

MEDICAL CAREER DESIGN FELLOWSHIP

John M. Flynn, MD

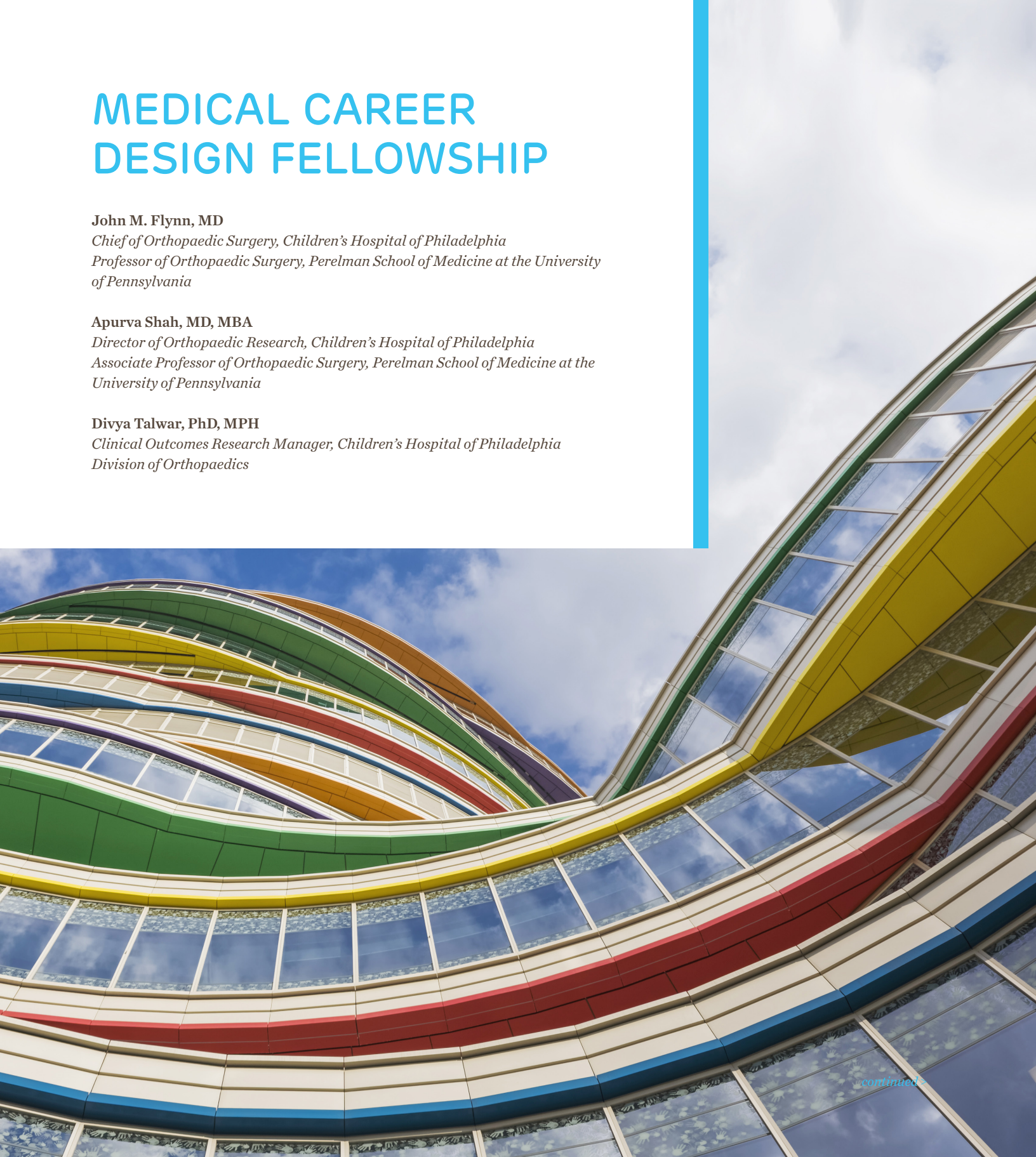
*Chief of Orthopaedic Surgery, Children's Hospital of Philadelphia
Professor of Orthopaedic Surgery, Perelman School of Medicine at the University
of Pennsylvania*

Apurva Shah, MD, MBA

*Director of Orthopaedic Research, Children's Hospital of Philadelphia
Associate Professor of Orthopaedic Surgery, Perelman School of Medicine at the
University of Pennsylvania*

Divya Talwar, PhD, MPH

*Clinical Outcomes Research Manager, Children's Hospital of Philadelphia
Division of Orthopaedics*



continued

THE MEDICAL CAREER DESIGN FELLOWSHIP

Award Overview

The Medical Career Design Fellowship promotes clinical research by giving extraordinary pre-medical students the opportunity to investigate pertinent topics in clinical orthopaedic research at Children's Hospital of Philadelphia (CHOP). This fellowship will allow recent college graduates the opportunity to explore many aspects of a medical career – research, clinical practice, education, advocacy and leadership.

Each Medical Career Design (MCD) fellow will spend two years as an essential member of our research and clinical teams, mentored by our thought-leading faculty from the Perelman School of Medicine at the University of Pennsylvania. The fellowship focuses on giving the pre-medical student a diversity of clinical research opportunities, advanced orthopaedic skills through clinical exposure, and mentoring for medical school applications and beyond. Fellows will be mentored by our Division of Orthopaedics faculty. See www.chop.edu/ortho-team.

About the Division of Orthopaedics at CHOP

CHOP is internationally recognized for its pioneering work in pediatric orthopaedic patient care, education, and basic and clinical research. The Division of Orthopaedics at CHOP has consistently ranked among the top pediatric orthopaedic programs in the nation by *U.S. News & World Report*; and was ranked #1 for Pediatric Orthopaedics in the 2023-24 rankings.

CHOP orthopaedic surgeons and physicians are leaders in their fields – pioneering clinical innovations, writing textbooks, chairing courses and leading regional, national and international organizations in orthopaedics. We have 29 attending physicians, each with different subspecialties in pediatric orthopaedics.

Fellow Eligibility

MCD fellow applicants will be completing a BA/BS degree, pre-medical and commit for two gap years between college and med school. The student must be in good academic standing and have an interest in pursuing a career in Orthopaedic Surgery. The successful applicant will be responsible, motivated, intellectually curious and independent. An MCAT score, biostatistics training and research experience are strongly valued, but not mandatory.

Stipend and Benefits

Each fellow will be provided an annual stipend of \$45,000 in year one and \$50,000 in year two, and will be provided with up to \$5,000 of travel support annually to attend and participate in scientific presentations at regional and national meetings. A minimum two-year commitment is required. Fellows will also receive 12 vacation days per year in addition to CHOP-designated national holidays.

Start and End Dates

Each fellow's official start date will be determined by the Division of Orthopaedic Surgery at the time of receiving an offer. The start date will be no later than June 15, 2024, with the exception of students enrolled in late spring or summer coursework. The official start date may be within two weeks of college graduation to facilitate the transition between incoming and outgoing MCD fellows. The fellowship will culminate no earlier than June 30, two years after inception.

How to Apply

To apply, please submit the following:

- Cover letter
- Undergraduate transcript
- Curriculum vitae
- MCAT score
- Your earliest available start date

Applications should be emailed to: Research Manager Divya Talwar, PhD, at talward@chop.edu. Applications will be considered on a rolling basis through **March 1, 2024**. Interviews will be required as part of the selection process.

PROGRAM AT A GLANCE

The central aspect of the MCD fellow's work will be coordinating and facilitating clinical research, including but not limited to:

- Subject recruitment
- IRB submissions and renewals
- Data analysis/manuscript preparation
- Monitoring/maintaining data for study group databases and multicenter registries

This will include training in research ethics, research subject protections, clinical science study design, methodology, data analytics and statistical methodology.

Successful MCD fellows will have opportunities to co-author medical journal submissions and are encouraged to present study results at regional and national meetings. Through this immersive experience, the MCD fellow will learn how to initiate, design, complete and communicate clinical research.

Each week, MCD fellows will work in our clinics as a scribe, helping our attending physicians with patient visits by populating medical records. The scribe role offers the MCD fellow a unique front-line physician shadowing role in performing a history and physical exam, interpreting image and lab data, and formulating clinical decisions.

This daily exposure — over time — allows the MCD fellow to develop a significant font of medical knowledge, grow confident in the patient-care setting, and gain insights into managing the challenges of a busy and complex clinical practice.

Clinical Research at CHOP Orthopaedics

There is a very strong, long-established clinical research office in the Division of Orthopaedics at Children's Hospital of Philadelphia. A few of the benefits of doing clinical research in our division include:

- Extremely active academic surgical faculty, with internationally known thought leaders among our 18 full-time surgeons and six non-operative surgeons.
- A faculty member and research manager with a PhD, who can assist the student with study design and statistical analysis.
- Nearly 200 open clinical IRBs, including databases for several national multicenter research groups ripe for utilization for high-powered, collaborative projects.
- Daily clinical conferences, visiting speakers, quarterly Journal Club and many other educational events to inspire and educate student researchers.
- A high-volume clinical practice (more than 64,000 outpatient visits and 4,000+ surgical procedures each year) that allows the student to shadow and gain clinical exposure to inspire new research ideas.
- A research manager whose advice and support will be invaluable as you navigate the logistical and compliance challenges of 21st-century clinical research.
- Four U.S.-trained clinical fellows, three year-out medical student fellows and an international research fellow, each of whom has their own individual projects, but with their other obligations, often welcome and mentor student collaborators.

Alumni from our MCD (Class of 2023) were admitted to top medical colleges such as the University of Michigan, Ohio State University, Case Western Reserve University, Northwestern University and University of North Carolina.

Additionally, completed projects by MCD fellows are published in the best orthopaedic journals and are presented at leading scientific conferences such as the American Academy of Pediatrics.

CURRENT MEDICAL CAREER DESIGN FELLOWS



“Before beginning my time as an MCD fellow my career path felt unclear: Did I even want to go to medical school? Would working in a hospital feel fulfilling? Did I even enjoy surgery? I can confidently answer each of the former questions (YES x3) thanks to the research exposure and clinical mentorship I have gained from this position. My PIs and co-fellows quickly became lifelong friends and I feel proud and honored for the opportunity to engage in such high-level research.”

Eliza Buttrick

Graduate of Barnard College, New York, with major in in Urban Studies and Anthropology

Primary mentor: Apurva S. Shah, MD, MBA

Secondary mentors: Benjamin Chang, MD, FACS; Shaun D. Mendenhall, MD



“My experience as an MCD fellow has far exceeded all my expectations. The unique combination of working as a clinical research coordinator and scribe on a team of fantastic surgeons, researchers, and other healthcare professionals has been the perfect opportunity to learn and grow. I have especially enjoyed the chances to build relationships with knowledgeable individuals who are eager to teach me everything they know. Through this fellowship, I have been able to build a strong, supportive network of lifelong friends, colleagues, scientists, and clinicians who are truly invested in my future.”

Scott Mahon

Graduate of Duke University, Durham, NC, with major in Neuroscience

Primary mentor: Apurva S. Shah, MD, MBA

Secondary mentors: Robert B. Carrigan, MD; Shaun D. Mendenhall, MD



“The MCD fellowship has greatly exceeded my expectations so far. The opportunity to be involved in the clinical care we are researching is an invaluable learning experience. In my short time here thus far, I have gained confidence in my research skills, learning from renowned pediatric orthopaedic surgeons, and have been able to explore my own clinical research interests under their guidance. Above all, I value the relationships I have developed with patients and families along with the incredible mentors I have the privilege of working with each day. These connections have not only expanded my clinical knowledge but helped solidify my passion for academic medicine.”

Maia Regan

Graduate of Vanderbilt University, Nashville, TN, with double major in Chemistry and Medicine, Health, and Society

Primary Mentor: Keith D. Baldwin, MD, MPH, MSPT

Secondary mentor: B. David Horn, MD; Christine M. Goodbody, MD, MBE; David A. Spiegel, MD



“The MCD fellowship has provided me with everything I wanted and needed during my gap years between college and medical school. Working at CHOP, I have been surrounded by mentors and peers who are not only brilliant world-leaders in their field, but also passionate about research and eager to teach and collaborate. The opportunities and resources at CHOP have allowed me to grow as a professional, develop as a future physician, and provided me with the opportunity to perform high level research and challenge myself daily. Because of this fellowship, I will enter medical school more adept at patient care, more experienced as a researcher and scientist, and more prepared to address any challenges that come my way. The mentors who have invested in me and peers who have supported me have made this experience continuously rewarding.”

Kevin Landrum

Graduate of University of Michigan, Ann Arbor, MI, with major in Biology, Health, and Society

Primary mentor: Theodore J. Ganley, MD

Secondary mentor: Joseph L. Yellin, MD

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RECENT WHITE COAT CEREMONY OF PREVIOUS MEDICAL CAREER DESIGN GRADUATES

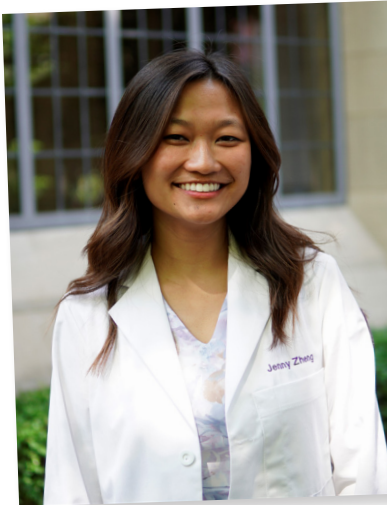
Leta Ashebo
University of Michigan



Alex Stevens
Ohio State University



Jenny Zheng
Northwestern University



Zoe Belardo
Case Western Reserve University



LETTER OF GRATITUDE

Dear Dr. Flynn,

I just wanted to reach out and let you know that I was offered over thirty interviews this season for ENT, and I cannot thank you enough — both for your strong letter and for the research fellowship year. At every interview, your letter is commented on, as well as all of the awesome orthopaedic research I got to take part in!

Interestingly, I was interviewed by one pediatric otolaryngologist at Northwestern/Lurie Children's, Dr. Douglas Johnston, who told me that he worked as a research coordinator in the ortho department at CHOP 20 years ago, and he worked on projects with you, Dr. Ganley and Dr. Horn — such a small world!

Anyway, thank you again for all of your help and support, and I hope you are doing well!

Sincerely,
Lacey

CURRENT MEDICAL CAREER DESIGN FELLOWS (CONT.)



“It has been a privilege to be a part of the MCD fellowship. This program has been the perfect combination of clinical exposure and research and has grown my interest in medicine even more than I could imagine. I have learned so much not only from the orthopaedics team, but also the incredible patients and families we see in clinic. The opportunity to grow as an individual and as a student alongside my fellow MCDs has been incredibly special and I know that the bonds we have created will last long beyond our time here at CHOP.”

Meg Bowen

Graduate of Haverford College, Philadelphia, PA, with double major in Biology and Music

Primary mentor: J. Todd Lawrence, MD, PhD

Secondary mentor: Patrick J. Cahill, MD



“My experience as an MCD fellow has given me invaluable insight into the world of orthopaedic surgery and sports medicine that will guide me in my medical career. I have gained more confidence in my understanding of medicine and clinical research and developed constructive relationships with peers and mentors. I feel so lucky to have the opportunity to work with and learn from world-class surgeons and amazing researchers every day.”

Morgan Swanson

Graduate of Boston University, Boston, MA, with major in Biochemistry and Molecular Biology

Primary mentor: Theodore J. Ganley, MD

Secondary mentor: Kathleen J. Maguire, MD



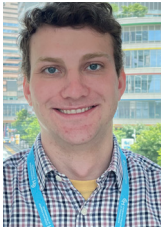
“My time as an MCD fellow thus far has completely exceeded my expectations. The position offers a really valuable opportunity to meld both clinical and research experience, allowing you to learn from incredible physicians who are both surgeons and researchers. In only a few months, I have learned so much about patient care and clinical research while also forming a vast support network here in Philadelphia!”

Carter Hall

Graduate of William & Mary, Williamsburg, VA, with major in Kinesiology & Health Sciences

Primary mentor: Wudbhav N. Sankar, MD

Secondary mentor: Richard S. Davidson, MD



“This fellowship offered me the unique experience to learn about medicine through close work with patients and surgeons. In my time at CHOP, not only have I been able to explore new questions through research, but I have also witnessed what a high standard for patient care looks like through my clinical experience. To top it off, I have been able to create a network of mentors with some of the leading physicians and surgeons in pediatric orthopaedics.”

David Kell

Graduate of Vanderbilt University, Nashville, TN, with major in Economics

Primary co-preceptor: Alexandre Arkader, MD

Secondary co-preceptor: Brendan Williams, MD



“During my tenure so far as an MCD research fellow at CHOP, I have grown more than I could have ever anticipated. Time spent learning from some of the most intelligent and talented researchers in the field of orthopedics has, in just a short time, begun to transform my view on meaningful research and has set me on a path to become a more productive and ethical scientist. From multi-center study coordination to brainstorming new projects from scratch, I have been challenged to think creatively and scientifically. In the orthopedic clinic, I have been afforded the opportunity to expand my clinical knowledge, interact with patients and receive mentorship from high-achieving clinicians. Most meaningful to me has been the connections I have made with my mentors and colleagues, who have made CHOP feel like home and will make the next year and a half rich with excitement and opportunity.”

Lucas Hauth

Graduate of Davidson College, Davidson, NC, with major in Chemistry

Primary preceptor: John J. Flynn, MD

Secondary preceptor: Jason B. Anari, MD

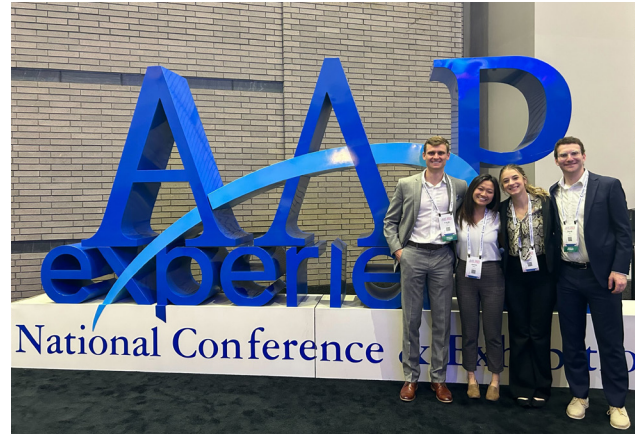
Learn more about the Medical Career Design Fellowship or apply by contacting Research Manager Divya Talwar, PhD, at talward@chop.edu.

Applications will be considered on a rolling basis through **March 1, 2024**.

CURRENT MCD FELLOWS



MCD fellows Scott Mahon, Carter Hall, David Kell, Lucas Hauth and Morgan Swanson enjoy beautiful Philly summer.



Class of 2023 MCD fellows Jenny Zheng and Morgan Batley along with Class of 2024 MCD fellows David Kell and Lucas Hauth present at 2023 American Academy of Pediatrics in Washington, DC.



MCD fellows, along with Ben Fox fellows and research director, Dr. Shah, go for a morning run.



MCD fellows (left to right) Morgan Swanson, Meg Bowen, Scott Mahon, Kevin Landrum, Carter Hall, Maia Regan and Eliza Buttrick enjoy camaraderie outside of work.



Coach Lucas trains Meg Bowen, Eliza Buttrick and Morgan Swanson in CrossFit.



MCD fellows attend year-end clinical fellows' graduation at Penn Anthropology Museum along with MCD Fellowship Co-director Apurva S. Shah, MD, MBA (right).