

Edith Graham Mayo:

Mayo Clinic's First Nurse Anesthetist

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Introduction

This historical study will outline Edith Graham Mayo's professional life and her role helping realize the dreams of Doctors Will and Charlie Mayo.

Her Character

Edith Graham Mayo was a woman of great strength and compassion, qualities woven throughout of her daily life. She gave the sick compassion always and all- her heartfelt respect. The common man met the same Edith as did kings and queens; she was sincere in all her interactions and saw the dignity in everyone.¹ According to Dr Charles W. Mayo (Edith's son), Edith was very opinionated, especially regarding the Mayo Clinic; however, she remained ever tactful.² She lived by the words of the Hindu Poet Tagore, "Give me the strength to raise my mind high above daily trifles."^{2(p108)} Edith believed, "If

you think hard enough and do everything within your power, you can accomplish almost anything in the world.”³ In a letter of recommendation for nursing school, Mr. JH Chapman Jr., Superintendent of Rochester Schools in 1887 wrote, “ Miss Edith... to be a young lady of unquestionable character, a good scholar... faithful and industrious in whatever work she under takes.”⁴

As the first nursing teacher at Saint Marys, Edith successfully taught the first five hospital Franciscan sisters the art and science of nursing; these and many of her other students made outstanding contributions to nursing.

Edith’s success went beyond her professional achievements. She was elected by the national Golden Rule Foundation as its Mother of the Year in 1940. The foundation recognized her as a mother of courage, moral strength, patience, affection, and kindness; a woman with a clear sense of social and world relations; and an activist for her country’s betterment.¹

Family

Edith Graham Mayo was born on her family’s Southern Minnesota farm to Jane Twentyman and Joseph Graham on February 12, 1867- the dead of winter.⁵ Her mother Jane had thirteen Children of her own, five girls and eight boys.⁵ She also delivered 243 babies as a midwife without a single demise of mother or child and without any physician.⁵

Her father Joseph Graham, a farmer brought his family to Minnesota from the East Coast-Cortland County, New York- in 1856.⁶ The land he carefully selected to settle in Southern Minnesota was both economical and fertile. He named the land Grahamholm. It was located five miles northwest of what is now called Rochester, in Kalmar Township

of Olmstead County. Although branches of the Cascade Creek irrigated this land, only with great efforts did Grahamholm produce enough sustenance for the family to survive.⁵

Education

Yet they did much more than just survive. Joseph and Jane Graham provided Edith an education on life. From their Scottish and English heritage, these parents instilled in their children precious virtues of thrift, hard practical labor, compassion, courage, stubbornness, and most importantly faith.⁵

As a child Edith's formal primary education began at the Rochester District School Number 24. Here founder Sanford Niles applied his advanced educational concepts. He felt students should be constant observers, self reliant, and creative.⁵ Edith absorbed Niles' lessons at a young age and they carried her successfully through her professional schooling. Edith traveled to Chicago to attend the Women and Children's Hospital School of Nursing.⁵ The nursing course taught both practical and theoretical aspects but was short⁷; not until 1892 was a two-year course developed.⁸ Edith studied nursing for eighteen months and graduated on March 7, 1889.⁹

Edith likely learned the possibilities of stepping beyond traditional nineteenth century women's roles during her time at the Women and Children's Hospital. Dr. Mary Thompson - a pioneer woman physician and one of the nation's first female surgeons, founded this novel institution on May 8, 1865.⁸ Dr. Thompson founded more than a hospital: she founded a wellspring of nascent feminism. During this time there were only two other hospitals in the city of Chicago: one did not care for female patients and the other did not allow women to practice medicine. So Dr. Thompson created a hospital that did both.¹¹ Its mission was to care for civil war widows and orphans of veterans during

the cholera epidemic,¹⁰ she went even further and opened the first medical college for women in the Midwest.¹¹ It's hard to imagine that Dr. Thompson did not plant seeds of feminism in young Edith.

In 1871, the Chicago fire destroyed the hospital. The hospital rebuilt and opened with the first nursing school in the Midwest in 1874. In 1888 it was located at 1712 West Adams Street, where Edith attended nursing school.¹² Little information could be found about the working conditions or Edith's duties at the Chicago School of Nursing except that in 1888 only one large room was available for surgical operations and the patient beds were not more than a foot from the floor.^{7,8} The Women and Children's Hospital became known for its pioneering spirit in years to follow. It was the first Chicago hospital to provide aid and services for the poor and indigent, the first Mother's Milk Bureau in 1930, and became the first mental health hygiene clinic in 1946.¹³

Positions for Women

In the first half of the nineteenth century most women worked in the home or were teachers, but in the 1840's a rising feminine spirit entered public American life and brought women out of the homes and schools and into areas of industry, science, and civic affairs. This social movement affected perceptions of nursing: a task previously felt fit only for the morally and socially degraded now became an opportunity for a decent livelihood for many women.¹⁴

Despite the doors opening to women at this time, Edith still needed her profoundly determined spirit to start her career. Before attending Women and Children's Hospital, Edith taught school like so many other women. Indeed, J.H. Chapman Jr.'s letter also praised her as "...a very successful teacher."⁴ Soon after graduation as a nurse in 1889,

Edith was denied her first assignment to a local Chicago physician who found her too young and too beautiful to work for him.¹⁵ Edith was twenty-two years old at the time,¹⁵ but she was undeterred and returned home to Olmstead County Minnesota to work as an office nurse, bookkeeper, and secretary to Dr. William Worrell Mayo.⁵ With the help of his sons, Doctors William James (1869-1939) and Charles Horace (1865-1939), the Sisters Of Saint Francis, and Edith Graham, what was to become the Mayo Clinic achieved international acclaim during the Golden Age of Surgery which followed after the development of asepsis.¹⁵ Mother Alfred of the order of Saint Francis conceived the idea of Saint Mary's Hospital and asked Dr. W.W. Mayo to join in its development as the chief physician.¹⁶ The first operation, for cancer of the eye, was performed on September 30, 1889, one day before the hospital's official scheduled opening. The three surgeons, Drs. W.W. Mayo, William J. Mayo and Charles H. Mayo, and the five sisters of the Order of St. Francis, Sisters Sienna Otta, Constantine Kompal, Fidelis Cashion, Hyacinth Quinlan and Joseph Dempsey (who joined a few weeks after Saint Mary's opened), staffed Saint Marys.¹⁶ During the hospital's first week of operation, eight patients were admitted. Edith Graham was placed in temporary charge of the nursing staff which was comprised of the five Sisters.¹⁶ Edith's received her first paycheck from Saint Marys, fifty dollars paid by Mother Alfred, on November 5, 1889.¹⁷

Edith taught the Sisters the rudiments of nursing through informal classes held over a period of few weeks.¹⁶ The Sisters also gained on-the-job training by watching Edith work and learning in the operating room.¹⁸ The Sisters' routine duties included housekeeping, meal preparation, dressing wounds, giving medications, inserting catheters and temperature assessment.¹⁶

Edith and Anesthesia

With the success of Saint Marys- Hospital the three surgeon's workload increased, and they became unable to administer anesthesia themselves. In most hospitals of the time medical students, interns, and general practitioners administered anesthesia with varied effectiveness.¹⁴ Saint Marys hospital did not have interns and needed skilled anesthesia providers. This may have been advantageous because it was said that the medical students and house officer were poor anesthesia providers because they were often distracted watching the surgery rather than the patient.¹⁴

In any event, 70-year-old William Worrall Mayo wanted to travel and leave the surgical work to his sons, but first he needed to solve the anesthesia problem.¹⁹ A conscientious and skilled provider was imperative. It was not shortly after, in 1890, in other parts of the country a flood of complaints about anesthesia delivery had come to light. Deaths related to surgical patients were being blamed on unskilled anesthesia providers. The practice of asepsis was fully established by 1888 and septic mortality was falling: focus thus shifted to anesthesia –related mortality.¹⁴

In 1889, Dr. Mayo did not need to look far to find an anesthesia provider with the aptitude and intelligence to deliver a high-level care. Indeed, “Long before the furor about the disgrace of anesthesia in the 1890s such anesthetists had been quietly going about their business, and from among their members a new method of general anesthesia was to receive its greatest impetus.”^{14(p33)} In other cities the Catholic hospital sisters were already well respected by their local surgeons for their delivery of anesthesia. But many of their contributions went unrecognized in 1890 because their names were not allowed in the hospital records until the 20th century. In 1878, Sister Mary Bernard a nurse at St.

Vincent Hospital in Erie Pennsylvania provided anesthesia, 1880, Sister Aldonza Ehrich administered chloroform and ether.¹⁴ Not surprisingly then, Dr. Mayo turned to Edith Graham.

Thus in 1889 Edith Graham became the sole nurse anesthetist at St. Mary's Hospital.¹⁴ Dr. W.W. Mayo found her to be both intelligent and capable; she quickly learned his anesthetic techniques.^{2,20} Dr. W.W. Mayo taught Edith the art of administering chloroform, primarily over a two-month period.^{2,20} According to Thatcher,¹⁵ chloroform was often administered drop-by-drop onto a small wire frame covered with gauze over the patient's face during that period.

Although chloroform anesthesia was a contemporary technique, Edith likely primarily administered ether. According to Alice Magaw, ether had been Saint Marys Hospital's preference¹⁴ and was used almost exclusively beginning with the first anesthetics.²¹ A review of Edith's journal supports this claim. Edith referenced the ether cone in an 1889 journal entry outlining operating room preparation.¹⁷ Edith's journal reference strongly suggests that she used the ether cone. We can speculate that she used the cone with the typical technique of the time; Ether was poured through the apex of a cone formed from a folded towel or sheet of paper and placed over the patient's face; the ether ran down the patient's face and neck.¹⁴ The amount of ether Edith used to anesthetize her patients was not referenced in Edith's journal. Nonetheless, Dr Charlie wrote a testament to Edith's success with ether in a letter sent to her from Chicago, "... maybe we should give you a week off to teach the interns in Chicago how to give ether."²² Dr. W.W. taught also Edith to monitor the patient's blood pressure, pulse, moisture or dryness of the skin, the eyes and other reflexes.²

Within months after Saint Marys Hospital opened, Edith's workload was prodigious; she was not only Dr. W.W. Mayo's office nurse, bookkeeper and, secretary but, also the head nurse and sole nurse anesthetist. Some help did arrive when her sister, Dinah, joined Saint Marys Hospital in the spring of 1890 as Dr. Will's nurse.⁵ Dinah later learned anesthesia delivery from Dr. Augustus Stinchfield, an Eyota, MN physician who was recruited in 1893 to join Will and Charlie in their practice.²⁴ Nonetheless, Edith's days were busy. She began the day by preparing the operating room;¹⁸ she then spent the morning administering anesthesia only to return to Dr. W.W. Mayo's office and perform office duties in the afternoon.⁹ During Edith's years as an anesthetist, 1889-1893, the numbers of surgical operations performed were modest by our current standards: 14 in 1889, 160 in 1890, 261 in 1891, and 220 in 1892. The operations in the first two years included 7 mastoid abscess drainages, 14-cataract excisions, 14 eye enucleations, and 14 excisions of carcinoma from the lip or face.^{21, 23}

Gaining Credibility for St. Marys Hospital

In the early years, the biggest obstacle facing the doctors and Saint Marys was the reluctance of patients to stay in the hospital for treatment.²¹ Hospitals of the time had high mortality rates and patients feared for their lives. Some patients were nearly incarcerated. Edith said, "We almost had to lock some of the first patients in their rooms; they were so sure they were going to die..."^{20(p149)}. Patients had an even greater fear of anesthesia and its young anesthetist- Edith Graham. So, Edith performed all inductions in the operating room with Dr. W.W. Mayo at her side to help alleviate patients' fears. Once the patient was asleep, Dr. Mayo would leave the subsequent anesthetic management into her capable hands.²⁴ This practice of operating room induction was highly criticized by

many surgeons from other hospitals. Who expected their patients to enter the operating room fully anesthetized. However, W.W. Mayo's saw advantages in his induction practice. Patients who were awake in the operating room before being anesthetized were less anxious because their attention was diverted. Also, the avoidance of transportation stimuli after induction allowed rapid surgical narcosis with use of fewer anesthetics.^{9, 19} After the operation Edith remained with the patient until the afternoon when she passed responsibility for patient care to the capable hands of the Franciscan sisters.²⁰ The Sisters were expected to be extensions of the eyes and hands of the physicians and without today's technology they depended entirely on their abilities of observation.¹⁸ The sisters quickly learned expertise allowed Edith to pursue other anesthesia and office.²⁰ By the close of 1889, 62-persons were served by St. Mary's hospital. In 1890 there were 300 more patients, and by 1893 the total passed one thousand.⁶ Of the 655 patients who had undergone surgical operations through 1893, 98.3% left the hospital alive. This remarkable success was attributed to the only anesthetist, Edith Graham, the doctors Mayo, and the sisters of St. Francis.⁹ The Saint Marys Hospital experiences changed the public's perception: patients came to recognize Saint Mary's Hospital as a place to be healed.¹⁸ However, the hospital's good reputation was somewhat threatened by other physicians who sent the most dangerously infected and terminally ill patients to Saint Marys. To everyone's surprise even the sickest of the sickest improved. However, to ensure quality of care the Sisters limited admission to only patients whose care was accepted by the Doctors Mayo.¹⁶

Edith's Role in Education/Mentorship

Edith's success as a nurse educator was reflected by the achievements of her students who made outstanding contributions to nursing and hospital work.²⁵ Sister Joseph Dempsey became the primary surgical assistant to Dr. Will Mayo. Her surgical skills were greatly respected both by Dr. Mayo and the foreign surgeons who visited. Her skills were so revered that a deep mass of the umbilical area was named after her, "The Nodule of the Sister Joseph."²⁶ Edith trained the anesthetist who replaced her after her marriage to Dr. Charlie in 1893,²⁴ Alice Magaw "Mother of Anesthesia".¹⁹ She was chosen by Edith to replace her.⁹ Ms. Magaw became famous for her open drop ether method.¹⁴ In a 1960 report, Ms. Magaw claimed 14000 anesthetics had been given without an anesthesia-related death.¹⁹

Marriage and Family Life

Despite the accomplishments of such pioneering women as Edith and Dr. Mary Thompson, most women of the late nineteenth century assumed then-traditional roles of mother and wife. They sought to rear virtuous and industrious children and support their husband's career. This view was fostered since the 1830s-1840s.³ Indeed, Edith herself accepted such a role after she left the operating room and married Charlie. Edith was a good wife and a loving mother who raised her eight children.

She met Dr. Charlie Mayo in 1889 when she returned to Rochester from Chicago.⁵ Edith and Charlie shared many interests. Their early connection was bike riding. Charlie was one of the first in Rochester to ride a bike.⁵ He used to practice riding in an empty lot adjacent to a church on Franklin Street. One Sunday the pastor had to cut out the entertainment factor by closing the windows so the congregation would listen to his

sermon.⁶ Edith learned to ride a bike quickly and they took bike rides together. They also enjoyed sharing hayrides, picnics, and ice-skating. By the winter of 1892 they had fallen in love, and on April 5, 1893 they were married.

They initially lived with Dr Will and his wife, Hattie, until their own home “the red house” was built next door.⁵ Edith’s leap into motherhood started on a rocky road with several miscarriages and the death of her first live-born child, Margaret, at 5 days.⁵ In 1897 she delivered a healthy baby girl she named Dorothy; a son, Charles, was born in 1898.⁵ Scarlet fever threatened Dorothy at age three, but through her mother’s prayers and the grace of God she survived although she became mentally challenged.⁵ On October 20, 1900 Edith gave birth to baby Edith. Joseph was born August 31, 1902.⁵ By 1905 Edith and Charlie had hired help to care for the children.⁵ Three more children, Louise, Rachael, and Esther made a total of eight –two of whom died early in life.⁵ Edith’s motherhood did not stop with her own. She raised one foster child, John Nelson, whom Dr. Charlie saved at 18 months old from going to an orphanage, and she adopted Margaret (called Sally).⁵

Edith and Charlie had a very loving relationship. They exchanged tender letters when Dr. Charlie had to be away. After they had help for the children, Edith frequently joined him on his trips.⁵ Edith’s home life did not only consist of taking care of her children and loving her husband; she entertained many physicians visiting the clinic. She never knew how many people Dr. Charlie would bring home for supper.⁵ In 1910 they moved to a country home, Maywood, designed by Dr. Charlie. She lived in the main house entertaining, adoring her husband, raising her children, and loving her grandchildren until the year Dr. Charlie died 1939.⁵ That June she switched homes with her son, Dr. Chuck,

moving next door to Mayowood into its Ivy Cottage. Dr. Chuck and his wife moved to the main house.⁵

Civic Duties & Achievements

After Edith's marriage to Dr. Charlie, she continued to be involved in the work of St. Mary's Hospital. On their honeymoon Charles and Edith visited European hospitals together and she shared Dr. Charlie's professional interests.¹⁵ Edith, like Dr. Thompson of Women and Children's Hospital, served her community and helped those in need. She was described as a "mother " to Mayo Foundation fellows and their wives and "foster Mother" to student nurses. She organized the Fellows wives into the Rochester Magazine Club.²⁷ Rochester was within the first district of the Minnesota League of Women Voters founded on October 29, 1919 and Edith was the first district representative. The league taught women who were newly enfranchised how to carry out their newly won responsibilities and studied measures to protect women and children.²⁷

After Dr. Charlie's death (1939), Edith was honored as American Mother of the Year by the organization *American Mothers* in 1940 at age 69 (Appendix Figure 9).⁵ This award was considered one of the highest honors bestowed on a woman in the U.S. Edith's selection was said to meet with unanimous and enthusiastic approval.²⁸ In accepting the award Edith urged mothers to provide a good home for their husband and children and to maintain an interest in outside activities.²⁹ She also urged mothers of America to do for the wounded, robbed, and impoverished - overseas or at home - as they would want done for themselves.²⁷ As Mother of the Year, Edith ran the Coin-a-Meal drive sponsored by

the Golden Rule Foundation of New York. It raised funds for orphans and refugees of World War I.^{30, 27}

Edith was also the first president of the Rochester Civic League and the first to promote the organization of the YWCA in Rochester. She worked hard until the YWCA became a reality, even giving her Rochester home for its headquarters.^{31, 1} She was also associated with the County & City Maternal Health Center, financial aid of Camp Kahler and the Campfire Girls.¹

In recognition of her benefits to mankind Edith was elected membership in the National Institution of Social Sciences in 1941.¹ She was also named Outstanding Woman Pioneer by Delta Kappa Gamma, Rochester Honorary Education Society.³² On August 3, 1953 Edith's contribution to the nursing profession was recognized. A bronze statue erected by her grand-daughter Mayo Kooiman stands in the courtyard at St. Mary's Hospital in Edith's honor.⁵ The statue is the first in the United States to honor a nurse. As described by the Olmsted County Monthly Bulletin, "The statue seems to tell nurses of today that nursing is a serious business. As one studies the statue standing serenely in the golden sunlight, one sees the 'going forth' attitude of the little figure with its willing hands ever ready to serve."^{33(p13)} Dr. Charles H. Mayo II, Edith's grandson (Appendix Figure 4) added Edith's ether bottle used for home visits to Saint Marys Hospital collection in 1960.³⁴

Death

Edith Graham Mayo died at Saint Marys Hospital at age 72, July 26, 1943 after being ill since mid-April.¹

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