2020 Annual Report

DIMER

Delaware Institute of Medical Education and Research

Medical Education
for Delawareans

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Board members are subject to serve three (3) year terms or until reappointment by the representing organization.
Contact DHCC@delaware.gov or (302) 255-4751 for details about appointments and/or vacancies.

Mission Statement

DIMER is reimagining medical education for Delawareans: creating opportunity and improving health for all Delawareans. The DIMER mission is to create opportunities for high-quality medical education for all Delawareans. In collaboration with our partners, we serve the current and future healthcare workforce needs of Delaware through innovation and inclusion.

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Delaware Institute for Medical Education and Research

Executive Summary

History and Background

The Delaware Institute of Medical Education and Research (DIMER) was founded in 1969, as an alternative to an in-state medical school, to address the concern of access to high-quality medical education for Delaware residents. Upon creation, DIMER formalized a relationship with Thomas Jefferson University for 20 admission slots for Delawareans at Jefferson Medical College (now Sidney Kimmel Medical College (SKMC)). In 2000, DIMER expanded its education relationships to also include the Philadelphia College of Osteopathic Medicine (PCOM), further increasing access to medical education for Delawareans. Upon creation, PCOM held five admission slots for qualified Delaware applicants and in 2019, the number of admission slots was increased to 10. DIMER is incredibly grateful to both institutions, who accept qualified Delawareans into their respective medical education programs and provide the highest quality training to future physicians.

The DIMER Advantage

Of the 151 medical schools listed by the AAMC, 120 have more in-state students than out of state students. As a state with no medical school, this would ordinarily present a disadvantage for Delaware residents seeking medical education and future careers in medical professions. However, through its relationships with SKMC and PCOM, Delaware has secured a minimum number of slots for qualified Delaware applicants. On annual average, SKMC and PCOM each receive an estimated 10,000 applications for ultimately no more than 280 slots per respective institution. As a DIMER applicant, Delaware resident applications are pulled from the overall 10,000 applications received and evaluated against Delaware applicants. This significantly improves the odds, to being one of ultimately 30 or more slots out of approximately 90-100 Delaware applicants. DIMER therefore provides one of the best medical education admission advantages in the country for qualified applicants from the First State.

Delaware Branch Campus and Residency

DIMER is not only focused on providing medical education opportunities for Delawareans but also on the retention of Delaware physicians to serve our communities. DIMER's relationships extend beyond its education partners and into Delaware's health systems and Delaware Health Sciences Alliance (DHSA) partners. DIMER Medical students at SKMC and PCOM have an opportunity to conduct their third- and fourth-year rotations at the Delaware Branch Campus. The Delaware Branch Campus provides medical students clinical training at ChristianaCare, Nemours/A.I. Dupont Hospital for Children and the Wilmington VA Medical Center. In addition, PCOM clinical rotations also include Bayhealth's Kent and Sussex Campuses. Due to the global pandemic, clinical rotations for medical students at the branch campuses were reimagined. At the start of the pandemic in March 2020, students were pulled back to their medical education institutions for virtual learning. Clinical rotations were reimagined with ongoing virtual learning and conferences to ensure social distancing, as well as offering student opportunities to support telehealth practices. All of Delaware's Branch Campuses welcomed students back on site in June 2020.

The opportunities for residency training in Delaware are numerous and expanding. ChristianaCare and Nemours / AI Dupont Hospital for Children offer an array of residency opportunities. Delaware residency match opportunities are not limited to Delaware Branch Campus partners as St. Francis also has a residency program and Bayhealth will launch its family medicine and internal medicine residency programs in 2021 with a general surgery residency program anticipated in 2022. Beebe Healthcare is also currently planning for a launch of its family medicine residency program in 2023. Recruitment and retention of Delaware physicians is enhanced with the increased opportunities for Delawareans to complete their medical training and serve their community in their home state.

Abstract Data

The incoming class of 2020 represents the largest entering class in DIMER's history with 47 students matriculating. DIMER's medical education partners have again exceeded their commitments, with SKMC matriculating 23 students and PCOM matriculating 24 students. As noted in the DIMER 50th Anniversary Report, 38% of all time DIMER students were female. However, the entering class of 2020 is comprised of 51% female students.

The graduating class of 2020 also represented the largest graduating class in DIMER's history, with 41 new physicians entering residency. For those Delaware medical students who graduated from SKMC and PCOM in 2020, 21 went into primary care and 20 entered specialty training.

DIMER Board Activity for 2020

The DIMER Board remained active in 2020 despite the COVID-19 pandemic. The Board of Directors held virtual meetings and met three times over the course of the year. There was broad Board participation on the DHSA-facilitated outreach events for prospective DIMER students in each of Delaware's three counties.

The DIMER Board continues to recognize the high cost for medical education and enormous debt students face upon graduation. As 2020 presented the dire importance and need for health care professionals, the DIMER Board continues to advocate and work closely with the Heath Care Commission, Delaware Legislators, and partners such as the Delaware Health Sciences Alliance, in support of a robust Delaware Student Loan Repayment Program. This would provide for increased participation and funding support for those physicians with Primary Care focused specialties, serving geographic areas of need throughout the State of Delaware.

Delaware Institute for Medical Education and Research
Executive Summary, continued

The foundation for which DIMER's success is built upon is its relationships. DIMER's key relationships include its educational and clinical partners as well as with students, alumni and prospective students, families and alumni. Through its contractual partnership with the Delaware Health Sciences Alliance, DIMER implemented a robust virtual strategy for engagement with DIMER students, alumni, and the general community in the midst of a global pandemic.

DIMER has a rich tradition of extending its activities beyond its mission to ensure access to quality medical education for Delaware residents. DIMER and its partners are committed to providing a network of support for its students and engage students throughout the academic year in a variety of ways. In collaboration with DHSA, DIMER provided personal letters to each student at the beginning of the academic year; co-hosted virtual receptions with PCOM and SKMC for DIMER students to network with DIMER and institutional leadership; and conducted virtual awareness events in every county with prospective students and families to discuss the many benefits of DIMER.

Conclusion

The DIMER program continues to represent an incredible value for Delawareans' medical education. The full annual report contains detailed information on the demographics and data relative to DIMER's 2020 incoming and graduating classes, as well as personal stories from state and institution leadership, including several DIMER alumni. DIMER's approach to partnering with the Alliance, health systems and others has resulted in a robust array of services intended to facilitate Delawareans' pathway to medical school and improved chances of returning to Delaware to practice needed specialties in their home communities. There remain important areas of needed investment such as more robust student financial support. We are confident that with the support of the State and our many partners, we can improve healthcare access for our communities with the best-trained medical workforce anywhere. We are grateful to all who have supported DIMER over its 50-year plus history and look forward to even greater achievements in the future.

Molly Magarik, MS
Secretary of the Delaware Department of Health and Social Services

It is critical for Delaware, one of only four states without its own medical school of any kind, that the Delaware Institute of Medical Education and Research (DIMER) program succeeds in its mission to ensure Delaware's future doctors are both educated and return to our state to work.

Our state needs more doctors, especially primary care doctors. As the Cabinet Secretary for Delaware's Department of Health and Social Services, I see that need becoming even greater as our state's older population continues to grow.

Over the past year, that need for doctors has grown more evident as we've battled an ongoing COVID-19 pandemic that has taken a toll on our older residents and those with underlying health conditions while stretching thin our health care team.

The DIMER program, founded in 1969 as an alternative to a state-supported medical school, offers qualified residents of Delaware the opportunity to receive a quality medical education at nearby medical schools. The ultimate goal is to improve health care access for our communities with the best-trained medical workforce anywhere.

The program currently sets aside 20 admission slots for Delaware residents to attend Sidney Kimmel Medical College of Thomas Jefferson University in Philadelphia, and 10 admission spots for Delawareans at Philadelphia College of Osteopathic Medicine (PCOM).

Since 2012, both schools have accepted more students than they committed to accept and the acceptance rate for Delawareans was much higher at both than that for non-Delawareans. That's good for Delaware and good for the health of Delawareans.

DIMER is not only achieving its objective of enabling access to medical school for qualified Delaware residents, with many of those graduating returning to practice in Delaware. At least a third return to Delaware with programs underway involving Delaware hospitals and universities to build on this strong return rate.

I know it is important for us to do everything we can to help the DIMER program succeed in getting more locally-educated doctors to live and work in Delaware, and to help us improve the overall health of Delawareans.

Part of the future of the health care system in Delaware – the future health of our residents – is tied to the success of the DIMER program. On behalf of all of us at the Department of Health and Social Services, I wish you continued success.

Welcome

Nancy Fan, MD, Chair
Delaware Health Care Commission

Last year, the Delaware Medical Institute for Education and Research celebrated 50 years of success in providing the students of Delaware with opportunities to obtain a medical education, despite not having an in state medical school. At the Delaware Health Care Commission, we looked forward to 2020 as the start of a second half-century of collaboration with DIMER to increase these opportunities and continued growth for the DIMER program, striving to increase interest in our students at all levels in the health care profession as well as enhance the health care workforce in Delaware. However, with the COVID pandemic, all organizations, especially those related to healthcare, had to pivot to adjust not only their goals, but their tools to sustain their work to achieve the goals. The delivery of health care itself became a challenge, as providers at all levels, from physicians in practice to health care systems, quickly embraced innovative technology with curbside "visits" and telehealth to provide quality and accessible care for their patients. While the pandemic has highlighted the resilience and dedication of our health care workforce in Delaware, it has also highlighted the deficiencies of our professional workforce, where there is greater attrition than growth, especially in primary care, the foundational cornerstone of an effective health care delivery system. Addressing these deficiencies has accelerated the work of the Primary Care Reform Collaborative and the newly developed Workforce Development Subcommittee, both of which, like DIMER, are actively supported by DHCC. The Workforce Development Subcommittee will look more broadly at the workforce needs across the entire health care delivery system and establish data-driven policy, which will not just meet current deficiencies but also establish pathways for long term sustainability.

DHCC continues to support DIMER's role as an essential "leg" to increase that workforce growth. As Chair of DHCC, I applaud DIMER's efforts to effectively shift into a "virtual" world for both the students who are currently in enrolled at Sidney Kimmel Medical College and the Philadelphia College of Osteopathic Medicine but also in reaching out to possible future medical students, whether currently enrolled in college or in high school. DIMER also continues to be an anchor for DIMER students and a reminder of their possible future role in health care delivery in Delaware, whether it was through the Branch rotation campuses at Christianacare, Nemours and now Bayhealth, or through the DHSA Delaware Career Day. The success of these programs will hopefully be reflected in an increase in the number of DIMER students who return to practice in Delaware. However, DHCC recognizes again that there needs to be complementary tools to attract and maintain a greater number of physicians who want to practice in Delaware, especially in primary care. We, along with DIMER, will continue to advocate for a state-sponsored Health Care Professional Repayment Loan Program, as well as explore initiatives which may interest and attract students of diversity from all areas of Delaware, especially Southern Delaware. Growing and maintaining our professional workforce will continue to be a mainstay goal for the DHCC every year, as we strive in our mission to provide quality, affordable and accessible care for all Delawareans.

The Delaware General Assembly created the Delaware Health Care Commission in June of 1990 to develop a pathway to basic, affordable health care for all Delawareans.

The Delaware Health Care Commission embodies the public/private efforts which have traditionally spelled success for problem solving in Delaware. The Commission consists of 11 members, 5 of whom are appointed by the Governor, 1 appointed by the President Pro Tempore of the State Senate, and 1 appointed by the Speaker of the House of Representatives. Of the 5 members appointed by the Governor, at least 1 member shall be a resident of each county. The Insurance Commissioner, the Secretary of Finance, the Secretary of Health and Social Services, and the Secretary of Services for Children, Youth and Their Families or their designees shall serve as ex officio members of the Commission.

By creating the Commission as a policy-setting body, the General Assembly gave it a unique position in State Government. It is intended to allow creative thinking outside the usual confines of conducting day-to-day state business. The Commission is expressly authorized to conduct pilot projects to test methods for catalyzing private-sector activities that will help the state meet its health care needs. To achieve its goals, the Commission strives to balance various viewpoints and perspectives.

In 1996, the Commission assumed administrative responsibility for the Delaware Institute of Medical Education and Research, which serves as an advisory board to the Commission. Placing the administration of DIMER within the Commission enhanced its ability to accomplish its primary goal of providing Delaware residents greater opportunity for a medical education, while also expanding its mission to help the state meet its broader health care needs.

The Commission strives to balance access, quality and cost concerns, and develop recommendations that represent the best policy for the most Delawareans.

Welcome

Sherman L. Townsend, Chair
DIMER Board of Directors

First, I would like to thank all who have and will choose healthcare as their profession. 2020 was clearly a year that took all our dedicated providers within the broad spectrum of healthcare to new physical, emotional, and mental limits. We thank them and their families.

This year was DIMER's largest class of first year students at our two partner institutions; Sidney Kimmel Medical College at Thomas Jefferson University (SKMC) and Philadelphia College of Osteopathic Medicine (PCOM). In addition, 2020 provided our largest graduating class to date with 41 new physicians from Delaware.

DIMER's two primary goals are to provide educational opportunities for our Delaware students and to address the current and projected shortage of primary care physicians. I am pleased to share that this year's graduating class of 41 included 21 for whom have chosen primary care. Many of these graduating physicians will also complete their residency training here in Delaware.

As for the future, applications from medical students are up 18% nationally and Delaware applications are following that trend. It is being called the "Fauci" effect, clearly bringing healthcare to the forefront for our students.

The success of the Delaware Branch Campus Program at ChristianaCare is significantly increasing the number of residency students from our program. Special thanks to Dr. Maxwell and Dr. Jasani for their leadership and service to DIMER and those programs. In addition, Bayhealth has created a branch campus as well for student clinical rotations and will be starting their residency programs in 2021. Beebe Healthcare has also indicated they are building their educational program and plan to start residency opportunities in 2023. These programs should provide a boost to training and recruitment in primary care in Kent and Sussex Counties.

As stated in the DIMER 50th Anniversary Report, we are hopeful for the creation of a student loan repayment plan for primary care providers in underserved areas in Delaware. Our Governor and legislators are currently discussing funding and creation of the program. This program will provide needed incentive for students to choose primary care and practice in underserved areas in Delaware.

DIMER's partnership with the Delaware Health Sciences Alliance (DHSA|www.dhsa.org) continues to grow and allows DIMER to expand our outreach to our potential students who are Delaware high school and undergraduate students considering medical education. Over the year, DHSA sponsored many outreach events with our current students as well as held virtual events in all three counties to inform the community of educational opportunities through DIMER.

We continue to strengthen our retention of Delaware's finest physicians and are excited about the expansion of residency programs throughout the State. Our thanks to the Delaware Health Care Commission and our state leaders for their ongoing support of DIMER.

Sincerely,

Sherman Townsend
DIMER Board Chair

**DHSA member organizations: ChristianaCare, Nemours/AI duPont Hospital for Children, Thomas Jefferson University, University of Delaware, Bayhealth, Delaware Academy of Medicine/Delaware Public Health Association, Philadelphia College of Osteopathic Medicine.*

Why DIMER Today?

Omar A. Khan, MD, MHS
President and CEO,
Delaware Health Sciences Alliance

On behalf of the Board of the Delaware Health Sciences Alliance (DHSA), we are thrilled to introduce the DIMER 2020 Annual Report.

As a Delawarean, I am pleased and proud to support the DHSA's efforts to maximize the impact of DIMER on health throughout the First State. This includes recruitment of highly qualified Delawareans and providing them opportunities for medical school through 2 outstanding DHSA member institutions- Sidney Kimmel Medical College (Thomas Jefferson University) and the Philadelphia College of Osteopathic Medicine (PCOM).

When the Alliance was formed over 10 years ago, the mission of collaboration was primarily health sciences research. We are now firmly embedded in not only the highest-quality multi-institution research projects (such as ACCEl-CTR and DE-INBRE) but with Delaware's medical education program. The partners of DHSA- ChristianaCare, Nemours, Thomas Jefferson University, Philadelphia College of Osteopathic Medicine, University of Delaware, Bayhealth, and the Delaware Academy of Medicine/ Delaware Public Health Association- are collectively committed to the highest quality medical and health sciences education and programs for Delaware's benefit.

As an alternative to a state-based medical school, the 'Delaware Medical School' is in fact the DIMER Program (which provides for enhanced admission to qualified Delawareans) + the Branch Campus model (wherein students from SKMC and PCOM can carry out their entire 3rd and 4th year of medical school at a Delaware health system).

We remain incredibly proud of our partnership with DIMER to help make this happen. The DIMER Board, led by Mr. Sherman Townsend, works tirelessly to advance opportunities for Delawareans. I encourage you all to keep up on all our great programs through the highlights in this Annual Report, and via our website (www.dhsa.org).

Please keep sending us your ideas and thoughts on how you would like the work of DIMER and DHSA to be reflected in future iterations.

We want to acknowledge the leadership of the DHSA institutional leadership in supporting our DIMER partnership: Dr. Janice Nevin (ChristianaCare), Dr. Steve Klasko (Thomas Jefferson University), Dr. Dennis Assanis (University of Delaware), Mr. Mark Mumford (Nemours), Dr. Jay Feldstein (PCOM), Mr. Terry Murphy (Bayhealth).

This report benefited greatly from the overall guidance and attention to detail provided by Ms. Pamela Gardner, DHSA Program Manager. The design and technology expertise of Mr. Timothy Gibbs, Executive Director of the Delaware Academy of Medicine/Delaware Public Health Association, is also sincerely appreciated.

It is a joy to work with our partners at DIMER, the Delaware Health Care Commission, and the State of Delaware. Together, we are making Delaware a healthier place for us all.

Sincerely,

Omar Khan MD MHS FAAFP
President & CEO
Delaware Health Sciences Alliance
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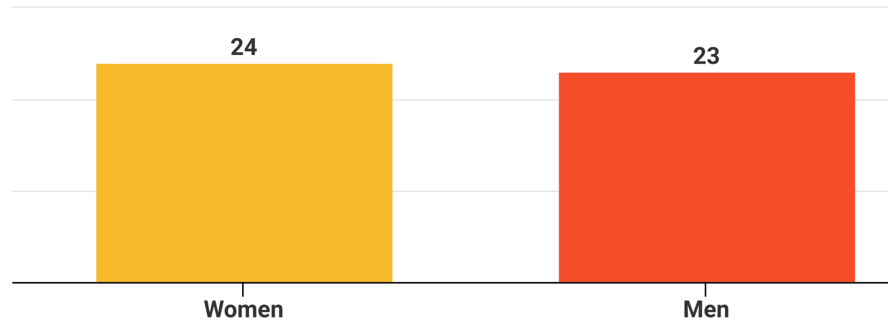
Facebook: @delawarehsa
Twitter: DHSAHealth
Instagram: delawarehealthsciencesalliance
Linkedin: www.linkedin.com/company/dhsa

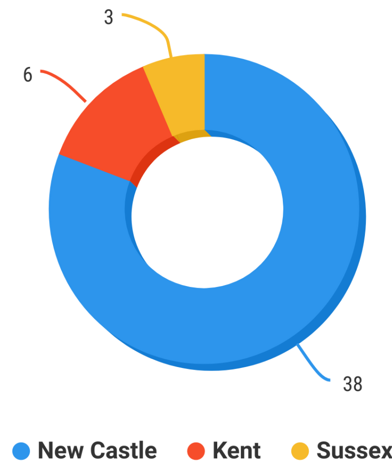
DIMER Matriculating Class 2020

By the numbers for the largest class to date (47 students total)

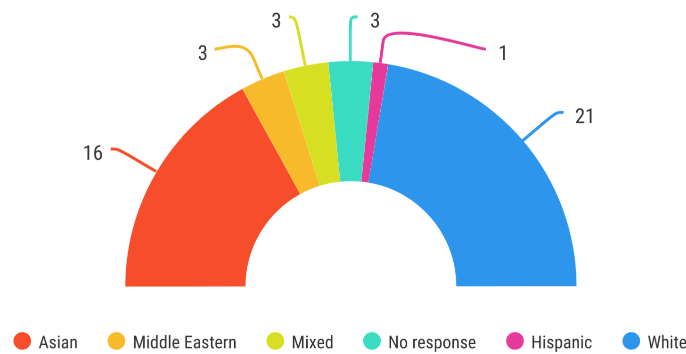
2020 Gender Representation



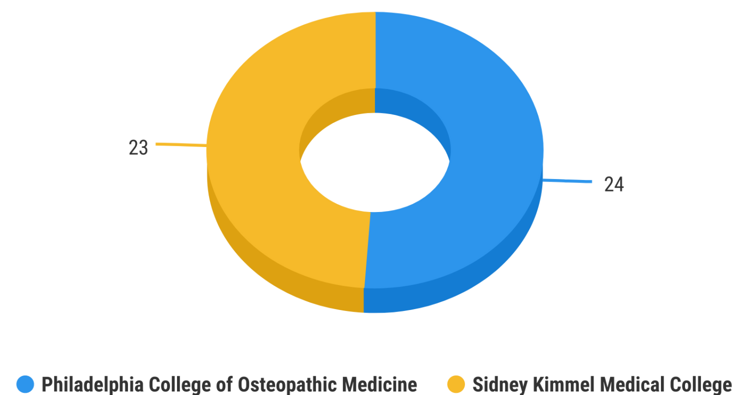
2020 County of Residence



2020 Self-reported Diversity



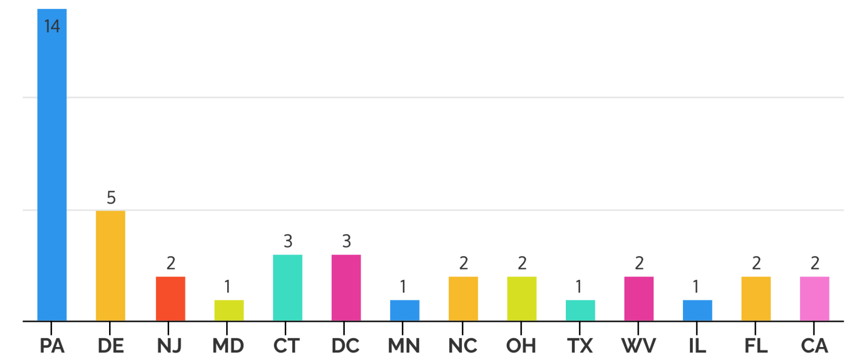
School Attending



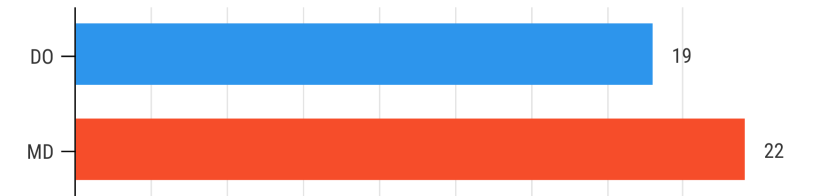
DIMER Graduating Class 2020

41 Graduates entering their first year of residency

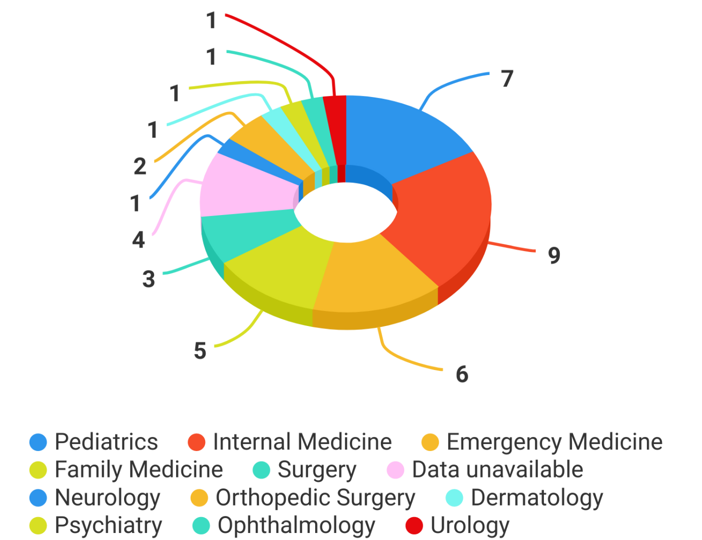
Residency Locations by State



Degree Types DO / MD



Resident Specialties



The information provided in page 12 and 13 charts and graphs is based upon best available data compiled by the Delaware Academy of Medicine / Delaware Public Health Association in partnership with the Delaware Health Sciences Alliance as a part of their joint comprehensive Healthcare Workforce Initiative.

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2020 STATEMENT FROM

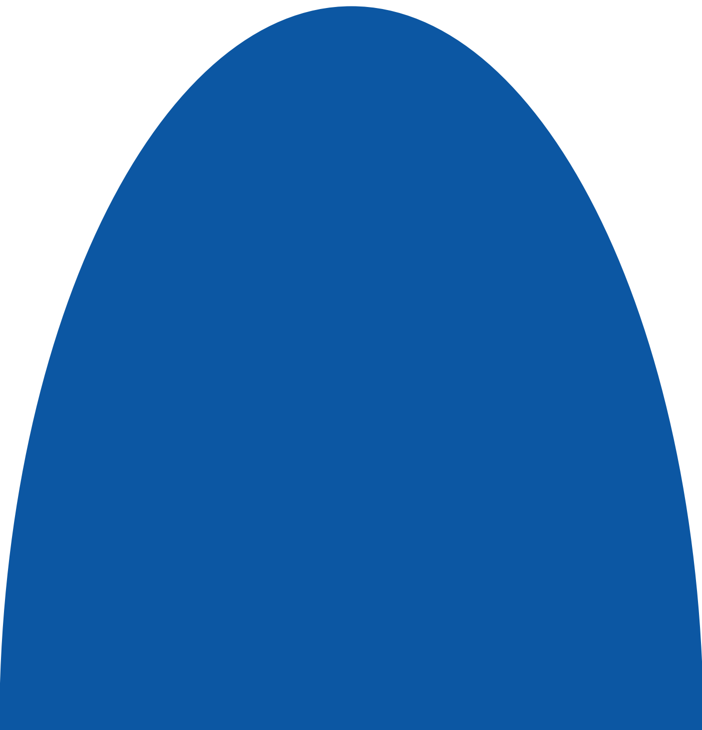
Sidney Kimmel Medical College
David L. Paskin, MD, Vice Dean
Graduate Medical Education & Affiliates

For nearly 200 years, Sidney Kimmel Medical College at Thomas Jefferson University (SKMC) has been educating physicians and has awarded more than 31,000 medical degrees. As DIMER's founding medical education partner, SKMC is pleased the relationship and collaboration continues more than 50 years later. Delaware continues to provide highly qualified and competitive applicants and SKMC looks forward to educating Delaware physicians for many years to come.

In 2020, eleven SKMC students matched to first year postgraduate positions in Delaware, one each in internal medicine and obstetrics/gynecology, two each in emergency medicine and family medicine, all at Christiana Care, and five students matched to the DuPont Hospital for Children in pediatrics.

For the incoming Class of 2020, we had 9,916 applications, including 86 from DIMER applicants, approximately 0.9% of the total pool. We made 424 offers of admissions last year, 31 of them to Delaware residents. That means that approximately 36% of the DIMER applicants received an acceptance compared to an acceptance rate of 4.3% for the general application pool.

By way of comparison, for the incoming Class of 2019, we had 9,443 applications, including 83 from DIMER applicants, approximately 0.9% of the total pool. We made 448 offers of admissions last year, 23 of them to Delaware residents. That means that approximately 28% of the DIMER applicants received an acceptance compared to an acceptance rate of 4.7% for the general application pool.)

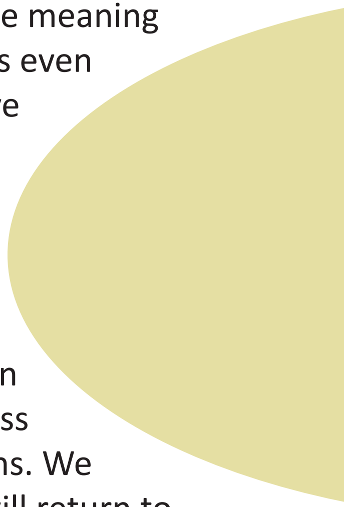


2020 STATEMENT FROM

Philadelphia College of Osteopathic Medicine
Adrianne Jones, MLS, Chief Admissions Officer

For more than a century, PCOM has provided hands-on and holistic training in the growing field of osteopathic medicine as well as the health and behavioral sciences. Philadelphia College of Osteopathic Medicine has served as the official osteopathic medical school of the State of Delaware for nearly twenty years through the partnership with the Delaware Institute of Medical Education and Research (DIMER). By collaborating with DIMER for nearly two decades, PCOM has been able to provide high quality medical education for Delawareans with a passion for medicine and the treatment of the whole person.

While we are still early in the admissions cycle for Fall 2021 enrollment, we are very pleased with PCOM's ability to adapt our processes to meet applicant needs despite the restrictions we all face during a pandemic. Prior to the pandemic, PCOM experienced increased applications and interviews for most of our programs, but more dramatically in our Doctor of Osteopathic Medicine program at all locations. Going virtual has amplified our ability to remain agile in the face of the changing landscape of graduate and professional school admission. The Admissions team continues ongoing strategic discussions on the meaning of the applicant and yield numbers as they could be impacted by several factors even outside of the pandemic. With the exception of mail delivered by USPS, we have transitioned every aspect of our delivery of the admission, recruitment and enrollment process to the virtual landscape.



Once again, PCOM has exceeded its DIMER enrollment goals. For the 2019-2020 application cycle, we interviewed 45 Delaware candidates, accepted 39, and matriculated 23 students to the Doctor of Osteopathic Medicine program in Philadelphia; the highest number of Delawareans enrolled for any incoming class since the initial state contract requiring PCOM to hold five seats for Delawareans. We are proud of these results and thrilled that these caring, competent students will return to Delaware to serve their hometown communities.

The DIMER Chairman of the Board, Mr. Sherman Townsend, has joined forces with our new Chief Admission Officer, Mrs. Adrianne Jones to assure the continuation of the DIMER and PCOM legacy. We are eager about what the future holds as DIMER and Philadelphia College of Osteopathic Medicine journey together on this new and exciting virtual pathway.

The ChristianaCare Branch Campus Perspective

Brian Levine, MD
Assistant Chief Learning Officer and Designated Institutional Offier

Looking back at this past year, March 2020 was bittersweet for the Office of Academic Affairs. For the first time ever, the largest group of Delaware Branch Campus students matched into one of our ChristianaCare residency programs; (2) Emergency Medicine, (2) Internal Medicine and (1) Med/Peds. With an additional (7) Sidney Kimmel Medical College (SKMC) students and (6) Philadelphia College of Osteopathic Medicine (PCOM) students who matched with us as well. While this was very exciting, at the same time, we were addressing the COVID-19 pandemic and the many issues surrounding the crisis. ChristianaCare made the difficult decision to suspend all clinical rotations for students and students returned to their home school for instruction on online and virtual instruction for lectures, simulations, resident conferences, etc.

The COVID-19 pandemic brought disruption and uncertainty to medical student education leaving students feeling anxious and vulnerable, but the outpouring of support and desire to help during the pandemic was unwavering. Medical students requested the opportunity to give back to the community and work alongside faculty, resident and staff to help fight COVID-19. Students from Sidney Kimmel Medical College and Philadelphia College of Osteopathic Medicine volunteered their time at our Virtual COVID-19 Practice located at Avenue North which was literally implemented overnight. These students helped staff the practice and filled an urgent need that involved work around COVID-19 and the triaging of patients through virtual technology. The students participating in CareVio' s COVID-19 home monitoring program utilized a secure text messaging platform (Twistle) to send assessments and to communicate with patients using bidirectional text conversations. The dashboarding and text messaging allowed students and the CareVIO team to quickly identify who may need additional resources and who needed of an urgent virtual visit. A total of 17 students volunteered at the virtual practice; (6) from SKMC and (11) from PCOM; 14 of the 17 were Delaware Branch Campus students and 13 of the 17 were from Delaware. These students performed tremendously in support of our patients, the practice and our community up until clinical rotations resumed. Volunteering at our COVID-19 virtual practice allowed students the opportunity to make a difference and put their skills to use.

ChristianaCare welcomed students back to clinical rotations in June 2020 with strict guidelines in place for their safety. Like others, COVID-19 forced us to think outside of the box and creatively address education issues around clinical volume, ability to meet learning objectives and PPE. ChristianaCare continues to meet the needs of our students and continues to provide a robust clinical education amidst the pandemic. Students are required to adhere to the same guidelines set forth by ChristianaCare for all caregivers related to face masking, PPE, daily self-monitoring and the reporting of symptoms and exposures. Students are not permitted to provide direct in-person contact or care for patients suspected of or known to have COVID-19 or be involved in any high-risk procedure requiring N95 respirator use. The safety of our students is a priority to us, and we continue to monitor our students, process and guidelines closely.

www.christianacare.org

Nemours/A.I. duPont Hospital for Children Campus Perspective

Steven Selbst, MD
Residency Program Director

The Nemours/Alfred I. duPont Hospital for Children is a multispecialty, tertiary care, 200-bed free-standing children's hospital located in Wilmington, Delaware. As the only children's hospital in Delaware, our hospital offers the entire spectrum of pediatric medical and surgical subspecialties. We are fortunate to have been recognized by a variety of national organizations as a site for outstanding teaching and clinical care.

We have pooled the considerable resources of three major institutions to create exciting, high-quality programs in patient care, biomedical research, and medical education. We enjoy the strong financial backing of Nemours, the broad patient base of the Alfred I. duPont Hospital for Children and ChristianaCare, and the rich academic heritage of Sidney Kimmel Medical College (SKMC) of Thomas Jefferson University. These partnerships have enabled us to develop a unique educational program. DIMER students who train with us are able to gain a wealth of experience working with nationally-recognized physician-educators in a variety of pediatric disciplines and with patients in the hospital, clinic, and private practice settings. Students rotate through the medical/surgical units, general pediatrics clinics, newborn nurseries, and private practitioners' offices. They gain experience with the various aspects of well-child care and normal growth and development as well as common and uncommon pediatric diseases. We also offer advocacy training for students and residents to learn to become a voice for children's health in the clinical setting and the community.

The DIMER program continues to be an excellent resource for Nemours/Alfred I. duPont Hospital for Children, providing numerous local trainees who are passionate about serving the population of Delaware. We are thrilled to have DIMER students from SKMC rotate with us during their clinical (third) year. We welcome senior medical students (4th year) from SKMC and the Philadelphia College of Osteopathic Medicine (PCOM) in a variety of clinical and research experiences. Through rotations as 3rd and 4th year medical students, we are able to introduce the students to our renowned children's hospital and expose them to the broad scope of Pediatrics.

Many DIMER students continue their training as residents in Pediatrics at Nemours/Alfred I. duPont Hospital for Children. DIMER students who enter specialties such as Family Medicine and Emergency Medicine at local residency programs, such as Jefferson or ChristianaCare, also gain valuable pediatric training here. Several DIMER graduates of our Pediatric Residency Program have become our Chief Residents and many have pursued fellowships and attending positions here and at other prominent institutions. One even joined our residency leadership team, helping to train the next generation of Delaware physicians! Through DIMER, we have been able to recruit physicians who go on to serve their home communities in a myriad of ways, including teaching and advocacy.

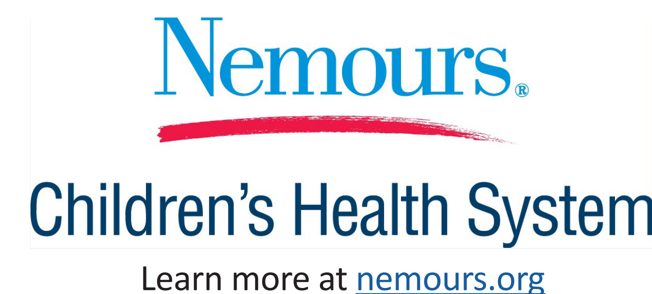
It is definitely an understatement to say that 2020 has been a year like no other! Fortunately, coronavirus has not affected children at the same level as the adult population. However, the impact of the pandemic on medical education has been significant. In mid-March, due to the COVID-19 pandemic, all medical students were taken off clinical duties by their home medical institutions, SKMC and PCOM. We divided our pediatric residents into 2 groups and kept one group 'off-cycle' to continue their education at home while the other group remained in-hospital providing clinical care. We rotated these groups every 2 weeks. Fortunately, none of our residents tested positive for coronavirus and we brought all trainees back to the hospital on June 1, 2020. Medical students also returned for rotations at that time. Patient volume is decreased compared to previous years, but our hospital continues to have a suitable inpatient census and enough outpatient visits to provide a very good experience for our students and residents.

All of our conferences were converted to virtual format and this continues with excellent participation from residents, medical students and Attending physicians. Our large conference rooms have been converted to work stations so we can better spread out our trainees and keep them safely distanced while they do their work. We altered our Family -Centered Rounds to limit the size of teams that care for our patients. Some students and residents attend these rounds virtually, from a work station.

Many students and residents have participated in patient care via telemedicine. We are fortunate that Nemours/Alfred I. duPont Hospital for Children has an adequate supply of PPE for all students and residents. However, medical students are not involved in direct care of COVID positive patients. We have set up a sophisticated system to contact all trainees who are exposed to a COVID positive patient. Fortunately, there are very few concerning exposures and none of our trainees have become infected by a patient at our institution. We are currently conducting interviews for our Pediatric Residency Program, and all of these are done virtually via Zoom. Although we regret not having students tour our hospital and meet directly with our staff, there have been very few technical issues with our virtual interviews.

Medical education remains a priority at Nemours/Alfred I. duPont Hospital for Children. DIMER students continue to receive an excellent experience in pediatrics, though this is limited by our temporary inability to conduct our usual interactive sessions at the bedside with our students. We look forward to the day when all of our students and residents are protected by a vaccine and we can resume our traditional teaching methods.

We look forward to partnering with DIMER for many more years to come.



Learn more at nemours.org

GME Program Grows as UME Students Face Global Pandemic Head On at Bayhealth

Bayhealth UME Program Chair Joseph Rubacky, DO, FAAFP

As a regional healthcare leader, Bayhealth is focused on meeting the needs of our community today while we plan for tomorrow. This includes the recruitment of the brightest and most capable, next-generation healthcare providers to our beautiful state. In July 2021, Bayhealth's Graduate Medical Education (GME) Program will welcome its first group of residents into the Family Medicine and Internal Medicine Residency Programs.

The GME program is poised to help bring top medical students – future physician leaders – to Kent and Sussex counties for generations to come. In the three years each resident will spend at Bayhealth, the hope is they will truly feel a connection with our communities and ultimately choose to practice medicine in central and southern Delaware.

Bayhealth's commitment to medical education extends beyond the GME as we also partner with area medical schools to host medical students for a portion of their Undergraduate Medical Education (UME) clinical rotations. Upon graduating medical school, these students may later apply for one of Bayhealth's residency programs.

The students complete 11 core rotations, each lasting one month. Each day, the students head to their specialty rotation where they are mentored by a Bayhealth physician for four weeks, learning in a hands-on environment.

When the COVID-19 pandemic reached our community in March 2020, a shift from hands-on to virtual learning took place. As an organization, Bayhealth was eager to welcome the UME students back to our campuses in a safe and thoughtful way in June 2020. Caring for patients during a pandemic is something that may only happen once in a doctor's career. The students needed to understand the virus, be a part of the treatment, and see patients recover and leave the hospital.

The thought of treating COVID-19-positive patients brought some anxious feelings from students. Those feelings diminished quickly when they donned their PPE and started treating patients. The students were able to be on the frontlines dealing with a global pandemic – it was their opportunity to make an impact at the local level on something that the entire world was focused on overcoming.

Several of the UME students who rotated through Bayhealth had ties to Delaware in one form or another. It was important for them to see the impact they can have on their community and the value of training and practicing in the state.

COVID-19 also impacted the application and interview process for the GME programs. Many students who may not have been able to afford travel expenses in a pre-COVID world were able to apply to Bayhealth thanks to virtual interview options. These were in addition to several Delaware residents who applied for the program.

As the GME Program welcomes a total of 21 residents in July 2021, the opening of a Family Medicine outpatient clinic in Kent County and an Internal Medicine outpatient clinic in Sussex County is on the horizon. The Family Medicine and Internal Medicine Residency practices will serve many purposes, including resident education, with a priority of providing care to the community. At full capacity, the Family Medicine practice will add more than 30,000 patient care visits per year and the Internal Medicine practice will add more than 20,000.

Visit BayhealthGME.org to learn more about Bayhealth's undergraduate and graduate medical education

Being a DIMER student gives me the opportunity to learn medicine from providers in my original hometown community. It allows me to stay close to my family and loved-ones while going through rigorous medical student training. Having a support system is just as important for medical providers as it is for patients. DIMER also helped me create a new family of mentors and colleagues as a Branch Campus student at Christiana Hospital, a phenomenal teaching hospital in Delaware. It also allows for continued mentorship interactions with the my alma mater University of Delaware students as well as Wilmington Friends School students who may be interested in pursuing medicine. I hope that, in the future, I have the option to continue the tradition of providing excellent medical care to this wonderful community and mentor and inspire prospective medical students along the way.

Kelsey Mellow
Medical Student at PCOM

The DIMER Program has given me many different opportunities over the past few years, and I really appreciate it. Being a part of this program gives me a sense of belonging and maintains my connection to Delaware, where I was born and grew up. In addition to helping me as a student, the program has afforded me the opportunity to become involved as a student leader in the Branch Campus Program at ChristianaCare, being involved in mentoring and recruiting students to the Branch Campus Program. I have learned a lot from all these experiences, and I am really thankful to the DIMER program for all of the different opportunities it affords.

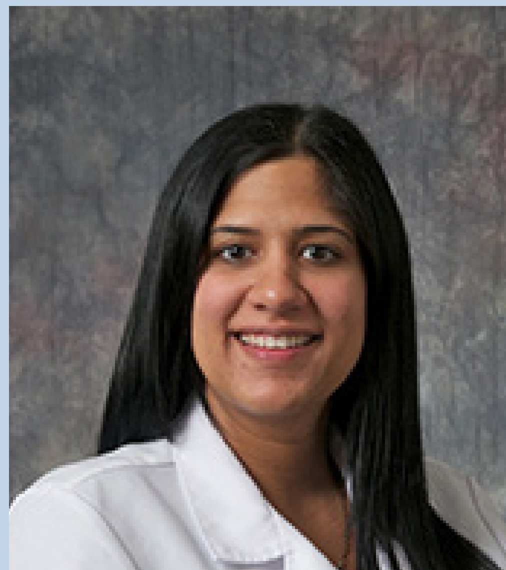
Abhishek Surampudy
Medical Student at SKMC

DIMER Alumna Profile

Seema Dattani, MD

Delaware is one of four states that does not have a medical school. By partnering with Sidney Kimmel Medical College and Philadelphia College of Osteopathic Medicine, DIMER supports Delaware residents in obtaining an excellent medical education. Twenty spots are reserved at Sidney Kimmel Medical College and five at the Philadelphia College of Osteopathic Medicine through this partnership.

I was born and raised in Newark, Delaware, attended Newark High School, and attended the University of Delaware. I was accepted into the Medical Scholars Program (MSP) at the end of my freshman year. The MSP is a dual major, eight-year academic program by the University of Delaware in collaboration with the Sidney Kimmel Medical College.



After graduating SKMC in 2008, I completed my family medicine residency at ChristianaCare. Then, I finished a one-year geriatrics fellowship at the University of Pennsylvania. My goal had always been to return to Delaware to practice and teach, and I was fortunate enough to be able to do so after I finished fellowship. I am currently an Associate Program Director for the family medicine residency at ChristianaCare. I practice geriatrics clinically and am the Medical Director of the Lodge Lane Assisted Living facility.

The DIMER program has played a vital role in my medical career. It allowed me to receive financial support throughout the four years of medical school. It also provides great networking and mentoring opportunities with other DIMER physicians. The odds of acceptance into SKMC or PCOM are enhanced for Delaware residents. The DIMER program is a blessing for any Delaware resident hoping to become a physician.

DIMER Alumni Profile

David I. Rappaport, MD, FAAP

Thank you for the opportunity to comment on my experience as a DIMER student. I consider myself very fortunate to have been a participant and am thankful to those who have supported the program. At the time, the program rewarded Jefferson medical students with significant financial incentives to return to the state of Delaware to practice in certain fields: Internal medicine, Family medicine, or Pediatrics.

I was able to return to Delaware as a member of the Division of General Pediatrics at Nemours/duPont Hospital, where I have worked since 2005. I have been fortunate enough to serve as Associate Pediatric Residency Program Director and Director of Fourth-Year Pediatric Medical Students at Sidney Kimmel Medical College.

I have published a number of research studies, including in major journals. All of these opportunities were directly due to the DIMER program—and for that I am truly thankful.

The DIMER program allowed me to not only to care for some of the most complex children in Delaware but also hopefully offer some mentorship to medical students and residents interested in Pediatrics so that future generations of Delawareans will stay healthy. I am hopeful that future DIMER students continue to have such a positive and rewarding experience.

Student Loan Repayment Program

Elisabeth Massa, MA
Delaware Health Care Commission

Background

Delaware's State Loan Repayment Program (SLRP) is administered by Delaware Health Care Commission for the purpose of recruiting and retaining critically needed, skilled, healthcare practitioners in federally designated underserved areas. The program is funded by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), the State of Delaware, and local healthcare organizations; for a combined total of $450,000 annually for program awards.

With a four-year commitment in the program, practitioners employed in underserved areas may be eligible for up to $200,000 in educational debt reduction.

Who can apply?

Mental health, medical, and dental professionals with educational debt are eligible for Delaware State Loan Repayment awards. As prescribed by the federal grant sponsor, dental and medical professionals with advanced or mid-level degrees from the following disciplines are eligible to apply:

DISCIPLINES	DEGREE
Allopathic Medicine	MD
Osteopathic Medicine	DO
Doctor of Dental Surgery	DDS
Doctor of Medical Dentistry	DMD
Certified Nurse-Midwife	CNM
Health Services Psychologist	HSP
Licensed Alcohol and Drug Abuse Counselors	LADC
Licensed Clinical Social Worker	LCSW
Licensed Professional Counselor	LPC
Marriage and Family Therapist	MFT
Nurse Practitioner	NP
Pharmacist	Pharm
Physician Assistant	PA
Psychiatric Nurse Specialist	PNS
Registered Dental Hygienist	RDH
Registered Nurse	RN

For more information regarding eligibility, the application process, and awards, please visit the Delaware Health Care Commission's website, https://dhss.delaware.gov/dhss/dhcc/slrp.html and the SLRP brochure, https://dhss.delaware.gov/dhss/dhcc/files/slrpprogbrochure_2019.pdf

Health Workforce Subcommittee

Nicholas Moriello, RHU
Delaware Health Care Commission

The Delaware Health Care Commission (DHCC) established in December 2020 a subcommittee to evaluate Delaware's health workforce needs, both short and long term. The subcommittee is initially comprised of 15 members representing diverse perspectives within the health care delivery, education, licensure, and business communities. The goal of this subcommittee is to provide recommendations to the DHCC, and the group will initially meet monthly during the first three months of 2021 and will then re-evaluate the pace moving forward.

The **DIMER Board of Directors**;
staff of the **Delaware Health Care Commission**; and the
affiliate, staff and board of the **Delaware Health Sciences Alliance**
express our heartfelt

to all of our healthcare colleagues, front line service provides, and their support staff who have operated on the front lines during the COVID-19 pandemic.

DHSA / DIMER Health Panel Events

Omar Khan, MD, MHS, President and CEO & Pamela Gardner, MSM, Program Manager
Delaware Health Sciences Alliance

The Delaware Institute for Medical Education and Research (DIMER) is committed to providing access to high-quality medical education for all Delawareans and ensuring awareness of the admissions advantages for our residents. Through its partnership with DIMER, the Delaware Health Sciences Alliance (DHSA), continues to implement a robust strategy for engagement, outreach, data collection, and evaluation, within the Delaware community of DIMER applicants, students, residents, and returning attending physicians.

The DHSA-led outreach events engage high school students and undergraduate students with an interest in future medical professions who reside in one of Delaware's three counties. We have a particular interest in ensuring all counties are well-represented in the DIMER applicant pool, to ultimately return to our State and serve our community. Throughout 2020 and in light of the COVID-19 pandemic, DHSA pivoted from in-person events to virtual outreach events as a way to safely continue to engage with our learners and leaders. Through these events, we continue to create awareness and provide students valuable exposure to experts from across DIMER and DHSA.

Each event provides a unique panel of experts, many of whom reside and work within the communities where students are from as well. Panelists always include representatives from DIMER leadership and the DHSA institutions. We have included DIMER Board members, DIMER alumni (practicing physicians), as well as leadership and admissions representatives from our medical education partners: Sidney Kimmel Medical College at Thomas Jefferson University (SKMC) and the Philadelphia College of Osteopathic Medicine (PCOM). The panels provide not only insight into the DIMER program and admissions advantages for Delaware students, but an opportunity for direct contact with leadership from across our professional network. This high degree of exposure for students is unparalleled across the country and is one of the reasons we have an increasing number of exceptionally qualified Delawareans from all 3 counties successfully gaining admissions to the DIMER-partnered medical schools.

We also review recommendations for undergraduate studies, the application process for medical school and the journey from medical student to resident to practicing physician. We also provide information on affordability of medical school and the options beyond, such as the Student Loan Repayment Program (SLRP) and other loan opportunities.

We have demonstrated how the DIMER-DHSA collaboration has significantly increased Delawarean student's and families' knowledge of "the Delaware advantage" for medical school application. We seek to have all counties and all walks of life represented in the amazing students we send to our partner schools, and then welcome back to Delaware for their Branch Campus clinical training and beyond. The success of our approach is evidenced by 2020 representing the largest incoming class of DIMER medical students in the 50+ year history of DIMER.

In a time for which healthcare and medical professionals have been called upon more than ever, thank those who mentor them: we acknowledge and thank our 2020 panelists who took time from their schedules to invest in Delaware's future medical professionals.

In closing, we echo the sentiments of Sherman Townsend, Chair of the DIMER Board, and thank all who have chosen and will choose a profession in medicine and health sciences. The world needs you more than ever, and Delaware needs and appreciates you.

Sherman Townsend
DIMER
Board Chair

David Tam, MD
Beebe Healthcare
President and CEO

Marshá T. Horton, PhD
Delaware State University
Dean, College of Health
and Behavioral Sciences

Robert Monteleone, MD
Saint Francis
DIMER Board Member

Cydney Teal, MD
ChristianaCare
Physician Executive

Omar Khan, MD, MHS
Delaware Health
Sciences Alliance
President and CEO

Brintha Vasagar, MD, MPH
Bayhealth
Program Director FM
Residency Program

David Barlow, Ph.D.
University of Delaware
DIMER Board Member

Cindy Siu, MD
Bayhealth
DIMER Alum

Joseph Deutsch, MD
Bayhealth
Program Director IM
Residency Program
DIMER Alum

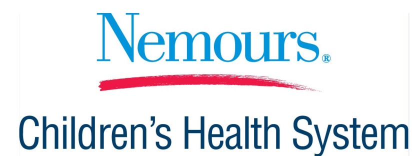
DHSA Workforce Recruitment – Delaware Day

Pamela K. Gardner, MSM, Program Manager
Delaware Health Sciences Alliance

The Delaware Health Sciences Alliance (DHSA) recognizes the importance of pipeline development and creating access points for increasing Delaware's medical workforce. DHSA starts with high school students, creating awareness for the admissions advantages and networking opportunities DIMER provides Delaware students. DHSA further supports connecting DIMER students to Delaware's leadership networks through facilitation of DIMER's engagement strategies for current students and alumni.

In 2019, DHSA launched Delaware Day. Delaware Day is a physician recruitment initiative bringing together, for the first time, all of Delaware's health systems across the 3 counties, in a collaborative recruitment effort. DHSA works closely with recruiting partners to identify anticipated openings and targets its event to DIMER physician residents practicing in Delaware and the mid-Atlantic region, to recruit key Delaware talent for the Delaware community. In 2020, the in-person recruiting event was reimagined to a virtual recruiting effort due to the COVID-19 pandemic.

DHSA is pleased to share the 2020 Delaware Day event provided 100% of our recruiting partners with resumes of interest and saw a doubling of resume submission and interest by candidates. DHSA looks forward to providing this annual event to support recruitment and retention of Delaware's qualified and talented physicians and would like to thank our 2020 Delaware Day partner institutions and participants:



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DHSA Writing Initiative and Contest

Pamela K. Gardner, MSM, Program Manager
Delaware Health Sciences Alliance

The spring of 2020 brought what most initially thought was a temporary hold on gathering with a two-week shutdown, in an attempt to stop the spread of the novel coronavirus COVID-19. Unfortunately, as time went on, it became clear COVID-19 was not going to easily go away. As health systems and health care workers worked endlessly and tirelessly to provide care and take care of our community's sickest, life outside the health system started to look different as well. Social distancing protocols were put into place along with mandates for mask wearing. Students and professionals logged on from home. In an effort to limit those coming into the health system and to ensure the safety for learners and patients alike, third- and fourth-year medical students were transitioned to virtual learning and patient care.

The Delaware Health Sciences Alliance (DHSA) understands the power of engagement. In an effort to connect students back to the hands-on learning COVID-19 pulled them from, DHSA released two writing initiatives for DIMER and Branch Campus medical students. The first opportunity was in collaboration with a Branch Campus DIMER student research workgroup. Students were called to conduct research on the impact of COVID-19 on medical education. The piece by Elizabeth Avakoff, MPH and Omneya Ayoub, MS titled "*Exams May be Cancelled, but Humanity is Not: A Medical Student Perspective on the COVID-19 Pandemic*" was published in the April 2020 Health Science Education issue of the Delaware Journal of Public Health (www.djph.org).

The second opportunity we presented to students encompassed personal perspectives in the form of essays and poetry. DHSA received an overwhelming response of submissions, for which the top five pieces, as selected by a panel of reviewers, received a cash prize from DHSA and were published in the August 2020 issue of the Delaware Journal of Public Health (From Cells to Society: Research in the Time of COVID-19). A sampling of submissions received are also featured on the Education page of the DHSA website (www.dhsa.org).

We are grateful to the editorial staff of the Delaware Journal of Public Health and to the students for being brave enough for sharing their voices and perspectives. The Delaware Journal of Public Health is the peer-reviewed, flagship publication of the Delaware Academy of Medicine / Delaware Public Health Association, a DHSA partner organization.

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Branch Campus Medical Student Research on COVID-19

Elizabeth Avakoff, M.P.H. and Omneya Ayoub, M.S., Medical Students at PCOM

Exams May be Cancelled, but Humanity is Not: A Medical Student Perspective on the COVID-19 Pandemic

"Stay at home!" Public health pleas to help "flatten the curve" amidst the COVID-19 pandemic have led to a wave of societal disruptions. Social distancing, defined as keeping yourself at least six feet away from others and avoiding gatherings of ten or more people, has become the new norm for Americans over the past three weeks. These (among other) dramatic societal changes and growing pressure on our nation's hospital systems have had a distinct impact on medical education, particularly when it comes to clinical training.

As third year medical students, our professional development has heavily relied on in-person clinical experiences, directly interacting with patients and healthcare providers. However, with the national push for a 14-day quarantine, students across the country were pulled from their clinical settings until further notice.[1,2] In a vast departure from our normally structured path to residency, licensing examinations were also temporarily suspended and our professional lives were placed on hold.[3] Medical education institutions across the country have faced the challenge of inventing new ways of supporting student learning in these critical years of clinical training. In many medical schools, this has led to the roll-out of new virtual clinical experiences and greater utilization of dynamic, online training modalities. Students at the University of Illinois, for example, are observing procedures through video conferencing and utilizing mock scenarios to prepare for future patient encounters.[4] Likewise, on the East Coast at the Philadelphia College of Osteopathic Medicine, students log-in to live virtual journal clubs, lectures and morning reports. These "online clerkships" support students' continued professional development and progression through educational requirements.

In an informal survey of medical students across the country, there was a resounding concern for what the sweeping societal changes would mean for our residency preparations and our clinical training overall. Simultaneous with online learning, medical students have taken ownership over their residency preparedness, utilizing their additional time to work on personal statements, curriculum vitaes, and study for licensing examinations. Students also expressed concern for their mental health in these uncertain times, finding relief in connecting with family and friends and catching up on much needed self-care. Whether revisiting lost culinary skills, reading a new book, or even going for a run, many have found this time at home to be grounding and introspective. As medical students, we are constantly engrossed in our education and learning the details needed for each progressive step in our training. This new time out of the hospital has allowed us to take a step back and in light of our nation's COVID-19 response, see the system as a whole from a new perspective. At the same time, we have not lost sight of our colleagues and mentors on the frontlines in this pandemic. In fact, students across all healthcare professions have voiced an earnest desire to do our part in the COVID-19 pandemic.[5]

Through the power of social media, communities across the Mid-Atlantic have seen an outpouring of volunteerism, donations and camaraderie amongst students across the healthcare spectrum. Through Facebook groups such as the "Philadelphia Organization of Health Professions Students - COVID Response,"[6] nearly 2,000 students in nursing, medicine, dental medicine, podiatry, veterinary medicine and physician assistant programs have come together for a united goal of stepping off the sidelines. This group has allowed students to collaborate, allocate resources, spread awareness and collect much needed personal protective equipment from the community. From blood drives, to child and pet care for healthcare workers, to meals for our region's most vulnerable populations, this group continues to develop innovative ways of supporting our mentors, colleagues and patients from our new positions at home. Through this enthusiasm for public service, our Mid-Atlantic medical and allied health professions students have found a way to continue making a difference, while forging new inter-professional crosscollaborations.

As our nation learns some hard and invaluable lessons in the spread and management of infectious diseases, emergency preparedness, and population health, we too have found this period to be transformative. The COVID-19 pandemic has shed new light on our individual roles as future physicians in the greater community at large. Students have expressed a greater appreciation for the physician's role in population health, citing the importance of elevating public awareness, preventing the spread of infectious diseases and having resources on hand to effectively treat large numbers of critically ill patients. As future physicians, we are witnessing humanity at one of its most vulnerable times, not only for our nation, but across the world. In this transformative period, "stay at home" has thus become more than a blanket directive to selfisolate. To us, it represents a civic responsibility to protect one another from unnecessary exposures and a movement to individually and collectively do our part in this COVID-19 pandemic.

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Authors

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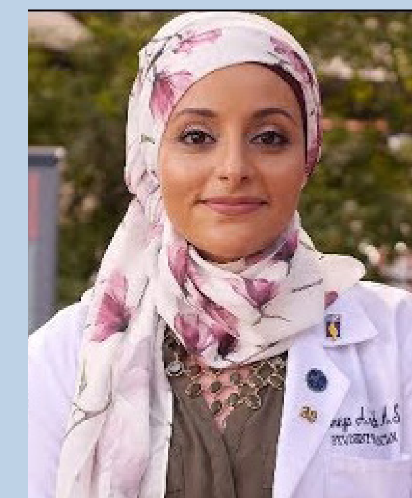

Omneya Ayoub, M.S.

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DIMER Graduate Research Article

Sky Prestowitz, DO

Sky Prestowitz, DO

Public Health Implications for the Future: Unifying a Fragmented System

When the picture of mass graves in the Bronx, New York shows up in the New York Times daily inbox summary email, it becomes apparent that the United States (US) is experiencing unprecedented times. This comes as a shock in a country that has been fortunate to avoid nationwide domestic crisis for decades. The pandemic is a public health crisis that demands understanding of the current state of public health in America in order to truly understand how our country is managing the situation. The COVID 19 epidemic highlights the importance of understanding Public Health and preventive medicine as a vital component of the American medical system.

Over the past few centuries in America, Public Health has been in a process of growth and maturation mirroring the rise of modern government and an increasingly global economy. Public Health emerged as a facet of the nation's medical system around the turn of the twentieth century. New York City was the location of the first public health department in America in 1866. By 1900, 40 states had developed similar public health departments. By 1912, the Marine Hospital Service was formed, which evolved into the US Public Health Service. Federal involvement in Public Health grew out of these early movements. In 1922 the Children's Bureau created the first federal program to provide grants to states, establishing a new level of federal influence. As the country marched into the thirties and forties, the federal public health system began to resemble much of what it does today.

The current structure of the federal component of public health is of import in this crisis. Right now, the Department of Health and Human Services (HHS) is the umbrella organization at the federal level. The HHS is part of the president's cabinet which includes 15 different executive departments from the HHS to Veterans Affairs to Transportation to the Treasury and others. Underneath this umbrella there exist familiar organizations that we now consider almost synonymous with modern medicine including the Center for Disease Control (CDC), National Institute of Health (NIH), Food and Drug Administration (FDA), and Center for Medicare and Medicaid Services (CMS). The level of infrastructure and organization that has evolved within each element of the HHS is impressive and inspiring. Yet, digging deeper into government spending elicits a striking incongruency suggesting that this growth was not always adequately proportioned to the growth within the medical system. For example, in 1960 total health expenditures rose from $26.7 billion dollars to $1.3 trillion dollars in 2000. The corresponding increase in public health expenditure was vastly different growing from $192 million to $17 billion. The effects of this incongruent spending raise some questions about the adequacy of available public health resources.

To adequately understanding the American Public Health system as it evolved and as it exists today, it is essential to remember that American government is a Federalist system, in which states have a significant degree of autonomy in running their own affairs of both law and public health, among other things. The Civil War is the most blatant example of how our government not a purely top-down or homogenous authority. About 25 years after the end of the Civil War, Congress wrote into law the Epidemic Disease Act of 1890. This law was invoked to prevent a certain practice called "shotgun quarantine" in which one state would claim to quarantine another. This practice used yellow fever outbreaks as a guise for the hidden agenda to create economic advantage. At the time this law was written, the Marine Medical Service – which was funded by the federal government – was given the authority to nullify state and local shotgun quarantines when deemed inappropriate. Although far removed from modern times, this example illustrates the importance of interplay between state autonomy and the federal government. It also points to the imprint that this federalist system has made on the structure of American public health.

Exploring modern examples will help to elucidate the ways in which our federalist system still impacts the structure of public health. Consider the Opioid epidemic. Before the current pandemic, this national crisis was at the forefront of public health law-making and effort. The federal and state response to this epidemic reveal the function of public health structure within the US. Steep rises in opioid addiction and related deaths between 2010 and 2014 provoked both federal and state governments to action. The CDC made recommendations to state and local hospital systems mainly via adjustments to their published guidelines. The FDA provided an adjustment to regulations over these medications. The NIH continued to fund and conduct research. And another federal organization called the Drug Enforcement Administration (DEA) acted to close pill mills, or doctors' offices illegally distributing these drugs. Despite their involvement, these federal systems were mostly limited in their ability to impact change on the ground, leaving the work of response up to the states. States oversaw their own department of justice responsible for related criminal arrests and charges. State medical boards in charge of licensing physicians were more effective at modifying medical practice. In addition, states had the ability to influence hospitals who had their own credentialing and privileging requirements. Despite work to address the opioid epidemic within each individual state, a lack of consistency characterized the national response to the problem. States began building prescription drug monitoring programs (PDMPs) to track the distribution and consumption of controlled substances. These projects were limited by the inability to share information across state borders. In addition, the financial burden on individual states was great. States became so involved in this work that they began suing opioid producing companies in order to recoup the increased costs and damages related to treating addiction within their communities. If looking for ways to improve, a logical connection would be the possibility of a more uniform response organized and funded by the federal government.

A similar argument for more consistent federal leadership can be made in the case of tuberculosis (TB) screening. The US response to TB screening is delegated to state and local public health officials. This lack of federal involvement results in widely variable policies. Under current practices, only 18 states mention that all healthcare workers should be screened for TB and seven of those states recommend hospital workers only. Similarly, only 13 states require all staff and inmates within correctional facilities to be tested. In addition, although 66% of TB within the US is a result of foreign-born individuals, screening for latent and active TB is only required for refugees seeking permanent US residence. Advocates for moving towards more consistent TB screening across states recognize that this would only be possible in the context of increased federal monetary and political support.

In the field of public health, concern about this fragmented system has been brewing and has occasionally bubbled to the surface. From 2003 to 2007, Bill Frist became the first physician senator since 1928. During his term as Senator, he wrote an article in the journal Health Affairs which pointed out a need for increased federal involvement to resolve some of this fragmentation. His primary reason for concern arose from evaluation of the anthrax attacks and events of September 11 raising suspicion about future bioterrorism within the United States. In his article he points out that, despite actions in the Bush administration to increase state and local response to biological warfare, there remained an important and unfulfilled role for the federal government to unify a response plan that was dependent on state and local public health capacity. The threat of bioterrorism did not carry enough weight with the country's political agenda. About 18 years later, Polly Price, professor of law and global health at Emory University, published a paper that addressed the same concerns about the fragmented public health system this Federalist government had produced. Her concern was expressed in the context of federal versus state jurisdiction surrounding quarantine. Her extensive report on the laws and structures that govern quarantine within the US reveal the same dependence on states to make decisions versus a unified federal response. Her paper shows prescient concern for the consequences of a conflict between state and federal government in response to an infectious disease outbreak. Directly quoted she says, "these conflicts can occur when uniformed or excessive panic drives political decisions in a manner detrimental to effective control of a national epidemic."

The unfortunate events of recent history could not have revealed this fragmentation in a more heartbreaking form of tragedy. As of this writing, there are 34,309 Americans dead and trillions of federal dollars spent to avoid a worse catastrophe. This is not to mention the impending economic depression. In one funny medical cartoon the doctor asks, "which is better: one hour of exercise or 24 hours of death?" Perhaps it would be too cruel to make a corresponding cartoon posing a similar question about public health spending. Benjamin Franklin must be turning in his grave and mourning our decided inattention to his famous quote, "an ounce of prevention is worth a pound of cure." The evidence of a fragmented public health system is not only obvious, it glares like a violation of what it means to live in America. States are thrown to the wolves to bid in an international market for medical supplies that everyone needs. States even outbid each other in bidding wars that could mean life or death for one hospital nurse, if not hundreds or thousands of patients. States are unable to test individuals, as the country has a severe lack of reagent to perform a basic polymerase chain reaction viral screen. Restaurant doors are closed, businesses are closed, millions of Americans are jobless. Some say hindsight is twenty-twenty and prevention is rarely a priority. But in the light of mind-numbing statistic, inconsolable tears, and thousands of people who were forced to die alone it can't be too naïve to ask: WHAT WILL WE DO DIFFERENTLY?

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DIMER Student Writing Contest

Mary Blumenfeld, Medical Student at SKMC

Mary Blumenfeld

A Grief All Its Own

On the morning of Friday, March 20, my sister called me to tell me two things. First, our dad was in isolation because he had been in court for two weeks with another lawyer who had just tested positive for COVID-19. Second, our mom was at Wilmington Hospital, but don't worry, it wasn't COVID.

I sent messages to a few of my closest friends that I was somewhat worried about my dad having been exposed because, at 67, he was in an at-risk age group. They all responded with optimistic support: "I'm sure he's going to be okay!" I hadn't even mentioned my mom being in the hospital because it didn't seem like a big deal, relatively speaking. She'd been to the hospital numerous times in the past several years and it always turned out to be "nothing," so to speak. But on Saturday morning, my sister called me again. My sister never calls me, so seeing her name light up on my phone two days in a row was cause for alarm. I braced myself for what was inevitably going to be an update about our dad that I didn't want to hear, that he had tested positive and was having trouble breathing. "Mar, so I just talked to Mom's doctor at the hospital. She's in pretty bad shape. He thinks there's a good chance she's not going to make it." What? Why are we talking about Mom? I thought Dad was the one we were supposed to be worrying about.

When I called the hospital, my mom's doctor confirmed that things were not looking good. "Unfortunately, we can't allow any visitors in the hospital right now." Excuse me? My mom is literally about to die and I can't see her? "If things continue to go downhill, we will allow you to come in to say your goodbyes, but we can only let one visitor in the hospital at a time." I asked him how long he thought she had left. I was in Center City Philadelphia; I didn't want to be 45 minutes away when I got the call saying it was time, but I couldn't exactly go wait at my dad's house, and I didn't want to go to my sister's house because I didn't want to risk exposing her two young girls. "Honestly," the doctor said quietly, "I would start driving to Wilmington if I were you."

By the time I got to the hospital, my sister had already been allowed in, which meant my mom's condition had deteriorated. I knocked loudly on the hospital door, noting its unusual locked state, and a man donning a full suit of PPE came outside to ask what I needed. "My mom. She's sick. I mean, she's not sick, she's dying. I mean, she is sick, but she's also dying." I stopped to try to catch my breath and my thoughts. "She's in there," I pleaded. "I need to get in there." He asked me if I had been feeling any flu-like symptoms or had a sore throat recently. "No and no." "Have you had any shortness of breath?" Only because my mom is dying. "Have you had a fever?" "No." "Have you been around anyone with a suspected or confirmed case of COVID in the past 14 days?" "No." "Have you been outside the country in the past 14 days?" "No." He stepped aside to let me in, and I headed straight back to the information desk and told them who I was there to see.

"Have you had any flu-like symptoms?" Seriously? My mom is dying. I didn't develop flu-like symptoms in the three seconds it took me to get from the entrance to this desk.
"No."
"Have you had a sore throat?"
"No."
"Have you had any shortness of breath?"
"No."
"Have you had a fever?"
"No."
"Have you been around anyone with a suspected or confirmed case of COVID in the past 14 days?"
"No."
"Have you been outside the country in the past 14 days?"
"Still no."

"It looks like your mother already has a visitor. I think it's your sister, or maybe her sister. She needs to exit the hospital before we can let you up. You'll need to wait outside away from the entrance, past the walkway." My sister and I wouldn't even both be allowed in the room with our mom in her final moments. How were we supposed to choose which one of us would be with her at the end? Our brothers lived in Minnesota and Arizona; there was no point in them even trying to get home, so at least it was a choice between two rather than four. What an odd thing to be grateful for.

Fortunately, my mom's two sisters lived close enough to meet us where we were waiting outside the parking garage, and we all took turns going in and out to be with her. While one of us was in the hospital, the other three shuffled between sitting and standing and pacing in a construction site about 100 yards away from the hospital entrance, careful to maintain six feet between each of us. An awkward triangle desperately wishing to collapse into a single point. When it was clear that my mom didn't have much time left, the oxygen mask was removed, the morphine drip was started, and the medical team very graciously decided to let all four of us stay in the room with her until the end under the condition that we all maintained an appropriate distance between each other. My mom died early Sunday morning. Against protocol, the four of us were there next to her, and I am so grateful for that. But we didn't get to have a proper funeral or sit shiva. We still haven't been able to hug each other. My brothers haven't been able to come home. Going through the grieving process in a period of physical and social isolation is a grief all its own.

Through this grief, I learned too well how COVID has the ultimate control, capable of invading not only your respiratory tract but every aspect of your life. Somehow these invisible little particles together formed a colossal barricade against the things we might usually take for granted, still invisible but in no way inconsequential. Physiologically, my mom's death was unrelated to COVID, and yet her death was so intimately tangled with these tiny but formidable particles, a marionette with its strings manipulated by a puppeteer who was both invisible and merciless – an utterly dangerous combination. COVID isn't what killed my mom, but her death is what made COVID a harrowing – and humbling – reality for me.

Since her death, I have found myself progressively unsettled by the ubiquitous term "social distancing." My mom and I had a complicated relationship, as many parents and children do, and I distanced myself from her quite a bit during the last few years of her life. She was already unconscious when I got to the hospital, and I realized it had been over a year since I'd last seen her, but what felt worse was that I hadn't even talked to her since her birthday in November. Truthfully, physical distance often did a lot of good for our relationship, but how hard would it have been to pick up the phone and talk to her for five minutes, even just once a month? I will regret my choice to socially distance myself from her for the rest of my life, so I want to reframe the way I think and talk about the difficult but necessary current distancing practices. We should be distancing ourselves not socially, but physically. Perhaps it's just a matter of semantics, but the words we choose often have a larger impact on our actions and beliefs than we may think. This is an absolutely critical time to be social. The frenzy around procuring resources and pervasive fear of the unknown have yielded a trend of concern for self over community, which over time will only weaken our ability to fight the virus together. COVID has made room for antisocial and divisive reactions, such as supply hoarding and price gouging, to infiltrate society like opportunistic infections that thrive under conditions of isolation. If we want to make it through this scary and chaotic time, maybe we should focus on the fact that the entire world has a common goal right now. Really, how often is the world united like this? Everyone is anxious, so talk to each other about it. Check in with each other. Use your anxiety as a catalyst for connection rather than conflict. Stick together socially; distance yourselves physically. Write someone a letter, call an old friend, and – please, if you can – call your mom.

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DIMER Student Writing

Karthi Jayakumar, Medical Student at PCOM

Karthi Jayakumar

COVID-19: An impasse between livelihood and health

It is a well-known fact that in America, socio-economic status may put individuals at a disadvantage in terms of healthcare. These health disparities in the United States have been especially highlighted during the COVID-19 pandemic. This virus has disproportionally affected low income and homeless populations; there is a domino effect on access to healthcare, nutrition and personal hygiene. Those who do not have proper access to one of these things will most likely not have proper access to the rest. Through my work with my family's non-profit organization, Charity Crossing, I have been able to work with the underprivileged communities in Wilmington, Newark, Dover, and Maryland. I have seen first-hand that lack of proper nutrition places individuals at a higher risk for diabetes and obesity, which come with a host of other comorbidities, including COVID-19.

During this pandemic, we have launched a No One Hungry Fundraiser that serves meals to those affected by COVID-19, including hospitals, old age homes and various homeless populations in Delaware, Maryland, and Philadelphia suburbs. So far, we have raised $31,500, served 6,132 meals, and plan to distribute 2,000 more by the end of June. Especially at the serves in Wilmington, we have been experiencing a higher volume of those coming to receive meals during this pandemic– a testimony for the amount of people experiencing food insecurity. Delaware was quick to provide resources to students that were now unable to secure their school provided meals and the food banks did a wonderful job supplying to those in need, but this also highlighted a deficit. Those who do not have cars or means of transportation still struggle to receive what is provided for them.

While most are able to take shelter in their homes, not everyone has the same luxury. Some are unable to work from home and must work to deliver essential services, while others provide care for those who have fallen ill. Essential workers have been sacrificing their livelihoods as well as putting their families at risk to keep our country running. Parents who are still working also may have to actively seek childcare, which makes social distancing challenging. In addition, the homeless population is extremely vulnerable; in many shelter homes, social distancing is not attainable. To achieve some form of distancing, officials in Las Vegas resorted to painting squares on the concrete parking lot to allow social distancing while sleeping. Other states, including Delaware, were able to take this to the next level and provide housing in vacant hotels. This virus has put the world at an impasse between livelihood and health. It has had a devastating effect, mentally, economically, and socially. The hope is that this will be a blessing in disguise, to unite humanity as we realize that everyone is equally susceptible – no matter the economic, social, or political status. Although we can only hope that a vaccine will be available to offer us some protection, we will never again take for granted the simple act of shaking hands, going to concerts, and attending crowded restaurants and bars. This has truly brought inequalities to light, made us rethink our values and regain perspective. The negatives are certainly undeniable, but globally, people have been lending a helping hand. Hopefully, after this tragedy, people will continue to recognize the value in that helping hand, and never cease to offer support to those who need it.

As a future physician, I'm grateful to be a part of this cultural change. I hope to take these life lessons into my practice by understanding the inequities that exist within our current system and actively work to address them to create a more just and accessible system for all American citizens. That is the America I believe in, and the America I hope to see in the future.

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DIMER Student Writing

Kayla Morrell, Medical Student at SKMC

Kayla Morrell

I Signed Up for This

I signed up for this. My cousin Noah, who has spent the first (and only) 3 months of his life in the hospital, did not. As first-time parents, my uncle and aunt have been faced with a nightmare they couldn't have even imagined. Not only was Noah born 6 weeks prematurely, he decided the best time to grace us with his presence was in the middle of a global pandemic. He spent some time in the NICU and when he finally graduated, his furry big brothers were thrilled by this new squirmy present their parents brought home, even if he made loud noises and smelled funny sometimes.

Then, Noah started having difficulty breathing. Their pediatrician recommended they take him straight to the Emergency Room, but once there, they were greeted by disbelief that a pediatrician would send someone in such an at-risk demographic to the ER in the face of the COVID-19 pandemic. They were sent home. Unfortunately, he got worse and by the time they got back to the ER, he had to be intubated. To make matters worse, only one parent was allowed to be with him at a time. They were scared. Seemingly overnight, they, along with the rest of the world, were thrust into a COVID-19 stricken place, with public health terms scattered about and everyone thinking they know best.

I signed up for this. They did not. I was able to talk to them (socially-distanced, of course) daily, calming their nerves and offering simple explanations behind the terminology the physicians were using. If I didn't know it, I looked it up. In a time where medical students can't directly help on the front lines, but signed up to help their community, this was an opportunity for me to help those closest to me. And it paid off to see everyone's relief when Noah was finally home again, although I think the puppies were happier than anyone.

Though I might just be finishing up my first year of medical school, I knew that there would be times where I would be risking my own health for the wellbeing of my patients. I can't say that I expected myself and my peers to be put in the face of a global pandemic this early in our careers; however, I joined the medical field to help my community. It is inspiring to see the way medical professionals before me are banding together to help save the world. I hope to encourage those younger than me in the same way. In a new elementary health curriculum I am creating with Nemours, we did a lesson about COVID-19 on the very last day before schools were closed. The students played Virus Tag to show how easily infection can spread and did an experiment to show how soap helps protect you from germs. To say they loved it would be an understatement.

I signed up to help my community in any way possible, even if I'm not yet on the frontlines saving lives. Not only am I inspired by the healthcare professionals paving the way ahead of me, but also by those who are following in my footsteps, albeit they have quite a few years of school to go. But one day when it's time for Noah to start medical school, I'll show this to him and say, "Kid, you were literally born for this."

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DIMER Student Writing

Thomas Marconi, Jr. (SKMC)

CareVio and Coronavirus: The Front Line for Delaware Medical Students

I stood in front of the bathroom mirror, glaring at a sentinel gray hair growing from my beard. Me, old? My first grays aren't supposed to come until intern year! Regardless, here I am, and I can't help but wonder who I will be when I am full of grays. I often dream of being a fully trained doctor - educating students, collaborating with patients, and caring for my family. At this point in my training, it all seems so far away. By the time I enter that level of my career, medicine will be vastly different. I'll gather the residents and students around the video screen; the patient, at home, will pop the bluetooth diaphragm on to their chest. We'll listen to each valve, discussing the physiology playing out before us. I will fondly recall the days of using a tangible stethoscope - an exceedingly simple, yet beautiful instrument that symbolizes the intimate moment of listening to another human's heartbeat. The thought of the stethoscope ending up in a glass display case hurts the young medical student in me. As I continued to look in the mirror, trying to hang on to that youth - is it a blonde hair? - I was comforted by the thought of my experiences with telemedicine over the last 10 weeks. The trial of which was brought on by the coronavirus pandemic.

I was half way through my obstetric and gynecology rotation at Christiana Hospital when coronavirus caused sweeping changes to our daily lives. I was about to enter a two week stretch of labor and delivery when students were removed from the clinical setting. A quintessential landmark of medical school, delivering a baby, is an experience I have yet to obtain. I, like everyone else, found myself trapped at home trying to navigate the unfamiliar world we live in now. I sought an opportunity - some way to contribute to the fight.

In March of 2020, that chance arrived - virtually, that is. Myself and other medical students were recruited to CareVio, Christiana's virtual practice, now tasked to monitor patients with coronavirus. The staff was pieced together, many ousted from the operating room - all of us naive to the virtual world. With the pressure to meet the needs of the Delaware community, we built the plane as we were flying it. Eventually, the medical students found their niche. CareVio utilizes a texting application known as Twistle - like "whistle" or do you say it "Twizzle" maybe "Twist-le?" You can ask around, it's still up for debate. The application gives us the capacity to survey and text hundreds of patients at a time to monitor their symptoms. We, the medical students, utilize it to act as a virtual information desk and triage service for the community. We speak with over 200 patients a day, answering questions, providing recommendations for symptomatic relief, coordinating testing, upgrading patients for virtual doctor visits, and even calling ambulances. Our service provides the next level of continuity of care. Daily monitoring, daily interactions, available 13 hours a day, 7 days a week while the patient sits in the comfort of their own home! The public response has been surreal.

"Thank you. This whole process has been very soothing. Delaware has got it together! Be safe! We appreciate you!"
Patient monitored via Twistle

"Thank you for this great service! Everyone I encountered during this was caring, empathetic, and professional. I have nothing but the highest praise and gratitude for the wonderful care I received during my illness!!"
Patient monitored via Twistle

"Yahoo! I am negative. I just love you to pieces. Thank you so much Thomas. Now you get a new patient that needs you. Please stay safe. You guys have been my guardian angels and I pray you all stay safe, and that this ends sooner than expected."
Patient monitored via Twistle

The last was from an elderly patient who had been cooped up in her home. At the time, testing was severely delayed, and she was left to ruminate if her cough and fever were going to take a turn for the worse. I had been communicating with her for over a week. We talked everyday until finally her result came in - negative! Over the next few days, her condition improved. She and I did not share the traditional patient-doctor relationship - I'm not that naive - but I do believe the connection we made was genuine. During this experience, I've had continuity with entire families, helped people get psychiatric care, walked someone through the grief of losing multiple family members to the virus, and it all had to be done with a keyboard. It's not the type of care people are used to, but the results speak for themselves.

I've realized I will spend more hours in the virtual practice than I will in any other third year rotation. Students have started to master Twistle and are now encouraged to shadow virtual visits. I've received education on "webside manner" - how clever is that? - and the tricks of conducting a virtual physical exam, including forceful breathing exercises for auscultation and using a patient's belly button to help them navigate abdominal palpation. Other techniques, like a lymph node exam, can be led by physician demonstration. The advancement of telemedicine will not just happen because everyone is comfortable using Zoom now, but because a young generation of doctors has been forced to adapt, and we've seen a glimpse of what it can be. There is no going back. Even now, it is sufficient to act as an outpatient triage, exceptionally designed to meet our current needs. As technology and patient comfort improves this avenue of care will start to rival its in-person predecessor.

As of mid-May we're still working. Twistle, which started as a crude and buggy platform, has now been refined. We grew from four to eleven trained and independently functioning medical students. All of us are balancing this volunteer work with virtual classrooms and preparing for our boards. Over 2,200 people have enrolled into Twistle and many of them have shared their appreciation for the service we provide. Everyone at CareVio who was expelled from their usual work environment has started to become a little family. This family, a time capsule, is what I will remember most from the pandemic. Not the surgical masks, not the gloves, nor the 6 foot squares duct taped to tiles in the grocery store line. When medical students in the future ask me to recall the events that played out during the coronavirus pandemic, I'll tell them about the dedication of Chelsea, a fellow student, who volunteered 70 hours a week to get this service off the ground. I'll tell them about Zahide "Z", a wonderful teacher and friend who solved every single PowerChart problem I had. I'll tell them about the dozens of masks Tina's 93-year-old mom made for everyone (mine is peach colored with white roses). Mary Jo's chocolate covered pretzels and Megan's hand written cards. That despite the social distancing, I'll remember how we all came together.

Eventually, this pandemic will come to pass, and we will return to a sense of normalcy. A new era of medicine will be ushered in, one that is marked with telemedicine and video visits integrated throughout. We will emerge smarter, sleeker, and more sophisticated. Just today, I received the official word. In 4 weeks, I'll be headed back to the clinical setting. With it came the instruction to be clean and shaven so I can don an N95 mask. That's how I ended up in front of the mirror. My short white coat has been washed and pressed and I've cleaned the dust off my stethoscope - it's not a relic just yet. I've seen the foundations of how we will move forward and it comforts me. The traditions of medicine will be safe in the virtual world.

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DIMER Board of Directors
Statements

"The DIMER program represents a unique and unquestioned value to the citizens of the State of Delaware. It not only serves to provide access to high-quality medical education for Delaware residents but also to the provision of quality healthcare services though out our communities. As an educator, it is my hope to continue to support qualified premedical studies students in their goal of acquiring a professional medical education."

David A. Barlow, PhD, Director
Center for Health Profession Studies
Univesity of Delaware

More than 20 years of my state service has been focused on improving access to care for uninsured and vulnerable populations across Delaware. It has been my pleasure to serve on the DIMER Board, which has allowed me to collaborate with healthcare partners to better understand the supply and distribution of clinicians and to help build the pipeline. I look forward to continuing our work in supporting the physicians of the future.

Katherine Collison, MS
Bureau Chief of Health Planning and Resources Management
Delaware Division of Public Health

"The fields of healthcare and medicine have always been a personal interest of mine. I also place a high value on education and am always looking for more ways to help students achieve their education goals. As a member of the board of trustees at the University of Delaware, I actively look for ways to encourage educational growth, development and innovation especially in the field of medicine. Which is why I am so excited to be a part of DIMER, an excellent program that provides opportunities that otherwise would not exist in Delaware for advancement in the field of medicine. I am greatly looking forward to continuing to support students with goals to work in the medical field achieve their dreams".

Chai Gadde, MBA
Found and CEO
Biotek reMEDys

As a DIMER alum and member of DIMER's first class, I am grateful for the access to high quality medical education DIMER provides for Delawareans seeking careers in medicine. As a member of the DIMER Board, I am proud of the opportunities DIMER provides through not only ensuring access to medical education, but its work in creating community awareness and support of loan re-payment programs for Delaware physicians. I would encourage any Delaware resident wishing to pursue a career as a physician to avail themselves of the opportunities DIMER provides.

John Glenn, MD
Kent County - Public Member

A strong and effective healthcare system is a foundational tenant of society. As Dean of the College of Health and Behavioral Sciences at Delaware State University, one of my goals is to prepare those interested in careers in the health sciences to serve the needs of our diverse populations, needs that are often unrecognized or unmet. DIMER, through its programs and services, opens doors, literally and figuratively, and I am excited to play a role in implementing its vision. It provides opportunities for Delawareans that are hard to find in other areas of our nation and/or world and being a member of the Board is an honor. I look forward to my continued service.

Marshá T. Horton, PhD
Dean for the College of Health and Behavioral Sciences
Delaware State University

ChristianaCare is one of the largest teaching affiliate hospital for the Sidney Kimmel Medical College of Thomas Jefferson University. In addition, we train nearly 290 residents and fellows on an annual basis. ChristianaCare serves as the Delaware Branch Campus for Sidney Kimmel Medical College and the Pennsylvania College of Osteopathic Medicine, overseeing more than 650 medical student rotations annually. Both Sidney Kimmel Medical College and the Philadelphia College of Osteopathic Medicine participate in the Delaware Institute of Medical Education and Research (DIMER) program, which helps Delaware students attend medical school and to generates a pipeline of highly qualified future doctors for recruitment to train and practice in Delaware.

Neil Jasani, MD, MBA, FACEP
Chief People Officer
ChristianaCare

I am honored to serve on the DIMER board, which oversees a critically important source of medical training opportunities for Delawareans. An adequate supply of physicians and other health care professionals is crucial to maintaining the health and well-being of our citizens and attracting business development that leads to jobs and economic prosperity for Delawareans. DIMER provides a cost-effective path to ensure the availability of a medical education for qualified Delaware students, many of whom return to Delaware for their professional practice.

Jan Lee, MD, MMM, FAAFP
Chief Executive Officer
Delaware Health Information Network

The dedication of DIMER's leadership continues to advance opportunities for Delawareans interested in pursuing medicine. I am proud to be a graduate of the Philadelphia College of Osteopathic Medicine (PCOM) and proud to have helped facilitate the expansion of DIMER's education partnerships to include PCOM. This expanded partnership increases opportunities for educating future Delaware physicians and retaining Delaware physicians to provide medical care for our community.

Vincent Lobo, Jr., DO
Sussex County - Public Member

"DIMER plays a critical role in Delaware in enhancing our ability to help Delaware students in gaining the opportunity to pursue a medical education by obtaining placements in our partner medical schools in Philadelphia. We are investing in facilitating the training of medical doctors with the hope that they will become part of the workforce in Delaware and help us to meet our healthcare needs in the State of Delaware. DIMER, together with other organizations in Delaware, shares the goal of improving the health of Delawareans. It is a great pleasure and honor to serve as a board member and to do this important work."

Kathleen S. Matt, PhD
Dean, College of Health Sciences
University of Delaware

DIMER Board of Directors, continued

Statements

The journey to becoming a physician can be complicated. DIMER and DHSA provide a critical pathway for Delawareans. They intentionally position themselves along all points of the journey, providing programming and support to high school audiences, pre-med college students, medical students, residents and attendings. Delaware's high quality physician workforce has been greatly impacted by the DIMER-DHSA partnership and the pipeline it works so hard to maintain and enhance.

Lisa Maxwell, MD, MHCDS
Chief Clinical Transformation Officer
ChristianaCare

My desire to be engaged with DIMER is almost entirely related to my passion for teaching. DIMER gives me the opportunity to engage with students who are early in their career path to become a physician. Showing these students at an early stage the impact they can have on the lives of their patients, especially in the field of family medicine, allows them to see medicine from a different lens. DIMER allows me to connect with students who have ties to Delaware and possibly peak their interest in training locally and hopefully practicing here for their career.

Robert Monteleone, MD
Saint Francis Hospital
Director, Medical Residency Program

DIMER remains critical to the health and well being of Delawareans as a way to provide medical education to state residents and encourage their return to care for those of us who call The First State home.

Wayne Smith, MGA, MA
President & CEO
Delaware Healthcare Association

DIMER has much to be proud of in its quest for providing access to high-quality medical education for Delawareans for more than fifty years through its partnerships with Sidney Kimmel Medical College, Philadelphia College of Osteopathic Medicine and the Delaware Branch Campuses. DIMER remains committed to ensuring continued access to medical education for Delawareans as well as advocating for initiatives to strengthen retention and recruitment of Delaware's finest physicians.

Sherman Townsend
President of the Board

PHYSICIAN DIRECTORY

The following pages contain a working list of DIMER students who have completed their medical education and their degree type (M.D. from SKMC, and D.O. from PCOM), and the year that they matriculated (entered) into medical school. We use matriculation rather than graduation date as not everyone who enters a given medical school graduates from it due to transfers and medical school duration is not 100% consistent for all students. This section of the directory does not include current DIMER medical students. Resident and student directories can be found on pages 46 and 47.
These physicians are, or have, practiced in Delaware, elsewhere in the United States, or globally.

Entries are listed alphabetically by last name, and in order to economize on space, we have used only married last names if we found a maiden name as well.

Semaan Abboud, M.D. - 1987
Ari Abel, M.D. - 1997
Anne Adam, M.D. - 1977
Cheryl Albanese, M.D. - 1975
Gregory Albert, M.D. - 2006
Bradley Albertson, M.D. - 2015
Christopher Aleman, M.D. - 1995
Evaline Alessandrini, M.D. - 1988
Christopher Alexander, D.O. - 2009
Mohsin Ali, M.D. - 2013
David Aljadir, M.D. - 2007
Brianne Allerton, D.O. - 2015
Bryan Ambro, M.D. - 1999
Jacob Anderson, M.D. - 2012
James Andersen, M.D. - 1983
Donald Andersen, M.D. - 1989
Jonathan Andrews, M.D. - 2012
Damian Andrisani, M.D. - 1999
Alice Angelo, M.D. - 1974
Paul Antal, M.D. - 1994
Ashley Anttila, M.D. - 2011
Kert Anzilotti, M.D. - 1996
Christine Arenson, M.D. - 1990
Bradley Auffarth, M.D. - 1987
Jeremie Axe, M.D. - 2008
Dierdre Axell-House, M.D. - 2015
Alfred Bacon, M.D. - 1981
Carl Barbee, M.D. - 1977
Malissa Barbosa, D.O. - 2009
Sarah Barlow, M.D. - 2012
William Barrish, M.D. - 1996
Bruno Basara, M.D. - 1979

Sarah Bass, M.D. - 2000
Amber Batool, D.O. - 2011
Raman Battish, M.D. - 2004
Casey Bedder, D.O. - 2007
James Beebe, M.D. - 1976
Joseph Belgrade, M.D. - 1985
Theresa Benecki, M.D. - 1978
Bruce Benge, M.D. - 1988
David Bercaw, M.D. - 1981
Amanda Berg, M.D. - 2013
Paul Berlin, M.D. - 1985
Grace Berlin, D.O. - 2014
Scott Berta, M.D. - 2002
Gary Beste, M.D. - 1980
Xia Bi, M.D. - 2016
Laura Biederman, M.D. - 2014
Jason Biggs, M.D. - 2006
John Billon, M.D. - 1999
James Blythe, M.D. - 1998
Alanna Bodenstab, M.D. - 1977
Alex Bodenstab, M.D. - 1977
William Bodenstab, M.D. - 1977
Michael Bonk, M.D. - 2012
Lindsay Bonnett, M.D. - 2014
Paul Boulos, M.D. - 2000
Elizabeth Bowen, M.D. - 1987
Thomas Bowen, M.D. - 2001
Adam Bowman, M.D. - 1998
Kevin Bowman, M.D. - 2006
William Boyd, M.D. - 1998
Laura Boyd, M.D. - 2013
David Bozentka, M.D. - 1987

Daniel Bregman, M.D. - 1985
Ira Brenner, M.D. - 1976
Cora Breuner, M.D. - 1982
Kevin Bristowe, M.D. - 1995
David Brock, M.D. - 1976
Barrington Brown, M.D. - 2000
Patricia Brown, M.D. - 1999
Richard Bruehlman, M.D. - 1982
Gina Bui, M.D. - 2005
Daniel Burge, M.D. - 1986
John Burge, M.D. - 1988
Jeffrey Burgess, M.D. - 2016
Stephen Burke, M.D. - 1998
Kelly Burkert, M.D. - 2002
Archana Caballero, M.D. - 2013
Cristina Cabrera, M.D. - 2004
Michael Cairns, M.D. - 1981
Carmen Campanelli, M.D. - 2001
Mario Capparuccini, M.D. - 1980
Andrew Carey, M.D. - 1986
Asher Carey, M.D. - 1978
Thomas Carnevale, M.D. - 1983
James Carney, M.D. - 1983
Jenava Carty, M.D. - 2014
Nicholas Casscells, M.D. - 2013
Amanda Castro, M.D. - 2012
Haynes Cates, M.D. - 1980
Michael Chai, M.D. - 2015
Venkat Chakkaravarthi, M.D. - 2003
Faye Chao, M.D. - 2005
Wen Chao, M.D. - 1990
Lynn Chao, M.D. - 1991

William Chasanov, D.O. - 2007
Jeffrey Chase, M.D. - 1986
Andrew Chen, M.D. - 2004
Sonia Cheng, M.D. - 1997
Deepthi Cherian, M.D. - 2013
Dinu Cherian, M.D. - 2008
David Chiang, M.D. - 2008
Nikhil Chinmaya, D.O. - 2015
Richard Cho, M.D. - 2003
Hetal Choxi, M.D. - 2012
Melissa Choy Beattie, M.D. - 2017
Stephen Chrzanowski, M.D. - 2002
Pil Chung, M.D. - 2004
Mark Clark, M.D. - 1976
Ryan Cleary, M.D. - 2010
Joseph Clemente, M.D. - 1985
David Clinton, M.D. - 1975
Stephen Clute, M.D. - 1997
Clyde Clybourn, M.D. - 2002
David Clymer, M.D. - 1987
Amy Coan, M.D. - 2013
Daniel Coar, M.D. - 1986
Valerie Cohen, D.O. - 2011
Timothy Cole, M.D. - 1988
Joseph Colletta, M.D. - 1977
Roger Componovo, M.D. - 2002
David Compton, M.D. - 1998
Kieran Connolly, M.D. - 1996
Stephen Conrad, M.D. - 1975
Michael Conway, M.D. - 1989
Frederick Cook, M.D. - 1984
James Cook, M.D. - 1984
Brianna Cook Sustersic, M.D. - 2008
Jennifer Cooke, D.O. - 2007
Susan Cooley, M.D. - 1984
Kevin Copeland, D.O. - 2006
Jonathan Corsini, M.D. - 2014
Michael Cosgrove, M.D. - 1999
Christopher Cox, M.D. - 1998

Walter Coyle, M.D. - 1986
Colin Craft, M.D. - 2013
Jeanne Craft, M.D. - 1989
Kevin Crotty, D.O. - 2007
Robert Crowe, M.D. - 1999
Elizabeth Crowe, M.D. - 2010
Christopher Crowell, M.D. - 2004
Kevin Crowley, M.D. - 1974
Kevin Cullen, D.O. - 2004
Patricia Curtin, M.D. - 1988
Elizabeth Cushing, D.O. - 2017
Anthony DalNogare, M.D. - 1978
Hung Dam, M.D. - 1999
Anh Dam, M.D. - 1999
James D'Amour, M.D. - 1982
John Danko, D.O. - 2001
Jeffrey Dassel, M.D. - 2002
Seema Dattani, M.D. - 2008
Kimberly Davidson, M.D. - 2001
John Davies, M.D. - 1991
Joshua Davis, M.D. - 2017
Erin Davis, M.D. - 2010
Bessann Dawson, M.D. - 1986
Angela Debo, D.O. - 2012
Steven Dellose, M.D. - 1996
Lee Dennis, M.D. - 1981
Joseph Deutsch, M.D. - 2006
Chaitan Devulapalli, M.D. - 2011
Surjeet Dheer, D.O. - 2016
Matthew Di Guglielmo, M.D. - 2004
Dennis Dicampli, M.D. - 1996
Jacob Diehl, D.O. - 2006
John Dietz, M.D. - 1977
Stephen DiSabatino, M.D. - 2015
Kristin DiSimone-Berna, M.D. - 1996
James Dobson, M.D. - 1976
Phillip Dobson, M.D. - 2011
Michael Doherty, M.D. - 1984
Jeremy Domanski, M.D. - 2005

Zeena Dorai, M.D. - 1998
William Doran, D.O. - 2011
Denise Dorsey Kyle, M.D. - 1995
Christopher Doty, M.D. - 1997
Anthony Dougherty, M.D. - 1974
Lauren Dougherty Bloom, D.O. - 2013
Lauren Douglas, M.D. - 2011
Richard Dowling, M.D. - 1986
Jeremy Dressler, M.D. - 2011
Luis Duarte, M.D. - 1987
John Duch, M.D. - 1993
Duane Duke, M.D. - 2003
Gealina Dun-Melli, M.D. - 2016
Philip Durney, M.D. - 2017
Anne Durstenfeld, M.D. - 2013
Kevin Eanes, M.D. - 2008
Paul Eckenbrecht, M.D. - 1981
Guy Edmondson, M.D. - 1981
David Edwards, M.D. - 1982
Joshua Eisenberg, M.D. - 1999
Jesse Eisenman, M.D. - 1984
Richard Eisenman, M.D. - 1987
Kathleen Eldridge, M.D. - 2007
Valerie Elener, M.D. - 1987
Daniel Elliot, M.D. - 2001
Amy Elliott, M.D. - 1997
Scott Ellis, M.D. - 1985
Frank Ellis, M.D. - 1989
Donald Emery, M.D. - 1981
Brian Englander, M.D. - 1998
Rachel Epstein, M.D. - 2009
Alan Erickson, M.D. - 1979
Christopher Eriksen, M.D. - 1982
Charles Esham, M.D. - 1988
David Estock, M.D. - 1982
Mary Facciolo, M.D. - 1979
Christian Fagel, M.D. - 2016
Andrew Farach, M.D. - 2010
Hadi Fattah, M.D. - 2011

Bahar Fazeli, M.D. - 2007
Samantha Feld, M.D. - 2012
John Field, M.D. - 2012
Justin Field, M.D. - 2015
Bonni Field, M.D. - 1985
Michael Fierro, M.D. - 2010
Barbara Figgs, M.D. - 1974
Marciana Filippone, M.D. - 1978
Jon Finamore, M.D. - 2015
Tina Finesmith, M.D. - 1987
John Fiss, M.D. - 2001
Christa Fistler, M.D. - 2001
Patricia Fitzpatrick, M.D. - 1978
Timothy Fitzpatrick, M.D. - 2000
Peter Fleischut, M.D. - 2006
Erin Fletcher, D.O. - 2005
Erin Fletcher, D.O. - 2006
Patrick Fogarty, M.D. - 1996
Everett Ford, M.D. - 1992
Amy Forsythe Morgan, M.D. - 1993
Bruce Foster, M.D. - 1977
Andrew Foy, M.D. - 2008
Bryan Franck, M.D. - 2008
Charles Frasso, D.O. - 2013
Marilee Frazer, M.D. - 1978
Kyle Frey, M.D. - 2014
Hervey Froehlick, M.D. - 1981
William Funk, M.D. - 1977
Peter Furness, M.D. - 1990
Rosa Fuste, M.D. - 1977
Teresa Gale, M.D. - 2002
Lauren Galinat, M.D. - 2011
Eric Gallagher, M.D. - 1996
Kimberly Gallagher, M.D. - 1996
Alexander Gambogi, M.D. - 2013
Kaanchan Gangal, M.D. - 2007
Michelle Gardecki, M.D. - 2008
David Garth, M.D. - 1995

James Garvin, M.D. - 1976
Richard Gasparre, M.D. - 1999
Charles Gawthrop, M.D. - 2004
Sarah Gawthrop, M.D. - 2004
Daniel Gelb, M.D. - 1987
Benjamin George, M.D. - 2002
Susan George, M.D. - 2004
Dana Ger, M.D. - 1997
Darin Geracimos, M.D. - 2006
Ryan Geracimos, M.D. - 2003
Joseph Gerard, M.D. - 1977
Constance Gerassimakis, M.D. - 1979
Stephanie Giattino, M.D. - 2013
Sandra Gibney, M.D. - 1994
Danielle Giddins, M.D. - 2002
Peter Gkonos, M.D. - 1978
John Glenn, M.D. - 1974
Andrew Glick, M.D. - 1984
Stefanie Golebiewski-Manchin, M.D. - 2010
Katy Goodman Crowe, M.D. - 2005
Jonas Gopez, M.D. - 1996
Richard Gorman, M.D. - 1989
Sharon Gould, M.D. - 1988
Matthew Grady, M.D. - 1999
Antonio Granda, M.D. - 1974
Glenn Graybeal, M.D. - 1978
Michael Graybeal, M.D. - 1979
Michael Greenage, D.O. - 2007
Jeffrey Greenwald, M.D. - 1983
Tyler Grenda, M.D. - 2010
John Griggs, M.D. - 1975
Angelo Grillo, M.D. - 1990
Sharon Griswold, M.D. - 1993
Jerome Groll, M.D. - 1976
David Grubbs, M.D. - 1985
Stephen Grubbs, M.D. - 1979
Jeffrey Guarino, M.D. - 2009
Courtney Guerrieri, M.D. - 2007

Kanika Gupta, M.D. - 2007
Ratika Gupta, M.D. - 2011
Sara Guzick, D.O. - 2006
Hilary Haack, D.O. - 2013
Constantinos Hadjipanayis, M.D. - 1998
Timothy Hagemann, M.D. - 1983
John Hale, M.D. - 1988
Nathan Hammel, M.D. - 2006
Scott Hammer, M.D. - 2001
Joseph Handler, M.D. - 1992
Patrick Hanley, M.D. - 2010
Edward Hanna, M.D. - 1978
Patricia Hansen Figgs, M.D. - 2011
Ashley Harrison Choucroun, M.D. - 2008
Elyse Harrop, M.D. - 1995
Scott Harshman, M.D. - 2012
Geoffrey Hart, M.D. - 1981
Heather Hartman, M.D. - 2000
Sally Hauser, M.D. - 1977
McKenna Healy, M.D. - 2010
Lauren Healy-Scarpaci, M.D. - 1996
Anneliese Heckert, D.O. - 2011
Jeffrey Heckert, M.D. - 1989
Richard Heckert, M.D. - 1981
Ryan Heffelfinger, M.D. - 2000
Cynthia Heldt, M.D. - 1983
Stacy Henderson McAllister, M.D. - 2012
Michael Henrickson, M.D. - 1984
George Henry, M.D. - 1995
Wayne Herrick, M.D. - 1981
Thomas Hetrick, M.D. - 1976
Gideon Hill, M.D. - 1983
Raymond Hillyard, M.D. - 1981
Benjamin Hinman, M.D. - 2014
Neil Hockstein, M.D. - 2000
John Hocutt, M.D. - 1975
Courtney Hoey, M.D. - 2007
Carolyn Hoffman, M.D. - 1990

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Jean Hoffman-Censits, M.D. - 2002
Michael Hofmann, M.D. - 1977
Charles Hoidal, M.D. - 1982
Anita Holloway, M.D. - 1986
Angelica Honsberg, M.D. - 1989
Timothy Hoopes, M.D. - 1988
Terry Horton, M.D. - 1987
Paul Hoyer, M.D. - 1976
Marian Huang, M.D. - 1982
Philip Huffman, M.D. - 1998
Carrie Hufnal-Miller, M.D. - 1984
Samuel Hughes, M.D. - 1975
Peter Hulick, M.D. - 2001
Mark Hummel, M.D. - 1985
Joseph Hung, M.D. - 2007
Clifton Hunt, M.D. - 1974
Deborah Hunter, M.D. - 1992
Christopher Huntington, M.D. - 1990
Jennifer Hurd, M.D. - 2009
Douglas Hutchinson, M.D. - 1984
Sharon Hwang, M.D. - 2013
Patrice Hyde, M.D. - 1980
Melodie Icasiano, M.D. - 1999
Daniel Ikeda, M.D. - 2009
Galicano Inguito, M.D. - 1990
Siobhan Irwin, M.D. - 1996
Kathryn Italia, M.D. - 2005
Brittany Jackson, M.D. - 2013
Jeffrey Jacobs, M.D. - 1985
Neeta Jain Sethi, M.D. - 2013
Pooja Jasani, D.O. - 2007
Tyrie Jenkins Hiller, M.D. - 1980
Brian Jerusik, D.O. - 2009
David Jezyk, M.D. - 1975
Margaret Johnson, M.D. - 1990
David Johnson, M.D. - 1987
Robert Johnson, M.D. - 1974
Joan Johnson, M.D. - 1983

Steven Johnson, M.D. - 1975
Caitlyn Johnson Costanzo, M.D. - 2011
Upasana Joneja, M.D. - 2013
David Jones, M.D. - 1998
James Jones, M.D. - 1975
Trisha Jordan, M.D. - 2001
Nathan Jordan, M.D. - 2013
Trisha Juliano, M.D. - 2010
Jennifer Kacmar, M.D. - 1996
Nicholas Kalman, D.O. - 2015
Ram Kalyanam, M.D. - 1993
Samata Kamireddy, M.D. - 2012
Jonathan Kaufmann, D.O. - 2006
Erin Kavanaugh, M.D. - 2007
Jonathan Kay, M.D. - 1975
Peter Kelleher, M.D. - 2002
Tara Kennedy, M.D. - 2004
Anne Marie Kennedy, D.O. - 2016
Minh Kenney, M.D. - 1993
James Kerrigan, M.D. - 1984
Christopher Kestner, M.D. - 2006
Brian Keuski, M.D. - 2007
Vikram Khasat, D.O. - 2010
Mary Khine, M.D. - 1992
Elaine Kilmartin, M.D. - 2001
Gina Kim, M.D. - 2013
Edward Kim, M.D. - 1989
Su Kim, M.D. - 2010
Deborah Kirk, M.D. - 2000
Chris Kittle, M.D. - 1978
Peter Klacsmann, M.D. - 1975
Maryida Klimowicz, M.D. - 1984
Maciej Klosowski, M.D. - 2012
James Knox, M.D. - 1986
Jane Kong, M.D. - 2003
Craig Koniver, M.D. - 2000
Mark Kostic, M.D. - 1994
Jennifer Koterwas, M.D. - 2010

Renee Kottenhahn, M.D. - 1990
Heidi Kozic, M.D. - 2002
Charles Krespan, M.D. - 1982
Andrew Kubinski, D.O. - 2014
Michael Kuczmarski, D.O. - 2005
Gregory Kujala, M.D. - 1981
Sanjay Kulkarni, M.D. - 2009
Braden Kuo, M.D. - 1994
Maryanne Kuo, M.D. - 2007
Kristen Kuratnick Sandoe, D.O. - 2007
Erika Kutsch, D.O. - 2006
Dean Laganosky, M.D. - 2014
Jared Lander, D.O. - 2012
Gail Larkin, M.D. - 1982
M. Lauter, M.D. - 1978
Otto Lauter, M.D. - 1982
David Lavin, M.D. - 1978
Philip Lavenburg, D.O. - 2011
Laura Lawler, M.D. - 2001
Victoria Lawn, D.O. - 2011
Marvin Lawrence, M.D. - 1996
Jessica Lawrence George, M.D. - 2004
Stephen Lazar, D.O. - 2014
Peter Lazzopina, M.D. - 2008
Sook Lee, M.D. - 1996
Vanessa Lee, M.D. - 2003
Stephanie Lee, M.D. - 1999
Brian Lee, M.D. - 2012
Christina Lehane, M.D. - 2003
Miriam Lender, M.D. - 2008
Nicholas Leone, M.D. - 2003
Nancyanne Lerner, M.D. - 1991
Michael Levy, M.D. - 1976
Eleanor Lewin, M.D. - 2013
Benjamin Liechty, M.D. - 2010
Julie Linek Barta, M.D. - 2008
Matthew Lippstone, M.D. - 2002
George Lisehora, M.D. - 1984

Susan Livesay, M.D. - 1989
Elizabeth Livingston, M.D. - 1989
Joshua Lloyd, M.D. - 2004
Julia Loiacono Cullen, D.O. - 2012
Thomas Londergan, M.D. - 1988
Michael Longo, M.D. - 1997
William Lovett, M.D. - 1980
Jonathan Lowry, M.D. - 1989
Hungyi Lub, M.D. - 2002
Jeffrey Lukish, M.D. - 1991
Christo Lutrzykowski, M.D. - 1993
Melissa Lynch, M.D. - 2001
Lawrence Lyons, M.D. - 1976
Albert MacFarlane, M.D. - 1982
Jill Mackey, M.D. - 1994
John MacKnight, M.D. - 1992
John Macmillan, M.D. - 1995
Leslie Magalong, M.D. - 1993
Ali Mahmood, M.D. - 2013
Reza Maleksalehi, M.D. - 1991
G. Malone, M.D. - 1976
Stephen Malone, M.D. - 1995
Michael Maloney, M.D. - 2014
Patrick Maloney, M.D. - 2007
Lindsay Mammarella, M.D. - 2015
Maria Mancuso, M.D. - 1999
Charles Mandelberg, M.D. - 1982
Mark Mandichak, M.D. - 2007
Richard Marcello, M.D. - 1975
Walter Marchlewski, M.D. - 1980
Armin Marefat, D.O. - 2005
Megan Margiotta, M.D. - 2014
Andrew Margules, M.D. - 2012
Andrew Markiewitz, M.D. - 1989
John Maroney, M.D. - 1986
Christopher Martin, M.D. - 2009
Patrick Massey, M.D. - 2008
Patrick Matthews, M.D. - 2003

Sarah Matthews Wells, M.D. - 2016
Thomas Maxwell, M.D. - 1975
Henry Maxwell, M.D. - 1980
Thane McCann, M.D. - 2003
Christopher McClung, M.D. - 2003
Edward McConnell, M.D. - 1976
Paul McCready, M.D. - 1980
Jamie McElrath, M.D. - 1994
Brian McGillen, M.D. - 2004
Holly McKiel, D.O. - 2011
Brian McKinley, M.D. - 1993
Elizabeth McShane, M.D. - 1983
Ryan McSpadden, M.D. - 2012
Isha Mehta, D.O. - 2011
Aaron Mendelson, M.D. - 2012
Armando Mendez, M.D. - 1985
Martin Mersky, M.D. - 1975
Joseph Mesa, M.D. - 1994
Laura Methvin, M.D. - 2015
Erich Metzler, M.D. - 1988
William Meyer, M.D. - 1974
Eric Michael, M.D. - 1978
Liudmila Mikhno, D.O. - 2018
Julia Milewski Azari, M.D. - 1985
Wayne Miller, M.D. - 1983
Randolph Miller, M.D. - 1984
Samuel Miller, M.D. - 1991
Pamela Miller, M.D. - 1988
Erin Millilgan-Milburn, M.D. - 2008
Edmund Mitchell, M.D. - 1990
Perry Mitchell, M.D. - 1974
Bradford Mitchell, M.D. - 1987
Obinna Mmagu, D.O. - 2013
Wallis Molchen, D.O. - 2012
Jeremy Molligan, M.D. - 2012
James Monihan, M.D. - 1984
Benjamin Montgomery, M.D. - 2000
Paul Montigney, M.D. - 1978

David Moore, M.D. - 1982
Edward Moore, D.O. - 2013
Sarah Moore, M.D. - 2007
Daniel Moore, M.D. - 1990
Leslie Moroz, M.D. - 2009
Allston Morris, M.D. - 1976
Todd Morrison, M.D. - 2009
Heather Mosca, D.O. - 2010
Neil Moudgill, M.D. - 2004
Parisa Mousavi Garrett, M.D. - 2003
Craig Muetterties, M.D. - 1975
Adam Mullan, M.D. - 2012
Donald Mullen, M.D. - 1993
Lise Mungul, M.D. - 1979
Margaret Murphy, M.D. - 1980
Gene Myers, M.D. - 2004
Steven Myrick, M.D. - 1981
Tejal Naik, M.D. - 2016
Nadia Nashed, D.O. - 2011
Priyanka Nath, M.D. - 2004
Guillermo Navarro, M.D. - 2000
Kimberlie Neal, M.D. - 1996
Krista Neal Wasserman, M.D. - 2015
Jean Nelson, M.D. - 1988
Anne Nelson Walton, M.D. - 2000
Sharon Nemser-Rudo, M.D. - 2000
Janice Nevin, M.D. - 1987
Ngoc Nguyen, M.D. - 2015
Michael Nguyen, M.D. - 2000
Aivi Nguyen, M.D. - 2014
Andrew Noble, M.D. - 2000
Sajid Noor, D.O. - 2007
Leonard Noronha, M.D. - 2000
Jillian Noyes, M.D. - 2013
Brent Noyes, M.D. - 1978
Robert Nunag, M.D. - 1992
Aaron Ober, M.D. - 2013
Jeffrey O'Brian, M.D. - 2006

Matthew O'brien, M.D. - 1997
John O'Brien, M.D. - 1979
Allison Ochsner, M.D. - 1992
Robert O'Connor, M.D. - 1986
Julie O'connor, M.D. - 2003
Kathryn O'Connor, M.D. - 1986
Kara Odom Walker, M.D. - 2004
Michael O'Donoghue, M.D. - 1992
Stephen Ogden, D.O. - 2005
Ann Olewnik, M.D. - 1983
Robert Olivere, M.D. - 1977
David Olson, M.D. - 1976
Robert Olympia, M.D. - 1996
Patricia Olympia DeChellis, M.D. - 2001
Chiazom Omeruah, D.O. - 2008
Jubril Onaneye, D.O. - 2015
Kevin O'Neil, M.D. - 1983
Daniel O'Neill, M.D. - 1989
Eric Orndorff, M.D. - 1999
Timothy Ortlip, M.D. - 2012
David Osborn, M.D. - 2001
Ernest Osei-Tutu, M.D. - 1984
Gary Owens, M.D. - 1975
Jeffrey Owens, M.D. - 1996
Juan Palacio, M.D. - 1996
Francis Palermo, M.D. - 1984
Craig Palmer, M.D. - 1983
Vasudha Panday, M.D. - 2001
Ashley Panichelli, M.D. - 2015
Matthew Paoli, D.O. - 2012
Anuj Parikh, M.D. - 2002
Amol Parikh, D.O. - 2008
Kajal Patel, D.O. - 2013
Monica Patel, M.D. - 2003
Monil Patel, D.O. - 2013
Parth Patel, D.O. - 2016
Shaunak Patel, M.D. - 1998
Sayjal Patel, M.D. - 1997

Ravi Patel, M.D. - 2007
Dhiren Patel, M.D. - 2003
Shivam Patel, M.D. - 2007
Markian Pazuniak, M.D. - 2015
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Nicholas Pefkaros, M.D. - 2001
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Sarah Perry Ambro , M.D. - 2005
Michael Peters, M.D. - 1998
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Khanh Pham, M.D. - 2000
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Matthew Sincock, M.D. - 2005
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Brian Uniacke, M.D. - 1982
Kenneth Usuki, M.D. - 2004
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John Yindra, M.D. - 1979
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Dennis Young, M.D. - 1974
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Elizabeth Zapp, M.D. - 1997
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Mark Zolnick, M.D. - 1982
Paul Zukoff, M.D. - 1986
Thomas Zumsteg, M.D. - 1983
Benjamin Zussman, M.D. - 2009

DIMER Residents*

Hannah Anderson, M.D.
Gulsedef Arslan, D.O.
Haseeb Bajwa, D.O.
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David Barry, M.D.
Isaac Bennett, D.O.
Hamza Bhatti, D.O.
Talha Bhatti, D.O.
Brian Blazovic, M.D.
Brandon Boyer, D.O.
Charles Brodowski, M.D.
Rachel Brown, D.O.
Mark Burgess, D.O.
Brian Calio, M.D.
Alexander Chau, M.D.
Xian Cheung, D.O.
Evan Cohen, D.O.
Ryan Cotto, M.D.
Alicia Cox, D.O.
Stephanie Cramer, M.D.
Marcus Dal Nogore, M.D.
Christine Dang, M.D.
Adam Daniel, M.D.
Courtney Docherty, D.O.
Julia Durante, M.D.
Alexis Esbitt, D.O.
Maura Fahy, M.D.
Meghan Fahy, M.D.
Michele Fascelli, M.D.
Andrew Freeman, D.O.
Nicole Frerichs, D.O.
Julie Gianakon, M.D.
Gerald Gibbons, M.D.
Amanda Grigoli, M.D.
Rica Gueco, M.D.
John Hafycz, M.D.
Katrina Hansen, D.O.
Joshua Harman, D.O.
Erica Hatch, M.D.*
Brittany Heckel, M.D.*
Clifford Hegedus, M.D.
Meghan Holliday-Minderlein, D.O.
Madison Houff, D.O.
Chad Hummel, M.D.*
Travis Hunt, M.D.
Gabrielle James, M.D.
Shreya Jammula, M.D.
Pavitra Krishnamani, M.D.
Elizabeth Kuhn, M.D.
Patrick Kukulich, M.D.
Christine Kurian, M.D.
Abigail Kushner, D.O.
Kristine LaRocca, D.O.
Arooj Latif, D.O.
Ryan Lee, M.D.
Harry Lengel, M.D.
Thomas LeNoir, D.O.
Bryan Lerner, M.D. (deceased)
Philip Lieberman, M.D.
Zachary Magner, D.O.
Padmini Manrai, M.D.
Philip Margiotta, M.D.
Ashley Martin, D.O.
David Matera, D.O.
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Christopher Mitchell, M.D.
Jaymin Modi, D.O.
Nidhi Mody, D.O.
Priyanca Mody, D.O.
Fazad Mohamed, D.O.
Angelica Montes, M.D.
Samuel Needles, M.D.
Amanda Nemecz, M.D.
Jeffrey Oliver, M.D.
Susan Pak, M.D.
Arjun Patel, M.D.
Ramkrishna Patel, M.D.
Needhi Pattani, D.O.
Nithin Paul, M.D.
Lauren Payne, D.O.
Gregory Penny, M.D.
Gabrielle Perrotti, M.D.
Taylor Phillips, D.O.
Torey Roesch, M.D.
Nathaniel Rosal, D.O.
Rebecca Russell, M.D.
Susan Schiff, M.D.
Karim Shafi, M.D.
Nadia Shobnam, M.D.
Maryanne Shorey, M.D.
Shilpa Singh, D.O.
Andrew Singles, D.O.
Hope Skibicki, D.O.
Collin Sylvester, M.D.
Stephy Thomas, M.D.
David Truscello, D.O.
Siddardth Umapathy, D.O.
Meredith Vieira, M.D.
Matthew Viercek, M.D.
Lisa Strouss Wallace, M.D.
Kevin Walpole, D.O.
Amanda Walsh, M.D.
Julie Wang, D.O.
Alissa Werzen, M.D.
Christopher West, M.D.
Matthew Wiltshire, M.D.
Hunter Witmer, M.D.
Cullen Worsh, M.D.
Yuchen Yang, D.O.
Victor Ye, M.D.
Andrew Young, D.O.
Joseph Zarraga, D.O.

2020 residents

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Robert Anderson, D.O. - 2020
Elyse Andrews, M.D. - 2020
Jessica Beadle, M.D. - 2020
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Grant Gillan
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Kurt Hill
Zachary Howell
Zubin Hussain
Galicano Kai Inguito
Adrienne Johnson
Ki Chang Kang
Humaal Khan
Jacqueline King
Meera Kohli
Varsha Kripalu
Samantha Leite
Sara Long
Lauren Lynch
Priyha Mahesh
Arlene Maheu
Osama Mahmoud
Thomas Marconi
Praneeja Matta
Anna Melnick
Toru Mihama
Kayla Morrell
Jeffrey Mu
Oriana Pando
Taylor Paskey
Stephanie Perez
Darius Pirestani
Kyle Plusch
Nicholas Rapp
David Nathan Ribaya
Chelsea Richards
Austin Roadarmel
Emily Romano
Drew Sanclemente
Nazanin Sarpoulaki
Erin Schulze
Jacqueline Sinnott
Shruti Sirapu
Christina Stiebris
Jay Subramoney
Anna Sung
Abhishek Surampudy
Rashiqah Syed
Alexander Tam
Julian Tanjuakio
Olivia Taylor
Ana Tegtmeier
Volkan Tekmen
Shiori Tomatsu
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Jasmine Wang
Kerith Wang
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Philadelphia College of Osteopathic Medicine

Yara Aboubakr Abdelaal
Chelsea Adebiyi
Megan Aidoo
Bhavana Aitha
Farha Ali
Alyssa Alicea
Ariella Anthony
Samichhya Aryal
Omneya Ayoub
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Jessica McKeown
Kelsey Mellow
Arianna Morton
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Delaware Institute of Medical Education and Research

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