



# shade tree

C L I N I C

Annual Report 2020-2021



**“For more than a decade, the Shade Tree Clinic has afforded our students a unique learning environment where their clinical skills flourish as they provide valuable assistance to our community’s medically underserved. Participating in the Shade Tree experience offers students the unique opportunity to be responsible for a continuum of patients’ needs while they learn fundamentals of health care delivery. The experience is incredibly rewarding for everyone involved and represents the very best of Vanderbilt University School of Medicine’s mission to train future leaders in health care.”**

*Jeff Balsler, M.D., Ph.D., President and CEO of Vanderbilt University Medical Center, Dean of Vanderbilt University School of Medicine*

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## Who We Are

The Shade Tree Clinic (STC) is a free health clinic run by students at Vanderbilt University School of Medicine.

## Our Mission

We strive to be the primary care home for underserved individuals in Davidson County by providing comprehensive care for chronic illnesses, social services, and health education. To meet this mission, STC forms interdisciplinary teams of medical, nursing, pharmacy, and law students. These students are supervised by professionals in their fields to provide healthcare and social services free-of-charge to this community. The clinic welcomes all patients, regardless of their race, residency, gender, socioeconomic status, or religious affiliation.

## Impact

Since opening, Shade Tree has provided cost-free medical, social, and pharmaceutical support to over 4,000 patients. This past year, STC was the primary medical home to approximately 275 uninsured, underserved, and homeless patients. We provided nearly 2468 medical visits last year.

## From the Student Directors

Each year brings new challenges and joys for Shade Tree and the 2020-2021 year was no exception. Dr. Cooper Lloyd, Osler Internal Medicine-Pediatrics Urban Health program graduate and Shade Tree Director of Social Work alumnus, returned to us as a new Medical Director. Dr. Lloyd took the role in stride, providing exceptional care for our patients and mentorship for our healthcare students. Continuing a hybrid telehealth and onsite service model designed by the 2019-2020 Shade Tree Board, we stayed firm in our mission to care for Nashville's underserved.

Although many first year medical and nursing students interacted with the clinic in virtual roles to reduce in-person crowding, they remained engaged and dedicated to our patients. The essential onsite staff worked exceptionally hard, often for more hours than these roles previously demanded, to make sure Shade Tree was even more available to our family of patients during such a tumultuous period for physical health, mental health, and socioeconomic stability.

As the world became more familiar with COVID-19 and vaccines became accessible to the public, our Community Outreach Department and former Shade Tree Board members achieved rapid vaccination of our panel with superb vaccine eligibility tracking, persistent patient communication, and rapid scheduling. This effort allowed us to re-expand in-person patient services and restore our full in-person staff, coaxing Shade Tree closer and closer to its pre-pandemic state each day. In the meantime, our dedicated volunteers expanded our services to include Plastic Surgery & Wound Clinic, Sleep Medicine Clinic, Weight Management Clinic, expanded Patient Assistant Program medication services, General Surgery evaluations, fresh and nonperishable food, and certified Spanish interpretation.

It was an absolute privilege to be the Executive Directors of Shade Tree Clinic, a patient-centered medical home that we truly believe is one of the best student-run free clinics in the world. Despite long days and nights and over a dozen phone calls a day, our role allowed us to have the most incredible, defining experience of a lifetime. The Shade Tree family--patients and volunteers alike--is resilient, loving, and irreplaceable. Thank you to everyone who stood with us during this year. Shade Tree would not be able to continue to grow without the support of our student and attending volunteers, student leaders, medical directors, donors, and all of our institutional partners at VUSM, VUSN, VUMC, Melrose Midwives, UT College of Pharmacy, and Vanderbilt Law School. Lastly, thank you to our patients who are the heart of Shade Tree and the reason why we strive to be better each day.

We could not have the opportunities we do without the support of Vanderbilt University Medical Center, Vanderbilt University, Neighborhood Health, the Melrose Women's Clinic, University of Tennessee College of Pharmacy, volunteers, donors, and our patients.



*Simone Herzberg and Sarah Brown  
Executive Directors of Shade Tree Clinic  
with Dr. Miller and Dr. Fowler*





## From the Medical Directors

As clinicians in the changing healthcare environment, we are increasingly faced with obligations that take us away from the exam room and our patients. Shade Tree Clinic, for many of us, has come to represent an outpost of what clinical medicine ought to be. Students acting in interprofessional teams, physicians, and patients come together in a unique synergy that allows the provision of care to those who need it while providing a pure way for students to build patient relationships and learn the art of medicine.

This past year has been an exciting year for us. We continue to provide comprehensive primary care to more than 320 uninsured Nashville residents. Furthermore, we are able to offer regularly scheduled specialty care in gynecology, psychiatry, neurology, physical therapy, orthopedics,

ophthalmology, dermatology, weight loss, prenatal care, and other fields.

We have witnessed students integrate new technologies into clinic including point-of-care testing technologies, telemedicine diabetic eye screenings, and automating laboratory ordering in the electronic health record. Through these improvements we are providing care that is more convenient for our patients and cost-effective.

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*Robert Miller, M.D., Eleanor Weaver, M.D., Michael Fowler, M.D., and Cooper Lloyd, M.D., MPH Medical Directors, Shade Tree Clinic*

# In the Middle of COVID-19

Shade Tree had come far since its humble beginnings. From a trailer to its current location in Melrose at the Vanderbilt Health Midwives Clinic, for more than 15 years we had been able to provide primary and speciality care to our cohort of patients. We are fortunate for the many partnerships and pillars of support that have formed through the years to enable us in caring for our community.

Unfortunately, with the COVID-19 pandemic, this goal required us and our patients to be flexible in providing that care. At the end of the 2019-2020 academic year, we had shifted care to be predominantly telehealth based. As masking restrictions were put in place we began to shift to a half in-person and half telehealth clinic during 2020-2021.

Together as a team, our students and support departments were able to quickly mobilize and provide more in-person care to our patients. We worked through innovative solutions and were able to adhere to restrictions maximizing safety for everyone present.

When vaccines became available in 2021, we began to solicit supplies to be able to offer them to our patients. Our students and staff were luckily able to vaccinate themselves as well and serve as stewards to the community demonstrating both the effectiveness and safety of COVID-19 vaccines, encouraging many more beyond the doors of Shade Tree to seek vaccination themselves. We can work towards a future where we return to “normal”.

## Leadership

### Clinic Leadership

*Executive Directors: Simone Herzberg and Sarah Brown*

*Director of Finance: Sounak Roy*

*Director of Operations: Katherine Lee*

*Director of Patient Health Education: Aisha Suara*

*Directors of Dispensary: Ali Alving-Trinh and John Shelley*

*Director of Social Work: Katie McKay*

*Director of Community Outreach: Emilie Fisher*

*Directors of Laboratory Services and Referrals: Andrew Schaffer and Kelly Vittetoe*

*Director of Nursing: Chandler Washburn, BriAndra Grantham, Akaninyene Ruffin*

*Medical Directors: Cooper Lloyd, M.D., MPH, Robert Miller, M.D., and Eleanor Weaver, M.D.*

*Social Worker: Shannon Jordan, L.M.S.W.*

### Past Executive Directors

**2020-2021: Simone Herzberg and Sarah Brown**

2019-2020: Tita Gonzalez Pena and Thomas Day

2018-2019: Lauren Barr and Rohini Chakravarthy

2017-2018: Joshua Latner and Gregory Fricker

2016-2017: Joey Starnes and Tom Klink

2015-2016: Emily Buttigieg, Whitney Muhlestein

2014-2015: Mary DeAgostino-Kelly, Justiss Kallos, Mary Van Meter, Cristin Quinn, Rafael Tamargo

2013-2014: Nick Harris, Taylor Triana

2012-2013: Bharat Kilaru, Matthew Stier

2011-2012: Allison Ferreira, Paula Marincola

2010-2011: Ben Deschner, Ravi Patel

2009-2010: Jonathan Steer, Adam Wegner

2008-2009: Meredith Albin, Alon Peltz

2007-2008: Eve Henry, Caitlin Toomey

2006-2007: Sarah Dunn, Caroline Kim

2005-2006: Dana Guyer, Sara Horvitz

2004-2005: Kristina Collins, Katie Cox

### Board of Directors

Eleanor Weaver, M.D.

Robert Miller, M.D.

Cooper Lloyd, M.D., MPH



## Board of Directors (cont.)

Donald Brady, M.D.  
Bonnie Miller, M.D.  
Andre Churchwell, M.D.  
Amy Fleming, M.D., M.H.P.E.  
William Cutrer, M.D., M.Ed.  
Cecelia Theobald, M.D.  
Catherine Fuchs, M.D.  
Consuelo Wilkins, M.D., M.S.C.I.  
Allen Naftilan, M.D., Ph.D.  
Reid Finlayson, M.D.  
Al Powers, M.D.  
Beth Ann Yakes, M.D.  
Jeffrey Stoval, M.D.  
Jule West, M.D.  
Shannon Jordan, L.M.S.W.  
Robertson Nash, Ph.D., R.N.  
Pam Jones  
Mavis Schorn, Ph.D., C.N.M., F.A.C.N.M.  
Tracy Hagemann, Ph.D  
Alistair Finlayson, M.D.  
Neerav Desai, M.D.  
Beverly Conner  
Jennifer Streams

## Board of Advisors

Tita Gonzalez Pena  
Sharon Kam  
John T Walker  
Daniel E Sack  
Ayesha Muhammad  
Jessa Fogel  
Graham Treasure  
Christian Nguyen  
Jacqueline Antoun  
Eden Lyons  
Ellen Jennings  
Rafi Tamargo



# Clinic Departments

## Finance

The Shade Tree finance department obtains funding for all of the clinic's programs, creates a budget, and oversees spending. Without funding from a combination of grants, donations, and fundraisers, most of Shade Tree's programs would not exist. The finance department coordinates with and receives generous funding from the Community Fund of Middle Tennessee, Boulevard Bolt Foundation, the American Association of Family Physicians (AAFP), Howard Fuchs Swim Program, Turner Foundation, and many other community partners each year. As part of the grant reporting process, the finance department is responsible for managing data on patient health outcomes. Through gathering and analyzing this data, we have the unique opportunity to measure the impact that Shade Tree has on our patients' health. We are able to identify strengths and areas for improvement in order to provide equitable, evidence-based care to our patients.

This fiscal year, the finance department has raised a record amount of funds from a successful virtual benefit dinner and virtual 5K fundraising with a focus on vaccinating the most vulnerable in Davidson County. Generous donations from Vanderbilt alumni and faculty allowed the finance department to implement significant upgrades to one of the most crucial departments, the dispensary. With a similar focus on optimization and efficiency, we facilitated the operations department's COVID-facilitated check-in and in-clinic translational services with iPads and VUMC translator services. The finance department also made significant progress towards a sustainable funding plan for social work services by growing the Shade Tree Endowment to nearly nine thousand dollars. In collaboration with interpreter services, finance department helped certify six Spanish interpreters.

With the help of the diverse skillset of our volunteers, the finance department continues to pursue novel initiatives to improve the Shade Tree patient experience and build strong, lasting,

*Director of Finance: Sounak Roy*

## Dispensary

The Shade Tree Clinic dispensary is a full-service dispensary providing over 300 different medications to our patients at no cost. Over 50 incredible dispensary volunteers, including medical, nursing, and pharmacy students, ensure that it runs smoothly and medication orders are filled for the entire Shade Tree panel of patients. The dispensary also coordinates vaccine orders for the clinic and works closely

with the outreach team to ensure they have the proper amount of vaccines for their events. Moreover, we work very closely with the Patient-Assistance Program (PAP) department which helps our patients receive expensive, cutting-edge medication that we cannot keep on our formulary. Finally, we have continued to take the lead on keeping Shade Tree compliant with the highest standards, having scored well on both Environment of Care surveys and on our monthly, dispensary-focused MEDS survey.

We instituted a number of changes in the Shade Tree Dispensary this past year. We upgraded our electronic dispensing system this spring to EnterpriseRx, a move that brings us in line with Vanderbilt main-campus and many commercial pharmacies. Enterprise Rx can now communicate directly with our electronic medical record system Epic which has led to improved accuracy, efficiency, and most importantly, safety. In this new system, every medication order is processed completely electronically by our volunteers with multiple layers of safety checks. Data from the patient's Epic chart is continuously imported into EnterpriseRx, allowing us to detect potentially harmful interactions and allergies before they occur. We have also restructured our verification process so that a licensed pharmacist, in addition to an attending physician, reviews every single primary care medication order before it reaches the patient. This will further ensure that we are providing our patients with timely care in the safest manner possible

*Directors of Dispensary: Ali Alving-Trinh and John Shelley*

## Operations

The Operations Department supports the work of all of our other departments to meet the needs of our patients and keep our clinic running. We have a staff made up of eighteen first-year medical and nursing students who serve as clinic coordinators, greeting and screening patients when they arrive to clinic as well as starting the process of their visit. They communicate with the other teams in clinic, helping direct patients to the social work office or to have labs drawn, and are the first people that patients turn to with their questions. Our clinic coordinators keep track of all of our patients, making sure they leave with follow-up appointments, and calling those who were unable to make it to their appointments to reschedule their visits.

Outside of clinic hours, we coordinate with acute care coordinators and patient health educators to schedule patients, ensure that each Tuesday and Saturday is fully staffed with students and attendings, and serve as the point-of-contact for volunteers. In addition, we collect data on various aspects of clinic performance and



produce monthly reports on metrics such as health outcomes, orders and referrals, and appointments. As the department with the greatest focus on the behind-the-scenes work of Shade Tree, we have been able to work on many improvements to clinic flow and our ability to respond to our patients' needs. Over the past year, we have made efforts to develop a system for tracking patients who have not had recent visits, optimizing appointment reminders through the use of text messages, and offering clinical students checklists and guides to improve continuity of care.

The routine work of our department made us critical in helping shape Shade Tree's response to the COVID-19 pandemic, first finding ways to continue to provide necessary in-clinic care while reducing risk to patients and volunteers, and then temporarily transitioning our clinic to an entirely telehealth model. Thanks to the collaboration with each of our incredible departments, we have been able to continually identify and respond to our patients' needs through a year marked by significant change.

*Director of Operations: Katherine Lee*

## Patient Health Education

The Patient Health Education Program was established in 2012 to improve the continuity-of-care for Shade Tree Clinic's patients with chronic diseases, including diabetes, cardiovascular disease, and respiratory conditions. Under the leadership of the Patient Health Education Program Director, a team of first-year medical student patient health educators (PHEs) serve as case managers for ~100 patients who were previously enrolled in the program by the clinic's Medical Directors. Though these patients represent 30% of the total clinic patient population, they characterize the subgroup of patients with multiple chronic medical conditions often complicated by disadvantaged socioeconomic factors external to the clinical environment (e.g., immigration status, ability to travel to clinic, and employment status). In the clinical setting, the PHEs assume an educational role. Both of Shade Tree's twice-weekly clinics are staffed by PHEs, and they are often joined by one of Vanderbilt's dietetic interns. These PHEs meet with each in-clinic patient currently enrolled in the program. PHE visits often focus on the discussion of specific, patient-centered diet and exercise goals as well as the promotion of medication adherence, health maintenance, and patient autonomy in medical decision-making. In addition to their 10–15-minute visits with program patients, the PHEs also see other Shade Tree patients with newly diagnosed conditions and/or newly prescribed medications that require additional education (e.g., insulin administration).

The significance of the PHE's role as case manager is most prominent in the out-of-clinic setting. Throughout the entire calendar year, PHEs serve as the direct line-of-communication between their 5-7 assigned patients and Shade Tree Clinic. In this role, the PHEs establish a personal relationship with each of their patients as they regularly communicate laboratory results, assist in scheduling appointments, and promote continued health progress (with respect to diet and exercise goals, medication education and compliance, and triaging of acute complaints) between scheduled clinic appointments in order to minimize the utilization of emergency departments and other lapses in patient care.

This year brought some unique challenges, but with it I've been able to witness such resilience and determination from both the patient side and amongst the 17 1st year medical students that I had the privilege to work alongside. It was amazing to watch the first year PHEs connect with their patients and develop personal relationships with their panel. I've heard from many patients how much they enjoy having a PHE: someone they can easily contact for their needs and someone who is able to help establish meaningful and attainable health-directed goals. Such enthusiasm from the patients is a testament to the impact PHEs have. I, personally, cannot say enough about what a great job the PHEs did this past year during these unprecedented times and I'm glad I had the opportunity to help support them.

*Director of Patient Health Education: Aisha Suara*

## Social Work

The social work department at STC was established to address the social determinants that impact the health of our patients. A team of trained students works alongside a licensed social worker to identify social needs and work to mitigate their impacts by connecting patients with in-clinic and/or community resources. Our database includes resources for food insecurity, housing, utilities assistance, employment, mental health, transportation, substance use, as well as vision and dental needs. Patients can also receive assistance from a health insurance navigator and a licensed attorney. Each member of our social work department serves as the expert liaison for a given area of need, which helps to improve patient follow-up and closed-loop communication. In addition, volunteers attended training sessions on food, insurance, immigration, domestic violence, and mental health.

This year, the social work department helped address a high volume of social needs



for our patients. This includes obtaining glasses for 25 patients, providing bus passes and Kroger cards to help patients get to appointments, referring over 40 patients to community dental clinics, and providing emergency food boxes and produce bags to help combat food insecurity. We also dealt with an unprecedented amount of housing insecurity, submitting rent and utility referrals for over 15 patients. We also collected over \$2000, received many clothes, food, and toy donations, and purchased 25 turkeys for our Annual Holiday Drive, making it the most successful one yet. I am so proud of our team's efforts this year!

*Director of Social Work: Katie McKay*

## Laboratory Services

The Laboratory Services department consists of 8 medical / nursing students who are responsible for collecting labs from patients during clinic hours. These trained laboratory technicians draw blood, collect urine samples, and administer vaccines. They are also certified to run "point-of-care" testing (urine pregnancy test, hemoglobin A1c for diabetes, etc.) so that our patients can get immediate, actionable results during their clinic visit. The laboratory team is led by two senior medical students who train and oversee the technicians. These senior medical students also coordinate imaging studies and specialty care referrals, monitor trends in lab test utilization, and promptly respond to any dangerous lab results.

This year, the department focused on several quality improvement initiatives. To increase compliance with cancer screening tests, we worked with the operations department to monitor patients with overdue mammograms and colonoscopies, allowing us to reach out to these patients and get these important health maintenance exams completed. Another way the department encouraged positive, systems-level change was by educating our clinical student volunteers on the pros and cons of our various in-clinic, point-of-care tests (described above). The department worked to use FIT (fecal immunochemical test) kits for patients who qualified for this type of colon cancer screening to increase rate of colon cancer screening. The lab directors also screen all orders and referral requests to make sure that we continue to responsibly utilize Vanderbilt University Medical Center resources.

*Director of Social Work: Kelly Vittetoe and Andrew Schaffer*







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**I am always impressed with the impact Shade Tree Clinic has on our students. From students that volunteer, teach, or help raise money to support the clinic, to those who take on major leadership roles, nearly every student that graduates from Vanderbilt**”

*-Amy Fleming, M.D., M.P.H.E., Associate Dean for Medical Student Affairs, Associate Professor of Pediatrics*

## Shade Tree Specialty Clinics

### Dermatology

Dermatology clinic offers medical and surgical care to underserved patients while also allowing medical students to learn under the direct supervision of Vanderbilt dermatologists. Patients are seen for both acute and chronic dermatologic conditions, including skin cancer, annual skin evaluations, cutaneous infections, exanthems, and more. We maintain an inventory of dermatologic supplies and can safely perform skin biopsies, skin excisions, cryotherapy, and other minor procedures on-site at the Shade Tree Clinic. Additional dermatologic care, including Mohs surgery and nail biopsies, is arranged through Vanderbilt Dermatology.

In the 2020-2021 year, we hosted 5 dermatology clinics, with around 40 patient encounters. With the help of Vanderbilt Dermatology & Plastic Surgery, we performed several procedures at Shade Tree Clinic, including skin biopsies, skin cancer excisions, and cryotherapy, as well as had our first patient receive treatment with Mohs Micrographic Surgery thanks to Vanderbilt Dermatology's generosity. We also incorporated a project investigating disparities in dermatologic and specifically skin cancer-related care at our clinic and, working with the Melanoma Research Foundation, created clinic handouts geared towards increasing awareness for skin cancer in our patients.

*Directors: Briana Halle and Emily Mace*

### Gynecology

The gynecology clinic is held on the first Tuesday of each month for uninsured and underinsured women who have gynecologic complaints, such as abnormal uterine bleeding, pelvic pain, sexually transmitted infections, vaginal infections, infertility, and incontinence. Women are seen and examined by a team of volunteer medical students, residents, and an attending physician from the Department of Obstetrics & Gynecology at Vanderbilt. The clinic additionally provides birth control counseling, with options offered by our clinic free-of-charge, including oral hormonal agents, hormonal injections, and long-acting reversible contraception (implantable devices). The clinic also supports the primary care clinic in keeping patients up-to-date on

their cervical cancer screenings and mammograms. Further specialty care, such as gynecologic surgery, pelvic ultrasounds, colposcopies, annual mammograms, and specialty clinic visits, are scheduled at the Vanderbilt University Medical Center as needed.

*Directors: Heidi Carpenter and Beatrice Konrad*

## Neurology

The Neurology Clinic provides high quality care for our Shade Tree patients with neurological needs who would otherwise be unable to afford these services. We see a variety of neurological conditions, including seizures, headaches, strokes, neuropathy, and movement disorders. Once every three months, we hold a Botox Clinic for our headache and cervical dystonia patients. The botulinum toxin provides our patients with symptom relief for months while also affording students the opportunity to learn a valuable clinic procedure. In addition to medical consultation by board-certified physicians from the Vanderbilt Departments of Neurology and Neurological Surgery, patients are able to receive timely diagnostic studies, such as MRI, EMG, and vestibular tests, through free-of-charge referrals at Vanderbilt University Medical Center.

*Directors: Alex Brito and Olivia Henry*

## Ophthalmology

The Shade Tree Ophthalmology Clinic offers comprehensive eye care to all Shade Tree patients, from patients who need a new glasses prescription to patients with advanced eye disease. In partnership with the social work office, we provide free eyeglasses for our patients through the New Eyes for the Needy program. We screen patients for diabetic retinopathy during primary care visits using telemedicine where we image the retina using a fundus camera, upload the images to the patient chart and an ophthalmologist will then examine the images. We also provide eye exams to screen for glaucoma and visually significant cataracts, with patients receiving surgery and post-operative care from Vanderbilt ophthalmologists when needed. This past year, we worked with Vanderbilt optometrists to provide one patient with a year supply of scleral lenses for her keratoconus, giving her back her vision and independence. Shade Tree Ophthalmology Clinic maintains a strong relationship with Vanderbilt Eye Institute physicians, who donate their time and resources to see our patients that need more specialized ophthalmic care on a referral basis.

*Directors: Patrick Donegan and Ray Zhou*

## Orthopaedics and Physical Therapy

At the orthopaedics and physical therapy clinic, we see patients with a variety of musculoskeletal complaints. Many of our Shade Tree patients struggle with joint pain that can affect their ability to exercise, which in turn affects their overall health. Even the ability to perform simple activities like walking up the stairs or cooking meals can be difficult with injuries. Our student teams are able to evaluate both acute and chronic injuries during a clinic visit. X-rays, CT scans, and MRIs can be obtained if appropriate. We manage our patients' problems with the help of licensed physical therapists, medication, counseling, joint injections, and even joint-replacement surgery on case-by-case bases—all free-of-charge to the patient. The orthopaedics and physical therapy clinic organizes an annual hand and sports surgery day during which Vanderbilt Orthopedic Surgeons perform cost-free surgeries for patients.

*Directors: Carsen Cash and Kate Sborov*

## Psychiatry

“Shade Tree Psychiatry Clinic is a specialty clinic offered every month. Staffed by Vanderbilt psychiatrists and medical students, the psychiatry clinic helps provide chronic follow up for individuals with behavioral health care needs and first-time evaluation for patients with newly identified or referred mental health concerns. The monthly clinic provides a dedicated time and space towards expert consultation on the diagnosis of mental illness, optimization of psychoactive medication management, and identification of therapeutic needs requiring referral to other community resources.

During the 2020-2021 year, as we returned to in-person clinic, we continued to offer virtual appointments to increase access to psychiatric care for patients with barriers to joining the clinic in person. To better meet patients' counseling needs, we restructured our liaison with the Social Work Mental Health department to improve follow-up to therapeutic services. We continue to monitor our patients for acute mental health needs resulting from challenges caused by the COVID-19 pandemic.

*Directors: Nur Eken, Jessica Giles, and Samuel Massion*



## Rheumatology

The Shade Tree Rheumatology Clinic recently progressed from an informal clinic to a formal clinic with official sub-specialty directorship, and has now been integrated to run symbiotically during primary care clinic. Rheumatology clinic serves the rheumatological needs of Shade Tree's patient panel, caring for patients with diseases such as rheumatoid arthritis and systemic lupus erythematosus. The sub-specialty clinic also assists in the diagnostic workup of referral patients with joint pain or concerns for possible rheumatological diseases, and assists in the follow-up and workup of patients who have a positive ANA, ESR, and/or CRP laboratory testing. In the past year, the clinic has managed approximately 20 patients, many of whom require recurrent visits, and has evaluated more than 15 referrals. Approximately 7 patients require long-term drug monitoring while on immunomodulating agents, such as methotrexate, azathioprine, and adalimumab.

*Directors: Caroline Maguire*

## Plastic Surgery and Wound Clinic

Established in 2020, the Shade Tree Plastic Surgery and Wound Clinic cares for patients with hand pathology, chronic wounds, excisional skin diseases, and other presentations within the scope of plastic surgery. With support from the Vanderbilt Plastic Surgery Department, we offer outpatient procedures under local anesthesia at Shade Tree Clinic, including carpal tunnel release, keloid excision, skin cancer excision, among others. To date, we have had the opportunity to care for 30 patients and provide 14 procedures. Co-directors of the clinic are responsible for ensuring longitudinal care, such as following pathology results and removing sutures. All clinics are led by medical students and allow both pre-clinical and clinical students to take patient histories, perform physical exams, and assist a plastic surgeon with procedures. Many students have enjoyed learning from our patients and faculty volunteers, including Dr. Brian Drolet and Dr. Galen Perdakis, about the many features of plastic surgery care.

*Directors: Jessica Fogel and Alan Makhoul*

## Sleep Clinic

Newly established in 2020, the Sleep Clinic at Shade Tree serves patients with a variety of sleep disorders. The clinic was created to address a growing need for sleep apnea treatment among our primary care patients. We know that uninsured populations experience sleep health disparities, including delayed recognition, diagnosis, and treatment. Prior to the inception of the clinic, only a small portion of our patients had formal sleep studies and access to CPAP therapy. Thus far, we have received 37

referrals and have coordinated sleep evaluations for half of these patients. We have been able to provide CPAP therapy to nearly all of our newly diagnosed patients in addition to providing sophisticated remote monitoring to ensure that they are getting the maximum benefit from this treatment. All of our clinic visits have been conducted via telehealth, keeping our patients safe during the COVID-19 pandemic. These visits have been led by medical students who are able to gain invaluable knowledge from our patients and from our sleep neurologist, Dr. Upender, about sleep disorders

*Directors: Olivia Henry*

## Other Services

### Acute Care Coordinators

- Managed a panel of 100 English-speaking low-income patients
- Presented weekly on labs/specialty clinic visits, scheduled appointments, and placed orders for medications/labs
- Provided counseling on medications, lifestyle changes, and mental health concerns
- Triage patient concerns to determine need for clinic versus emergent care
- Addressed social barriers to health through medication assistance programs, transportation services, grants, and other resources

*Coordinators: Rachel Chang, Veerain Gupta, Nicole Kloosterman, and Clarissa Liu*

### Retinal Screening

The retina screening program at Shade Tree Clinic serves to monitor for the development of retinopathy in our patients with diabetes. Because diabetic retinopathy is often asymptomatic until the development of irreversible vision problems, screening helps us to intervene early by connecting at-risk patients with our ophthalmology clinic. Patients with diabetes are offered screening annually during their regular clinic appointments, including visual acuity assessment and retinal photos for evaluation by an ophthalmologist.

*Director: Dakota Vaughan*

### Patient Assistance Program

The STC Patient Assistance Program (PAP) team assists patients with gaining access to costly medications for free. Most commonly, these include insulins and inhalers which are relatively expensive (e.g. \$200-300 for a 1-month supply), but also include



prohibitively expensive medications such as Harvoni, Truvada, Botox, Stelara, Repatha, Ozempic, and more. In clinic, PAP student volunteers assist eligible patients in applying for medication assistance programs, and behind-the-scenes, the Vanderbilt Pharmacy PAP team supports us by tracking application statuses and refills. Our team also works very closely with other STC teams to ensure that medications are successfully stored and dispensed to patients. Overall, the PAP team has a tremendous impact on reducing STC dispensary costs (estimated savings of >\$800,000 this year!) and is vital to ensuring the access and quality of healthcare we provide to our socioeconomically disadvantaged patient population in Nashville.

*Coordinator: Sharon Kam*

## Research Department

The research directors help set research priorities for STC and support students completing quality improvement and research projects. We are in the process of building a data repository for the clinic to act as a resource for future projects. Research at Shade Tree is presented both regionally and nationally by medical students.

*Coordinators: Leon Cai and Duncan Smart*

## Spanish Services

Spanish Services is responsible for recruiting, training, and scheduling Spanish interpreters to work at clinic for Tuesday, Saturday morning, and Saturday afternoon shifts. Our responsibilities during clinic consist of interpreting during clinic visits and during other required tasks such as social work and dispensary interactions. Outside of clinic, staffed VMS interpreters (first year medical students and nurse practitioner students) are responsible for calling patients a day before clinic to remind them of their appointment or reschedule as necessary. Other responsibilities include interpreting documents on an as needed basis and triaging patients. The body of interpreters consists of medical students, nurse practitioner students, other graduate students, undergraduates, and alumnae. Before interpreters volunteer for the first time, they are screened to ensure Spanish proficiency with a written and oral exam and then provided a full-day training and orientation. During the 2019-2020 academic year, we developed a novel training and orientation system designed to further improve the quality of our service. In the past two years, we have begun implementing formal certification process to ensure that our interpreters are trained to a standard that parallels that seen at the hospital. During the pandemic, we adapted our service to meet the needs of STC patients and volunteers, providing phone and teleconferencing interpreter services. Students who had returned to homes out of state, and some who returned home abroad, continued to provide this essential service from afar

*Coordinator: Nicole Kloosterman*





# Grant Support

## The Boulevard Bolt

This past year, our clinic was awarded \$30,000 by the Boulevard Bolt to continue our vaccine outreach program. Through this support, our clinic was able to organize ten vaccination events in the community, during which we provided 207 influenza immunizations to people experiencing homelessness in Nashville. To date, Shade Tree has administered 7,542 flu vaccines with the support of the Boulevard Bolt.

## Shade Tree Trot

Over the past decade, the Shade Tree Trot has been a vital event aimed at raising awareness of and support for the Shade Tree Clinic throughout the Nashville community. Alongside the Shade Tree Benefit Dinner, the Trot serves as one of the clinic's two largest fundraisers to support Shade Tree's annual operating expenses. The Shade Tree Trot also partnered with Mercury Courts to further support the healthcare needs of Nashville's underserved communities.

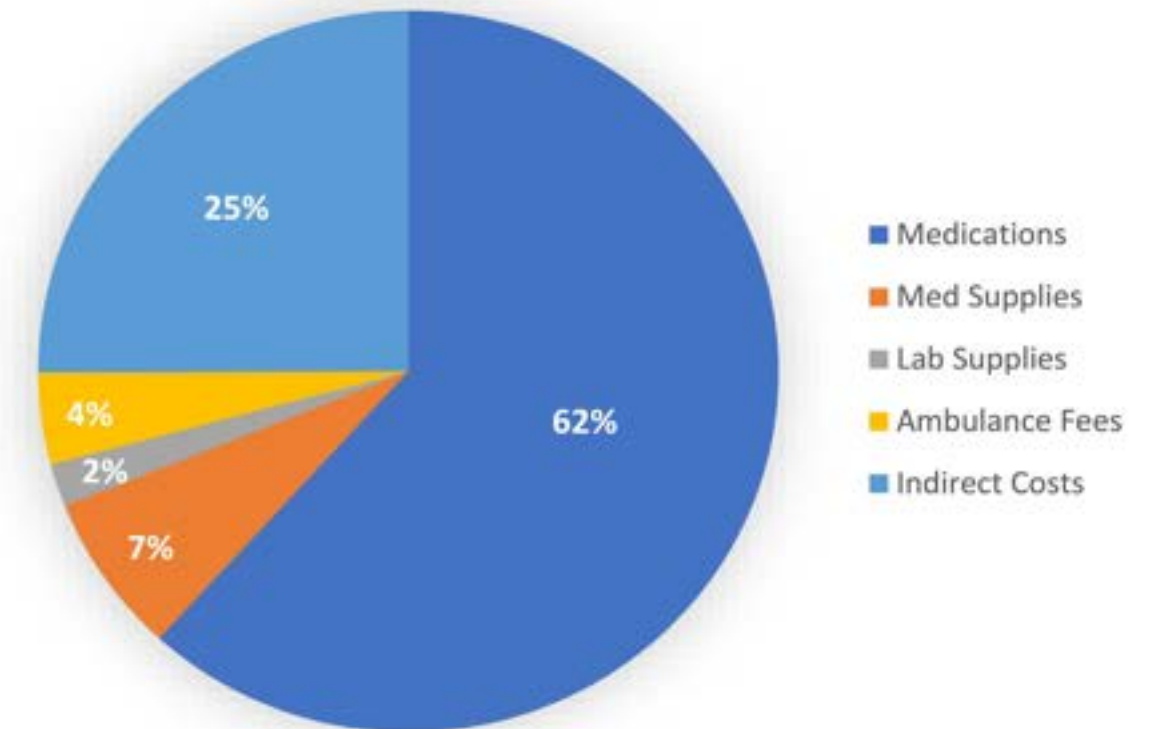
Due to COVID-19 guidelines, this year's event was reformatted to a virtual run instead of historically being held on Vanderbilt's campus. Thanks to presenting sponsor Messer Construction and long-standing partner Vanderbilt Medical Alumni Association, the virtual run allowed for the 13-year tradition to continue— all while practicing safe social distancing measures.

The 13th annual Shade Tree Trot was held on April 3rd as a virtual event where participants completed their 5K all across the country, took photos after their socially-distant run, and submitted their time online. A major emphasis of this event was community engagement, where participants could take part in various virtual race festivities and challenges, connect with other race participants on social media platforms, and launch their own fundraising pages. Each participant also received the trademark Shade Tree Trot T-shirt that was delivered to their mailed address, thanks to the generosity of the Vanderbilt Medical Alumni Association.

We are very grateful for the enthusiastic community engagement and generous donations that allowed our virtual race to be a success. More than 800 racers participated and, in conjunction with peer-to-peer fundraising, the Trot raised nearly \$70,000 for Shade Tree Clinic and Mercury Courts. The success of the virtual race allowed our community to continue the race's longstanding tradition of supporting Nashville's underserved communities with their healthcare needs, even amidst this challenging time. The Shade Tree community looks forward to Shade Tree Trot 2022!

*Directors: Annmarie Mede and Pooja Santapuram*

# Major Expenses by Category 2020-2021 Total Expenses: \$159,754



## Publications

**Evans, P. T., Ewing, J. K., Walia, S., Miller, R. F., & Hawkins, A. T. (2020). Implementation of General Surgery Care into a Student-Run Free Clinic. The Journal of surgical research, 255, 71–76.**

**Kuhn, A. W., Wollenman, C. C., Gibian, J. T., Daryoush, J. R., & Fiechtl, J. F. (2020). Orthopaedic Conditions Among the Uninsured: Data from an American Student-Run Free Clinic. Journal of surgical orthopaedic advances, 29(2), 112–116.**

## Presentations

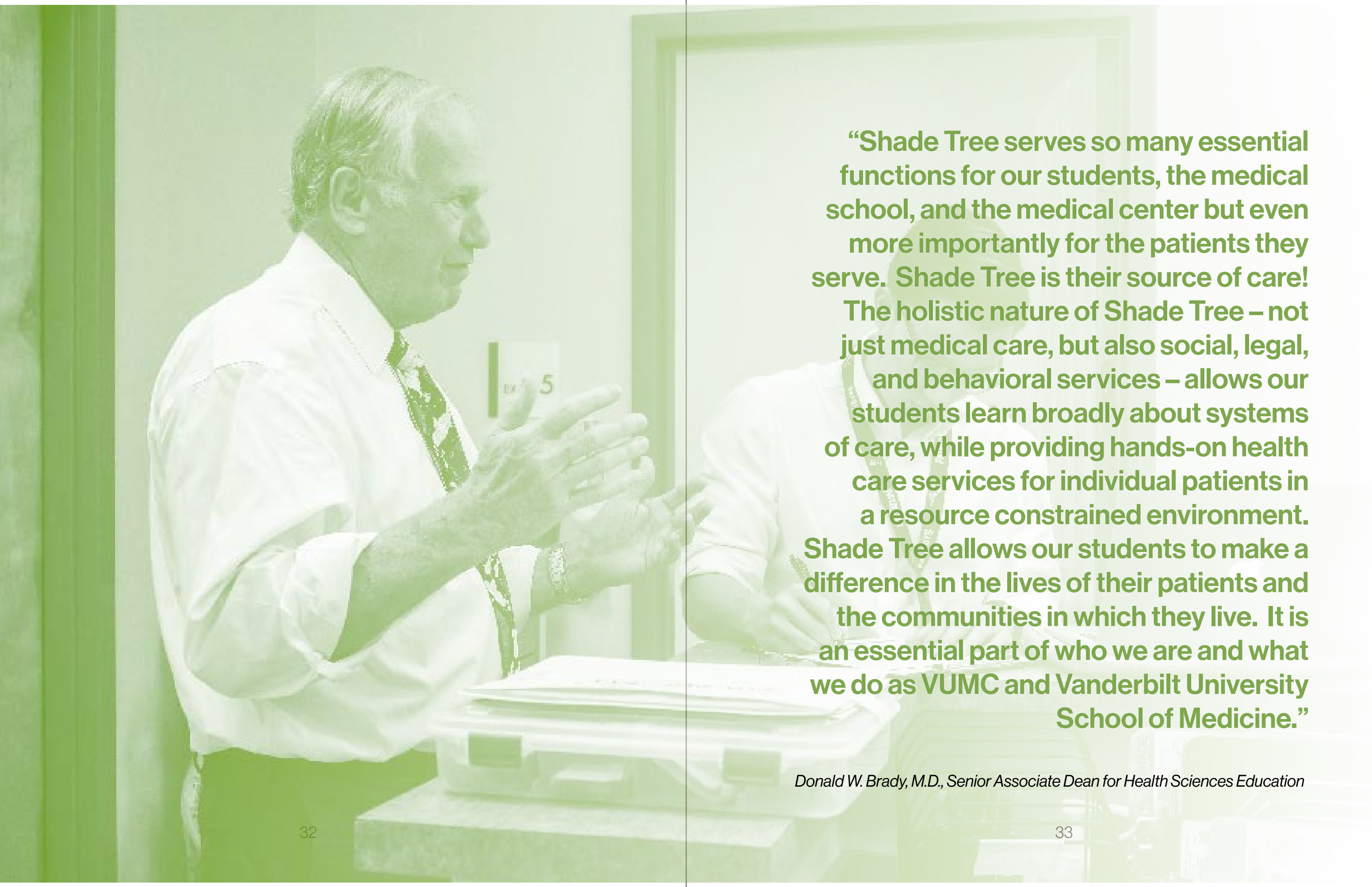
Our students presented projects at several national conferences this year. Here are some of the select poster presentations are included below.

**Niklinska EB, Mahoney MR, & McLaughlin S. (2020, March). Shade Tree's Patient Health Education Program: A Model for Early Engagement in Clinical Learning. Poster presented at the Society of Student Run Free Clinics annual meeting, Orlando, FL.**

**Hamdan SA, Morales NG, Fossum K, Zheng Y, Miller RF. Addressing the Burden of Uncorrected Refractive Error Through a Student Run Free Clinic. Poster presentation at 3rd Annual Conference at Society of Student Run Free Clinics. 2020 Mar 7-8; Orlando, FL.**

**Treasure, G, Ferguson, S, Li, T, Zakria, D, Day, R, Triana, AJ, Shah, KP "Applying spend analysis principles from management consulting to the operation of a student-run free clinic". Society of Student Run Free Clinics Conference, March 7, 2020**





**“Shade Tree serves so many essential functions for our students, the medical school, and the medical center but even more importantly for the patients they serve. Shade Tree is their source of care! The holistic nature of Shade Tree – not just medical care, but also social, legal, and behavioral services – allows our students learn broadly about systems of care, while providing hands-on health care services for individual patients in a resource constrained environment. Shade Tree allows our students to make a difference in the lives of their patients and the communities in which they live. It is an essential part of who we are and what we do as VUMC and Vanderbilt University School of Medicine.”**

*Donald W. Brady, M.D., Senior Associate Dean for Health Sciences Education*

# Clinic Volunteers

## Physicians

Toaa Abuelanaan  
Emily Brown  
Babatunde Carew  
Gisella Carranza Leon  
Angela Chen  
Daniel Cottrell  
Kaylin Craig  
Gio Davogustto  
Neerav Desai  
Xuan Ding  
Wes Ely  
Jennifer Green  
Kevin Hageman  
Tiffany Hines  
Wade Iams  
Vikranth Induru  
Eiman Jahangir  
Ashley Karpinos  
Sophia Kostelanetz  
Russell Ledford

David Li  
Kevin Liu  
Peter Liu  
Bhavish Manwani  
Saumya Maru  
Mona Mashayekhi  
John McPherson  
Jennifer Miao  
Matt Miller  
Robert Miller  
Allen Naftilan  
John Newman  
Adesola Oje  
Derek Pae  
Nick Pietrini  
Kathleen Pollard  
James Powers  
Kelly Pugh  
Angela Qian  
Tyler Reese

Bradley Richmond  
Chelse Rick  
Tony Ross  
Jeffrey Schmeckpeper  
Alexandra Shingina  
Billy Sullivan  
Krista Suojanen  
Sahar Takkouche  
Kristin Tatosyan-Jones  
Timothy Thayer  
Cecelia Theobald  
Pierce Trumbo  
Eleanor Weaver  
Rachel Wolf  
Kathleene Wooldridge  
Beth Ann Yakes  
Zach Yoneda  
Sally York  
Roy Zent

## Finance Managers

Jeewoo Kim  
Michelle H Smilansky  
Praveen Vimalathas  
Rishub Das

## Social Work Staff

Mary Evelyn Carroll  
Jean Wu  
Milani Kyaw  
Meghan Frimming  
Daniel Ragheb  
Samuel Ufuah  
Anna Hendricks

## Clinic Coordinators

Alison Williams  
Caroline Khanna  
Lisa Roddy  
Ming-Ray Xu  
Natasha Belsky  
Vicky Wang  
Virginia Claire Sooter  
Yangyiran (Wendy) Xie

## Dispensary Staff

Alex Miller  
Alexandra Belfi  
Alyssa Altheimer  
Anna Matthews  
Brian Hou  
Ellen Jennings  
Ericka Randazzo  
Erika Torres  
Harrison Thomas  
Jessica Hanks  
Malini Anand  
Marissa Johnson  
Nina Curkovic  
Raymond Zhang  
Shravi Lam  
Thomas Crain  
Trevor Anesi  
Will Hefley  
Alex Wells

Ayesha Muhammad  
Bronson Wessinger  
Holly Harper  
Jessica O'Shea  
Jooeun Kang  
Kalin Wilson  
Katherine Kelly  
Leon Cai  
Rachel Windmueller  
Sharon Kam  
Tanner McArdle  
Thomas Day  
Tita Pena  
Alexander Barrett  
Bailey Deglow  
Brianna Hawkins  
Britney Tran  
Brooke Welch  
Caroline Joura

Christina Leibold  
Dhruvi Lad  
Eleese Huddleston  
Emma Lemke  
Georgina Mensah  
Isabella Corbin  
Justin Young  
Kayla Claus  
Lan Le  
Laurel Hayes  
Leang Lim  
Leila Abdalla  
Malak Hamdulla  
Mattie McLawhorn  
Nicole Gorsuch  
Nischal Patel  
Phillip Knight  
Ryan Melton

## Patient Health Educators

Kasey Hutcheson  
Aseem Utrankar  
Lena Leszinsky  
Zoe Finer  
Melissa Dong  
Joseph DeCorte  
Katherine Hajdu  
Sachin Aggarwal  
Kaitlin McKernan  
Nada Elsayed  
Ratannya Bralley  
Anne Altman-Merino  
Hannah Light-Olson  
Saba Rehman

Peter Potash  
Kayla Buttafuoco  
Robert Rodriguez Suro

## Patient Assistance Program Volunteers

Gabriel Bendfeldt  
Gloria Nashed  
Kimmy Bress  
Manohar Devarasetty  
Neil Chada



## Spanish Services

### Volunteers

Thomas Perez  
Ana Torres  
Maria Loaiza Bonilla  
Allison Thomas  
Lauren Hatcher  
Tess Batchelder  
Jasmine Chaparro  
Madeline Meloy  
Priyanka Kadari  
Hannah McGrew  
Daniel Carranza Leon  
Clara Wang  
Harry Woong  
Morgan Wiley  
Starina Dsouza  
Pranav Kodali  
Jessica Klein  
Susmita Chennareddy  
Mackenzie Blair

Melanie Hacklander  
Jaime Perez  
SM Roberts  
Katherine Nicole  
Carlos Ortega  
Caroline Carlson  
Courtney Young  
Jennifer Quinde  
Samantha Chavez-  
Salinas  
Tatiana Baxter  
Netra Rastogi  
Laura Fandino  
Kaleel Wainwright  
Lisandro Lorenzo  
JanelleChavarria  
Ines Debbiche  
Meghana Rao  
Brynn Carlson  
Caroline Carlson  
Taylor Griffith

Rocio Bermudez  
Mariam Farag  
Logan Prock  
Reagan Martin  
Jennifer Tat  
Diana Row  
Julia Sacha  
Diana Cedillo  
Nicole Kloosterman  
Annalisa Schallerer  
Ximena Rocha  
Linda Tejada  
Hannah Jazdzewski  
Veronica Pedraza  
Fatima Roque  
Mary E Carroll  
Ian Barckhausen  
Alexandra Manoni  
Andria Li  
Marcell Paguaga

### Shade Tree Trot Committee

Evan Mercer  
William Quach  
Georgina Sellyn  
Carsen Cash  
Steven Bishay  
Harrison Thomas  
Shauna McLaughlin  
Kevin Guo  
Kate Hadju  
Hannah Brown

Jeremy Hatcher  
Kai Ting Wu  
Katie Mann  
Katlyn McKay  
Kaustav Shah  
Kyle Langford  
Matthew Villaume  
Parker Evans  
Pooja Santapuram  
Sushmitha Divakar  
Sydney Payne  
Tara McDermott  
Tara Roeder  
Tavia Gonzalez Pena

### Laboratory Technicians

Alexandria Bontrager  
Amber Wesoloski  
Jaron Pruett  
Danielle Brouillard  
Danielle Farley  
Jessica Hernandez  
Olivia Harper  
Elizabeth Lansden  
**Attorney Supervisor**  
Kent Halkett

## Medical Student Clinical Volunteers

Abin Abraham  
Amany Alshibli  
Santiago Angaramo  
Jacqueline Antoun  
Annie Apple  
Meredith Balbach  
Madeleine Ball  
Kelsey Barter  
Scott Beeler  
Manasa Bhatta  
Marc Blatt  
Victor Borza  
Sarah Brown  
Peter Bryant  
Leon Cai  
Lin Cao  
Shane Carr  
Carsen Cash  
Rachel Chang  
Shirley Chen  
Arrush Choudhary  
Jennifer Connell  
Thomas Day  
Sushmitha Divakar  
Leland Dunwoodie  
Lexi Erath  
Landon Fike  
Jessica Flook  
Jessa Fogel  
Racher Fortner  
Jessica Giles  
Carolina Gomez  
Grimaldi  
Tita Gonzalez Pena  
CeCe Cihang Gu

Brad Guidry  
Arulita Gupta  
Britt Hatcher  
Olivia Henry  
Alistair Hilton  
Meredith Huszagh  
James Jordano  
Sricharan Kadimi  
Sharon Kam  
Karampreet Kaur  
Hannah Kay  
Nicole Kloosterman  
Julie Lee  
Katherine Lee  
Thomas Li  
Alica Liao  
Aaron Lim  
Sarah Lin  
Clarissa Liu  
Claire Lo  
Alex Lupi  
Eden Lyons  
Caroline Maguire  
Alan Makhoul  
MariaSanta Mangione  
Kevin Manz  
Evonne McArthur  
Katlyn McKay  
Lydia McKeithan  
Mallory McKeon  
Shauna McLaughlin  
Katie McLeod  
Megan McLeod  
Kelsey McNew  
Annmarie Mede

Evan Mercer  
Chandler Montgomery  
Ayesha Muhammad  
Eva Niklinska  
Carlos Ortega  
Pious Patel  
Daniel Pereira  
Sneha Rajendran  
Rahul Ramaswamy  
Jake Ramsey  
Seth Reasoner  
Bradley Reinfeld  
Benjamin Reisman  
Daniel Sack  
Sanjana Salwi  
Nathan Samora  
Katherine Sborov  
Andrew Schaffer  
Jacob Schultz  
Timothy Schurz  
Kaustav Shah  
Eileen Shiuan  
Aisha Suara  
Emily Thomas  
Petria Thompson  
Megan Tigue  
Somto Ukwuani  
Anne Walker  
Camille Wang  
Alex Wells  
Phillip Wilson  
Michelle York  
Raymond Zhou  
Ryan Zinone  
Catherine Zivanov

## Shade Tree Benefit Dinner and Auction Committee

Michelle York  
Jessica Giles  
Mollie Limb  
Saif Hamdan

Sara Lin  
Kelsey Barter  
Wendy Xie

## Medical Student Pre-Clinical Volunteers

Sachin Aggarwal  
Atheimer Alyssa  
Li Andria  
James Bathon  
Natasha Belsky  
Julie Bielanin  
Ratannya Bralley  
Kayla Buttafuoco  
Chloe Cho  
Sarah Cook  
Nina Curkovic  
Rishub Das  
Ashley Drenkler  
Nadia Elsayed  
Zoe Finer  
Nashed Gloria  
Jessica Hanks  
Anna Henricks  
Kasey Hutcheson  
Caroline Khanna  
Jeewoo Kim  
Drew Kittleson  
Hailey Kresge

Shravi Lam  
Diane Lee  
Katherine Lee  
Lena Leszinsky  
Kaitlin McKernan  
Dominique Mosley  
Emma Neal  
Ankush Patel  
Emily Reeves  
Saba Rehman  
Amelia Sawyers  
Samantha Singal  
Aseem Utrankar  
Jordan Vancel  
Vicky Wang  
Amber Wesoloski  
Alison Williams  
Wendy Xie

## Nursing Student Pre-Clinical

Negest Alemu  
Victoria Bechtold  
Zachary Campbell  
Rothstein Chloe  
Kaylee Conner  
Pascale Daou  
Julia Draker  
Mariam Hameed  
Smilanky Hannah  
Hailee Hunt-Hawkins  
Mary Lynch  
Robyn Pham  
Taylor Powers  
Emily Reeves  
Nicole Skroch  
Valentine Tarrete  
Melanie Vaughn

## Law Student Volunteers

Kirby Ammons  
Jaehee Kim  
Natalie Graves  
Samantha Smith  
Maryam Saad  
Sarah Anderson  
Elizabeth Kimbrough  
Sammuel Kim  
Robert Havas  
Brett Bornstein  
Lisa Orucevic  
Kevin Leddy  
Jacqueline Chan

## Nutrition Planners

Cassidy Blackwin  
Julia Carlson  
Gabriella Collier  
Dana DeVore  
Brittany Durant  
Harper Lovegrove  
Michael Partipilo  
Sarah Pendergraft  
Abby Povinelli  
Amy Qazi  
Sarah Reynolds  
Brittney Roszell  
Olivia Shipp  
Meghan Thitchener  
Madeline White

Sarah Anderson  
Divya Bhat  
Chase Rowland  
Paul Lee  
Ari Goldfine  
Maya Thomas  
Natalia Wurst  
Jacqueline Chan  
Lisa Orucevic  
Bria Black  
Tiffany Thomas  
Juliana Strobing  
Madison Hoover





“

**One of a medical school's primary jobs is to foster expertise development and lifelong learning in students during their training. At the Shade Tree Clinic, Vanderbilt medical students have the opportunity to provide high-quality, mentored care with progressive responsibility, a linchpin in their development as physicians, all while learning foundational lessons that will stick with them for a lifetime. I am consistently amazed by our student's relentless dedication and service to the patients of**

*Bill Cutrer, M.D., Associate Dean for Undergraduate Medical Education*



**2410 Franklin Pike  
Nashville, TN 37204  
www.shadetreeclinic.org  
615.422.5262  
Shadetreeclinic@gmail.com**

Photography: Maria Lee Beninati

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**shade tree**  
CLINIC  
**Shade Tree Clinic Hours:  
Tuesday 6pm-9pm  
Saturday 12pm-4pm**