

DUCK MED

The Official Stevens Pre-Health Professionals Newsletter

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WOMAN IN HEALTHCARE: A SERIES FOR WOMEN'S HISTORY MONTH

"It is not easy to be a pioneer - but oh, is it fascinating!" - E. Blackwell

By: Faizah Chowdhury

The Blackwell family was full of exceptional individuals, including abolitionists, women's suffrage activists, female ministers, and Elizabeth Blackwell was no exception. Elizabeth Blackwell graduated from Geneva Medical College in Geneva, New York on January 23, 1849, becoming the first ever female to receive a medical degree in the United States. Dr. Blackwell was drawn to medicine after being inspired by her friend, who on her deathbed told Elizabeth that her medical care was worsened, as her doctors were only men. Before her acceptance at Geneva Medical College, students were asked to vote on whether to let her attend, and many voted to allow her in as a joke! During her time at Geneva, she was often shunned by her classmates, shut out from her classes by professors, and was the source of many complaints. But, Blackwell persisted and after earning her medical degree, she opened a clinic for the poor in New York City. She founded the New York Infirmary for Women and Children, trained nurses during the Civil War, and even opened a medical college of her own. Dr. Blackwell inspired thousands of women to join medicine, starting with her own sisters, who also attended medical school up to today. In 2017, for the first time in history, the majority of medical students enrolled in the U.S. were women, and this is all thanks to Dr. Elizabeth Blackwell, who carved the path for female representation in medicine.



FEMALE DOCTORS IN HEALTHCARE

By: Michelle Gnidash

Female physicians are incredibly valuable in healthcare settings. Aside from serving as role models for young girls who desire to pursue medicine, they may have better health outcomes for their patients. As published in Annals of Internal Medicine, studies suggest that female physicians spend more time with patients, have more patient-centered communication, show more empathy, and provide patients with more medical information. Similarly, a paper in the Journal of General Internal Medicine concluded that women are more likely to receive breast and cervical cancer screening by female physicians, who are more likely to focus on prevention. Despite the many clear benefits of having female physicians, such as better patient care and more representation and diversity in the field, female physicians earn less than their male counterparts and are less likely to be involved in leadership roles. Not surprisingly, this gap stretches even further with minority, female doctors.

COVID-19 CONTINUES TO WIDEN DISPARITIES AGAINST WOMEN

By: Joana Fardad

As over a year has passed since the start of the pandemic, pre-existing inequalities throughout the world have made people vulnerable to the catastrophic consequences brought on by the coronavirus. From major blows to public health to the economy, the pandemic has been a major factor in further widening these long-standing divides.

One of these divides is gender diversity: inequality across gender diversity and COVID-19. Frontline workers are predominantly women and since the start of the pandemic, these frontline workers have been deemed the title “essential workers” and are required to work-in person. [Research](#) shows that from healthcare (76%), social work (78%), and government and community-based services (73%), these areas in the workforce are overwhelmingly female employees. As these women-dominated industries fight against COVID-19, these women are also the most vulnerable to getting sick and spreading the virus to others.



Even though these sectors are overwhelmingly composed of women, they are the most economically vulnerable, as they comprise about 60% in low-wage occupations. When it comes to the heavy toll taken on the economy, low-paid women have very little in savings and face harder times supporting their dependents. The [Bureau and Labor Statistics](#) data revealed that in March of 2020, men and women had the same unemployment rate (4.4%); however, by the time the pandemic had shut down the majority of the economy, these discrepancies skyrocketed. Female employment reached 16.2% while men averaged around 13.5%. Though the economy is slowly improving and these gender gaps have narrowed for both genders to about 6.7% as of this December 2020, it does not make up for the significant income loss that women suffered over the 2020 year.

This gender divide does not stop here. Another notable trend broadened by the pandemic is that more mothers have stopped working than fathers. The unwritten rule that has embedded itself in society is a pattern of women tending to take on the role of the primary family caregiver. According to [Bureau of Labor Statistics](#) data, women in the labor force dropped by 2.4% between January and September 2020; however, there was only a drop of 1.9% seen in men. The gap between men and women with children was even larger. The greatest decline was seen in [research](#) conducted by Rand Corporation that stated women with two children were seen to have a 3.82% decline in the labor force, while men with two children were seen with only a 1.39% drop.

What are potential solutions to these problems? Better workplace policies would be a start. Women are more economically vulnerable and insecure when there are times of economic uncertainty, which has dramatically increased more than ever. These are mainly due to the gender and racial disparities in society. The United States is one of the few countries that does not guarantee workers paid leave for personal illness. Low-wage workers, from caregivers and those interacting with the public everyday, are least likely to have paid time off, even if it were to care for a child, ill family member, or simply to aid in stopping the spread of the coronavirus. Overwhelmingly, women are overrepresented in these low-wage jobs. Women workers now, more than ever, have become the backbone of our economy; however, disparities continue to widen. Women are still not being valued equally, so who is guaranteeing their safety?



THE STATISTICS OF WOMEN IN THE MEDICAL FIELD

By: Harshal Shah

Due to the historical treatment and discrimination against women, gender gaps have existed in the medical field. On paper, the gap has declined drastically. Last year, for the first time ever, the percentage of women medical school students was greater than that of men at 50.5%. A similar statistic was seen in biomedical Ph. D students, where the number of female and male students were nearly equal. However, the gender disparities are seen at the higher level and leadership positions. One research study found that, although women make up almost 40% of medical school faculty, “only 21% have reached the rank of full professor and only 16% of medical school deans are women.” Likewise, it was seen that less than 25% of medical directors in hospitals are women. Another major gender disparity is found in surgery. An analysis of AAMC data found that women make up less than 25% of 10 surgical specialties. Moreover, women have been known to face much greater biases and discrimination in surgical specialties compared to others. One gender disparity that is quite opposite is in nursing, where more than 90% of nurses are female. There is a need to shift the current practices and beliefs in the medical field to bridge these gender disparities and build a more equitable healthcare field.



STUDENT HIGHLIGHT

Jeel Shah

Major: Biology

Minor: Science,
Technology, &
Society

Graduating Year:
2022



“I always enjoyed learning about science and medicine and knew that I wanted to pursue a career in healthcare. I started my journey at Stevens by joining a research lab during my freshman year. Being part of a lab studying cancer in mice models was a great experience for me to apply what I learned in my core classes to practical applications. I participated in various scholarship research programs at Stevens, including CHI and Summer I&E Program, where I learned how to share and communicate my research. Due to unforeseen circumstances during the spring 2020 semester, I lost a few internship opportunities for the summer, couldn’t go back to school to conduct research, and had no clinical experience. Instead I decided to participate in the SHPC and AED E-Boards, which served as a great outlet for me to continue my interest in healthcare. I was dedicated to healthcare and applied everywhere and anywhere I could to get some type of clinical experience. I reached out to different hospitals, ambulance facilities, local town health departments, and many doctors. Thankfully, I was able to join Hoboken Volunteer Ambulance Corps as an observer and started shadowing a cardiologist in Jersey City. I became an EMT during the following semester, and now I do both online and in-person shadowing. Through my experience, I realized how important it is to have a community who is going through the same process as you, which is why I decided to start a pre-health newsletter, DuckMed. Last but not the least, my journey at Stevens has taught me many valuable lessons from lab skills to communication which are crucial for my future career in medicine. My biggest advice would be to not be shy to take a chance, and if you fail, at least you’ll know what not to do next time.”

Stevens Female Alumni in Healthcare

Teny Odaimi

Education:

University of Pennsylvania School of Dental Medicine (Class of 2025)

D.M.D. Doctor of Dental Medicine

Stevens Institute of Technology
M.S. in Management,
Certificate in Healthcare
Management & Leadership –
2021

B.E. in Biomedical
Engineering, Minor in Pure &
Applied Mathematics – 2020



“In the vast field of healthcare, I have found my niche career where I will apply my various interests, creativity and skills to patient care and wellbeing. Dentistry enhances my manual dexterity, and embraces my artistry to craft the perfect smile! In my healthcare career, I will design as an engineer, manage as a leader, and serve my patients as a dentist!”

Kristine Pederson

Education:

Salus University Pennsylvania
College of Optometry (Class of 2024)

O.D. Doctor of Optometry

Stevens Institute of Technology
(Class of 2020)

B.S. in Biology and B.A. in
Science Communication



“I entered Stevens in 2015 and graduated in 2020 with a double major in Biology and Science Communication. I am now attending Pennsylvania College of Optometry at Salus University, where I will be graduating in 2024 and potentially doing a residency afterward.

I chose healthcare because I knew I wanted a profession that would give back to my community and allow me to take care of people. I was back and forth for a while trying to narrow down what area of healthcare I wanted to go into, so I shadowed doctors in Hoboken in different healthcare fields and attended some nearby university open houses to determine what field I would thrive in. I landed on optometry because of the wide range of specialties and settings available to practicing doctors. Aside from prescribing glasses and contacts, I love the fact that optometrists can diagnose various systemic diseases and are a critical part of someone's primary care team. I look forward to seeing patients in the clinic soon and helping people on their journey to better health!”

Anne Marie Arcidiacono

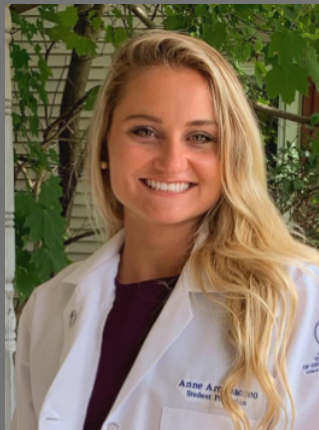
Education:

Touro College of Osteopathic
Medicine - Middletown, NY
Campus (Class of 2023)

D.O. Doctor of Osteopathic
Medicine

Stevens Institute of Technology
(Class of 2019)

B.S. in Biology, Minor in Social
Sciences



“I chose to pursue a career in medicine from my strong interest in both biological science and patient care. While I attended Stevens Institute of Technology, my passion for medicine led me to focus on science and develop my leadership abilities. At Stevens, I was challenged academically while being involved in extracurricular activities such as the Women's Varsity Swim Team, AED, SHPC, being a tutor and a peer leader, and performing research in Dr. Alluri's Lab. Additionally during my college years, I worked in the summer as an EMT and a lifeguard officer on the Jersey Shore. I responded to several life-threatening emergencies and as I helped each patient in the best way I could, the continued advancement of care was at the center of my focus. Transporting my patients in one quick ride to the hospital and never seeing them again left me feeling unfulfilled. I wanted to do more for them. This was a reminder of the potential I could have to help others and instilled in me an excitement and passion to become a physician.”

Gabriella Borodyansky

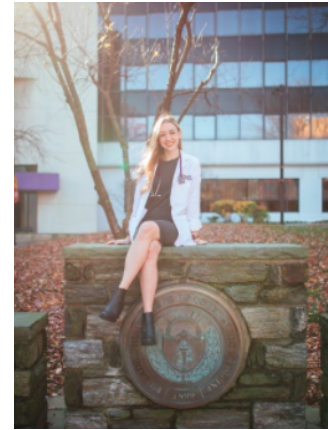
Education:

Philadelphia College of Osteopathic
Medicine (Class of 2024)

D.O. Doctor of Osteopathic
Medicine

Stevens Institute of Technology
M.S. in Bioengineering – 2020

B.E. in Biomedical Engineering
– 2019



“Medical school has shown me that healthcare isn't just vaccinations and routine checkups. It is advocacy and education, it's the opportunity to use your voice, skills, and passions to save lives on and off the operating table. I chose healthcare to help people, but my friends, teachers, and patients have helped me as much as I've helped them.

I love healthcare because I get to find new ways to improve patients' lives while learning more about my passions and skills every day!”

“No Jab, No Job”: Requiring the COVID-19 vaccine in the workplace

By: Cosette Lim



As the United States continues its vaccine distribution efforts, questions arise surrounding the ethics of mandatory vaccination. Employers now wrestle with the idea of whether employees should be required to get a COVID-19 vaccine before returning to work.

For employers, requiring the COVID-19 vaccine is both an ethical and legal concern. While many companies want to protect their workers and customers, they are threatened with the possible legal allegations from those who are not vaccinated. According to [David Samuels](#), the legal director at the employment law firm, Lewis Silkin, employers are able to establish mandates for their employees to require vaccination. However, the possible legal challenges may expose companies to allegations of discrimination, especially for those who haven't gotten a hold of the vaccine yet or have medical reasons. According to [CNN](#), some companies have begun to consider the “no jab, no job” policy, in which an employee's decision to not vaccinate may leave them out of work. A [December poll](#) conducted by the Yale Chief Executive Leadership Institute found that over 70% of current CEOs of major companies signaled consideration for vaccine requirements.

Some experts have also shown their support for mandatory vaccination. [Jennifer Miller](#), a bioethicist and professor at Yale University School of Medicine, stated that because COVID-19 is a critical health issue, the emergency-use authorization of the vaccine would justify its requirement.

The decision to require the COVID-19 vaccine in the workplace may be decided on a case-by-case basis. However, the implications of this decision are just as important as the nation's ability to distribute enough vaccines to those who are willing to take it. That, along with providing clear information to the public about the vaccine, will be crucial in returning the workplace to normal.

Tips for College Students



Dr. Sesha Alluri

Lecturer
Department of Chemistry & Chemical Biology
Stevens Institute of Technology

Inspire

Set your goals and work hard to achieve them. Never be afraid to fail. Share your enthusiasm and stay positive.

Think

Think of innovative ideas. Read literature, know what has been done in the field you are passionate about. A helpful tip to be successful in research -Think before you do!

Learn

Create your own study tools for learning, be it flash cards, study notes or working with friends. Find out what works best for you.

COVID-19 Vaccination Info.

By: Jeel Shah

Comparison of the FDA approved COVID-19 Vaccines for Emergency Use			
Vaccine Name	Moderna	Pfizer-BioNTech	Janssen (Johnson & Johnson)
Number of doses	2	2	1
Amount in each dose	0.5 mL	0.3 mL	0.5 mL
Days apart between doses	28 - 42 days (preferably 28 days)	21 - 42 days (preferably 21 days)	N/A
Type of vaccine	mRNA	mRNA	Viral vector*
Age group	18 years and older	16 years and older	18 years and older
Administration	Intramuscular on upper arm	Intramuscular on upper arm	Intramuscular on upper arm
Effectiveness	94.1%	95%	66.3% efficacy**

*Viral vector - stabilized spike protein is packaged in adenovirus for delivering the protein.

**Efficacy = under experimental controlled conditions; Janssen vaccine has shown high efficacy in preventing hospitalizations and death in those that got sick. Studies suggest that the vaccine might also provide protection against asymptomatic infection.

Links for [Moderna](#), [Pfizer-BioNTech](#), and [Janssen \(Johnson & Johnson\)](#)

Important considerations for all three vaccines:

- Contraindications for all three vaccines:
 - Severe allergic reaction (i.e. anaphylaxis) to components of vaccines or previous dose
 - Immediate allergic reaction to the vaccine or component of the vaccine
- Common side effects:
 - Redness, swelling, and pain at the injection site
 - Fever, chills, muscle aches, fatigue, nausea, and tiredness throughout the body
- If you started a vaccine series (such as Moderna), do not take the second vaccine from a different series (such as Pfizer-BioNTech).
- If you received an antibody therapy for COVID-19, avoid taking the vaccine at least 90 days after the therapy.
- The COVID-19 vaccine must be administered at least 14 days after receiving a different vaccine.

Mental Health

Zoom fatigue: Its impact on mental health and academic performance

By: Leigha Tierney

With classes, extracurricular activities, and many jobs being moved online due to the COVID-19 pandemic, Zoom has become the default tool for communicating while social distancing. However, many have since experienced the phenomenon of “Zoom fatigue”, a feeling of mental exhaustion from frequently using Zoom. There are a variety of reasons why many feel so drained after using Zoom for school or work. One of the main reasons is that video calling requires more focus and effort than communicating face-to-face. It is often more difficult to process non-verbal cues such as body language, facial expressions, and tone of voice, which help the flow of conversation in person. Similarly, even millisecond delays in video and sound can make it more difficult for the brain to process social signals. Using cameras during video calls can also add to the mental load of Zoom meetings, as it may feel draining to constantly be in view of your peers.

While Zoom is not likely to die out as long as the pandemic continues, there are some methods to mitigating Zoom fatigue. One approach is to try avoiding distractions and multitasking during Zoom sessions. While it can be easy to open other computer tabs or use your phone unnoticed on video calls, it has been shown that multitasking can diminish focus and productivity. It could be helpful to put your phone away during Zoom meetings or take notes with a notebook during Zoom lectures. Another helpful practice is to try putting Zoom in speaker mode so that you are only looking at the video of whoever is speaking. It can be unnerving to look at every participant at the same time while also looking at your own video, so setting Zoom to speaker mode may make the conversation feel more natural. Taking breaks during Zoom meetings can also be effective in lessening Zoom fatigue. Turning off your camera for a minute to stretch or get a drink of water can be a beneficial mental break.

COVID-19 Updates

What is double masking and why is it important?

By: Jeel Shah

With the rise of new variants of SARS-CoV-2 that increase transmissibility, it is important to maintain proper masking practices to prevent the spread of the virus. Double masking is a new term brought to attention recently, and it simply means having two layers in your mask routine. There is a wide range of double mask practices. The ideal double mask practice is to wear a disposable mask (or a surgical mask) and a single layer cloth mask over it to provide a tighter seal. The reason why it is important to have a tight seal in the mask is because droplets and particles can leak through your mask and to others and vice versa. If one chooses to wear a cloth mask only, the CDC recommends the cloth mask to have two or more layers. To add an extra layer of protection, one can also add a coffee filter in the pocket of the mask to further prevent the transmission of particles to other people. There are a wide range of examples demonstrating proper mask practices, including double masking, tying a knot in larger masks, using a nose wire, etc., to further minimize the spread of respiratory droplets. It might be a difficult adjustment at first, however, testing it out in short intervals at home and wearing the masks that provide the most comfort will help with adjusting to this new technique. Double masking is important, but not every double-layer mask combination is appropriate for preventive measures. Therefore, check out the CDC website for appropriate combinations.

Community

Suffragists Vs. New Jersey

By: Faizah Chowdhury

In the first New Jersey Constitution created in 1776, women were allowed to vote; however, in 1807, this right was taken away, and instead voting was allowed for only “free, white males.” Little did the state legislature know, the women of New Jersey would put up a strong fight until the right to vote was returned. The suffrage movement began on an individual level: In 1857, Lucy Stone protested the right to vote and gain property rights by refusing to pay her property taxes on a home she purchased in Orange, NJ, claiming “taxation without representation.” In 1867, Antoinette Brown Blackwell of Elizabeth, NJ and Lucy Stone created the New Jersey Woman Suffrage Association (NJWSA) and held the organization’s first convention. After Black men gained the right to vote in 1869 in the 15th amendment, the fight put up by women for the same right was put in high gear, with the founding of the American Woman Suffrage Association and the National Woman Suffrage Association. The increased protests and organization of women began showing small, yet meaningful victories, with women being allowed to serve as school trustees, to being able to vote in New Jersey School elections in 1887. However, this was superseded by the Supreme Court in 1894, which ruled it unconstitutional for women to vote. In 1896, the National Association of Colored Women was formed, further adding power to the fight for women’s suffrage.

The 19th Amendment was passed in the United States in 1920, and the suffrage amendment was ratified in New Jersey, making it the 29th state to allow women to vote. While voting became legal for women across the United States of America, many struggles of voter suppression remained. For example, many women, especially Black women, were often wrongly told by elected officials that they were in the wrong voting place, did not possess proper literary skills required to vote, or filled out their application incorrectly. For over a hundred years, women did not have a voice by voting, and the determination and persistence of the New Jersey women who fought for this right have brought us where we are today. Thanks to them, all women in the United States can freely express themselves by voting every Election Day!

UPCOMING EVENTS

Additional:

If you are interested in running for an E-Board position for AED or SHPC, please fill out the following Google Form for nominations by Thurs. March 18! Don't be shy to nominate yourself!



Student Health Professions Club

- Elections on March 25th @ 5pm
- Nominations form



Alpha Epsilon Delta

- Elections on March 24th @ 3pm
- Nominations form

“Have any healthcare related topics you are interested in or passionate about?”

If you want to submit a piece for our next newsletter or if you know of a student who deserves a shout out in our Student Highlight, please contact us at duckmedicine@gmail.com!

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