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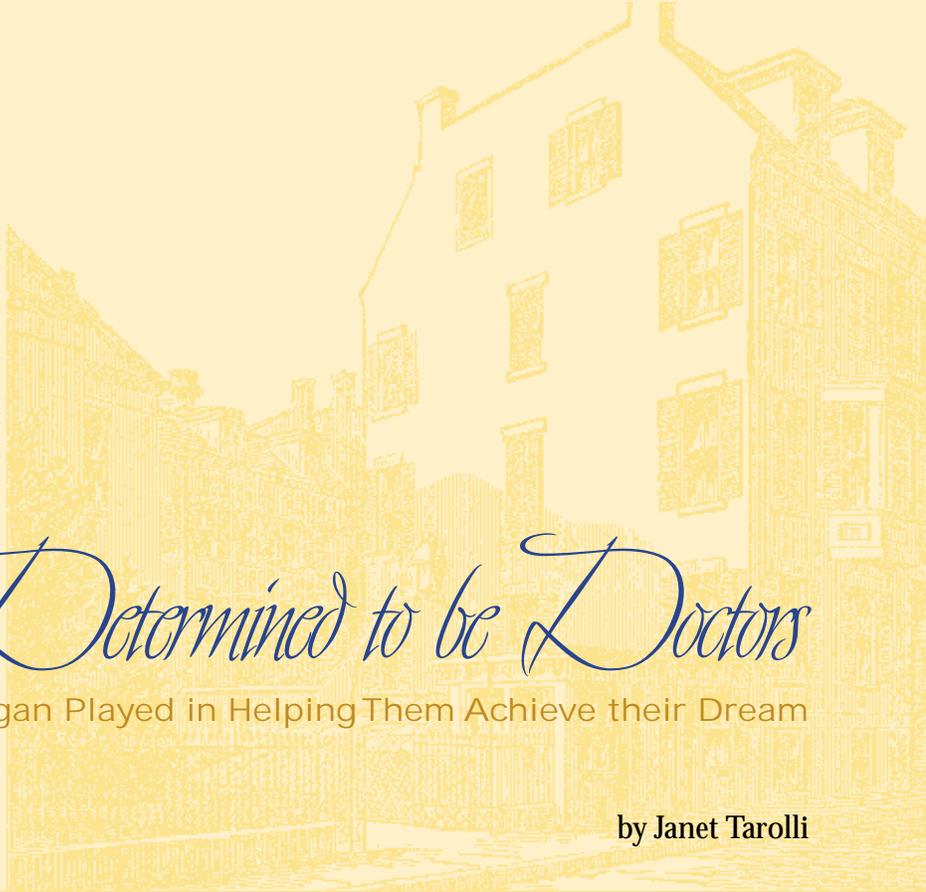
*celebrate
150 years*





“I well remember the day we read in the Boston papers that the University of Michigan had opened its doors to women in all departments,” physician Eliza Mosher recalled years later. The year that would forever stand out in her memory was 1870. She and four other interns, all of whom wanted the kind of medical education available only at the best medical schools, were in the laboratory at the New England Hospital for Women and Children in Boston when they heard the news. “We five young women joined hands and danced around the table,” Mosher said.¹

The women had no illusions about how they would be received at Michigan. Mosher had already applied to Michigan and had received a reply from Professor Alonzo Palmer stating, “For my part, I can not see how right-minded women can wish to study medicine with men!”² But the women knew that success in their future careers depended upon receiving a thoroughly competent medical education at an established school — and they were ready to take on whatever challenges faced them. The five friends were Amanda Sanford, Anna Hutchinson Searing, Elizabeth Hait Gerow, Eliza Maria Mosher, and Emma Louisa Call, interns at the New England Hospital. Their stories give us a vivid picture of the ambition of the Medical School’s early female applicants — women with determination.



Five Women Determined to be Doctors

and the Role Michigan Played in Helping Them Achieve their Dream

by Janet Tarolli

The five women who danced around a table to celebrate the University of Michigan's decision to admit women came to the Medical School with experience. The hospital at which they were training, the New England Hospital for Women and Children, was established in 1862 to provide practical experience for women medical graduates and an introduction to medicine for educated women. No other suitable hospitals in the area would accept women. To appreciate this hospital's importance, one needs to know something about the background of its founder, Marie Zakrzewska (zak-SHEF-ska), and her mentor, Elizabeth Blackwell.

The Women's Medical Movement: from New England to Michigan

In the United States, the women's medical movement began through the efforts of Elizabeth Blackwell, who graduated from Geneva Medical College in 1849 and proceeded to open medical education to American women. When Blackwell met Zakrzewska in 1854, she immediately recognized the potential in this young German immigrant of Polish descent who was a skilled midwife with formal training in Berlin. Blackwell sponsored her into the medical department of the Western Reserve College in Cleveland, and, when she graduated in 1856, Zakrzewska helped Blackwell raise funds to establish the New York Infirmary for Women and Children and became its first resident physician. In 1859 Zakrzewska went to Boston where she was associated with the New England Female Medical College and its hospital for three years. In 1862 she established the independent New England Hospital for Women and Children and modeled it after Blackwell's New York Infirmary.

Starting with a single house in downtown Boston, the hospital grew to four buildings by 1865 and moved, in 1872, to a modern facility in Roxbury. When Amanda Sanford, Eliza Mosher, Anna Searing, Elizabeth Gerow and Emma Call trained there, the hospital in Boston consisted of one large house and three smaller ones connected by a covered passageway. This configuration provided for separation of the maternity, medical, surgical, and dispensary patients and housing for the resident physician. By 1868, the hospital was treating over 5,000 patients annually.

The hospital hierarchy was similar to that found in hospitals associated with men's schools. The attending physician visited the hospital frequently, prescribing and administering medicine and other treatments during teaching rounds with the resident physician and interns. The resident physician supervised the interns, carried out the medical orders of the attending physician and notified the attending physician in cases of emergency. Her job was key to the smooth functioning of the hospital and dispensary. The interns supervised the nurses. There were nurses from the beginning but no nurse training program until 1872, so it is likely that the interns were involved with bathing, lifting and turning patients as much as with doctoring. Although Harvard College remained closed to them for theoretical instruction, Massachusetts General Hospital was allowing a few New England Hospital students to visit in 1866-67. In 1869 Zakrzewska and Lucy E. Sewall were the attending physicians. ➤

Interns rotated through maternity, medical, surgical and dispensary services over a year's time, spending three months in each. In the 1860s and 1870s some interns, such as Eliza Mosher, were accepted without a medical degree; they were called "amateur interns." However, by 1877 everyone who entered was a graduate M.D., and in 1880 this became a requirement. Between 1862 and 1872, 29 interns received training at the hospital, including one from Michigan, Ruth A. Gerry, M.D., of Ypsilanti (1865-66).

Gerry and physicians Helen Walker McAndrew of Ypsilanti, Anna M. Longshore-Potts of Adrian, Frances Rutherford of Grand Rapids, and others were working hard to open the doors of the University of Michigan to women in the 1860s. Public sentiment was growing in Michigan in support of coeducation, including medical coeducation. This was crucial to the women's medical movement, but in the eastern United States higher collegiate barriers were being erected.

Acceptance to Medical School Becomes Harder . . . and Easier

Women had to overcome many obstacles to gain access to the type of medical education available to men. In the

1850s, only those women with an uncommon sense of purpose achieved access, and when they became successful practitioners they were tolerated as a novelty. As women physicians increased in number and reputation in the 1860s, some physicians became alarmed that they would compete for patients and income. Certain medical schools that had admitted women stopped doing so. Harvard and the major schools in New York City and Philadelphia had for years rejected all applications from women, although some individual professors were sympathetic.

The ire of the public was aroused against these exclusionary practices, and in the interest of the "rights" of women, many schools were established for the purpose of educating women physicians. These schools were, for the most part,

coeducational from the beginning, but they held to low standards, partly as a result of competition for students. The education they provided in homeopathy, hydropathy, or eclecticism was considered deficient or dangerous by those aspiring to traditional medicine, but many women

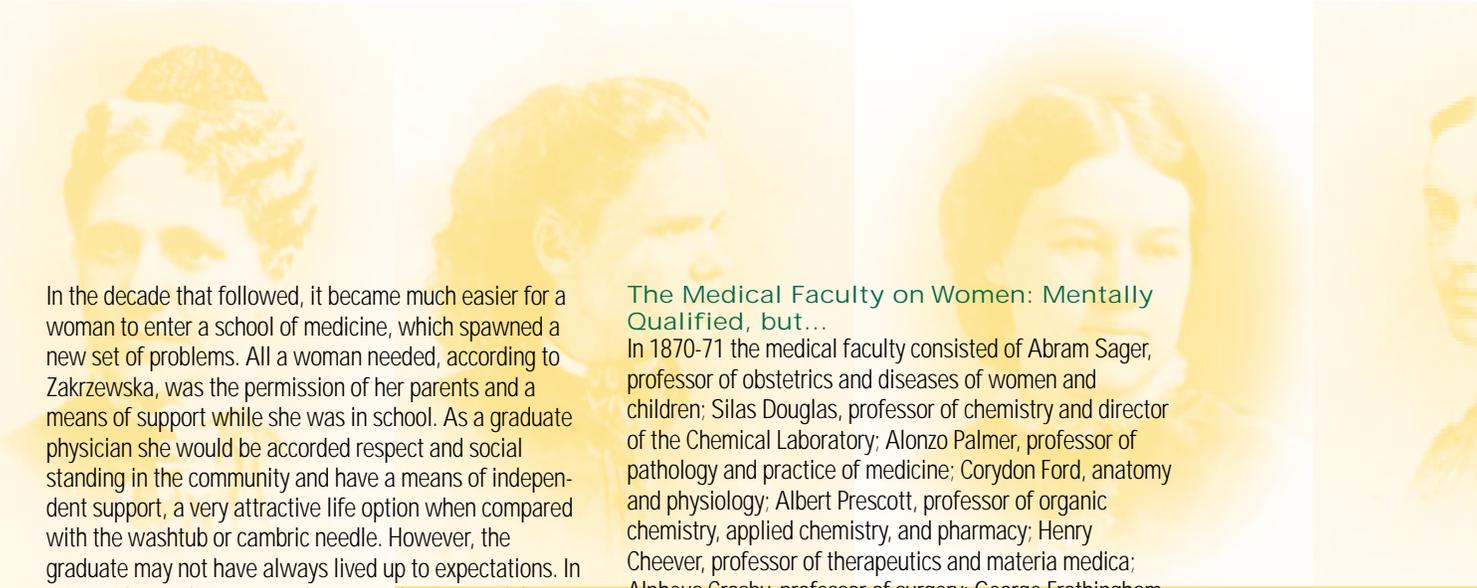
tended to find in them a gentler, more natural art of healing. Traditionalists maintained that if an intelligent, ambitious woman could not produce credentials from a scientifically rigorous school, she would not receive the same consideration from the public.

The need for access to the best medical schools was becoming acute by the late 1860s. To do her part to stem the flood of inferior physicians graduating in New York City, Elizabeth Blackwell opened a women's medical school in 1868 to complement the New York Infirmary. That school and the Woman's Medical College of Pennsylvania, which had gradually improved its program since opening in 1850, maintained standards comparable to men's schools, but they alone could not produce well-educated women physicians in sufficient numbers. Blackwell and Zakrzewska and their followers renewed their efforts to open the men's schools to women, targeting the schools that from their standpoint were the best — Harvard and the major schools in New York City and Philadelphia. To them it was axiomatic that, to be considered "best," a medical school must have an association with a large hospital, as in the European model of medical education.

One of the obstacles to entry into the "best" men's schools was that they could not provide for the clinical education of women. As Joseph Lister argued in 1872 in remarks pertaining to the Royal Infirmary in Edinburgh, "The reasons which are generally held to make it inexpedient for ladies to attend lectures on medical subjects along with male students in the college class-rooms apply with tenfold force against such mixed attendance in the wards of an hospital."³ On the wards, men and women would be jostled together out of the direct observation and control of the instructor. In order to meet requirements for graduation, women students would necessarily be assigned progressively responsible clinical positions. Men and women would then be forced to work in close association during consultation and professional emergencies, in the absence of sufficient numbers of junior and senior women house officers to work as a pair, leading in the long run to "great inconvenience & scandal."⁴ If women were to be taught the practice of medicine, he concluded, they must be educated in an entirely separate institution. But in 1870, the University of Michigan was well positioned to receive an influx of women medical students. Twenty years old, it was an established school with a national reputation, yet not encumbered by a large clinical edifice with a complex hierarchy.



New England Hospital for Women and Children, circa 1870



In the decade that followed, it became much easier for a woman to enter a school of medicine, which spawned a new set of problems. All a woman needed, according to Zakrzewska, was the permission of her parents and a means of support while she was in school. As a graduate physician she would be accorded respect and social standing in the community and have a means of independent support, a very attractive life option when compared with the washtub or cambric needle. However, the graduate may not have always lived up to expectations. In 1877, Zakrzewska expressed concern that many of these women possessed doubtful ability because of inadequate preparatory or medical education. The public, initially so hopeful about the entrance of women into the profession, was beginning to view the movement with distrust after receiving services from so many women lacking a scientific education and practical talent, she reported. Zakrzewska made it clear that these remarks applied to all recent graduates except those educated at the two women's medical colleges in New York and Philadelphia and the University of Michigan.

Zakrzewska renewed her efforts toward equal educational opportunity for women. Medical education for women was still experimental, but women must be allowed to succeed or fail on their own merits. She argued, "In order that the test be a fair one, they must have preparation and education and subsequent opportunity, equal to those given to the men."⁵

In 1880, Zakrzewska called for the leading women in each state to lobby the best medical colleges to become coeducational. A few years earlier she had rejected an unofficial Harvard proposal to acquire separate buildings — two miles away — for women medical students. "Meanwhile," she said, "we have another bright prospect in the admission of women to the University of Michigan, at Ann Arbor. Although the medical students are not in the same classrooms, yet the lectures and the opportunities for women are precisely the same as those for men."⁶

The Medical Faculty on Women: Mentally Qualified, but...

In 1870-71 the medical faculty consisted of Abram Sager, professor of obstetrics and diseases of women and children; Silas Douglas, professor of chemistry and director of the Chemical Laboratory; Alonzo Palmer, professor of pathology and practice of medicine; Corydon Ford, anatomy and physiology; Albert Prescott, professor of organic chemistry, applied chemistry, and pharmacy; Henry Cheever, professor of therapeutics and materia medica; Alpheus Crosby, professor of surgery; George Frothingham, lecturer on ophthalmology; and Preston Rose, assistant in chemistry. Henry Frieze was president pro tem of the University. The enrollment in the medical department in 1869-70 was 338, all men, and in 1870-71 enrollment was 315, of which 18 were women.

The historical record provides ample evidence that the arrival of the women medical students in Ann Arbor in fall 1870 was not particularly relished by the faculty. That spring, in a failed attempt to alter the course of events voted upon by the regents in January, Professors Crosby, Douglas, and Palmer had presented to the regents the familiar and old arguments relating to female medical education. In women's favor, they allowed that women were not only mentally qualified to study medicine but also had more pronounced sensibilities and sympathies with the sick. Some women might indeed prefer "a life devoted to the relief of human suffering, rather than the cares of a family."⁷ The treatment of diseases of women and children, at least, might be placed in their hands — but not obstetrics, because a woman physician might lack the courage and firmness needed in emergencies.

On the other hand, they continued, each month a woman is a quasi-invalid and unable to think clearly, and each time a woman bears a child, she must be largely incapacitated from practicing medicine for at least a year following the birth. The forced interruption in her practice would lead some, they said, to be tempted to end their pregnancies or even kill their infants. ➤

A favorite visual aid was an apron she wore with attached colored silk models of internal organs.

Illustrations from the thesis of Emma Call, "Arrangement of Neurine in the Cerebro-Spinal Axis."



On these issues, the professors said, they were neutral, but they preferred to consider medical coeducation experimental. In summary, the faculty stood ready to provide a full course of medical instruction to females — for a suitable compensation — or to have a separate female medical college. As a result of this petition, the faculty members received an increase in pay for the extra work involved in teaching the women separately.

On the whole, the professors succeeded in treating the women fairly that first difficult year. As Emma Call wrote years later, "I entered the Medical Department of the University the first year that women were admitted. The first class of women...were naturally the objects of much attention critical or otherwise (especially critical) so that in many ways it was quite an ordeal. I believe that only one of the medical faculty was even moderately in favor of the admission of women, so that it speaks well for their conscientiousness when I say (with possibly one exception) we felt that we had [a] square deal from them all."⁸ Corydon Ford had taught Elizabeth Blackwell at Geneva Medical College and was tolerant of the women students, but not all the professors were so kind. The professor of chemistry, Silas Douglas, did not intervene when the men students stamped their feet and shouted as the women entered the lecture room for the one subject that was taught to mixed classes.

Adella Brindle Woods, who attended medical classes at U-M in 1873-74 and in 1876 graduated from the Woman's Medical College of Pennsylvania, found the differences among the professors striking: "I remembered with pleasure, dear, genial Dr. Ford, professor of anatomy. I also remember the coarse, ribald stories of Dr. Douglas, antiquated professor of chemistry, who looked upon us women students as monstrosities. I remember with kindly feeling, Dr. Palmer, professor of practice, who did not approve of us, yet who was just and often said we were good students, always adding he doubted if we would ever become successful practitioners. I remember with real affection, Dr. Dunster [who succeeded Sager in 1873], professor of obstetrics, a deeply scientific lecturer and

perfect teacher." She continued, "I remember with contempt the loud and boisterous behavior of the 500 men 'medics' when we (35 in number) entered the lecture room. You could not find in a day's travel 35 women more modest and unobtrusive than we were."⁹

Eliza Mosher thought her medical education at Michigan entirely worth the effort. "The University broadened my mental horizon. Opposition increased my power of resistance, deepened my determination to prove that I had both the ability and the right to become a physician and to practice medicine beside the best men in the profession. My acquaintance with men both as professors and students gave me a conception of the workings of men's minds which has been most helpful in my dealings with them in my later life."¹⁰

Mosher lived in a rooming house that admitted both men and women and belonged to an "eating club." In the club, members purchased food to be cooked for the group and thus enjoyed a more varied menu than usual boarding-house fare. Members included "men from all departments," some of whom became lifelong friends.¹¹ There are other reports of cordial relations between the men and women medics, especially after the arrival of President Angell and his wife, Sarah Caswell Angell, in 1871.

An Important Legacy

Mosher, in particular, did develop a very successful career and was given credit for working well with men. For women in general, much of their success developing careers after graduation depended upon their individual personalities and motivation, as well as their support systems, in developing successful careers. Career opportunities for women physicians opened up in community hospitals and in private practice, but, for most women physicians, professional opportunities in the form of major academic appointments in coeducational schools were still many years away.

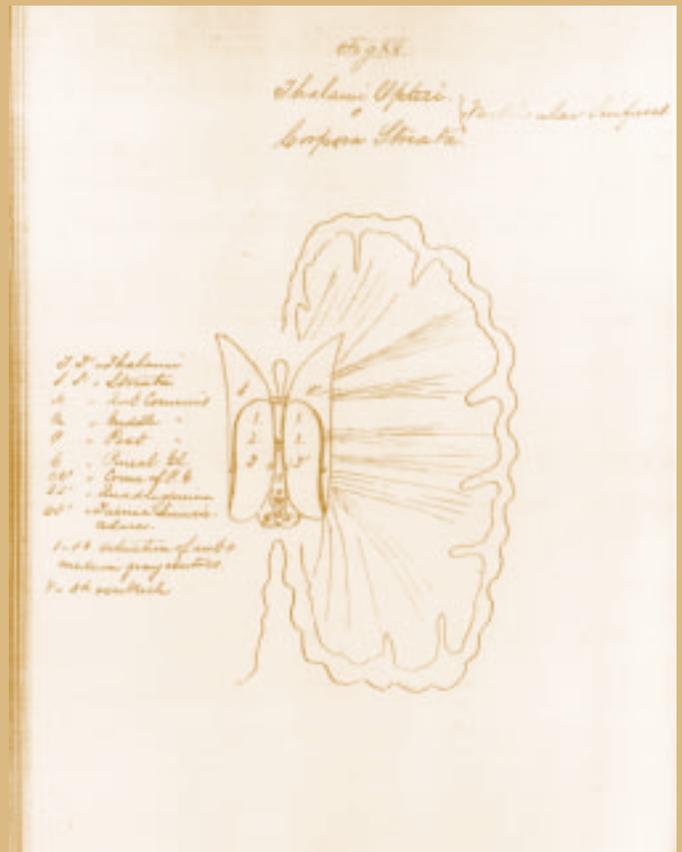
"My acquaintance with men both as professors and students gave me a conception of the workings of men's minds which has been most helpful in my dealings with them in my later life."

-Eliza Mosher

The lack of regulation of medical schools and private practice, along with hospital construction in the second half of the nineteenth century, did work to women's advantage, allowing them to found and develop institutions in which to teach medicine and to practice with other women physicians. Women's medical schools, however, were destined to be temporary. The opening of men's schools to women and the advances in medical science made it unnecessary or economically unfeasible to continue to operate separate women's medical colleges, and most closed well before the famous Flexner Report of 1910.

After 1900, fewer women entered the medical profession at Michigan and nationwide for complex reasons. The Flexner Report, which did much to improve standards of teaching at medical schools in America, also resulted in the closing of many medical colleges, and, though not intended by Flexner himself, did contribute to the decline in professional opportunities in medicine for women and blacks at all levels. At Michigan, enrollment of women in the Medical Department peaked in 1894-95 at 72. Starting in 1892, there was a falling off in enrollment of women in the professional departments (medicine, law, dentistry, pharmacy and homeopathy) at U-M and a steady increase in women enrolled in the literary department.

Between 1871 and 1900, the University of Michigan graduated nearly 400 women physicians, perhaps the most of any coeducational school in the U.S. The number of women enrolled in the Medical School did not reach levels comparable to the 1890s until the 1940s, only to fall once more. But if the five dancing women — Amanda Sanford, Eliza Mosher, Anna Searing, Elizabeth Gerow and Emma Call — could come back to Ann Arbor and the Medical School today, they would be delighted by what they would see and by the reception they would receive — from a faculty with many women members and from a student body that is now nearly half female. ►



Author's Note:

Janet Tarolli, who earned her nursing degree from the University of Michigan in 1969, is a research associate at the Historical Center for the Health Sciences, where she has been a member of the staff since 1997. She worked with Professor Emeritus Horace Davenport to produce his history of the Medical School, *Not Just Any Medical School*, published by the University of Michigan Press in 1999.

Five Friends...

As the brief biographies that follow tell us, the five friends from the New England Hospital succeeded in achieving their dreams, earning the praise of many of their teachers and later their colleagues, and making significant contributions to American medicine. The name of one of them, Eliza Mosher, who eventually became the first dean of women at the University of Michigan, is still known by students today, her name gracing a residence hall on Observatory Street not far from the medical campus.



Amanda Sanford

Amanda Sanford (1838-1894) was born in Rhode Island to a Quaker family and as a young girl moved with her mother to the New York town of Scipioville in Cayuga

County. She attended the Union Springs Seminary, a preparatory school run by the Society of Friends, and completed one academic year at the Woman's Medical College of Pennsylvania in March 1869. For eighteen months she trained in Boston under preceptor Lucy E. Sewall. At the New England Hospital, she learned the importance of strict cleanliness and non-interference with the normal birth process and became a skilled obstetrician. But she yearned for the further education and credibility that a university degree would bring.

Sanford did well at Michigan, graduating with highest honors in her class in March 1871. Her graduation thesis, "Puerperal Eclampsia," was a thorough review of the state of knowledge at the time about this dire obstetrical complication and included some original research as well as statistics and case studies. Former faculty member Henry F. Lyster, addressing the graduating class, honored her by saying, "It is my pleasing duty to welcome to the profession a woman coming from these halls."¹² Some young men threw paper at her from the gallery during Lyster's address, but she maintained her composure and became even more determined in the cause of women's rights.

She set up private practice in Auburn, also in Cayuga County, the first woman in that city to do so, and developed successful, fashionable private and hospital practices in obstetrics, gynecology, surgery, and general medicine. She and her friend Eliza Mosher went to London in 1879-80 where they were exposed to new ideas, such as listerism and laparotomies. At the suggestion of Elizabeth Blackwell, who was then living in England, they went to Paris for additional clinical work and toured Europe. In 1884 she married

Patrick Hickey, a widower with children, and managed their household while continuing her medical practice.



Emma Louisa Call

Emma Louisa Call (1847-1937) was born in Newburyport, Massachusetts. She was encouraged to study medicine by her father, Abraham A. Call, who later was a director of the New England Hos-

pital. She met Eliza Mosher at the New England Hospital, where they were a student team in obstetrics under Helen Morton, and they became lifelong friends.

Call entered the University of Michigan in October 1870 with Lucy E. Sewall as her preceptor. Like Eliza Mosher, she found in anatomy an unchanging solid foundation for medical practice. It is reported that her thesis, "Arrangement of Neurine in the Cerebro-Spinal Axis," was useful to the professors in their teaching. She graduated with top honors in the medical class of 1873 and studied medicine in Vienna afterward.

Call pursued a career at the New England Hospital for Women and Children, serving as an attending physician from 1875 to 1902 and consulting obstetrician from 1902 to 1920. She also served as attending physician to the Massachusetts Infant Asylum for approximately five years in the 1880s. Call was the first woman member of the Massachusetts State Medical Society and held membership in the American Medical Association. Her name appears in pathology textbooks in relation to Call-Exner bodies, which are densely staining materials in developing ovarian follicles.

Anna Hutchinson Searing

Anna Hutchinson Searing (1830-1912), was born in Poplar Ridge, another Cayuga County town in New York state, to a Quaker family. She matriculated at the Woman's Medical College of Pennsylvania in October 1869, probably attending until the end of the term in March 1870. Following this, she engaged in clinical work in Boston at the New England Hospital for Women and Children. In 1871-72 she enrolled in the U-M Medical Department as a senior, indicating she was given credit for work previously completed. She wrote her graduation thesis on indigestion in 1872. After graduation she studied medicine in Vienna for one year.

Searing practiced medicine in Rochester, New York, with Sarah Adamson Dolley, the third woman in the U.S. to receive a medical degree (after Elizabeth Blackwell, M.D., 1849, and Lydia

Folger Fowler, M.D., 1850). Dolley was an 1851 graduate of the Central Medical College of New York at Syracuse, an eclectic institution. Eclecticism was a medical approach that emphasized the use of medicinal plants. Searing was associated with the Provident Dispensary in Rochester, an ambulatory clinic for women and children. In 1895, she retired from practice and moved to California.



Eliza Maria Mosher

Eliza Maria Mosher (1846-1928) was U-M's first dean of women and was professor of hygiene, sanitation, and home economics in the Department of Literature, Science, and the

Arts, serving from 1896 to 1902. She was the first woman to become full professor at the University.

Mosher was born in Poplar Ridge, the same hometown as that of Anna Hutchinson Searing, to a Quaker family and completed preparatory school work at Union Springs Seminary, which was operated by the Society of Friends. Following clinical work at the New England Hospital, she entered the University of Michigan in 1871 with Lucy E. Sewall as her preceptor. At the completion of the term, Mosher served an undergraduate internship at New England Hospital under Susan Dimock. During 1872-73 Mosher studied anatomy under Corydon Ford and served as assistant demonstrator of anatomy to the women's section. Alonzo Palmer asked her to demonstrate a pathologic specimen to the men's class of hundreds, which she did. Prophetically, he told her she would be a professor some day. Mosher spent the following year at the New York Infirmary under Emily Blackwell (Elizabeth's sister), and she gained additional clinical experience at Bellevue and the DeMilt Dispensary. She returned to Ann Arbor for the academic year 1874-75 to complete her degree requirements. In 1879-80 she and Amanda Sanford studied medicine in London and Paris.

Immediately after graduation, Mosher practiced medicine in Poughkeepsie, New York, jointly with Elizabeth Gerow. She served as resident physician and later as superintendent of the Massachusetts Reformatory Prison, where she established hospital facilities. In Brooklyn she entered private practice with Lucy M. Hall, and they alternately served as resident physician and professor of hygiene at Vassar College in Poughkeepsie. Mosher returned to successful private practice in Brooklyn following her service at the University of Michigan.

For six summers she lectured on hygiene at the Chautauqua Summer School of Physical Educa-

tion and also lectured on hygiene at Wellesley and other colleges. A favorite visual aid was an apron she wore with attached colored silk models of internal organs.

To promote better posture in schoolchildren, she invented a kindergarten chair. She also took out patents on a bicycle seat, a subway bench, and a corset-like garment that did not impede breathing. In 1912 Mosher published *Health and Happiness—A Message to Girls*. From 1905 to 1928 she was senior editor of the *Medical Woman's Journal*. Called the “dean of American medical women,” she attained nationwide respect during her career of 52 years.



Elizabeth Hait Gerow

Elizabeth Hait Gerow (1845-1933) was born in Plattekill, Ulster County, New York, to a Quaker family and educated at Union Springs Seminary. She followed Eliza Mosher to the New England

Hospital for Women and Children and completed her clinical work there. In 1873, she entered the University of Michigan, with C. Annette Buckel as her preceptor, graduating in 1875. After graduation she and Mosher set up a joint practice in Poughkeepsie, New York, which was near Gerow's relatives. Like Mosher, Gerow served as resident physician at Vassar College. She continued her medical practice in Poughkeepsie and Newburgh, New York, in the Hudson River Valley. Upon retirement, she moved to Grand Rapids, Michigan, and lived out her days there.

For more information on the history of women in academic medicine in America, please contact Janet Tarolli at the U-M Historical Center for the Health Sciences by phone at (734) 764-8215 or by e-mail at jtarrowli@umich.edu. [m](#)

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Footnotes

1. “A Woman Doctor Who ‘Stuck It Out,’” *Literary Digest* 67, April 4, 1925.
2. Alumnae Questionnaires, 1924, Alumni Association Records, Bentley Historical Library, University of Michigan.
3. Joseph Lister to Peter Bell, 1872, Archives of the Edinburgh Royal Infirmary, Medical Archive Centre, Lothian Health Board, quoted in Shirley Roberts, *Sophia Jex-Blake: A Woman Pioneer in Nineteenth-Century Medical Reform*, (London: Routledge, 1993), p. 133.
4. *Ibid.*
5. Marie E. Zakrzewska, *A Woman's Quest: The Life of Marie E. Zakrzewska*, (New York: Appleton, 1924), p. 379.
6. *Ibid.*, p. 383.
7. A. B. Crosby, S. H. Douglas and A. B. Palmer, Memorial to the Board of Regents, March 25, 1870, *Michigan University Medical Journal* (1870-71), p. 171.
8. Alumnae Questionnaires, 1924, *op. cit.*
9. *Ibid.*
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11. “Banquet Tendered to Eliza M. Mosher, M.D., on Her Completion of Fifty Years in the Practice of Medicine,” *Medical Woman's Journal* 32 (1925) p. 143.
12. *Michigan University Medical Journal* 2 (1871) p. 143.