

Changing the Face of Medicine: Celebrating America's Women Physicians

Exhibition Overview

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Exhibition Goals:

- To inspire young people to consider careers in the sciences.
- To document the achievements of women physicians in every aspect of the profession.
- To acknowledge the importance of different perspectives in developing quality health care for all.

Exhibition Themes:

- Overarching theme of diversity -- that every group in society needs its advocates in the profession, and that medicine benefits from having a broad range of perspectives. Also a diverse range of careers -- from scientific research to patient care, to public health leadership, and community work to improve quality of life.
- People from different economic and cultural backgrounds, people who went to medical school straight from college or after years raising a family or in another career.

Exhibition Scope:

- Limited to women physicians (M.D. or D.O.) although we recognize that women also make important contributions to medicine in allied health professions including nursing, as medical technicians, caregivers, inventors, chemists/pharmacists etc.
- This focus on physicians reflects the particular circumstances *physicians* faced as medicine became formalized and the educational structures to earn the M.D. or D.O. degree were set in place -- and set up to exclude women.

Myths About Women in Medicine:

1 *"Most women physicians work in pediatrics."*

- Today, women physicians work in every area of the profession:

Lori Arviso Alvord (In Making a Difference on the introductory panel Changing the Face of Medicine). Surgeon.

Janet Rowley (in Making a Difference on the panel Achieving Breakthroughs).
Researcher in human genetics.

2 *"It is difficult or impossible for women to combine medical school or a career with having a relationship/family or other interests."*

- Women in medicine have pursued other interests such as music, sports, and political activism.
- They spend time with friends and family, raise children, volunteer in their communities, and travel the world.

Sharon Malotte (in Making a Difference on the panel Fighting for Rights/Confronting Prejudice). Internist and family practitioner with two children, coaches her youngest daughter Darcy in barrel racing, pole bending, goat tying and roping events for junior rodeo competitions.

Virginia Apgar (in Achieving Breakthroughs). Anesthesiologist and musician who made musical instruments including a two violins, a viola, and a cello to form a string quartet.

Helen Rodriguez-Trias (in Making a Difference on the panel Leading Change/Inspiring Others). Pediatrician and women's health activist who founded the Committee to End Sterilization Abuse.

3 "Women physicians do not get on well with women nurses, women students, or other women physicians."

- Women's professional networks like medical societies and leadership initiatives have played a crucial role in encouraging the recruitment and advancement of women. Women have also served as mentors to other women at every level of the profession.
- Some of our women physicians first trained as nurses -- they may have been discouraged from applying to medical school and encouraged to go into nursing instead, or may not have been able to afford medical school.
- Women physicians have worked with nurses to develop new approaches to patient care.

Elizabeth Blackwell (in Fighting for Rights). The first woman in America to earn the M.D. degree founded an infirmary for women and children with her sister Emily, and later added a medical college for women. Both institutions provided women physicians with job opportunities as physicians and teachers.

Catherine DeAngelis (in Transforming the Profession). The first woman editor of the Journal of the American Medical Association trained as a nurse and taught nursing to help pay for her physician training in medical school.

Barbara Bates (on exhibition Web site) worked with nurses to develop a nurse-practitioner textbook.

*Note: as mentioned above, this exhibition is limited to women physicians to focus on the exclusion of women from the avenues to professional training, qualification and licensing in the establishment of the formal system of education for the M.D. or D.O. degree. We recognize that women also make important contributions to medicine in allied health professions and practices including nursing, as medical technicians, carers, inventors, chemists/pharmacists and so forth.

4 "Women have had less of an impact on medical science or education than they have had on patient care."

- Women have had to fight for access to lab facilities and professional training, yet even in the early part of the twentieth century some women were able to build successful careers as scientists.

- Women have challenged barriers to career development and glass ceilings to lead public health agencies, medical schools, examination boards, and research programs.
- Women have made breakthrough discoveries.

Florence Sabin (in *Achieving Breakthroughs*). One of the first women physicians to build a career as a research scientist. In 1902, she became the first woman appointed to the faculty at Johns Hopkins University School of Medicine.

Barbara Ross-Lee (in *Making a Difference* on the panel *Transforming the Profession*). The first African American woman to be appointed dean of a United States medical school.

Janet Rowley (in *Making a Difference* on the panel *Achieving Breakthroughs*). In the early 1970s Dr. Janet Rowley identified a process of "translocation," or the exchange of genetic material between chromosomes in patients with leukemia. This discovery, along with Dr. Rowley's subsequent work on chromosomal abnormalities, has revolutionized the medical understanding of the role of genetic exchange and damage in causing disease.

5 "Now that men and women attend medical school in equal numbers, there is no longer any discrimination against women in medicine."

- Those numbers are not reflected in the upper levels of academia and in leadership roles throughout the profession. Without women in leadership positions, there is little likelihood of improving career prospects for women, and eradicating pay disparities. Adapting the culture of the profession to fit women's needs (time off for parenting, elder care, etc) would benefit everyone -- fathers, children, people looking for flexible working schedules.
- Women in leadership positions can also bring attention to women's health issues that have not been adequately addressed -- just as the inclusion of more minority voices and different perspectives broadens the focus of medicine.

Frances Conley (in *Making a Difference* on the panel *Transforming the Profession*). The first woman to be appointed a tenured full professor of neurosurgery at a medical school in the United States. In 1991, Conley made national headlines when she announced her intention to resign her tenured position at Stanford University Medical School to protest against sexism in the school.

Catherine DeAngelis (in *Transforming the Profession*). In her role as the first woman editor of the *Journal of the American Medical Association*, Catherine DeAngelis, M.D., has made a special effort to publish substantive scientific articles on women's health issues. The journal plays an important role in bringing new research to light, and featured articles can lead to fundamental changes in treatment. Under her editorship, the journal published a landmark study questioning the benefits of hormone replacement therapy in 2002.

Using Biographies to Tell the Story

- *Restoring the Balance: Women Physicians and the Profession of Medicine, 1850–1995* (Harvard University Press) by Ellen S. More, Visiting Curator.
- Ad Hoc Advisory Group nominations.
- Arranged thematically, with overlapping time spans.

- Changing the Face of Medicine was developed by the exhibition program of the NLM and Visiting Curator Ellen More, Visiting Professor of Psychiatry at University of Massachusetts Medical School, Worcester, and Professor of History of Medicine and Medical Humanities at the Institute for the Medical Humanities, UTMB, Galveston. Ellen's book *Restoring the Balance* won the 2003 History of Science Society's prize for the best book on women and science.
- The exhibition follows the time period of Ellen's book, beginning with Elizabeth Blackwell, the very first woman in America to receive the M.D. degree, (Geneva Medical College, New York, 1849), and going up to today.
- An Ad Hoc Advisory Group of historians and leaders in the medical profession, who nominated women physicians to represent the themes of the exhibition from across the time span of 150 years.
- The final list of physicians to be included in the exhibition included people who had challenged discrimination, broken glass ceilings, and made breakthrough discoveries. The list also featured women who may not have achieved great fame in their lifetime, but who represent themes in the history of women in the profession. We wanted to show a diverse range of careers, and to capture everyday lives as well as historical moments. This approach is especially important for telling women's history, or the history of other marginalized groups, as often these people did not receive the opportunities or recognition they deserved.
- Exhibition is loosely chronological, arranged thematically across the six panels beginning with the introductory panel **Changing the Face of Medicine**.

Making a Difference

- Each panel of the traveling exhibition has a section called "Making a Difference" where there are several short profiles of women who fit the theme of the main panel.
- This is where the chronology overlaps as these sections include women working today and over the last 150 years.

Panel 1 -- Fighting for Rights

- Access to education.
- Access to internships, teaching jobs, and hospital appointments.
- Blackwell's New York Infirmary for Women and Children (1857).
- Mary Putnam Jacobi's resignation from the Woman's Medical College.
- Even after gaining access to medical education, women physicians had to fight for other professional opportunities which were vital to develop a career as a physician, including internships in hospitals, laboratory training, and jobs as physicians, teachers, or researchers.
- Elizabeth Blackwell founded the New York Infirmary for Women and Children in 1857 and opened the Woman's Medical College 12 years later to provide such opportunities.
- Mary Putnam Jacobi worked with Elizabeth Blackwell at the Woman's Medical College of the New York Infirmary and resigned. Blackwell had argued that women should be allowed to train as physicians because they were especially suited to such work (feminine natures made them more caring, and women patients needed women doctors). Jacobi argued that women should be allowed to train as physicians because they were equally as capable as men. Blackwell was working within the ideas about women at the time -- and these debates continue. Visitors might want to talk about whether there are differences between men and women, how significant these differences are, and the limits and strengths of the arguments put forward by Blackwell and Jacobi.

Panel 2 -- Confronting Prejudice

- Double barriers of racism and sexism.
- Financial hardships.
- Providing health care in one's own community.
- Serving as role models.
 - Women of color faced financial hardships as well as racism and sexism when building careers in medicine.
 - Some women went into medicine to provide better care in their own communities, although they have served as role models for all women.

May Edward Chinn opened her own medical practice in Harlem in 1926. She saw most of her patients in her office or at their homes -- even for surgery, in some cases. Black physicians could not admit patients to the city's white hospitals during the 1930s and 1940s, so Chinn accompanied her patients to clinics to observe diagnostic examinations and to learn how to take biopsies.

Susan La Flesche Picotte was the first American Indian woman in the United States to receive a medical degree. In her remarkable career she served more than 1,300 people over 450 square miles, giving financial advice and resolving family disputes as well as providing medical care at all hours of the day and night. She also founded a much-needed hospital, on the reservation where she had grown up and where she spent the rest of her career.

Panel 3 -- Achieving Breakthroughs

- Breaking the glass ceiling in scientific research and the most unwelcoming medical specialties.
- Making discoveries and developing cures.
- By the turn of the 20th century, women had made inroads into the medical profession but they were still discouraged from pursuing careers in scientific research and the most prestigious medical specialties.
- Over the next few decades, more women were able to break into those areas of medicine that had been the most unwelcoming. They also pioneered in newly emerging specialties and carved out careers in specialist areas that had previously received little attention.
- Receiving professional recognition.
- Many women did not receive the recognition they deserved at the time of their most important contributions. (Vivien Thomas, Alfred Blalock).
- May Edward Chinn, a doctor in Harlem for more than 50 years, was barred from employment at New York city hospitals in the 1930s and 40s because black physicians were expected to work in all-black institutions.
- She built a name for herself in cancer research and was invited to join the Strang Cancer Clinic in the 1940s where she stayed on until her retirement, and was awarded an honorary degree by Columbia University in 1980 in recognition of her contributions to medicine.
- So we can see that recognition has sometimes taken years. The exhibition plays an important role in that process.

Panel 4 -- Leading Change

- A broad vision of a physician's responsibilities.
- Changing quality of life.

- Working with communities.
- In Leading Change we look at women who have brought new perspectives to medicine and developed new approaches to health problems.

Barbara Barlow, who founded the injury free coalition for kids in 1988 to provide safe places to play for children in Harlem.

Inspiring Others

- Inspiring Others focuses on education, mentoring, and the importance of diversity in the profession -- the idea that everyone in our society needs advocates in medicine who can draw attention to special issues, communicate clearly in a language they understand, respect different cultural traditions.
- Educators and leaders serve as role models to help recruit people from different communities.

Katherine Flores, grew up in a migrant farm workers community in Fresno, California, now runs programs for middle school and high-school students in Fresno to imagine themselves in careers in the sciences.

Panel 5 -- Transforming the Profession

- Women in leadership roles.
- Changing the culture of medical education, research, and health care.
- The final section looks at women in leadership positions -- getting back to the issues of career inequality and pay disparities between men and women after medical school.

Catherine DeAngelis served as vice-dean for academic affairs and faculty at Hopkins and developed a program to improve the career trajectories of women on the faculty who were rarely appointed to full professorships.

She is also the first woman editor of the Journal of the American Medical Association, which published a landmark study questioning the benefits of Hormone Replacement Therapy in 2002.

Panel 6 -- Building a Promising Future

- Concluding section of the exhibition and encouragement to visitors to imagine themselves, their children, neighbors, friends, as physicians in the future.
- Of the physicians in the exhibition, who inspired you? Why?
- Invitation to "Share Your Story" of other women in medicine on the exhibition web site.

Kiosk Resources

Interactive Tools

- This interactive is part of the kiosks that will travel with the exhibition.
- This one gives visitors a closer look at traditional Navajo objects and their significance for Dr. Lori Arviso Alvord, the first Navajo woman to be board certified in surgery.
- Another features a viola made by Dr. Apgar, others look at the science behind the work of some of our featured physicians.

Learning More

- In a section of the web site with resources for teachers, there are sample lesson plans based on different physicians from the exhibition and a series of games that explain the scientific breakthroughs these women made.
- This game refers to the work of geneticist Janet Rowley, who discovered a genetic translocation in leukemia patients in the 1970s.
- There are also activities explaining sickle cell anemia, the circulatory system, and medical tools like the stethoscope.
- There are bibliographies for youngsters and older students, and links to medical schools and societies for people interested in planning a career in medicine.

Short Films and Interviews

- We used existing film footage and recorded new interviews with 24 of our featured physicians who have retired only very recently or are still practicing today.
- This slide shows the screens where visitors select a particular physician to watch their film or interview.
- The interviews allow us to hear them tell of their experiences in their own words -- these stories can be shocking, inspiring, and very moving, and they generate a great response from our visitors.
- They can help bridge the gap between now and the past by reminding our visitors that some of the breakthroughs that have seen women rise through the ranks in all areas of medicine have happened only very recently.
- These interviews, like the rest of the films in the exhibition, are all available online at our exhibition web site -- they can be seen by people planning a visit to the library, as well as people all over the world who will never see the original exhibition.

The Exhibition Web Site

- It would be impossible to include the stories of all of the women in medicine, but we realize that many of our visitors will have their own stories to tell.
- At the web site, and in the exhibition activity zone, there is an opportunity for visitors to tell us more about a woman physician in their family, or who inspired them.
- As they are added to the database every month, the exhibition continues to grow, and of course, when the exhibition at the library is over, the web site will live on.

The Online Database

- The database is also fully accessible online, and web site visitors can search in the same way to find women physicians in particular medical specialties, different geographic locations, medical schools and ethnicity.
- This will enable libraries hosting the traveling version of the exhibition to tap into local stories to help publicize their exhibits and develop public programs and presentations for their communities.
- "Share Your Story," where visitors can add their own stories of women in medicine (libraries might also want to make a feature of women physicians in their community in this section).