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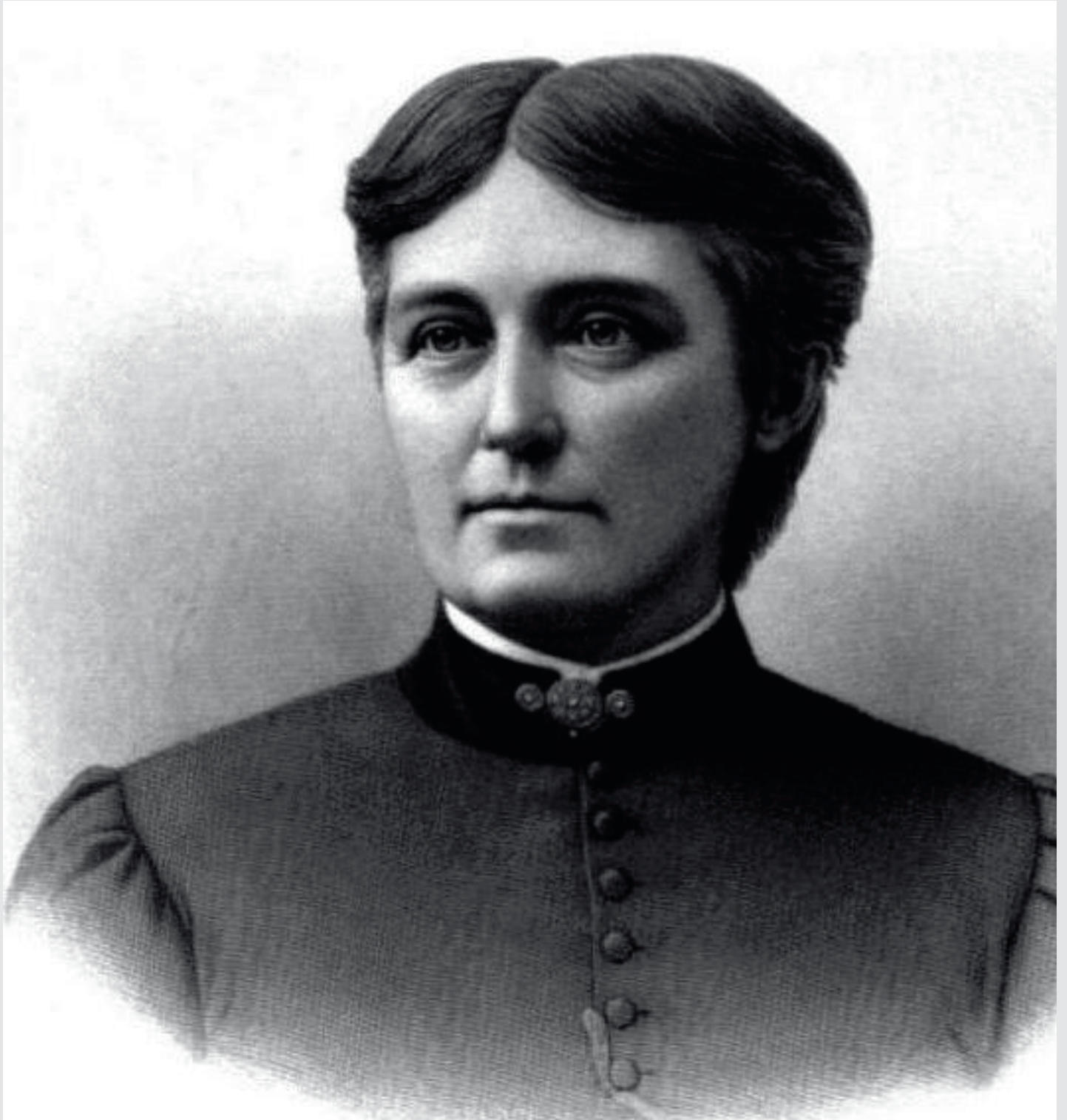
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Boston University

ACESO

Journal of the Boston University School of Medicine Historical Society
Fall 2019





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About the Cover Dr. Martha George Ripley

As many readers will know, BUSM has been training physicians for nearly two centuries, first as the New England Female Medical College from 1848 through 1873, and after that as BUSM once the NEFMC merged with Boston University in the midst of financial troubles related to the Great Boston Fire of 1872. Since then, the campus has seen and supported myriad advances in medicine, from training one of the first Native American physician licensed by the U.S. - Dr. Charles Eastman in 1890 - to Dr. Keefer's pioneering work with penicillin during World War II.

The cover of this edition of *Aceso* depicts Dr. Martha George Ripley, a BUSM alumna and a tireless advocate for social change. Obtaining her M.D. in 1883, Dr. Ripley - among other feats - founded and ran the Maternity Hospital in Minneapolis, an institution dedicated to alleviating the social as well as medical needs of its patients.

Within these pages, one can read much more about Dr. Ripley's life and work, as well as pieces on the history of medicine at BUSM, its neighborhood, as well as medical history in a more broad sense.

Join the Aceso Staff

Interested in getting involved with *Aceso*? We are actively looking for new editors and graphic designers to join our staff. We are recruiting for this upcoming semester so spread the word! Editors take part in shaping the overall direction of *Aceso* and review the articles submitted by our writers. This position requires the staff member to have excellent writing skills.

If you are interested in applying for one of these positions, please email us at aceso@bu.edu and let us know what position you are applying for.



About Aceso

This journal is named for a Greek goddess, Aceso, the daughter of Asclepius (pictured to the left) and sister of Panacea. Her name comes from the Greek word *akéomai*, which means "to heal." She represented the act of the healing process itself. Unlike the other gods, she personifies medicine from the patient's side, a process that involved both the ill and the physician. Rather than a magic cure, personified by Panacea, Aceso symbolizes a more holistic approach to health care, understanding that the path to wellness takes time and effort.

Letter from the Editors

Thank you for reading the 7th annual issue of *Aceso*, the journal of the Boston University School of Medicine's Historical Society. Within these pages, you'll find stories related to where medicine has come from, and how we got from there to where we are now. This is the main aim of *Aceso*, and we are glad you are reading.

We had an excellent time compiling and editing the collected pieces, and hope you will enjoy them as well.

Stuart Armstrong, Liam Conway-Pearson, and Brian Samuelsen
Editors-in-Chief, *Aceso*
Boston University School of Medicine Class of 2019

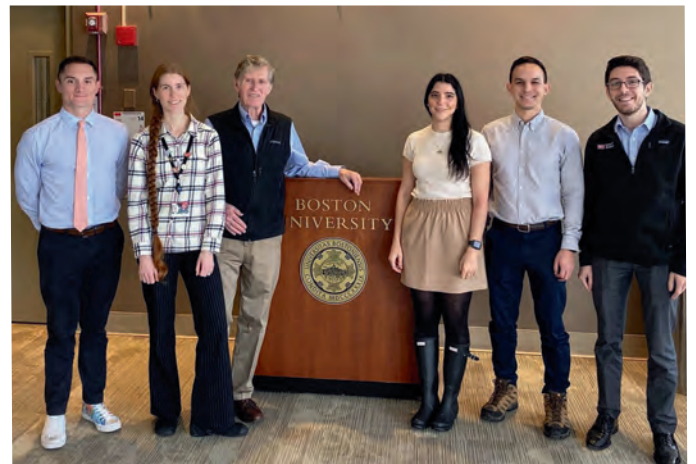


Photo of the Editorial Board 2019-2020 (left to right): Stuart Armstrong, A'Llyn Ettien MLIS, Robert Beazley MD, Andreina Giron, Brian Samuelsen, and Liam Conway-Pearson.

About the Art

Unless noted, pictures throughout this issue are from the archives of the Alumni Medical Library of Boston University School of Medicine or the Boston City Hospital collection (7020.001). Special thanks to A'Llyn Ettien and the City of Boston Archives, for allowing us to access the archives.



STERILIZING ROOM IN 1884

Dr. Martha George Ripley: A Life on the Frontier of Medicine and Social Justice



Tyler Ryan
Boston University School of Medicine
Class of 2021

Dr. Martha George Ripley was born in Lowell, Vermont on November 30, 1843. The foundation of Dr. Ripley's social consciousness formed from her family's values; her mother, Esther Ann George, was a devout Free Will Baptist who combined her faith with a "resolute concern for practical justice." Her father, Francis Rogers, was a hard-working farmer from New Hampshire. As competition from western states rapidly led to the deterioration of Vermont's farming industry in the late 1840s, the Rogers family moved to Iowa in search of financial opportunity.

Life in the West during the mid 19th century was wrought with hardship. Drought, pests, and floods led no small number of farmers into financial ruin. The Rogers family prospered, however, serving as a social hub in what would soon become Winneshiek county and sitting on its first leadership council. In congruence with her parents' progressivism and in defiance of social norms, Ripley chose not to marry at a young age. Women growing



Figure 1: Dr. Martha Ripley.

up on the frontier during the mid-19th century faced intense pressure to find a husband and tend to matters at home. Ripley instead began teaching grade school in her village, one of the few occupations available to women in rural

Iowa at the time.

It is here, at the edge of the American frontier, that Dr. Ripley embarked on her mission for social justice. In alliance with the abolitionist movement, the Rogers family operated an Underground Railroad station in a cave behind their dwelling. Ripley took to bringing food and supplies to refugees, marking her first role as both a caregiver and social



Figure 2: Dr. Martha George Ripley's diploma, generously donated to the Boston University School of Medicine by Lester and Pam Birnam in 2018.

reformer.

In 1861, the Civil War thrust abolition into the forefront of the American consciousness. Casualties mounted rapidly on the battlefield, exacerbating the dearth of medical personnel and creating an opening for women to join the wartime effort. This presented a new opportunity for Ripley, likely her first contemplation in pursuing a career in medicine. Though the Union initially permitted only male nurses, mental health activist Dorothea Dix led a march on

Washington that overturned this tradition. Women quickly formed the foundation of medical care on the battlefield, though they were compensated only \$12 per month compared to the \$20.50 afforded to their male counterparts. Unfortunately for 18-year-old Ripley, Dix set the minimum age requirement for nursing recruits to 30-years-old, and she was prohibited from joining the Union's nursing staff. Instead, she fundraised for the U.S. Sanitary Commission, the agency that managed all Union wartime medical care.

As the Civil War came to a close in 1865, the West greeted a wave of soldiers returning from war. One Union soldier in particular, William Warren Ripley of Groton, Massachusetts, settled in Winneshiek County, Iowa near the Rogers' family residence. William maintained close ties to his family's paper mill in Massachusetts, and promised to find his way home following his time in Iowa. After he and Martha wed in 1867, Martha agreed to leave her Midwestern roots behind and join him in bustling New England.

Martha and William settled in Lawrence, MA, a notable town that would transform women's labor laws through the Bread and Roses Strike some 50 years later. As William managed the family business, Martha took to caring for the sick and injured in their mill town (working conditions in Gilded-Age mills were notoriously hazardous), likely rekindling her interest in a medical career.

Martha quickly caught wind of the feminist reform movement that simmered in nearby Boston at the time. Inspired by Boston suffragettes such as Susan B. Anthony, Lucy Stone, and Henry Blackwell, Ripley kick-started her own movement in Middleton, MA. She possessed a talent for distilling ideological arguments for suffrage into everyday issues to which women could relate, and was steadfast in her determination to gain tangible outcomes for the movement. Her efforts quickly earned her appointments to the executive councils of the New England and the Massachusetts

Women's Suffrage Associations. Feminist leaders lauded her unapologetic voice above all. In a speech that challenged her colleagues at the Twelfth Annual Meeting of the Massachusetts Woman Suffrage Association, Ripley declared,

"We have been told in a popular lecture this winter, 'that the mothers are responsible if their sons go astray'! Not taking into account the responsibility of the fathers of society, the temptations of the world, or individual free will. One of our speakers, this afternoon, has told us 'that women are responsible for the sins of the men.'

Now, I have always thanked God that I was a woman, but if it is true that we are not only responsible for our own sins, but for those of our sons and husbands, why am I almost ready to say, I do not want to be a woman.

Men are called the 'protectors of women,' 'the stronger sex.' Is the stronger sex the weaker one? And if so, how can they be our protectors? Let everybody be responsible for their own sins, and not put more on the shoulders of women than belongs there. I leave the question with you, think it over and I am not afraid of your answer.

It seems to me in our meetings and arguments, we take up too much time in discussing questions that are already settled. We fight our battle over and over again. [...] What was true of woman's condition a few years ago is not true now. Woman can enter any profession she chooses and succeed if she has the ability. She can be a doctor, lawyer, or minister. And if Harvard will not open its doors to her, there are other places of learning where she can acquire the necessary knowledge."

Ripley worked with and impressed a number of prominent physician-activists from the New England Female Medical College (NEFMC) including Maria Zakrzewska – a former professor of Obstetrics and Gynecology. These alliances inspired Ripley to enroll at the NEFMC in 1880. In medical school, she carried with her the fiery voice that established her

legacy in her fight for women's suffrage. One notable example of her outspokenness in medical school occurred "during a class dissection, [when] she brandished a vertebra in front of the class insisting that this (i.e. a 'backbone') was what the faculty needed since they persisted in giving male students the best appointments, and that the time had come for women to be given equal treatment."

Just as Dr. Ripley earned her M.D. in 1883, her husband William suffered severe injuries in a paper mill accident that ended his career. With three daughters and no steady income, breadwinning responsibilities fell on Dr. Ripley. She transplanted the family to Minneapolis where William had relatives and where developing socioeconomics afforded more career opportunity and independence than Boston.

Dr. Ripley's reputation in Boston followed her to Minneapolis. In short time, the Minnesota Woman Suffrage Association appointed her as president. In this role she fought for such issues as sanitation, clean water, restrictions on food adulteration, and an end to hospital overcrowding. Later, she joined the Women's Rescue League, an organization devoted to the rehabilitation of prostitutes. She also campaigned heavily to change the age of consent from ten to eighteen, finding partial success when the legislature settled on a compromise of fourteen. Dr. Ripley would effectively meld her fight for women, the underserved, and public health together when she embarked on her most formidable feat in medicine – the creation of Maternity Hospital.

Social norms drove hospital policy during the Gilded Age; hospitals in Minneapolis and across the United States refused to admit "sinful" women who became pregnant out of wedlock. Furthermore, women with infants out of wedlock faced insurmountable stigma from their communities that often forced them to forfeit their infants.

A powerful advocate for women's health with

“no patience for the law’s delay in meting out justice,” Ripley built Maternity Hospital in 1887. The hospital’s outcomes earned it a reputation for excellence; in 1937, Maternity Hospital achieved an infant death rate of 1.35 per thousand compared to the statewide average of 4.5 per thousand. One reason for the hospital’s overwhelming success was its attention to the social factors that beset health outcomes. Indeed, Maternity Hospital was one of the first in the country to address what are



Figure 3: Maternity Hospital located at 301 Penn Avenue North in Minneapolis, MN.

commonly known today as the Social Determinants of Health.

Maternity Hospital embodied Dr. Ripley’s progressive values, providing supplemental services such as counseling and vocational training for its patients and claiming three “firsts” in Minneapolis: a social service department, parenting and natural childbirth classes, and a residence for unmarried women and their infants. The hospital functioned at the forefront of women’s health until financial troubles forced its closure in 1957. During its 80-year tenure, Maternity Hospital cared for a total of 5,200 patients and set an unprecedented standard for women’s healthcare in the United States.

A critical pillar in Dr. Ripley’s legacy is her husband and partner, William Ripley. As

Martha’s career advanced, William tended to matters at home, even driving Dr. Ripley to house calls in the dead of night. He also cared for their 3 children, no doubt a formidable task. His contributions to their partnership enabled Dr. Ripley to focus on medicine and social reform. She delicately balanced her extraordinary career with life at home despite the challenges that came with running a hospital. Her daughters remembered a mother who enjoyed poetry and cooking and could be counted on to be there when the family needed her. As was the case in Iowa, Dr. Ripley’s home became a hub for like-minded activists until her death on April 18, 1912.

Dr. Ripley thrived along many frontiers. The courage, conviction, and compassion that drove her family toward prosperity in Iowa formed the foundation for her success in Boston and Minneapolis. Though Maternity Hospital has since shut its doors, today the Ripley Memorial Foundation celebrates a fearless physician and suffragette by supporting women’s health programs across Minneapolis.

About the Author:

Tyler Ryan is a 3rd year medical student at Boston University who grew up near New Haven, Connecticut. He also attended Boston University for his B.S. in Biomedical Engineering, and he enjoys winter sports, spending time outdoors, and cooking in his spare time.

Special Thanks:

The BUSM Historical Society would like to thank Pam and Lester Birnam for generously donating Martha George Ripley’s medical

school diploma to BUSM in 2018.

Interestingly, the diploma was found as the backing for a 1913 football team photo that belonged to Lester's father from his time at Penn State. The diploma meant a great deal to Lester's mother, who happened to know Margaret Sanger (a pioneer in women's health and founder of Planned Parenthood) and who spent a great deal of her adult life in the medical field working for Margaret Sanger's son. Lester inherited the diploma from his mother and chose BUSM as the diploma's new home. This article celebrates the Birnams' generosity and Dr. Ripley's remarkable life.

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The Plague of Justinian: *Yersinia pestis* and the 6th Century Mediterranean World



Liam Conway-Pearson
Boston University School of Medicine
Class of 2020

In 476 C.E. the last Roman Emperor to rule from the Eternal City, Romulus Augustulus, was deposed by the Germanic “barbarian” Odoacer, but that didn't spell the end of the Roman Empire. Less than ten years later, the greatest of the Eastern Roman Emperors - known at that time as Petrus Sabbatius - was born a peasant in what is now Macedonia. Petrus and his successors would continue to rule over a Roman Empire until 1453. Rome's center of gravity had been shifting east for centuries by that point; the famous Pompey the Great drew his fabulous wealth from conquests in Anatolia and Syria, and Rome's first emperor, Augustus, realized that any emperor who wished to remain in power needed to hold Egypt as his personal property (which he did, thus remaining in power until his death in 14 C.E.) Rome continued to be the political epicenter of the empire, however, until the recovery from the Crisis of the Third Century. Starting with Diocletian and culminating with Constantine, the fulcrum of Roman power moved decisively eastward, settling in Constantinople (founded by Constantine in 324 C.E. on top of the much less consequential Greek settlement of Byzantium and named after himself, of

course). Over the next two hundred years, Constantinople would grow in importance and power as Rome and its western holdings faded into the background. Eastern Roman politics began to earn its reputation for duplicity, intrigue, and assassinations, as emperors like Julian the Apostate and Zeno and their dynasties rose and fell. It was on to this volatile and supremely important stage that Petrus Sabbatius stepped in the early 6th century C.E.



Figure 1: Mosaic of Emperor Justinian from Ravenna, Italy, from Wikimedia Commons.

The year 518 C.E. saw his uncle take the throne of Constantinople as Emperor Justin I,

although many historians believe that Petrus - or Flavius Justinianus, as he was known by then - had helped put him there and may have even ruled through him. Justin had also been born near modern-Macedonia, but had migrated to Constantinople to escape barbarian raids. There, he had risen to the prestigious post of the commander of the palace guard. Complex intriguing (perhaps masterminded by Flavius) led to his election as the successor the previous emperor, Anastasius, a controversial figure who had embraced the heretical branch of Christianity known as Monophysitism. By 527, after just nine years on the throne, Justin was dead and the intrepid Flavius became Emperor Justinian I. In a flurry of activity over the next decade, Justinian oversaw grandiose feats including the construction of the Hagia Sophia (which still stands today), the total overhaul of the Roman legal code, the defeat of Rome's longest-standing and most powerful rival, Persia (at that time ruled by the Zoroastrian Sassanid Dynasty), and an expansive reconquest campaign that included Africa, Spain, and even Italy. Rome itself, which had fallen into "barbarian" hands back in 476 was reconquered by Justinian's famous general and sometimes-imagined-rival, Belisarius, in 536. By 541, Justinian's dream of restoring the



Figure 2: Belisarius refusing the crown of Italy after conquering Rome, from Wikimedia Commons.

Empire to its former glory seemed near to realization. That same year, the city of Pelusium, in Egypt, witnessed the first cases of

the plague that would shatter those dreams.

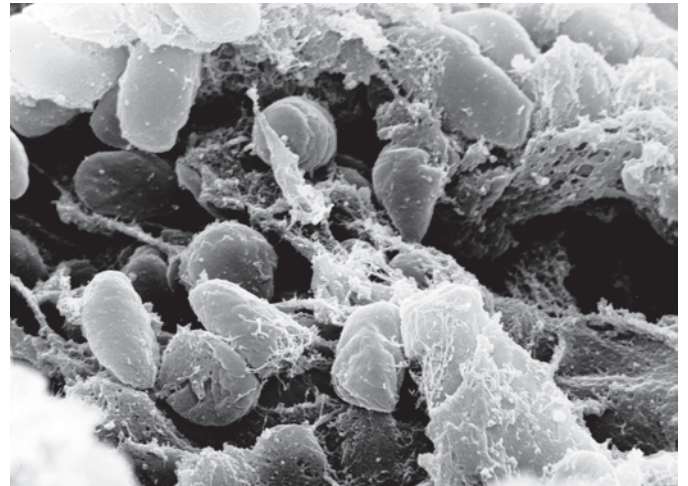


Figure 3: Scanning electron micrograph of *Yersinia pestis* in the foregut of a flea vector, courtesy of Rocky Mountain Laboratories, NIAID, NIH, Accessed from Wikimedia Commons.

The modern scientific consensus is that the subsequent Plague of Justinian was the first known pandemic of bubonic plague, although it is perhaps overshadowed in the popular historical memory by the more-famous second pandemic of the 14th century, the Black Death. The disease is caused by the bacterium *Yersinia pestis*, a tiny Gram-negative organism that lives in the digestive tracts of fleas. Specific types of flea tend to be highly picky in their choice of food, and the fleas in question lived solely on the black rat (*Rattus rattus*), a constant presence in 6th century granaries. There were several known reservoirs of *Yersinia pestis* in the ancient world, and modern genetic analysis supports the theory that the plague strain from the Central Asian Steppe was the one responsible for both Justinian's Plague and the Black Death. Before this period, rats carrying this strain of *Yersinia* lived in East Africa, but minor changes in the climate of the Mediterranean world around this time expanded their natural habitat, allowing these disease-carrying rats to make their way north into Egypt. Egypt had been the bread-basket of the Roman Empire for centuries - no doubt playing a role in Julius Caesar's decision to mediate a civil war between Cleopatra and her brother, Ptolemy, in 48 B.C.E. as well as Augustus' decision to



Figure 4: A photograph of *Rattus rattus* at the London Zoo, from Wikimedia Commons.

annex the region directly into Roman control in 30 B.C.E. after the decisive defeat of Mark Antony - and it still fed much of the Mediterranean world in 541 by way of grain shipments by sea. Stowing away aboard these grain fleets, however, were countless rats and their dangerous passengers. Now that Justinian and Belisarius had reconnected much of the old Roman World through their successful conquests, those ships had that many more ports on which to unleash their deadly cargo.



Figure 5: Image of a Roman mosaic from Veii in Italy depicting a cargo ship of the 3rd or 4th century C.E. loading an elephant (not shown), from Wikimedia Commons.

The Plague made its first appearance in the imperial capital of Constantinople the next year, in 542, and it soon spread through the city like Greek fire. The best surviving firsthand account of the effects of the disease come from Procopius in his *History of the Wars*, a historian who had risen to prominence as a legal secretary for General Belisarius. Those infected with plague, he wrote, “had a sudden

fever [...] a bubonic swelling developed [...] below the abdomen [...] inside the armpit, and in some cases also beside the ears.” The doctors of the day were completely overwhelmed as the number of cases mounted. Procopius informs us that “the disease in Byzantium [which they still sometimes called Constantinople] ran a course of four months, and its greatest virulence lasted about three.” Even Emperor Justinian himself was afflicted and nearly died, although he did eventually convalesce. Many of his subjects were less lucky, especially those living in the capital. Modern studies estimate that the mortality rate of the plague was as high as 40% for the inhabitants of Constantinople, and up to 25% throughout the rest of the empire, with a total of 100 million estimated deaths. According to Procopius, “the tale of dead reached five thousand each day, and again it even came to ten thousand and still more than that” and that “many houses became completely destitute of human inhabitants.” Death rates that high wrecked chaos on the wealthy and populous city, and it took years or even decades to recover. But *Yersinia pestis* spread much farther than Constantinople. It depopulated massive swaths of one of the empire’s most fertile and



Figure 6: 15th century painting of St. Sebastian praying for those suffering from Justinian's Plague by Josse Lieferinxe, from Wikimedia Commons.

wealthy regions and the source of most of its soldiers: Anatolia. It even made its way beyond the borders of Rome into Persia, Germania, and the former Roman province of Brittania.

It was exactly this wide spread that enabled scientists to pinpoint the cause of the outbreak. Archaeology as a science often relies on a good deal of luck, as

valuable evidence is unfortunately frequently destroyed by nature or by human beings not thinking much about the historical value of objects they hold. As a result, there has been much scientific debate over the years as to the exact pathogen responsible for the Plague of Justinian, even if Procopius' descriptions do sound a good deal like the bubonic plague. Some have even suggested that influenza virus might have been the culprit. Additionally, among those who agree with the *Yersinia* hypothesis, there has been disagreement as to whether this was the same strain that caused the Black Death or the Third Pandemic, which afflicted Qing China in the 19th century. These debates have now been largely resolved, thanks to new genetics technologies. The main proof that *Yersinia pestis* was the cause of Justinian's Plague comes from mass graves in modern-day France and Germany. One group of scientists published their genetic analysis in 2013 of the dental pulp of human remains from a graveyard in modern-day Bavaria, Germany. Radiocarbon dating provides solid evidence that these plague victims likely lived in the 6th century. They found *Yersinia pestis* was indeed



Figure 7: A Sassanid-era silver plate from the Azerbaijan Museum, from Wikimedia Commons.

responsible for the outbreak, and that this represented a separate pathogenic "jump" from rats to humans than the Black Death, although that "jump" did occur from the same Central Asian reservoir. Another group confirmed this conclusion in 2019, and additionally showed that the same strain of plague made its way as far as Spain and the British Isles.

The massive death toll of the Plague of

Justinian had a profound impact on both European and world history. It effectively reversed Justinian's attempt to revive Roman hegemony, leaving a power vacuum in Western Europe. But Rome was not the only Great Power afflicted; its old rival, the Sassanid Empire of Persia was assaulted by the bacteria soon after Constantinople, leaving



Figure 8: 15th century painting of the crowning of Charlemagne as Holy Roman Emperor by Pope Leo III in 800 C.E. by Jean Fouquet, from Wikimedia Commons.

a similar vacuum in the East. As the disease tracked along trade routes and inflicted the worst damage on dense, urban population centers, those who lived on the fringes of the 6th century world were relatively spared. In the East, the Arabian peninsula was shielded from *Yersinia's* wrath by impassable deserts. At the turn of the 7th century, the remarkable early Muslim conquests exploded into this vacuum, and soon Islam had spread throughout the Middle East and across North Africa, even replacing the ancient faith of Zoroastrianism as the dominant religion of Persia. Into the vacuum in the West poured various Germanic tribes (like the one that the previously-mentioned "barbarian" Odoacer descended from). One of the most historically significant of these groups was a Germanic ethnic group called the Franks. This group was likely from modern-Belgium, the distant frontier of the Roman World. Within two or

three centuries, the Franks expanded rapidly, conquering most of the old Roman province of Gaul as well as successfully incorporating into their realm much of what the Romans never could: Germany. In the year 800, Karl the Great (Charlemagne) - the most famous of these Franks - would himself be crowned Emperor of the Romans (otherwise known as Holy Roman Emperor) by Pope Leo III, much to the chagrin of the contemporaneous ruler in Constantinople, Empress Irene.

Much like the more famous second pandemic, the Plague of Justinian and the suffering it wrought had profound impacts on the lives of those who lived through it, as well as the history that they and their descendents created. As with any historical phenomena, it is difficult to disentangle the thread of causality, but the world would likely be a very different place were it not for the effects of this pandemic. The microscopic bacterium, *Yersinia pestis*, has molded the course of human history to a degree massively out of proportion to its tiny size.

About the Author:

Liam Conway-Pearson is a 4th Year Medical Student from Boston, MA. He completed his undergraduate degree in Biology and History at Northwestern University in 2016. He plan to complete residency in Internal Medicine, with an interest in potentially specializing in either Infectious Disease or Hematology/Oncology. He is particularly interested in Medieval European history, as well as classical history. He is also an avid consumer of history podcasts. He heavily recommends the book that inspired this article, *Justinian's Flea*, by William Rosen.

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6. St. Sebastian praying:

<https://commons.wikimedia.org/wiki/File:Plaguet03.jpg>

7. Sassanid art:

https://commons.wikimedia.org/wiki/File:Tabriz_Sasanian_Plate_2.jpg

8. Charlemagne's coronation:

https://commons.wikimedia.org/wiki/File:Sacre_de_Charlemagne.jpg

Poetry of Inclusion: Julia Ward Howe Graces BUSM's Opening Exercises



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November 5, 1873 was an important day for Boston University, witnessing the opening exercises for its new School of Medicine. Held in Wesleyan Hall (the current Wesleyan Building on Bromfield Street near Downtown Crossing), the evening event was attended by notable figures of Boston society including the Mayor and a former Governor, as well as Boston University President W. F. Warren,



Figure 1: Contemporary image of Wesleyan Building from King's Handbook of Boston.

Dean of the Medical School I. T. Talbot, and Franklin Snow, recently President of the New England Female Medical College.

The Boston University School of Medicine was founded that spring through a merger with the

25-year-old New England Female Medical College (NEFMC), in whose recently completed building BUSM

courses would be taught for the next 95 years. In keeping with the principles of its predecessor institution, as well as the egalitarian ideals of BU's abolitionist founders, the new medical school accepted women as candidates for the MD degree. This was, however, far from commonplace at the time, and the topic seems to have been much on the minds of the event's speakers, as it likely also was for those in the audience.

William F. Warren, BU President, touched on it in his opening prayer:



Figure 2: Image of original BUSM building. Note - Author Dr. Brust attended classes in this building.

"And wilt Thou bless all institutions of Christian learning in this and every land. Unbar their gates to all who covet knowledge,



Figure 3: Dr. Israel Tisdale Talbot circa 1870, from the Countway Library.

-- to all Thy children of whatever race, condition, sex." [Opening Exercises, p4]

Israel Tisdale Talbot, first BUSM Dean, continued the theme in his inaugural address, with a sense of inevitability that recognized the preceding quarter-

century during which the NEFMC had provided medical education to women:

"It is no longer a problem whether woman shall enter the medical profession; being in it, her interest, your interest, the interest of humanity, demands that her education should be thorough and complete. Accordingly she enters this school on equal terms and conditions with man. And she comes not into the University empty-handed. She brings with her the first medical school for women ever established." [Opening Exercises, p6]

A great part of the later evening was taken up by a lengthy address from Dr. William Payne, BUSM Professor of Materia Medica, offering a detailed introduction to and defense of homeopathy, the new school's guiding medical philosophy. Perhaps feeling the topic had been well enough covered by the preceding speakers, he made no reference to women's education.

Before he began, however, Julia Ward Howe, probably the most famous attendee of the evening and certainly the most notable from a modern perspective, read a poem she had written for the occasion.

Julia Ward Howe (1819-1910) was a well-known poet and a major figure in Boston literary and social circles, and was active in the social justice issues of her time, including abolitionism, pacifism, and women's rights. She was most famously the author of The Battle Hymn of the Republic, an enormously popular song in the Union during and after the Civil War and still well known today. She also wrote and published – first anonymously, and later under her own name – numerous plays, poems, and essays. On this evening in 1873 when Boston University formally opened its School of Medicine, she was serving as president of the New England Woman Suffrage Association (which she helped found) as well as the Massachusetts Woman Suffrage Association, and had written widely on women's rights [VanBurkleo and Miles].



Figure 4: Julia Ward Howe circa 1870.

Her presence at the opening exercises of this new, woman-educating medical school, the successor to a small but determined all-woman medical school, would therefore have been significant to those in the audience. Further, by making an appearance and reading a poem she had written specifically for the occasion, Howe expressed her strong support of BU's commitment to continuing the NEFMC's goal of providing a medical education to women.

The poem she read, "The Open Door," beginning with a reflection of her religious faith as it encouraged learning, clearly references opportunities for women in multiple later verses.

"The Open Door":

*The Master said: I am the Door.
The world is dark with doubt and sin,
Hidden the good that men explore,
But after Me ye enter in.*

*The ancient barriers I disown,
The distant and the dark control,
Who with one onward step have thrown
God's sunshine open to the soul.*

*Small blessing should it prove to you
If I were here to block the way,
Even should some lightened panel show
I stood between you and the day.*

*Another mystic door I know,
The entrance to this world of ours,
And she who opens it bears low
A wondrous weight of pains and powers.*

*Oh! men that plan the stately pile
Where law and learning hold their sway,
And drive with subterfuge and wile
Your mothers from the door away.*

*With pain your infant strength we rear,
Guarding the life we win with cost,
But where you build, and we draw near,
You warn us off, with empty boast.*

*Undo the doors! in God's high noon,
An equal heritage have we.
Your cold exclusion's out of tune
With Nature's hospitality.*

*Behold the portal of the skies
Unfolding to your simplest prayer.
The Saviour sits in Paradise,
And for your entrance tarries there.*

*See where the word of freedom lives
To bridge the gulf of ages o'er.
Learn how the Eternal Giver gives,
And keep, with Christ, the open door.*

[Opening Exercises, p8]

Given Howe's literary standing, it would have been a valued prize for the new school to have her compose a poem specifically for its opening, and the fact that she attended the event to read it in person gives some sense of the importance of the occasion to Howe herself.

As listed above, the poem was printed in the booklet produced to commemorate the occasion, which also includes the addresses by Drs. Warren, Talbot and Payne and Mr. Franklin, and which is a fascinating historical resource today. The poem was reprinted in partial form at various points over the next 35 years, but as far as we are able to determine (remaining always open to correction), has not previously been published again in full.

One reprint of two verses chosen to represent the School of Medicine in the 1897-98 Boston University Catalog and Circular, is of particular interest. Each school was allotted a small amount of space in this publication for some words apparently chosen to sum up its argument for why a student should wish to attend (for example, the School of Law chose, from *The Beacon*, the simple but effective quote "The best in the United States"). The School of Medicine elected to print two of Howe's verses:

*Oh! men that plan the stately pile
Where law and learning hold their sway,
And drive with subterfuge and wile
Your mothers from the door away.*

*Undo the doors! in God's high noon,
An equal heritage have we.
Your cold exclusion's out of tune*



Figure 5: Dr. William F. Warren, first president of Boston University, from 1873 to 1903.

With Nature's hospitality.

Not consecutive in the original poem, these two verses were obviously selected and printed together to highlight the school's egalitarian nature. While not coming straight out and stating "we accept women," the reference to men driving their mothers away followed by the plea to undo the doors and with Howe's name listed as the author, would have been quite clear to readers of the time, especially given that BUSM would certainly have been known nationally, and even around the world, as one of only a few medical schools to admit women.

This reputation was well-deserved: graduating classes were around 30-40% women in the late 1890s, so female students would not have been rare around the medical campus. In addition, by 1897-98, the Boston University School of Medicine had proved that it would extend "Nature's hospitality" to other underrepresented groups as well, having accepted a Native American (Ohiyesa, a Dakota Sioux who also took the name Charles Eastman, class of 1890), the man who would become the nation's first Black psychiatrist (Solomon Carter Fuller, class of 1897), and a Japanese citizen (Motokuro Kawase, already on campus as part of the class of 1899).

A shortened version of the poem (explicitly noted as being a quote of "the following stanzas" rather than the entire piece) was included in *The Woman's Journal*, a suffragist magazine that Howe founded in 1870 and edited for a number of years, in an 1899 issue celebrating Howe's 80th birthday. It consisted of six verses rather than nine, omitting stanzas 3, 6, and 8.

This abridged version appeared again in 1909 in a religious publication called *Unity*, in 1910 in a posthumous collection of Howe's poems titled *At Sunset*, and finally in 1919 (in an issue celebrating what would have been her 100th birthday) in *The Woman Citizen: The Woman's National Political Weekly*.

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The shorter form, presumably meeting the approval of Howe herself given that it ran in the magazine she founded in an issue specifically honoring her, is arguably a little 'snappier' at six verses compared to nine and therefore easier to fit into a few column inches, as well as to quickly read over. Though we can only speculate as to the precise reasoning behind which verses were cut, those excised may have been by turns perhaps a bit complicated to parse:

*Small blessing should it prove to you
If I were here to block the way,
Even should some lightened panel show
I stood between you and the day.*

(This verse, which could be summarized as saying that it doesn't do someone much good to know that knowledge exists if they aren't allowed access to it, is a sound point framed in a rather roundabout way);

A bit harsher and less conciliatory:

*With pain your infant strength we rear,
Guarding the life we win with cost,
But where you build, and we draw near,
You warn us off, with empty boast.*

(The specific reference here to mothers raising infants and to "empty boasts" is both a reminder that men wouldn't be here without women, and a sternly phrased contention that men bar women from education without any just cause – possibly more confrontational than some publications wanted to appear at the time of the later printings);

And perhaps simply unnecessary to the whole:

*Behold the portal of the skies
Unfolding to your simplest prayer.
The Saviour sits in Paradise,
And for your entrance tarries there.*

(These lines are nicely done, but arguably add nothing specific or unique to the details of the

poem, being, at least out of context, a general religious statement of a reward awaiting the faithful).

Whether in its full form, specifically composed for the opening of the BU School of Medicine, or in an abridged version that may have been more reader-friendly to later audiences, the poem is a clear and explicit call for women's equal opportunities in access to learning. It was an honor for Boston University to have a person of Howe's standing contribute to the celebratory event as the School of Medicine entered on its first year, and it offers testimony today, nearly 150 years later, to BUSM's foundational values of inclusion.

We feel it fitting that it be reprinted in full now, in BUSM's own historical journal, and hope that new audiences may enjoy the glimpse it gives us of the School's proud earliest days.

About the Authors:

James S. Brust, M.D., BUSM 1968, Associate Clinical Professor of Psychiatry at the David Geffen School of Medicine at UCLA, is a psychiatrist in private practice in San Pedro, California. Dr. Brust is an independent historian with a wide range of interests. He has been an active supporter of medical history at BUSM, lecturing on the school's history, and donating historical artifacts to the library, a number of which appear in this article. Dr. Brust has contributed to every issue of ACESO.

A'Llyn Ettien, MLIS, manages the archives at BU Alumni Medical Library, where she is the Collections Management Librarian. Her enthusiasm for the history of medicine in general, and of the BU Medical Campus in particular, is matched only by her enthusiasm for PubMed and for thorough and effective literature searches.

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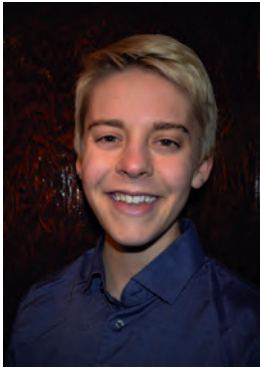
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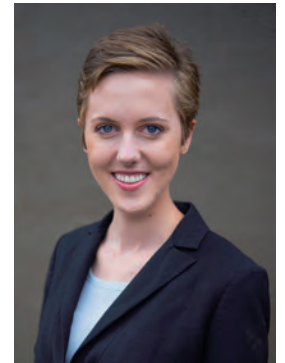
Gender Affirming Care at Boston Medical Center's Center for Transgender Medicine and Surgery: How Far We've Come



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The first documented gender affirming surgeries (GAS) known in Western research were performed in the 1910s at the Institute for Sexual Science (ISS) in Berlin, founded by Dr. Magnus Hirschfeld. Dr. Hirschfeld was a sexologist and a strong advocate for the rights of his patients to live as their identified gender regardless of the sex they were assigned at birth. Endocrinologists and other specialists at the ISS provided patients with the medical



Figure 1: Magnus Hirschfeld in 1936, from Wikimedia Commons.

and surgical treatments to do so. He argued for the validation of transexual identities as legitimate and separate from homosexuality. He coined the term “transexualism” in 1923.

Unfortunately, much of the information about the ISS and its research was destroyed by the Nazis in the 1930s. Adolf Hitler himself found

Hirschfeld threatening and exiled him from Germany.¹ Despite this loss, the notable case of Lili Elbe survived along with some details of her gender affirming care. Lili Elbe was a male-to-female (MTF) patient - though it is debated whether she was intersex - who received part of her care at the ISS including a surgical castration sometime in the 1920s -1930s.² Lili Elbe underwent multiple experimental GAS in her life, including ovarian transplantation and uterine transplantation; complications of her uterine transplantation ultimately contributed to her death three months later, in 1931.³ Elbe’s autobiography *Man into Woman*, published posthumously, documented her experiences with her many procedures.⁴ *Man into Woman* has inspired many novels; most recently, one was adapted into a movie called “*The Danish Girl*” in 2015.⁵



Figure 2: Lili Elbe in 1926, from Wikimedia Commons.

Meanwhile, in the US until the 1950s a “sex change” surgery referred to surgeries on intersex individuals - those born with developmental differences in their external genitalia that do not appear stereotypically male or female at birth. Most American



Figure 3: Christine Jorgensen in 1954, from Wikimedia Commons.

doctors in the early 1900s refused gender affirming treatments to patients unless they could prove an intersex condition. The European gender affirming approach to a “sex change” surgery hit American headlines in 1952

with the story of Christine Jorgensen when the New York Daily News ran the story “Ex-GI Becomes Blonde Beauty: Operations Transform Bronx Youth”. She received her gender affirming care in Denmark from Dr. Christian Hamburger. After this case Dr. Hamburger was overwhelmed with treatment requests from patients in the US and subsequently referred them to a doctor in the US named Dr. Henry Benjamin.⁶

Dr. Benjamin was a German-American sexologist and endocrinologist who was one of the first to advocate for GAS in the United States. He challenged the standard of care at the time which consisted of psychoanalytic therapy that attempted to change the patients desire to be another gender and questioned their gender identity.⁷ In 1966, Dr. Benjamin described how MTF gender affirming surgeries were performed, along with hormonal treatments in his book “The Transsexual Phenomenon.” He states the major three components consisted of castration, penis amputation (penectomy), and plastic surgery to create a vulva and vagina (neovaginoplasty), with the latter component

carrying the most variability. At the time the plastic surgery component to create a vagina consisted of using skin from either the body (thighs, buttocks, or back), the penile skin, or a segment of ileum. None of these techniques were perfected enough to stand out as the most successful MTF GAS approach and it was still a very controversial practice.

As for FTM (female-to-male) treatments, Dr. Benjamin did not detail the time period’s GAS procedure as thoroughly. However, he does elucidate how the climate that engulfed performing these procedures was a barrier to patients. The reluctance to perform FTM GAS came from the belief that FTM patients were far less common than MTF ones. Thus, they were far less likely to be taken seriously by the medical community. Surgeons were often reluctant to perform hysterectomies and chest reconstruction on patients deemed not fully “masculinized” in their eyes by androgen treatments.⁸

Around the same time as the publishing of Dr. Benjamin’s book a devoted clinic focused on offering GAS opened in the US at Johns Hopkins University in 1965. Yet the procedures were openly experimental and performed for research purposes.⁹ Access to GAS and treatment still lagged with only 24 out of close to 2,000 applicant requests for treatment being granted in the first two to three years of the clinic opening, almost all of which were MTF. More university affiliated hospitals and private practice physicians began to offer GAS to a select few and in 1979 the Harry Benjamin International Gender Dysphoria Association was established. It is now known as the World Professional Association for Transgender Health (WPATH) and has a regional branch in the US (USPATH).¹⁰

In the 21st century the number of GAS being performed has increased along with insurance coverage for the procedures and care for transgender patients has expanded substantially.¹¹ The Center for Transgender

Medicine and Surgery (CTMS) at Boston Medical Center (BMC) was established in 2016 under the leadership of Dr. Josh Safer as medical director, and has since welcomed Dr. Jenny Siegel as the current medical director.¹² The Trans Health Taskforce was created with BMC's Mission Office as a multi-disciplinary team tasked with working on issues impacting BMC's transgender and gender non-conforming patients and employees. It includes physicians, nurses, social workers, graduate students, faculty, various departmental managers and administrators, as well as LGBT community members. The purpose of the taskforce is "to create a gender competent environment and improve the experience for BMC's transgender and gender non-conforming patients and employees."¹³ Completed and in-progress projects include educational trainings, clinical updates, research, community outreach, and advocacy. BMC as a whole has also been named a Human Rights Campaign (HRC) Healthcare Equality Index (HEI) Leader in LGBTQ healthcare every consecutive year from 2012 to 2019. This award evaluates hospitals for policies and initiatives supporting LGBTQ patients, employees, visitors and the community.¹⁴



Figure 4: Boston Medical Center, from Wikimedia Commons.

The GAS and related clinical services offered at this time by CTMS for MTF patients includes chest reconstruction, facial feminization, orchiectomy, neovaginoplasty, pre-surgical laser hair removal, and post-

surgical pelvic floor physical therapy. For FTM patients, CTMS currently offers chest reconstruction, hysterectomy, and oophorectomy. These procedures are in high demand and performed each week in accordance with international guidelines for evidence-based care of transgender individuals. The Child and Adolescent Transgender Center for Health (CATCH) clinic, established in 2017 and led by Dr. Mandy Coles, cares for children and adolescents across the spectrum of gender identity and expression.¹⁵

Today, transgender care at CTMS expands beyond the historical focus on hormones and surgery alone; the CTMS directory includes providers in a wide breadth of disciplines, including adult, pediatric, and adolescent primary care, behavioral health, endocrinology, urology, plastic surgery, otolaryngology, obstetrics & gynecology, pelvic floor physical therapy, dermatology, and voice therapy. CTMS also has nurse liaison and a peer navigator dedicated to helping patients coordinate and advocate for their comprehensive care.

Members of CTMS at BMC have participated in local, national, and international conferences on transgender health care. Since its creation, CTMS has had a presence at First Event, one of the longest-running conferences for gender diverse individuals and providers, with both a table at the expo showcasing clinical services, clinical trials, and promotion materials and hosting multiple workshop panels, providing information and answering questions about surgical and non-surgical clinical services provided at BMC.¹⁶ Dr. Jeffrey Spiegel, an otolaryngologist specializing in facial feminization and a CTMS provider, has also given multiple presentations at First Event in recent years to both patients and provider audiences.¹⁶ CTMS's nurse liaison, Pam Klein, presented "Strategies to Expand Care for Transgender and Gender Non-conforming Persons in the US – The Role of the Academic Medical Center" at the WPATH

2018 conference and “Nursing for the Transgender Patient” at the WPATH conference in 2019.^{17,18} CTMS and its members are committed to providing up-to-date, evidence-based medical and surgical care to transgender patients, and continues to research new protocols, techniques, outcomes, and patient satisfaction.

CTMS is also working on educating medical students and residents about health care for transgender and gender non-conforming patients. Through the coordination between CTMS at BMC and BUSM, medical students for many years have been taught about topics relating to transgender medical and surgical care, barriers to care, and health disparities in this group during the first through third year didactic curriculum. In the fourth year curriculum, students have the option to take an elective in Transgender Medicine, where they are able to rotate in adult and adolescent primary care, endocrinology, surgery, behavioral health, and even the Boston Healthcare for the Homeless Project. While there are always improvements to be made, the leadership at CTMS and BUSM have demonstrated a commitment to improving medical education about these topics.

CTMS at BMC exemplifies just how far transgender health care has come since the early 1900s during which only experimental procedures existed that were offered to a select few transgender individuals who could access a small subset of specialists. In the US, transgender health care and GAS has transformed from being a front page spectacle of oddity to an integrated part of patient care in large medical institutions like BMC. Transgender health care at BMC and future provider education at BUSM have stayed true to the history and mission of both institutions in consistently providing care to this historically underserved population. BMC’s CTMS and Trans Health Task Force continue to work on improving access to quality health care for transgender patients, and expanding transgender health education at BUSM will help train the next generation of physicians to

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provide quality and welcoming care to patients of all gender identities in the future.

About the Authors:

Nat Mulkey is an MS3 who intends on going into psychiatry. During their time in school they worked on multiple LGBTQ+ advocacy projects and overall BUSM LGBTQ+ curriculum development.

Erin Carter is a 3rd-Year Medical Student at BUSM. She received a B.S. in Chemistry from Rhodes College in 2012 and a M.S. in Chemistry from Northern Arizona University in 2016. Her interests in medicine include Transgender Health, LGBTQ+ Health, Sexual Health, and Medical Education. She plans to pursue a surgical career and enjoys choral singing in her free time.

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An Elevated View



An Opinion Piece by Alison Barnet

I miss the Elevated Orange Line! It took ten minutes flat to get downtown from Northampton Station (Washington and Northampton Streets), and when it stopped running in April 1987, my world changed.

In May 1987, the MBTA opened the “new Orange Line” on the Southwest Corridor. While the T claimed it was merely “moving” the Orange Line, which sounded like a minor inconvenience, the new station was actually several blocks up Mass. Ave., leaving Washington Street and, notably, much of the black community, without a plan.

In the El’s final weeks, photographers and artists from all over the world came to document it. It was, most agreed at that late hour, a remarkable structure. The Globe magazine ran a nostalgic cover story called “The Last Ride,” with a colorful description of the El’s first run in 1901 and a photo of Northampton Station’s “exotic” copper citadels.

Someone once heard the MBTA promise that replacement service on Washington Street would be “equal to or better than” the El. “Equal to or better than” became a catch phrase for the Washington Street Corridor

Coalition (WSCC), of which I was a member. WSCC advocated for Light Rail Vehicles (LRVs) on Washington Street, a permanent form of rapid transit that would connect us directly - “one seat, one ride” - to the rest of the subway system, as the El had.



Figure 1: An image of the elevated Orange Line on Washington Street, from Wikimedia Commons.

The night before service ended forever, WSCC held a solemn wake. Wearing black, we got on and off the train at each station with a cardboard coffin labeled “The Orange Elevated Line 1901-1987.” Ministers said prayers “to acknowledge our sense of loss and give voice to our hope for an even better replacement service.”

The morning after service ended, a not so “equal to or better than” bus, the #49, began running down Washington Street. Its

downtown terminus was on Bedford St. behind the Lafayette Hotel where there were no bus shelters, no benches, and only half a sidewalk - no man's land.



Figure 2: Another shot of the elevated Orange Line, from Wikimedia Commons.

It wasn't until 2002 that the Silver Line replaced the #49. The MBTA dubbed it "Bus Rapid Transit," supposedly the latest high tech innovation in urban transportation. An unwieldy sixty-foot, "articulated," bus that made limited stops between Dudley Square and Temple Place, it was hardly an express bus and hardly a replacement for the El. Even so, the MBTA added the Silver Line to its system map as though it were a subway.

The Silver Line's inauguration was held at Dudley Square where a large group of us chanted until we were hoarse, "It's not a train, it's a BUS!" and "I'm not waiting for the BUS! I'm waiting for LIGHT RAIL!"



Figure 3: The Silver Line on Washington Street, from Wikimedia Commons.

Ever wonder why the downtown Worcester Square SL stop has no canopy, no shelter, no heat, just blue benches? A man who lived behind it at the time didn't want his view obstructed. At a fiery City Hall hearing, he displayed an 1857 drawing of a horse-drawn sleigh running past his historic Washington Street block.

No horse-drawn sleigh has ever carried so many passengers as the Silver Line. We're packed in like sardines - not just at rush hour - as we watch empty buses whiz by. The schedule board is usually wrong. So much for high tech!

I now think of the old Washington Street El as an ideal form of public transportation: no traffic, no lights, an unimpeded stretch of track, and great views of the neighborhood from on high.



Figure 4: Photo of the elevated Orange Line from Alison Barnet.

About the Author:

Alison Barnet has lived in the South End since 1964 and has been writing about it for almost as long.

Image URLs:

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An Interview with Alison Barnet

By Andreina Giron



Alison Barnet moved to Boston's South End neighborhood 55 years ago. She transferred to Boston University from Allegheny College. Barnet was born in Staten Island, growing up in rural Maryland and suburban New Jersey. She has been a South End resident since 1965 and has watched the neighborhood go through many changes. She was the founding editor of *South End News* and a reporter for *Neighborhood Network News* on Boston cable TV in the mid-eighties, receiving a Boston Fair Housing Award for her dedication. She is the author of several books, and recently published "*Once Upon a Neighborhood*," a timeline and anecdotal history of the South End of Boston.

We sat down for an interview with Alison, to talk about our beloved neighborhood and her love for its rich history.

Andreina:

How has the neighborhood changed recently?

Alison:

It has become a lot more gentrified compared to when I first moved here. It used to be a mixed group of people, many of them African American. We had block parties and a food co-op, everyone knew everybody. Many people that grew up in the neighborhood would share how it taught them to relate to people and not discriminate. And I feel over time a lot of that sense of community has been lost.

Andreina:

The South End is known for its restaurants, how was the restaurant scene 20-30 years ago?

Alison:

It was great. We loved our restaurants. There were Lebanese, Jewish style cooking, Syrian, and many other places that we loved. Café Quattro used to be a Greek restaurant. And these places used to be very cheap.

Andreina:

What do you miss the most?

Alison:

The people and how they took care of each other. There used to be great rooming houses and the landlords did a great job taking care of the houses. It was a great way for many low-income people to live. We used to have people come from Nova Scotia for work and they stayed at rooming houses. One of my friends used to pay \$25/month to live on East Newton. There was a woman called Rose Mohegan that owned a couple rooming houses in Worcester Square. One day we were talking and she told me she had to go because she had to give a roomer a haircut, and that was the kind of care people had for each other. I knew everyone and everybody knew me. And now people don't look at me, don't speak to me.

Andreina:

What was your favorite spot in the neighborhood back in the day?

Alison:

Number one was Chico's variety before it was Mike's Diner. The owner's name was Charlie and he used to talk to everyone at all times of the day.

Andreina:

How did you become interested in history?

Alison:

I had a landlady that was a nurse and served in WWI and would always talk about it. So I started to become interested in history. It was really Mary, my landlady, that got me interested in history. I visited the BU Nursing archives at the library and there was information on the agricultural fairgrounds. Boston Medical Center used to be known as City Hospital. The area where the hospital was built used to be agricultural fairgrounds with horse racing. The trustees had meetings with horses right outside their windows. If you were born at City Hospital it was the biggest pride.

Andreina:

Do you have any plans to move?

Alison:

No, I've been here for 55 years. My whole life is here.

*History of Surgery:
"A Tale of Two Gallbladders"*

**Part I:
Sir Anthony Eden**



Andreina Giron

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Dr. Robert Beazley

For many physicians, history becomes considerably more interesting when it intersects with medicine. From a political point of view, the following medical history had significant impacts on mid-20th Century geopolitics and still casts a long shadow on current world happenings. Sir Anthony Eden,

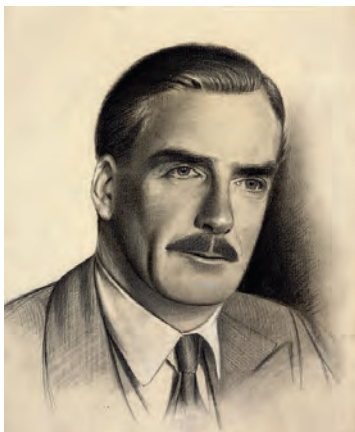


Figure 1: Drawing of Anthony Eden, from Wikimedia Commons.

the subject of this piece, succeeded Winston Churchill as Prime Minister of Britain in April 1955 at a time when many considered the British Empire to be on the wane as the Cold War was "warming up." Eden was popular and had been a Member of Parliament since 1923. Unfortunately,

Eden's tenure as Prime Minister would be short and plagued with challenges to his health.

Born in England in 1897, Eden stood out as an exceptional student from an early age. He attended the prestigious Eton College where he particularly excelled in foreign languages; it was said that as a youth his French was better than his native English. At 18, he volunteered for the British Army, serving in France during World War I. In the war, nearly one third of his Eton class died.¹ For



Figure 2: Eton College Chapel, Lupton's Tower, and School Yard from an etching by F. Buckler (c. 1814), from Wikimedia Commons.



Figure 3: A young Eden, from Google images.

his service, he was awarded the Military Cross, Britain's 3rd highest military honor. After the war he attended the University of Oxford concentrating in Persian and Arabic languages.

In 1922, Eden ran unsuccessfully for Parliament, but the

following year at the youthful age of 26 he gained a seat as a member of the Conservative Party. He gradually rose through Governmental ranks, chiefly in the Foreign Office, when in 1931 he became the Under Secretary for Foreign Affairs. Then, in 1935, he gained a Cabinet post as Foreign Secretary. At this time Fascism was consuming Germany and Italy, which greatly alarmed Eden. He quit his Cabinet post in protest of both then-Prime Minister Neville Chamberlain's



Figure 4: Prime Minister Winston Churchill and Foreign Secretary Anthony Eden in Quebec in 1943, from Wikimedia Commons.

Appeasement of Hitler and the PM's rude response to President Roosevelt's offer to mediate European tensions. His young brashness failed to pass unnoticed and in 1940, Churchill - a longtime critic of the Chamberlain government's policy towards

Hitler - became Prime Minister and appointed Eden as Secretary of War. Although Eden was Churchill's confidante and they worked closely together, Churchill would conduct most of the important negotiations with the

Allies himself.

On April 12, 1953, Eden's health challenges began when he underwent a cholecystectomy and bile duct exploration for biliary calculi. Eden had been provided the names of three

surgeons recognized as biliary experts, but opted for Mr. John Basil Hume, the surgeon who had removed his appendix many years

before. It was reported that Mr.

Hume became quite anxious before the procedure so the operation was delayed for one hour to allow him to regain his composure.² Following his surgery Eden was jaundiced with a bilirubin of 15 mg/dl and developed an external biliary fistula. A few weeks later on April 29, 1953, Mr. Guy Blackburn, who assisted at the first procedure, re-explored Eden and was unable to locate the proximal bile duct. A T-tube was placed in the distal duct, which was free of stones, and a drain was placed over the liver as well.

At this time, Dr. Richard Cattell happened to be in London, and was consulted by Eden's physician, Sir Horace Evans. Cattell, from the Lahey Clinic, was internationally recognized for his expertise in managing this type of surgical complication. Cattell recommended that Eden "could never recover without a third reconstructive procedure" at the Lahey Clinic in Boston. Churchill attempted to pressure Cattell into performing the surgery in London, but the persuasive Cattell managed to convince Eden's advisors that he needed both his own environment and team to achieve the most favorable result. "Obviously this raised considerable furor in the British press, where

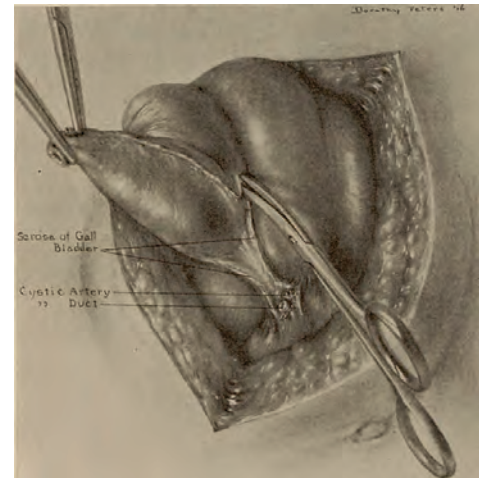


Figure 5: Interstate Medical Journal image of cholecystectomy from 1917, from Wikimedia Commons.

this proposal was considered 'a blow to the prestige of British surgery.'³

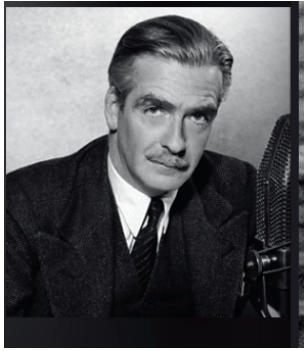


Figure 6: An older Eden, from Google Images.

Sir Anthony's third operation occurred at the New England Baptist Hospital in Boston on June 10, 1953. Dr. Richard Cattell found a spontaneous biliary-duodenal fistula - a connection that developed following the second procedure between his bile duct and duodenum - which was managed with closure of the duodenal opening. He identified a short length of proximal common hepatic duct and determined that the right and left hepatic ducts were intact and unobstructed. An anastomosis (connection) was created between the junction of the two hepatic ducts and a loop of jejunum (hepaticojejunostomy). Eden's hospital recovery was uneventful, thus enabling him to return to Britain and resume his political responsibilities. Fever and chills were reportedly observed once in 1954 and on three occasions in 1955, however.



Figure 7: The HMS Albion during the Suez Crisis in 1956, from Wikimedia Commons.

In 1954, Eden negotiated the staged withdrawal of British forces from Egypt under the Anglo-Egyptian Agreement. The troop

removal was completed on June 18, 1956. On July 26, 1956, Egyptian President Nasser surprisingly nationalized the Suez Canal, a long-time possession of the British Empire and of massive strategic importance for British naval power. Two thirds of the oil for Western Europe passed through the Canal and at that time Britain had only a six weeks supply on hand. The extremely tense situation was compounded by fears that the Russians were courting the Egyptians with proposed aid for the Aswan Dam project, an endeavor from which the United States and Britain had recently withdrawn promised funding. Eden, who had despised war since serving in the First World War, was now an experienced diplomat and embarked on a series of negotiations through the U.N. and undertook efforts to elicit pressure from European neighbors and the West.



Figure 8: Anthony Eden in Canada in 1954, from Wikimedia Commons.

Unfortunately for Eden, as he was in the middle of these negotiations, on October 5, 1956 the Prime Minister had a series of shaking chills and was hospitalized in London with a temperature of 106 degrees. He responded to medical management and was discharged on October 8 and soon returned to work. Eden, however, was under enormous stress and required sedatives for sleep and amphetamines to continue his heavy schedule. The Prime Minister and several close advisors met secretly with General Maurice Challe, Deputy Chief of Staff of the French Air Force on Sunday, October 14, hardly a week after Eden had his attack of cholangitis. Challe outlined a conspiracy between Israel and France proposing a plan for the Israelis to

invade the Sinai, quickly pushing to the Canal Zone area, at which point the French and British would intervene as “peace makers”



Figure 9: President Dwight D. Eisenhower, from Wikimedia Commons.

separating the warring parties, taking back control of the Suez Canal and removing Nassar in the process. The plan was highly contentious and doomed from the outset by the failure to notify the American government ahead of the invasion.

President Eisenhower was stunned when he found out what was taking place. A very large promised U.S. loan to the British was verbally placed in jeopardy which quickly impacted the stability of the pound. Israeli, French, and British forces ceased fire and began a withdrawal. U.N. Forces were even sent in as peace keepers. Parliament was outraged and public opinion turned against Eden.

For all practical purposes it was the end of what had been a long and stellar career for Prime Minister Sir Anthony Eden. Only a few close to Eden were aware of the depth of his illness as reflected by his fatigue. A sick and broken man, he presented his resignation to the Queen on January 9, 1957 after being advised by his doctors that his life was at stake if he continued in office. He had served in that role for just three months shy of two years.

During another trip to Boston, a fourth biliary surgical procedure was performed later in the spring on April 13, 1957, at the New England Baptist Hospital by Dr. Cattell. The biliary anastomosis was examined with the left hepatic duct being satisfactory, but a markedly stenotic (narrowed) area was discovered in the right hepatic duct. This stenotic area was

surgically dilated. Eden’s recovery was uneventful and for the next three years he was free of symptoms until 1960 when he once again began to have occasional febrile episodes. Ultimately, these episodes became more frequent and he was re-explored in March 1970 by Dr. John Braasch.⁴ The left hepatic duct was normal in size and without stricture while the right hepatic duct was difficult to locate and was strictured. In the right lobe of the liver a cystic cavity was diagnosed by hepatogram. A rubber catheter was placed trans-hepatically with one end lying in the right duct through the previous hepaticojejunostomy while the other end of the tube was brought out through the skin. The possibility of resecting the right lobe of the liver was considered, but the left lobe was enlarged (hypertrophied) and right lobe atrophied, causing the entire liver to rotate to the patient’s right making approaching the right lobe technically difficult. In addition to the patient’s age and four previous surgeries in the region, a conservative course was elected. Sir Anthony Eden was diagnosed with carcinoma of the prostate in 1975 and died in 1977 of widespread metastatic disease.



Figure 10: The Hungarian Revolution of 1956: Soviet tanks in Budapest, from Wikimedia Commons.

It is difficult to ascertain how much of Sir Anthony’s illness affected his role as Primer Minister during the Suez Canal diplomatic negotiation. What is certain is that the failed negotiations impacted British foreign relations that had lasting global consequences at the

time and still to this day. Some of these consequences are listed below:

1. The Russians invaded Hungary to put down a revolt on November 4, 1956 under the cover of the chaos of the Suez Crisis.
2. The Suez Crisis failure marked the end of "the age of Imperial Great Britain and France," hastening post-WWII decolonization, especially in Africa.
3. European powers recognized the depth and complexity of the Anglo-American relationship and realized they needed to work within Europe in order to help themselves. The European Economic Community was formed in 1958, excluding Britain until 1973. The European Union was formed in 1992.
4. The rise of Arabic pan-nationalism, which, largely failed, evolved into radical Islamic fundamentalism. Rulers of Jordan, Iraq, and Kuwait were overthrown.
5. The Strait of Tiran, closed since 1950, was reopened to Israel.
6. France left NATO and developed the Atomic bomb and subsequently may have aided the Israelis in developing their bomb.
7. Might this cholecystectomy complication not occurred if "laparotomy techniques" had been available at the time?

About the Authors:

Annie Giron is a current M.D. candidate at BUSM and a former journalist. she graduated with a degree in Journalism from Brigham Young University.

Robert Beazley, M.D., FACS is the assistant dean for student affairs and works as a professor of surgery and endocrinology at Boston University School of Medicine. Dr. Beazley enjoys mentoring and advising medical students and has particular interest in anatomy and the history of medicine. Dr. Beazley serves as the faculty advisor of the Boston University School of Medicine

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3. Eden walking in his characteristic hat:
<https://images.app.goo.gl/SdhS2TqyVybigfveA>
4. Eden with Churchill in 1943:
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5. Interstate Medical Journal cholecystectomy:
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6. An older Eden:
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7. HMS Albion:
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8. Anthony Eden in Canada in 1954:
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Part II: Mohammad Reza Shah



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Dr. Robert Beazley

At just the age of six, dressed in a military uniform, Mohammad Reza Pahlavi, who would later become the last Shah of Persia, led his father's coronation procession. Thereafter he was known as "His Highest", and expected deference from all. He was brought up in a rigid military manner in preparation for ascending to the throne. At age 12, he was made Colonel-in-Chief of the crack Pahlavi Regiment. That same year he was sent off to Switzerland to the Le Rosey School in Rolle, on the shores of Lake Geneva, having his first contact with internationals from all corners of the world. The young crown prince was exposed to Western modernity and culture, learning to speak French and English fluently, which would forever influence his socio-political views.

In August 1941, after growing concern about Nazi troop movements towards the Iranian oil fields, the British and Russians invaded Iran

and the Crown Prince's father was forced to abdicate and escape to Egypt. Foreign powers installed the Crown Prince as King, and he internalized the lessons and pledged that Iran would not be invaded again. Over the next 37 years he would modernize his country by building dams, roads, universities, schools, and hospitals. A middle class evolved as GNP soared. Land was redistributed to the



Figure 1: Mohammad Reza Shah and his second wife, Shahbanu Soraya on their wedding day in 1951, from Wikimedia Commons.

peasants. By the early 1970s, Iran was militarily one of the strongest country in the Middle East, second only to Israel.



Figure 2: From right to left, Lady Bird Johnson, Mohammad Reza Shah, President Lyndon Johnson, and Shahbanu Farah (third wife of Mohammad) in 1964, from Wikimedia Commons.

Soviets. He felt that the Islamic clerics would act as a religious barrier against communism and openly courted their favor. Unfortunately, in the end they were more concerned about Iranian societal changes including the influx of modernity and western influences as well as the rise of secularism they were witnessing. Additionally, modernization with accompanying soaring living standards raised expectations; this precipitated an flood of rural peasants into the metropolitan areas coming to participate in the "good times." Lastly, the oil economy took a significant downturn. This all took place in the background of the Shah's

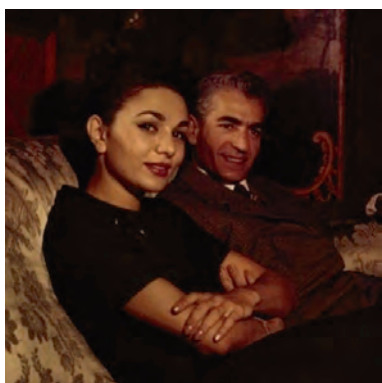


Figure 3: Mohammad Reza Shah and Shahbanu Farah in 1960, from Wikimedia Commons.

Aceso

There are numerous theories for the Shah's ultimate fall. Many assert his suspicion and paranoia colored relations with America, Britain, and the

Soviets. He felt that the Islamic clerics would act as a religious barrier against communism and openly courted their favor. Unfortunately, in the end they were more concerned about Iranian societal changes including the influx of modernity and western influences as well as the rise of secularism they were witnessing. Additionally, modernization with accompanying soaring living standards raised expectations; this precipitated an flood of rural peasants into the metropolitan areas coming to participate in the "good times." Lastly, the oil economy took a significant downturn. This all took place in the background of the Shah's deteriorating health, having a profound impact on the geopolitics of the time. Eventually the clerics joined the forces that turned the Shah out of power.

On January 15, 1979, the Shah

announced that he was taking an "extended vacation," flying to Egypt. He was quite concerned that he and his family might be hijacked so he personally piloted the Boeing 707 until they were out of Iranian air space. Unknown to nearly all of those on the Cairo bound airplane, the Shah was a very ill man. Five years before, while water- skiing he noticed a swelling in his left upper abdomen. French hematologist, Dr. Jean Bernard and his assistant Dr. Georges Flandrin were consulted. During his introduction, the Shah inquired whether Dr. Flandrin was a medical student! In addition to the splenomegaly, several enlarged cervical lymph nodes were discovered. He was diagnosed with chronic lymphocytic leukemia. The Shah's personal physicians were insistent that he be spared mention of the word "cancer" and that instead be told he had "Waldenstrom's disease." The Shah seemed satisfied and only learned his true diagnosis several years later. Dr.

Flandrin saw the Shah every five to six weeks, always secretly, until 1979, for a total of 35 personal visits each entailing a 5,000-mile round trip. A month later, on February 14, 1979, the American Embassy in Tehran was overrun and Islamic students held the American staff hostage for 6 hours, before diplomatic resolution. (This event is not to be confused with the later and more famous "Iran Hostage Crisis" that is discussed below.) This caused President Carter's open invitation to the Shah to visit the U.S. to be rescinded on the basis of the "Hostage Crisis" and concern that his arrival in the U.S. would further underscore the widely-held opinion in the Middle East that the Shah was a U.S.



Figure 4: Demonstration in Tabriz, Iran in 1978 in support of the Shah, from Wikimedia Commons.

“puppet.” On April 1, 1979, the newly-formed revolutionary government, the Islamic Republic, abolished the monarchy.

The prior scheduling of a Muslim Conference

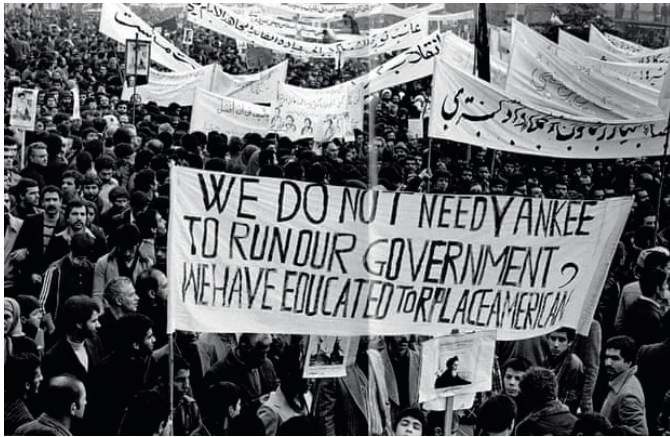


Figure 5: Revolution in Iran in 1979 and anti-American messages, from Wikimedia Commons.

in Marrakech hastened the Shah departure from Morocco, at which point, Henry Kissinger quickly arranged visas for the Bahamas. The Shah arrived in the Bahamas on March 30 but after ten weeks there he was anxious to find another shelter. Kissinger then made arrangements for him in Mexico, where he arrived on June 10 in a worsened condition. He was febrile and jaundiced and the Mexican physicians entertained a diagnosis of malaria. At this point, the Shah’s friend, David Rockefeller recommended that Dr. Benjamin Kean, of New York, see the Shah. In Mexico, Kean clinically diagnosed obstructive jaundice and asked for blood tests, which the Shah refused without the approval of Dr. Flandrin. Dr. Kean was unaware of Dr. Flandrin or the history of leukemia, and the Shah did not want to be hospitalized in Mexico yet also refused to go to the US after having been snubbed before his departure from Morocco. Dr. Flandrin came from Paris and was very concerned the Shah needed to be hospitalized. Dr. Kean flew back to Mexico and conferred with Dr. Flandrin and they eventually agreed that he should go to an American hospital. At this point Dr. Flandrin withdrew from the case after five years and many miles of travel. Eventually, the Shah agreed to go to New York after President Carter, having been informed that the Shah was extremely ill and

Aceso

required urgent treatment, conceded that the Shah be allowed to enter the country to be admitted to the New York Hospital for humanitarian reasons.

On the evening of admission, October 22nd, a CT scan demonstrated biliary obstruction secondary to stones and a massively enlarged spleen. Surgery was arranged for the 24th. The biliary tree was carefully explored endoscopically, and the common bile duct closed over a T-tube. This was followed by an operative cholangiogram, which was interpreted as normal with no stones remaining in the bile ducts. The spleen was not removed despite being enlarged because the surgical team felt that it would be a risky additional procedure particularly from the point view of infection and also that the patient had not given permission for a splenectomy.

An excised lymph node was found to be consistent with large cell lymphoma. A few days postoperatively, a T-tube cholangiogram showed a retained stone sitting just above the proximal end of the T-tube. Dr. Joachim Burhenne was summoned from Vancouver to attempt to remove it



Figure 6: Mohammad Reza Shah in the 1970s, from Wikimedia Commons.

percutaneously using a small basket passed down the T-tube-tract under radiological guidance. A several weeks delay was required for the tissues around the T-tube to mature enough to safely permit the procedure. Since the Shah was felt to be too debilitated to tolerate chemotherapy, he was transported daily across the street, by way of an underground tunnel to the adjacent Memorial Sloan Kettering Hospital for radiation treatments to his neck nodes. The transport was accomplished late at night or early in the

morning, accompanied by heavy security. Security was an utmost concern, as the new Iranian government was demanding that the Shah and the Queen be returned to Tehran for public trial. Shouting protesters were present outside New York Hospital 24 hours a day and as a precaution authorities placed black-out curtains over the windows of the Shah hospital suite. Armed security guards had even been in the operating room during surgical procedures!



Figure 7: An American protesting the Iran Hostage Crisis in 1979, from Wikimedia Commons.

In Tehran, on November 4, 1979, a large, angry mob overran the US Embassy, taking 66 American employees hostage. The Shah was anxious to leave the US in the hope that his departure might ease the hostage crisis. On November 27th, the bile duct stone was successfully removed clearing the Shah to leave the hospital with the plan to remove the spleen outside the US. On December 2nd, under the cover of fifty armed FBI agents, he left New York Hospital via the tunnel used to get his radiation and exited through a rear door of Memorial Sloan Kettering Hospital to take an Air Force plane to Lackland Air Force Base in Texas. His blood picture was worsening and the need for spleen surgery and/or chemotherapy was becoming more urgent in Dr. Kean's eyes.

The Shah was flown to the US Canal Zone on December 14, 1979. Where, when, and by whom would the splenectomy be performed became an international medical issue. Since Aceso

Panamanian physicians were providing the Shah's daily care, Dr. Flandrin was of the opinion that the procedure should be done by local surgeons in a private Panamanian Hospital. Dr. Kean opted to perform the operation at the Gorgas Hospital in the Canal Zone. He summoned Dr. Michael DeBakey from Houston and after much discussion he finally agreed to perform the procedure in the local private facility. A foreign surgeon coming to operate on the Shah upset the Panamanians, but the Shah viewed the negotiations as a "soap opera." Finally, DeBakey agreed to do the procedure in the private hospital but wanted to delay two weeks to allow a respiratory infection to clear. As DeBakey left to return home, he and Flandrin and most importantly the Shah arrived at a consensus that the procedure should be done elsewhere. While in Panama, the Shah was always in fear that he might be extradited back to Iran. The Empress, Farah, called her close friend in Cairo, Jehan Sadat, wife of President Anwar Sadat, who assured her a plane was on the way. On March 23, 1980, the Shah and his entourage headed for Cairo, the place they had started their long journey fourteen months before, on January 16, 1979.

On March 28, 1980, Dr. Michael Debakey removed a 1,190 grams spleen through a midline incision. The procedure took 80 minutes. A drain was not placed in the splenic bed. The spleen contained a large amount of tumor and the liver, which was reported to be normal at the time of the cholecystectomy, was now infiltrated with tumor. The Shah seemed to improve shortly after the procedure. The

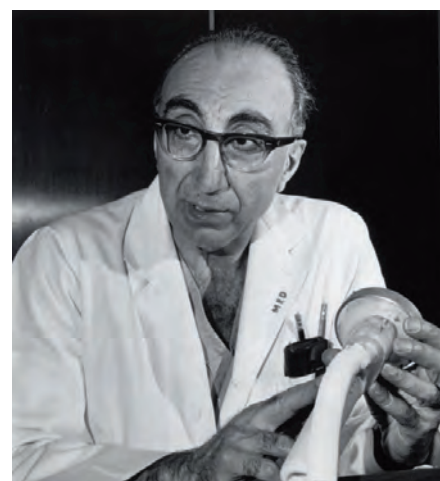


Figure 8: Dr. Michael Debakey, from Wikimedia Commons.

Empress did not want the Shah told of the operative findings but DeBakey disagreed, announcing them at a Press Conference. DeBakey was awarded the Egyptian "First Order of the Republic" before returning to Houston as the Muslim Brotherhood rioted in the streets of Cairo.



Figure 9: Anwar el-Sadat on a visit to the U.S. in 1978, from Wikimedia Commons.

Although Drs. Kean and DeBakey concurred that resumption of chemotherapy should be delayed in the immediate postoperative period, the Shah's Egyptian doctors began chemotherapy before discharge. Shortly thereafter the Shah began to have fever, left upper quadrant tenderness, nausea, and vomiting, raising the question of a subphrenic abscess. Dr. Flandrin returned to Cairo and advised that Dr. DeBakey should be notified. In the meantime the Shah's twin sister, who lived in New York City, asked Dr. Morton Coleman, the oncologist who cared for the Shah at New York Hospital, to go to Cairo and see the Shah. He agreed with Dr. Flandrin that the Shah very likely had a subphrenic abscess and that Dr. DeBakey should be notified. Dr. Kean in New York suggested that the chemotherapy be stopped and was considering coming to Cairo. Dr. DeBakey returned to Cairo, evaluated the Shah's condition and did not agree with the suspected diagnosis of subphrenic abscess, adding that his previous work and publications on this entity were "classics". He felt that the signs and symptoms were due to

the chemotherapy and proposed that the dosage be modified. Several weeks passed and Dr. Flandrin returned to Cairo at the Empress' request. Flandrin, because the Shah's condition was rapidly deteriorating, brought in surgeons from Paris, who on June 30, 1980 drained one and a half liters of pus from the Shah's abdomen, approximately three months after the splenectomy.

There was a great deal of disagreement on both sides of the Atlantic as well as among the family members about who should be in charge of the Shah's care. The question was settled by the President of Egypt, Anwar Sadat, who announced that Dr. Flandrin was the Shah's primary physician. The Shah never recovered and died on July 27, 1980. He received a state funeral and was buried in a tomb constructed of Iranian marble in Cairo's el-Rifa mosque. Happenings which can be at least partially attributed to the fall of the Shah and his illness include the following:

1. The rise of Islamic terrorism, supported by Iran.
2. Iranian societal changes were reversed, especially for women.
3. Jimmy Carter failed in his bid for a second term, in part because he allowed the Shah's humanitarian admission to the US.
4. American hostages were held for 444 days.
5. Iran became a disruptive influence in the Middle East for the next 40 years.
6. The Iran-Iraq War broke out with fighting from 1980 to 1988.
7. The stage was set for the Kuwait and Iraq Wars and for much of what has happened since.
8. Medically speaking, poor professional behavior and delays resulted in harm to the patient possibly hastened his demise.

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https://commons.wikimedia.org/wiki/File:https://commons.wikimedia.org/wiki/File:https://commons.wikimedia.org/wiki/File:Mohammad_Reza_Pahlavi_2.jpg

7. American protestor:

https://commons.wikimedia.org/wiki/File:Man_holding_sign_during_Iranian_hostage_crisis_protest,_1979.jpg

8. Dr. Michael DeBakey:

https://commons.wikimedia.org/wiki/File:Michael_E._DeBakey.jpeg

9. Egyptian President Anwar el-Sadat:

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6. Mohammad Reza Shah in the 1970s:

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