



Kaniya Hester

Woman's Educational Aid Association Scholarship Recipient

Class of 2023

MAJOR

Human Communication Sciences; Economics

SCHOOL

School of Communication

Academic Highlight

The professor who has by far had the greatest impact on me as a student and a professional is Ralph and Jean Sundin Endowed Professor of Communication Sciences and Disorders [Viorica Marian](#). Since I joined her lab, the Bilingualism and Psycholinguistics Research Group, she has taken a special interest in me, encouraging me to speak at academic conferences and conduct research in my own areas of interest. She even invited me to deliver a guest presentation in one of her graduate-level courses. Dr. Marian constantly models a strong work ethic and how to professionally advocate for yourself. If I were not going into business, I would not hesitate to work in her lab upon graduation.

Gaining Real-World Experiences

I conduct research in the Bilingualism and Psycholinguistics Lab on campus. I started as a research assistant via the Department of Communication Sciences and Disorders' Early Research Experience Award, coding qualitative data and co-authoring academic conference posters. Now, I lead my own project quantitatively studying the consequences of dialect in public health-related decision-making. I've also recently discovered a passion for business and joined the Minority Business Association to secure a consulting summer internship at EY-Parthenon Strategy Services. Currently, I'm doing a market research internship through the Chicago Field Studies program and enjoying the experience so far.

Campus Connection

My favorite place to study on campus is second floor of the Norris University Center in the morning. I like to work with people chattering in the background and the smell of coffee in the air next to a big window. It's one of the only places on campus I can stay for long periods of time.

Reflecting on my Northwestern Experience

While Northwestern advertises that it meets 100% of demonstrated financial need, I was surprised to find how many other resources existed for first-generation, low-income students like myself. Some of these include the [SES One Form](#), the weekly [Sheil Catholic Center](#) food drives, and the [Compass peer mentorship program](#), all of which I've benefitted from.

From Me to You

I'm very grateful to be a WEAA Scholar. Induction into this group of women has provided me both financial stability and a professional community. Last quarter I spoke with one of my advisers, Marcy Fullwood, and she was able to connect me with people in her network so I could ask them questions about their experience at various consulting firms. I'm excited to connect with all the current members, hopefully in-person, this upcoming spring quarter and would welcome the opportunity to connect with more alumni in the future.



Jeongju (Lily) Lee

Woman's Educational Aid Association Scholarship Recipient

Class of 2025

MAJOR

Music Education,
Economics

SCHOOL

Bienen School of Music

Joining the Northwestern Community

I was drawn to Northwestern because I loved how much flexibility students have in the different classes we could take and the majors we could pursue. All of the programs I was interested were very strong and widely recognized in their respective fields. Additionally, the campus was so beautiful, and the location was perfect!

Academics

I would love to learn more about design, engineering, business and entrepreneurship, as well as music. In music, I am particularly interested in studying conducting under some of the amazing Bienen faculty!

Extracurricular Activities

I'm a member of Launch, an entrepreneurship club on campus. I love how I can work with a team of Northwestern students to launch business ideas. We are currently in the process of bringing our vision to reality!

Scholarship Impact

I've been able to explore my various interests without feeling restrained by my finances. I also hope to use the time I would have spent working to pay off my college loans towards giving back to the community through volunteer work.

From Me to You

Thank you so very much for this scholarship. There are so many opportunities that I may have been unable to pursue without it. Now, I can go through college without feeling restrained by my limited finances and truly maximize my college experience. This scholarship has also provided me the chance to give back to the community, and I am excited to do so!



NaKaya Short

Woman's Educational Aid Association Scholarship Recipient

Class of 2023

MAJOR

Psychology

MINOR

Global Health Studies

SCHOOL

Weinberg College

Academic Highlight

I would say my favorite class has been Psychology 399: Independent Study. Though it is not a regular class at Northwestern, I enjoy the lab that I am in. Currently I help to run the Mexican American Couples Study at the Family Institute at Northwestern University. I enjoy working with the couples and learning about what aspects can make marriages more successful. I even apply what I learn into my relationships with others today.

Gaining Real-World Experiences

In addition to my work as a research assistant at the Family Institute of Northwestern University, I currently work as a physical therapy aide at Athletico in Evanston. I enjoy my job. The physical therapists are nice, and I definitely enjoy working with patients as well.

Campus Connection

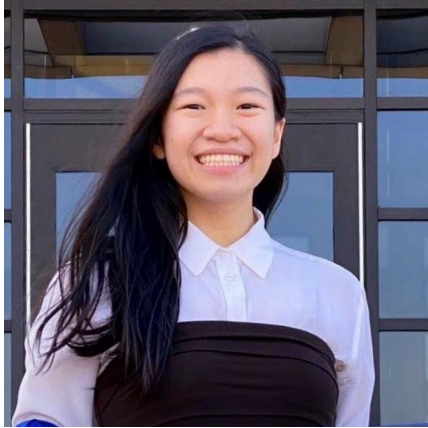
My favorite spot on campus would have to be the Lakefill because of its beauty. I go there when I want to see Chicago and need to relax. However, my favorite general area on campus is the northern area, I enjoy all of north campus because I love the Seeley G. Mudd Library and the gym.

Reflecting on my Northwestern Experience

What surprised me most at Northwestern was the socioeconomic gap. I did not think about how this would affect me before coming to Northwestern, but now that I am here I often feel very left out. I often see my classmates going on vacations or talking about the places they have been and the things they have done. I often wish I could've done the same, but I am FGLI and don't have the best family background. I did not expect the income gap to be such an issue for me.

From Me to You

Thank you for believing in me. I am an FGLI student who is also very independent. When something goes wrong, I know I often cannot turn to my family for help, so I am thankful for having the ability to ask for help from Northwestern through the aid of donors like you.



Katelynn My-ling Nguyen

Woman's Educational Aid Association Scholarship Recipient

Class of 2024

MAJOR

Biomedical Engineering

SCHOOL

McCormick School of
Engineering

Joining the Northwestern Community

The first time I stepped onto campus and saw the different architectural styles of the buildings, I knew Northwestern was a blend of both history and modernity, welcoming the new while appreciating the old. This was what initially attracted me to Northwestern.

Academics

I'm interested in pursuing research in biomedical settings, whether through bioelectronics or tissue-related projects. I am also interested in learning more about sociology, like the implications of race, ethnicity, language, and economic status.

Extracurricular Activities

I'm a member of the Vietnamese Student Association; the Chinese Student Association; Project Sunshine, the leading volunteer-based organization delivering free, in-hospital programs to pediatric patients and their families; and Medical Makers, which innovates, designs, and builds medical devices that serve unmet clinical needs. Medical Makers is my top priority, and I'm part of a team helping to design an experimental product for the nurses at Ann & Robert H. Lurie Children's Hospital of Chicago.

Scholarship Impact

This scholarship has helped me afford to find the time to do research, rather than working nonstop at a higher-paying institution off-campus. Because of your support, I have been able to learn crucial skills that will greatly benefit me in the future.

From Me to You

Thank you so much for this scholarship as well as the opportunities that I am able to pursue due to the privilege of having it. These funds have not only helped me take a hold of what Northwestern has to offer, but they also provide a happier state of mind, where financial burdens no longer cause stress and worry.



Abigail Sutter

Woman's Educational Aid Association Scholarship Recipient

Class of 2022

MAJOR

Journalism

SCHOOL

Medill

Northwestern Highlights

I have enjoyed the incredible amount of resources I've been exposed to at Northwestern. I know there's always place to go for help, whether it's about finances, career planning, or with classes. With that support, I've been able to find a wonderful community and group of friends through various clubs and activities.

Gaining Real-World Experiences

As a part of my Journalism Residency for Medill, I virtually interned at Guerrero Media in the spring of 2021. It was such an amazing and eye-opening experience of what it's like to work at a magazine. I was lucky enough to sit in on so many different meetings and was able to see so much of what it takes to put out their publications, not just from a writer's standpoint.

My Northwestern Community

Knowing that there are people at Northwestern who genuinely care about students has been so incredibly important to my growth as a student and young person. It was through community help and recognition I was able to attend the annual conference for NLGJA: The Association of LGBTQ Journalists in 2019. It has helped support me through my hard times and learn how to support those I care about and the communities around me.

Purple Pride

My proudest achievement at Northwestern is being the captain of one of the mock trial teams on campus for four consecutive quarters. Being a part of such a competitive team is an accomplishment itself, but I was so honored to be chosen to be a captain for so long.

Life After Graduation

I really hope to work in the legal field, though where in that field exactly I'm not sure yet. I'll be taking the next year off from school to work up some savings and study for the LSAT before applying to law schools. From there, I'll have to see what comes next!

From Me to You

Thank you so much for giving me the opportunity to be free from some measure of financial worry while in college. The scholarship has been invaluable to me throughout the hard journey of being a low-income student at an elite university with predominately wealthy students. Not only that, but the community WEAA has given me through the scholarship has uplifted and supported me throughout those times as well.

Abigail Sutter

Evanston, Ill. | 815-412-4098 | asutter21@me.com

Education

Northwestern University, Medill School of Journalism, Evanston, Ill.

Expected June 2022

Bachelor of Science in Journalism, double major in Sociology

GPA: 3.71/4.00

Work History

Manhattan-Elwood Public Library – Page

July 2016-January 2020

- Managed all clerical tasks involved in library circulation in both adult and youth departments including programming, cleaning, creating displays/signage, data entry and organization, and customer service.
- Updated and maintained website to include new releases.
- Created data visualizations as well as an interactive quiz to add engagement to the story.
- Designed flyers and programming for each department.
- Contributed to the Technical Office repairing and processing items.

Block Museum of Art – Student Docent

September 2020-March 2020

- Organized and guided tours of the different art exhibits at the museum.
- Underwent engagement training to learn how to better facilitate conversation and participation from a variety of different types of groups.
- Assisted with different museum programming and community outreach.

Guerrero Media – Journalism Resident

March 2021 – June 2021

- Conducted interviews and wrote articles featuring high-level executives and their respective companies.
- Developed newsletters for individual brands to highlight stories and engage their audience.
- Edited and updated their web archives to match their current style.

Medill School of Journalism – Research Assistant

March 2021-present

- Investigated the curriculum of Northwestern University to gauge the number of courses that lie at the intersection between media, identity formation, and DEI.
- Examined the experience of different undergraduate students to broaden the scope of my exploration and include student perspectives.

Leadership

Team Captain – Northwestern Mock Trial, Evanston, Ill.

Dec. 2019 – present

National Lesbian and Gay Journalists Association – Member, Evanston, Ill.

Sept. 2019– present

Skills

Computer: Knowledgeable in HTML / CSS, Adobe Premiere Pro, Photoshop, Audition, InDesign, Canva

Social Media: Twitter, Instagram, Snapchat, Facebook, YouTube

Other: collaboration, customer service, attention to detail, multitasking, problem-solving, communication



Abigail Royale Neufarth

Woman's Educational Aid Association Scholarship Recipient

Class of 2023

MAJOR

Chemical Engineering

SCHOOL

McCormick School of Engineering

Academic Highlight

[Professor JF Gaillard](#) has had a huge impact on my academic growth at Northwestern. I joined his research group in April 2021, and I am currently taking the Environmental Laboratory class with him. These two experiences have provided invaluable practical knowledge for a future career.

Gaining Real-World Experiences

Each week in Professor JF Gaillard's research lab, we meet to discuss relevant papers and projects in the field of environmental geochemistry. Also, I have performed titrations to assess the alkalinity of rivers after wildfires passed through in Paradise, California.

Campus Connection

My favorite spot to walk on campus is the Lakefill. The sound of the crashing waves and looking out over the water reminds me of home, and it is so peaceful. For studying, my favorite spot is the top floor of the Ford Design Center. There are very large glass windows, and I like looking outside while I study.

Reflecting on my Northwestern Experience

I never imagined that I would find such a sweet community at

Northwestern. After my freshman year, I didn't find a community I loved, and then COVID-19 happened. I expected to be at Northwestern for solely academic purposes, but this year, I got involved in Reformed University Fellowship. This community has become like family, and they were such a sweet surprise.

From Me to You

WEAA Board, I am so incredibly grateful for the opportunity you have given me to be involved with this amazing organization. I truly appreciate all of your support, both financial and emotional. Thank you for believing in me and investing in my growth. It is a privilege to get to be a part of this organization.

More to Share

I've attached my resume.

Abigail Neufarth

13 Harbor Oaks Circle, Safety Harbor, FL 34695
abbyneufarth2023@u.northwestern.edu | (727) 430-9923

EDUCATION

Northwestern University, Evanston, IL

Anticipated Graduation: June 2023

McCormick School of Engineering

Cumulative GPA: **3.54/4.00**

Master of Science in **Environmental Engineering & Science** | Bachelor of Science in **Chemical Engineering**

Relevant Courses: Chemical Processes in Aquatic Systems | Fluid Mechanics | Sustainable Water Systems | Thermodynamics |

Molecular and Cell Biology for Engineers | Earth in the Anthropocene | Marine and Coastal Law and Policy | Heat Transfer

SKILLS

- | | | | |
|-------------|---|----------|--------------------|
| • Titration | • Python | • MATLAB | • Microsoft Office |
| • Spanish | • NAUI Certified Open Water Scuba Diver | | • Aspen HYSYS |

RESEARCH EXPERIENCE

Research Assistant, Lab of Environmental Geochemistry | Northwestern University, Evanston, IL

April 2021–Present

PI: Dr. Jean-François Gaillard.

- Perform titrations to determine the effects of the Paradise, California fires on the alkalinity of various river samples
- Recorded and processed titration data using python code to determine alkalinity
- Discussed research projects related to water shed modeling and drinking water treatment residuals and relevant literature in the field

ENGINEERING EXPERIENCE

Project Manager – Design Project | Northwestern University, Mundelein, IL

March – June 2020

Client: Cygnus Lactation Services

- Project: Developed special protocol to recycle a lactation clinic's most used breast pump because it is considered a medical device
- Proposed ways to improve sustainability by reducing Cygnus Lactation Services' medical waste footprint
- Contacted major breast pump manufacturers to determine industry standards for recycling each component of the breast pump
- Collaborated with three engineering students to design a series of flyers and pamphlets to effectively communicate detailed instructions to implement the *Medela Recycles* program at the clinic with clients

Project Manager – Design Project | Northwestern University, Evanston, IL

September – December 2019

Client: Kids in Danger

- Project: Designed the "PolyRocker," a transitional rocker to bassinet, to address the dangers of leaving an infant in an unsafe sleep environment as a team of four students
- Conducted user observation and testing to modify designs and incorporate feedback
- Constrained rocking of device to 19 degrees to prevent device from requiring restraints to meet rocker and bassinet safety standards
- Managed project details & timelines using RAM and Gantt charts.
- Awarded the "Best Design" at Northwestern Design Expo following presentation to industry professional, professors, and clients

LEADERSHIP EXPERIENCE

Ministry Team, Reformed University Fellowship | Northwestern University | Evanston, IL

April 2021 – Present

- Arrange organization-wide meetings and events and facilitate weekly bible studies
- Coordinate and schedule transportation to service projects and local churches

Leadership Team, Campus Kitchens, | Northwestern University | Evanston, IL

March 2021 – Present

- Collected, packaged, and delivered leftover food from dining halls to serve the local community and minimize food insecurity

Mentor, Society of Women Engineers | Northwestern University | Evanston, IL

September 2020 – Present

- Support first-year Northwestern engineering students in their transition to the college academic environment
- Answer questions related to course offerings, professors, and social aspects of campus

Assistant Director of Children's Activities, Carlouel Beach and Yacht Club | Clearwater Beach, FL

June 2021– August 2021

- Developed a curriculum for 10 weeks of Marine Science and Adventure camp for children ages four to eleven.
- Instructed and managed 20 campers to facilitate fun, educational activities such as kayaking and marine conservation practice.

WORK EXPERIENCE

Math Instructor, Juni Learning | Remote

October 2021 - Present

- Tutor five students each week in Pre-Algebra and Algebra I to supplement their in-school instruction



Baydan A. Dahir

Woman's Educational Aid Association Scholarship Recipient

Class of 2025

MAJOR

Psychology

SCHOOL

Weinberg College

Joining the Northwestern Community

I was not expecting to be accepted to Northwestern. I was so shocked that I remember the exact moment I opened the portal. I remember feeling extreme gratitude to everyone who has helped me along the way. I am still thankful that Northwestern believes in me.

Academics

I am planning to major in psychology. In my culture, mental health issues are extremely stigmatized. It's even believed by some to be the work of an evil entity, completely out of our control. I want to do anything in my power to educate myself and, in turn, my community about the importance of mental health.

Scholarship Impact

WEAA helps me get through my imposter syndrome. As a Black, low-income, Muslim, woman, it was hard to feel like I deserved to matriculate at Northwestern. WEAA mentors helped me see that I do belong. The funds help me focus on myself. Not having to worry about money is a luxury I didn't have growing up. Now I feel like I'm fully supported.

From Me to You

I don't know what else to say other than thank you, and that I will carry that gratitude with me for the rest of my life. I will work as hard as I can to make the best of my time at Northwestern and with the WEAA.



Nicole Torres

Woman's Educational Aid Association Scholarship Recipient

Class of 2025

MAJOR

Electrical Engineering

SCHOOL

McCormick School of Engineering

Joining the Northwestern Community

I was so excited to be accepted to Northwestern University. I felt like my hard work had payed off, and that I had made my family proud. I decided to attend Northwestern because I liked the campus and felt like it was the wisest financial decision.

Academics

I am currently studying to become an electrical engineer and am interested in learning about the production of sustainable energy. I would like to learn about the production of solar panels and what goes into maintaining and storing the power that they capture.

Extracurricular Activities

I am in the National Society of Black Engineers (NSBE) and a member of the Menstrual Equity Club. I enjoy participating in NSBE because it allows me to connect with other Black students in a predominantly white institution and learn about my career of interest.

Scholarship Impact

This scholarship has allowed me to connect with other women in the same field as me as well as learn about other fields of study at Northwestern. It has also connected me with alumni that have

accomplished inspiring feats and given me less stress around the finances that come with education.

From Me to You

I would thank them for creating a safe space within the WEAA community with women that I can learn from and look on. I would also thank them for providing me with relief from my tuition bill because it has made it a lot easier to focus on my studies.



Aura Ulloa Ordonez

Woman's Educational Aid Association Scholarship Recipient

Class of 2022

MAJOR

Computer Science

SCHOOL

Weinberg College

Northwestern Highlights

The best part of my Northwestern experience so far has been helping the computer science department by being a peer mentor. By hosting office hours for CS 111: Fundamentals of Computer Programming, I can contribute to the early beginnings of prospective CS majors and minors by offering advice in homework, exams, and even general questions about the field. Explaining the programming basics to students also helps maintain my knowledge in those concepts, particularly recursion and functional programming. There's a joy seeing students continuing into the major and even becoming PMs themselves. This position has also helped me keep in touch with some of my professors, which I rarely do in other contexts. The experience of having weekly meetings with the professors and other PMs has made me feel more comfortable in asking a professor for a letter of recommendation or getting general advice on the field. So overall, this role has aided me on many levels. I have kept myself strong in the fundamentals, contributed meaningfully to the University, and built connections with students and faculty in my major. This peer mentor role has been emblematic of how the school has helped me at many levels by being a place of learning, service, and community.

Gaining Real-World Experiences

I liked the jobs that I've had while enrolled in Northwestern. I've

mentioned the peer mentoring role I do for the CS department. My decision to work at Publicis Sapient after graduating is because of my internship experience there. I noticed that there was a lot of space to grow, and there are various ways in which the company supports employees as they learn a new skill for a given project. Also, I felt like my web development skills greatly improved after my internship experience with them. I also found that Northwestern is amazing at providing students with research opportunities. I learned about biology research and even worked in labs straight from my freshman year. It's great that students can develop an immense amount of meaningful experience early on through the University.

My Northwestern Community

The community at Northwestern is so collaborative. At first, I was intimidated by the environment due to the sudden jump in difficulty coming from introductory college courses, new extracurriculars, and no longer being a big fish in a small pond, like I was in high school. But I'm now glad that I've been able to face these difficulties that I wouldn't have encountered otherwise. It was through these challenges that I learned how to seek guidance. I knew that to improve and grow, I would have to look towards the journeys of my professors, TAs, and upperclassmen to help pave my own. Even more importantly, I learned to collaborate and discuss with my classmates as part of the learning process, even voluntarily at times. Through this, I overcame the academic and social hurdles by recognizing the power of collaboration and maintaining community among peers and people of various expertise levels.

Purple Pride

My proudest moment was being a quarterfinalist in the regional Midwestern Robotics Design Competition as part of the NU Robotics Club. It was back when I was still a biology major, and it helped foster my decision to move towards computer science.

Life After Graduation

As a senior, I've already have a job set up for August 2022 as a software engineer in the Chicago office of the consulting company Publicis Sapient. I'm excited since this company will hopefully provide a diverse selection of client projects that will expand my breadth of experience in software engineering before I settle into a particular niche.

From Me to You

I am so grateful for the support of WEAA. Through WEAA, I have obtained class materials for classes both within and outside my major. These classes include Global History II, Tangible Interaction Design, and Intro to Computer Networking. These classes have been meaningful to me as I grow into a programmer. Intro to Computer Network taught me how networks and the Internet are built and expanded my scope of understanding when I build online applications. Tangible Interaction Design made me look into how technologies can better serve as a learning aid

for children, thinking beyond simple applications on a flat screen and expanding into tangible interactive instruments instead. Global History II covers the Industrial Revolution and the impact of carbon-based technology and allowed me to better understand both the benefits and repercussions of past and current technologies. WEAA also provides me with a community of mentors capable of providing advice on both my school life and career aspirations. This way, I've better analyzed the impact of the work I'll be doing in the future.



Jovana Lakic

Woman's Educational Aid Association Scholarship Recipient

Class of 2025

MAJOR

Global Health

SCHOOL

Weinberg College

Joining the Northwestern Community

Northwestern was my dream school because of its diversity in people, education, and opportunities. I was so scared to open my decision letter when it arrived. When I saw I was accepted, I started crying out of relief and shock, but afterward, I was elated for a whole month! There are so many people from varying backgrounds with such diverse interests to meet here. Also I don't have to force myself to pick just one area of study but explore cross-disciplinary fields—in both my education and extracurriculars.

Academics

I have so many interests! I know I certainly want to major in global health on a pre-public health track. However, it requires another major, and I am still deciding between Linguistics, Legal Studies, Cognitive Science, and MENA Studies. I am also considering getting the certificate in Integrated Marketing Communications.

Extracurricular Activities

I am part of the executive board as the marketer for the first ever Northwestern Balkan Student Association. I love this club as it helps me connect to my heritage and other Balkan people. I am also part of the junior executive board of Northwestern QUEST+ Scholars as the public relations chair and secretary. We help to connect various

low-income students to each other and to resources on campus. Additionally, I am a clerical aide in the Northwestern Department of Linguistics for work-study, and I enjoy this job as it helps me connect to one of the fields I am interested in studying. I am also part of NU Bioscientists, an exclusive research preparatory program in which a small number of first-year students work together for an entire year to design individual summer research projects. Finally, I have just been awarded the Summer Undergraduate Language Grant for 2022 in order to study my heritage language in detail at another university!

Scholarship Impact

This scholarship has made my education much more accessible to me as a first-generation, low-income student. With this aid, I can afford to participate in various extracurriculars or outside programs relevant to my future career and goals. I don't have to worry about choosing between what I love to do and what I can afford to do, and I am very grateful for that!

From Me to You

Thank you so very much for this opportunity! As a result of the aid I have been given, I have been allowed to focus on my studies properly as well as to engage on campus in various organizations. I am now involved in as many clubs and projects as time allows me, and I hope to contribute back to this campus as much as I can.

More to Share

I've included my current resume!

Jovana Lakic

jovanalakic2025@u.northwestern.edu 219-201-3174

Campus Address:

626 University Pl., Evanston, IL 60201, USA

Permanent Address:

1903 Austin Ave, Apt. 70, Schererville, IN 46375, USA

EDUCATION

Northwestern University, Evanston, IL

Undergraduate Degree, June 2025

QuestBridge Scholar, Cognitive Science & Global Health double-major, pre-Public Health track, 3.75 GPA

Lake Central High School, St. John, Indiana

High School Diploma, May 2021

Core 40 Academic Honors & Summa Cum Laude, top 1% in grade, 3.947 unweighted, 4.55 weighted GPA

EXPERIENCE

Balkan Student Association, Northwestern, Evanston, IL

Marketer, July 2021 - Present

- Launched brand new club as youngest member on Executive Board
- Implemented marketing communications to maximize member involvement, using social media & newsletters
- Designed and spearheaded inclusive, diverse event ideas in order to promote Balkan cultures on campus

Linguistics Department, Northwestern, Evanston, IL

Clerical Aide, September 2021 - Present

- Instituted marketing and communication skills to promote department colloquiums and events
- Created, edited, and organized newsletters in order to update alumni on relevant news
- Maintained department calendar and website to keep current students, faculty, and staff informed
- Streamlined and distributed important mailings, spreadsheets, and reports for faculty and staff

QUEST+ Scholars, Northwestern, Evanston, IL

Junior Public Relations Chair & Secretary, December 2021 - Present

- Collaborated with social outreach and media outreach chairs to market club, utilizing social media and newsletters
- Administered logistical support, inter-chair communication, and website updates as part of Junior Executive Board
- Guided and coached incoming first-generation, low-income scholars in Northwestern's Class of 2026

SKILLS

- Experience with Python, Microsoft Office Suite (Word, Powerpoint, and Excel), and Google Suites (all kinds)
- Graphic design and editing utilizing Canva online editor and Adobe Photoshop
- Trained in Cascade, a content management system and university website

AWARDS

- University: QuestBridge College Prep Scholar & Finalist, Women's Educational Aid Association Scholar, Arch Scholar (Summer Bridge Program), Ryan Scholar
- High School: High Honor Roll (4 yrs), German Student of the Year 2021, Literature Student of the Year 2021, Academic Letterwinner (4 yrs), Student of the Month, AP Scholar with Distinction, Matriculate High School Fellow

LANGUAGES

- Fluent in English
- Serbian/Croatian/Bosnian/Montenegrin: advanced speaking, low-intermediate reading or writing
- Intermediate German
- Beginner Turkish

PROJECTS

NU Bioscientist - Research Preparatory Program, Evanston, IL

Scholar, September 2021 - September 2022

- Developing knowledge of and skills for research process in a year-long, competitive, exclusive preparatory program and classes for 30 first-gen, low-income students; in progress to create own research project



Chidera Olewuenyi

Woman's Educational Aid Association Scholarship Recipient

Class of 2024

MAJOR

Dance, Economics

SCHOOL

School of Communication

Joining the Northwestern Community

I still remember the feelings of joy and accomplishment when I opened my admission letter from Northwestern. I had applied early decision because I knew that this school had just about everything that I was looking for, especially the flexibility to explore my multiple passions inside and outside of the classroom as well as a warm community that celebrated the growth and development of its students. I came here all the way from the Bronx, New York, and have now been away from my family for longer than I have ever been before. I am grateful to have found my place here.

Academics

Currently I am hoping to double major in dance and economics, and pursue the Integrated Marketing Communications certificate. I love that Northwestern celebrates both artistic and academic growth. It has allowed me to take classes in developmental psychology, African-American studies, and statistics, as well as dance technique classes in modern, jazz, and ballet.

Extracurricular Activities

I am involved in Refresh Dance Crew, where I perform in various dance showcases throughout the year, ranging in styles from hip hop to contemporary. This community definitely became a

home-away-from-home for me through mentorship opportunities and bonding events that strengthened my relationships with my peers and gave me a firm support system at Northwestern. I am also a writer for *Blackboard Magazine*, where I pitch and write stories that reflect the sentiments of the Black students at Northwestern. Although I am not pursuing journalism, I have always loved to write, and this club has allowed me to have a creative outlet and continue writing at Northwestern. I am also part of the Women in Economics Club, which uplifts and empowers female-identifying students in economics at Northwestern. This club introduced me to some of my closest friends and also allowed me to hear from Northwestern alumna pursuing different careers in economics through talks and panels that have helped me start defining my own future goals and aspirations.

Scholarship Impact

Scholarships have impacted me and my future goals by allowing me the opportunity to cast aside financial concerns temporarily and focus on absorbing as much knowledge during my time here as I possibly can. My parents have made a lot of sacrifices throughout my life to allow my four siblings and me to achieve things academically that they themselves could only dream about. I feel privileged to have scholarships, specifically the aid of WEAA, because it is easing the financial burden of higher education for my parents and empowering me to take advantage of all of the resources available to me at Northwestern (socially, artistically, and academically). With the help of these scholarships, I am on my way to graduating with a breadth of liberal arts knowledge, which will make me a competitive job candidate for whatever career path I choose as well as make me an overall more well-rounded, well-educated individual.

From Me to You

Thank you for allowing me to comfortably pursue my dreams of higher education at such an illustrious institution. Thank you for your generosity and kindness, as it has benefited not only me but also my parents, who are less burdened by the financial stress of affording college, as well as my younger siblings after me who my parents have to support, too. Because of you, I can spend time studying, pursuing internship opportunities, and taking advantage of all of the resources that Northwestern has to offer.



Amya Scott

Woman's Educational Aid Association Scholarship Recipient

Class of 2023

MAJOR

Radio/Television/Film

MINOR

Integrated Marketing Communications

SCHOOL

School of Communication

Academic Highlight

[Professor Miriam Petty](#) has had the biggest impact on me during my time at Northwestern. As a Black woman at a primarily white institution, it is easy to feel intimidated or like you don't belong. When I saw that one of my first professors at Northwestern, especially in my major, was also a Black woman, it was comforting. Since then she's become one of my biggest mentors. This past summer she gave me the opportunity to help her do research for a book she's writing. I had no prior experience, so it was nice to get the chance to gain some before my junior year under the guidance of one of my favorite professors.

Gaining Real-World Experiences

I've held a job as a clerical aide for the Department of Radio/Television/Film since freshman year

During my the winter and spring quarter of my sophomore year and early the following summer, I was a Katch Media Genome analyst at Katch Media. Katch is an entertainment data company that provides entertainment industry executives the data-driven insights they need to make actionable decisions to increase profitability and better target audiences. The Katch Media Genome is used to code various movies and television shows based on a set of over 200 genes. As an analyst, I watched movies and coded them in the database.

Also this past summer I was a research assistant for my professor Dr. Miriam Petty who's currently writing a book exploring Tyler Perry's depiction of the South and American Black people. I read through several different academic writings and composed a summary of relevant ones I found to assist her in the chapters she was working on at the moment.

Campus Connection

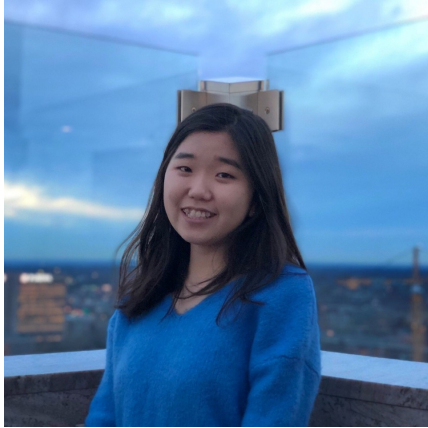
My favorite spot on campus is the Black House, specifically a little room with bean bags on the third floor. The Black House was closed for renovations when I first came to Northwestern and recently opened the past year. It's absolutely beautiful, and I love having a space specifically for Black students available on campus. It's nice for studying as well as just hanging out with my peers!

Reflecting on my Northwestern Experience

I thought that the rigor of the University would prevent me from having time to do fun things outside of schoolwork, however, I've found that's not true. I've been to virtually every restaurant in downtown Evanston with my friends. We're even currently having a contest to figure out which one has the best fries. There are definitely way more ways to find time to enjoy myself than I originally thought!

From Me to You

Hi, first of all, I would like to thank you for your generosity! Northwestern is such a great institution and I'm so happy I have the chance to attend. This scholarship helps me afford my education here, and I'm very grateful for that. Not only do I have the opportunity to receive an elite education but I've also gotten involved with some great extracurricular activities. The one I enjoy the most is [Mayfest Productions](#). We plan a music festival called Dillo Day, which also happens to be the largest student-run music festival in the country!



Unsun Lee

Woman's Educational Aid Association Scholarship Recipient

Class of 2022

MAJOR

Biomedical Engineering
and Global Health
Studies

SCHOOL

McCormick School of
Engineering

Northwestern Highlights

My time at Northwestern has given me so many different opportunities to grow as an individual, a scientist, and a friend. I really enjoyed getting involved with research, where I could apply the materials I learned in my course load to contribute to a project that I saw to be of great importance to the global and national healthcare system. I've also enjoyed all the connections I've made and the relationships I've built. Interacting with peers of different backgrounds as well as those of different life stages and backgrounds allowed me to really identify, reflect on, and refine my own values and the kind of person I want to be. I also cherish the fun memories with friends I've made over the past three-and-a-half years.

Gaining Real-World Experiences

I've conducted research at the Tyo Research Lab, assisting the development of rapid, ultrasensitive, point-of-care (POC) protein and small molecule diagnostic platform via protein engineering and protein signaling network design. I was funded by Chemistry of Life Processes Summer Scholars Program as well as the Academic Year Undergraduate Research Grant, and I plan to present my research for both the Murphy Scholars Final presentation and at the Chicago Area Undergraduate Research Symposium.

I also interned for the Rescuing Kidneys at the Risk of Discard

project, for which I aided with the qualitative research by transcribing and thematically coding/analyzing different physician, patient, and healthcare provider interviews. I was included as a contributing author for two different publications on the informed consent process for accepting KDPI>85 kidney transplants and on the role of procurement biopsies on kidney acceptance decisions.

I am also currently interning as a clinical research assistant for the Division of Genetics, Birth Defects, and Metabolism at Ann and Robert H. Lurie Children's Hospital of Chicago. I relish the experience of witnessing firsthand the impact of cutting-edge biomedicine on patients during the FDA-regulated clinical trial phases.

My Northwestern Community

The community at the University really shaped my life in the sense of how I viewed my life and identified with my values. It became the community with which I shared my laughter, tears, and growth. Having a supportive community that healthily challenged me to be a better self was a big encouragement.

Purple Pride

I am pretty proud of making it to graduation! I've definitely had my shares of ups and downs, and like everyone who has experienced an imposter syndrome, I doubted my own abilities. I feel that I've reached a point where I have more faith and confidence in myself. I worked as a research assistant at the [Tyo Lab](#) and received grants to pursue and fund my projects. I was also published in a journal article as the third author for one of the qualitative healthcare projects that I interned for.

Life After Graduation

Once I graduate, I am planning to take two gap years and work as an NIH postbaccalaureate in Bethesda, Maryland in Dr. Christine Heske's lab, pursuing research for pediatric sarcoma treatments. Afterward, I plan to apply to medical school to pursue an MD and become a clinical researcher.

From Me to You

I want to thank the donor for making my experience at Northwestern possible. Thank you for creating this scholarship. I truly believe that my experience at Northwestern would not have been the same without all your support.

More to Share

I am uploading my CV and one of the publications I coauthored!

EDUCATION

Northwestern University, Evanston, IL

Bachelor of Science, Major in **Biomedical Engineering** and Adjunct Major in **Global Health Studies**

Expected June 2022

Cumulative GPA: **3.738/4.00**

Relevant Courses: Cell Biology | Genetics and Molecular Biology | Quantitative Systems Physiology | Biostatistics | Organic Chemistry | Biochemistry | Biological Performance of Materials | Biomedical Signals and Circuit | Medical Devices, Diseases, and Global Health

HONORS/ AWARDS

Academic Year Research Grant (AYURG), 2021

The AYURG at Northwestern awards qualified undergraduates up to \$1000 to fund for faculty-supervised independent research project.

Chemistry of Life Processes (CLP) Institute Summer Scholars Program, 2021

The CLP Summer Scholars Research Program annually offers up to four competitive \$4000 research awards to Northwestern undergraduates, pursuing an interdisciplinary research project in collaboration with Northwestern University CLP-affiliated faculty.

Summer Internship Grant Program (SIGP), 2020

SIGP is a funding source to support Northwestern undergraduate students that demonstrate financial need to participate in unpaid internship opportunities. Students can receive an award of \$3,000 for supporting their summer experiences and internships to enrich important learning opportunities.

Northwestern Design Thinking & Communication Project Fair Best Communication Award, 2019

Each session of Design Thinking & Communication (DTC) Project Fair features the work of around 30 freshman engineering teams taking the DTC course at Northwestern. Within this session, one team is awarded for best communication.

Murphy Institute Scholar, 2018-2022

The Murphy Institute consists of a group of McCormick undergraduates pursuing research or design project during the four years at Northwestern with the support from faculty advisers. Every year, around 20-30 students within the incoming freshmen class in McCormick School of Engineering and Applied Sciences are invited, and they are advised by an interdisciplinary team of Faculty Fellows. Each Murphy Institute Scholar receives an award of \$4,000 to cover the expenses of their major project.

Women's Educational Aid Association (WEAA) Scholarship, 2018-2022

WEAA is a group that provides financial assistance, personal support, and mentorship to deserving undergraduate women at Northwestern University to enable women from economically or socially disadvantaged circumstances to access the full range of educational experiences offered at Northwestern.

RELEVANT EXPERIENCE

Northwestern University, Keith Tyo Research Group

Evanston, IL

Undergraduate Research Assistant

September 2020-Present

Supervisors: Keith Tyo, Principal Investigator and Catherine Majors, Postdoctoral Scholar

- Perform research in development of a rapid, ultrasensitive, point-of-care protein and small molecule diagnostic platform via protein engineering and protein signaling network design under the supervision of Dr. Catherine Majors
- Design and conduct experiments to optimize *E. coli* recombinant protein expression and purification protocols: analyzing Sanger sequencing data, performing DNA cloning via Gibson Assembly, PCR, plasmid purification, agarose and SDS-PAGE gel electrophoresis, *E. coli* protein expression and purification via immobilized metal affinity chromatography, and cAMP ELISA
- Adapt and collect data from the MATLAB-based computational model of self-amplifying, bistable rapamycin sensing positive feedback loop of cAMP production by the split adenylate cyclase sensors
- Interpret and present data to mentors and peers through oral and poster presentations at undergraduate research forum and expo

UNSUN LEE

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Lurie Children's Hospital, Division of Genetics, Birth Defects, and Metabolism

Chicago, IL

Student Intern/Research Assistant

August 2021-Present

Supervisors: Joel Charrow, Principal Investigator, Barbara Burton, Principal Investigator, and Rachel Katz, Clinical Research Manager

- Assist in enrolling (via REDCap) and following up with research participants for different clinical research trials under the supervision of clinical research coordinators, Carolyn Prokop, Jonathan Solamillo, and Joan Wright (MPH)
- Record data, maintain regulatory documents, and prepare lab kits and requisition forms for clinical research visits, performing duties in accordance with the FDA regulations and Good Clinical Practice
- Shadow attending physicians, clinical research coordinators, advanced practice nurses, and genetic counselors in the division of Genetics, Birth Defects, and Metabolism.

Northwestern University, Department of Industrial Engineering and Management Sciences

Evanston, IL

Student Intern/Research Assistant

June 2020-June 2021

Supervisors: Sanjay Mehrotra, Principal Investigator and Karolina Schantz, Research Study Coordinator

- Performed qualitative research for Rescuing Kidneys at the Risk of Discard Project under the supervision of the research study coordinator Karolina Schantz (MPH) with the aims to collect and analyze feedback from the kidney transplantation community to develop improved Organ Procurement and Transplant Network (OPTN) designs and a simulation software for kidney allocation and OPTN to reduce donated kidney discard rate
- Transcribed and thematically coded interviews with transplant surgeons, nephrologists, patients, nurse coordinators, and organ procurement organization affiliates using NVivo software for identifying recurring thematic patterns in responses
- Coauthored two manuscripts submitted for publications

HPA-Northwestern Medicine Physician Shadowing Program

Evanston, IL

Student Participant

January 2020 – February 2020

- Selected along with 14 other undergraduates to be paired with Northwestern physician mentors and to observe the practice of primary care at assigned site
- Shadowed two internist, Dr. Steven J. Fox and Dr. Susan L. Alt, at Northwestern Medical Group Evanston Ambulatory Clinic 4 hours/week for 5 weeks

Northwestern University, Biomedical Engineering Senior Capstone Design Project

Evanston, IL

Project Team Member

September 2021-Present

- Work with the team to design smart property incorporation into the current ostomy care devices provided by Hollister Incorporated

Northwestern University, Engineering Design & Communication Course Project

Evanston, IL

Project Team Member

September 2018-December 2018

- Work with the team to design and prototype a complementary system of extension spring resistance and size-adjustable foot apparatus for "Gepetto," a treadmill gait training device administered for cerebral palsy patients at the Shirley Ryan AbilityLab

LEADERSHIP EXPERIENCE

Northwestern University Special Olympics

Evanston, IL

Treasurer and Volunteer Site Leader

September 2020-Present

- Manage and oversee the organization's finances, liaising with the university Student Organization Finance Office to reconcile checking account, process reimbursements, and apply for grants, maintaining funds for the group of around 30-40 members
- Lead a group of 5-9 student coaches volunteering weekly at an assigned site for City of Evanston Special Olympics sports training to develop long-term relationships/friendships with Special Olympics athletes, children and adults with intellectual disabilities

Northwestern University Peer Guided Study Group

Evanston, IL

Peer Guided Study Group Facilitator

September 2020-Present

- Lead weekly two hours of peer tutoring session with 6-8 students for Northwestern courses in the Engineering Analysis sequence

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InclusionNU Fund Board

Board Member

Evanston, IL

September 2019 – June 2020

- Attended training for evaluating fund applications fairly to support diversity, access, and inclusion in Northwestern campus
- Reviewed, discussed, and made funding decisions as a board member for all InclusionNU fund applications from Northwestern student organizations in alignment with the fund's priorities: identity development, wellness, or education and awareness

COMMUNITY SERVICE EXPERIENCE

AMITA Health Saint Francis Hospital

Cardiology Nursing Unit Volunteer

Evanston, IL

July 2021–Present

- Provide administrative support at the nursing unit by restocking isolation boxes, running errands (i.e. lab specimens transport), cleaning equipment, answering call lights, and engaging in limited patient interaction in accordance with the COVID-19 policies

Lakeview Church KidsLand

Teacher

Northbrook, IL

July 2019 – Present

- Serve as a volunteer teacher leading weekly Sunday school for a group of 4th and 5th graders, variable in class size every year

POSTER & ORAL PRESENTATIONS

Chemistry of Life Processes Undergraduate Research Forum, Northwestern University, Oral presentation for *Protein Expression and Purification Optimization for Split Adenylate Cyclase Disease Biomarker Detection Scheme*, August 2021

Undergraduate Research & Arts Expo, Northwestern University, Poster presentation for *Computational Modeling of Protein Network for Binary Switch-like Detection of Disease Biomarkers*, May 2021

PUBLICATIONS

Schantz, K., Gordon, E. J., **Lee, U.**, Rocha, M., Friedewald, J., Ladner, D. P., Becker, Y., Formica, R., Reese, P. P., Kaufman, D., Barah, M., Walker, M., Mehrotra, O., Viveros, D., & Mehrotra, S. (2021). Patient and Clinician Perceptions of Informed Consent and Decision Making About Accepting KDPI > 85 Kidneys. *Transplantation direct*, 8(1), e1254. <https://doi.org/10.1097/TXD.0000000000001254>

Karolina J Schantz, Elisa J Gordon, **Unsun Lee**, Maria Rocha, John Friedewald, Daniela P Ladner, Yolanda Becker, Richard Formica, Peter Reese, Dixon Kaufman, Masoud Barah, Marissa Walker, Om Mehrotra, Dania Viveros, Sanjay Mehrotra. *The Role of Procurement Biopsies in Kidney Acceptance Decision Making and Kidney Discard; Perceptions of Physicians, Nurse Coordinators and OPO Staff and Directors*. (Submitted for publication, October 2021).

SKILLS

Software skills: Proficient in Excel, PowerPoint, Word, Outlook, REDCap, MATLAB, and Python

Laboratory skills: Plasmid preparation, cloning via Gibson Assembly, KLD site-directed mutagenesis, transformation, mammalian cell transfection, plasmid DNA extraction via miniprep, analyzing DNA sequencing data, running agarose and SDS-PAGE gel electrophoresis, Western blot, bacterial protein expression and purification via immobilized metal affinity chromatography, ELISA, and qPCR

Language skills: Fluent in English and Korean

OPEN

Patient and Clinician Perceptions of Informed Consent and Decision Making About Accepting KDPI > 85 Kidneys

Karolina Schantz, MPH,¹ Elisa J. Gordon, PhD, MPH,² Unsun Lee,¹ Maria Rocha,³ John Friedewald, MD,² Daniela P. Ladner, MD, MPH,² Yolanda Becker, MD,⁴ Richard Formica, MD,⁵ Peter P. Reese, MD, MSCE,⁶ Dixon Kaufman, MD,⁷ Masoud Barah, PhD,¹ Marissa Walker, BS,¹ Om Mehrotra,⁸ Dania Viveros, BS,⁸ and Sanjay Mehrotra, PhD¹

Background. Although the impact of the kidney donor profile index (KDPI) on kidney discard is well researched, less is known about how patients make decisions about whether to give consent for KDPI > 85 kidney offers. **Methods.** We conducted in-depth, semistructured interviews with 16 transplant recipients, 15 transplant candidates, and 23 clinicians (transplant surgeons, nephrologists, and nurse coordinators) to assess and compare perceptions of transplant education, informed consent for KDPI > 85 kidneys, and the decision-making process for accepting kidney offers. Thematic analysis was used to analyze qualitative data. **Results.** Four themes emerged: (1) patients reported uncertainty about the meaning of KDPI or could not recall information about KDPI; (2) patients reported uncertainty about their KDPI > 85 consent status and a limited role in KDPI > 85 consent decision making; (3) patients' reported willingness to consider KDPI > 85 kidneys depended on their age, health status, and experiences with dialysis, and thus it changed over time; (4) patients' underestimated the survival benefit of transplantation compared with dialysis, which could affect their KDPI > 85 consent decision making. **Conclusions.** To better support patients' informed decision making about accepting KDPI > 85 kidneys, centers must ensure that all patients receive education about the trade-offs between accepting a KDPI > 85 kidney and remaining on dialysis. Additionally, education about KDPI and discussions about informed consent for KDPI > 85 kidneys must be repeated at multiple time points while patients are on the waiting list.

(*Transplantation Direct* 2022;8: e1254; doi: 10.1097/TXD.0000000000001254).

INTRODUCTION

Between 2015 and 2018, nearly 20% of the patients on the waiting list for a kidney transplant in the United States died or were removed from the waiting list because they became too sick to transplant.¹ Despite the shortage of kidneys for transplantation, approximately 20% of the

deceased donor kidneys recovered in the United States are discarded.¹ The kidney donor profile index (KDPI) was implemented in 2014 to allocate the kidneys with the greatest expected graft longevity to patients with the highest expected posttransplant survival. KDPI is a calculation that predicts a kidney's relative risk of graft failure

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⁴ Pritzker School of Medicine, University of Chicago, Chicago, IL.

⁵ Yale School of Medicine, Yale University, New Haven, CT.

⁶ Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA.

⁷ University of Wisconsin School of Medicine and Public Health, University of Wisconsin, Madison, WI.

⁸ College of Applied Health Sciences, University of Illinois at Chicago, Chicago, IL.

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The authors declare no conflicts of interest.

K.S. collected data, led the data analysis and drafted the article. E.J.G. participated in research design, provided support with data analysis and revised the article. U.L. and M.R. transcribed interview data, conducted data analysis

and assisted with drafting the article. J.F., D.P.L., R.F., and Y.B. participated in research design, supported recruitment efforts and revised the article. P.P.R. and D.K. participated in the research design and revised the article. M.B. supported with recruitment, and M.W., O.M., and D.V. assisted with transcribing the data for analysis. S.M. was the principal investigator; he led the research design, supported data collection and analysis, and revised the article.

Supplemental digital content (SDC) is available for this article. Direct URL citations appear in the printed text, and links to the digital files are provided in the HTML text of this article on the journal's Web site (www.transplantationdirect.com).

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based on donor factors including age, history of hypertension and diabetes, height and weight, race, hepatitis C status, serum creatinine, cause of death, and donation after circulatory death. A kidney with a KDPI of 85 has a higher expected risk of graft failure than 85% of kidneys.^{2,3} Kidneys in the lowest KDPI range (KDPI < 20) are only allocated to patients with an expected posttransplant survival score in the top 20%. Kidneys with KDPI > 85 are only offered to patients who have provided informed consent to be listed for KDPI > 85 kidney offers.⁴ The use of KDPI in kidney allocation may be exacerbating kidney discard.⁵⁻⁷ Over 50% of kidneys with KDPI > 85 are discarded.⁷ Meanwhile, < 50% of patients nationally have granted consent to be listed for KDPI > 85 kidneys¹; however, even a KDPI = 99 kidney confers a survival advantage over remaining on dialysis for most patients.⁸ Using more KDPI > 85 kidneys could provide significant benefit to patients in terms of survival and quality of life.^{8,9}

Receiving education about kidney transplantation influences whether end-stage kidney disease patients pursue evaluation at a transplant center, complete the evaluation process, and eventually receive a transplant.¹⁰⁻¹³ Education is also critical in ensuring that patients understand treatment options, such as consenting for KDPI > 85 kidneys. Although the Organ Procurement and Transplantation Network (OPTN) requires transplant programs to relay specific content, transplant programs vary in the depth of information provided and delivery modality.^{14,15} Studies show that patients' understanding of kidney quality in general, and KDPI in particular, is limited.^{16,17} Additionally, patients lack information about their chances of survival on the waitlist.¹⁸ The present study builds upon these findings, focusing specifically on the informed consent process for KDPI > 85 kidneys. This study assesses and compares patients' and clinicians' perceptions of transplant education and KDPI > 85 informed consent and kidney offer acceptance decision making, with the goal of ensuring that patients have the ability to make informed KDPI > 85 consent decisions.

MATERIALS AND METHODS

This is a qualitative, cross-sectional study. The standards for reporting in qualitative research checklist was used to ensure appropriate reporting of this qualitative research.¹⁹

Sample and Recruitment

Patients were eligible if they were 21 y or older, English-speaking, and were waitlisted for a kidney transplant, or had received a deceased donor kidney transplant between 2015 and 2020. A cutoff of 2015 was used to ensure that patients did not receive a kidney transplant before the adoption of the kidney allocation system in 2014. Clinicians (surgeons, nephrologists, and nurses) were eligible if they were directly involved in the clinical care of kidney transplant candidates.

Patients were recruited through the American Association of Kidney Patients (AAKP) and Northwestern Comprehensive Transplant Center. Demographic information and approximate date of wait listing and date of transplant surgery were provided by AAKP and the Northwestern Electronic Data Warehouse. Patients were screened for eligibility using the data provided by AAKP and the Electronic Data Warehouse, then intentionally selected to obtain a diverse sample by age, sex, race, ethnicity, geographic location, and waiting time. The selected patients were invited to participate in an interview

via email. Those who expressed interest in participating were then contacted by telephone to schedule interviews. All patient interviews were conducted by telephone.

Surgeons and nephrologists were recruited from a national list of OPTN committee members and transplant center medical directors and were selected to obtain a diverse sample by sex, race, ethnicity, and geographic location. Nurses from 5 different transplant centers were identified by the study's scientific advisory board. These 5 nurses participated in an interview and then were asked to identify additional nurses at other transplant centers to participate in the study. Five additional nurses were identified, 3 of whom completed an interview. All interview invitations were sent via email. Interviews were conducted over the phone or using video conferencing depending on participant preference. Institutional review board approval was obtained from Northwestern University (STU00208614), and all participants gave verbal informed consent.

Data Collection Methods

A research associate/project coordinator (K.S.) conducted semistructured, in-depth interviews with transplant recipients, candidates, surgeons, nephrologists, and nurse coordinators. Interviews were conducted during April through December 2020.

Interview guides for transplant candidates, recipients, surgeons, nephrologists, and nurses were developed based on literature on the kidney allocation system, KDPI, and kidney discard and formative interviews with 4 patients and 10 transplant clinicians and administrators.^{4-6,20,21} The interview guides were pilot tested through cognitive "think-aloud" interviews with 3 surgeons, 3 nephrologists, 4 nurses, 3 candidates, and 3 recipients. Cognitive interview participants were asked to explain their thought process as they interpreted and responded to the questions; their feedback was used to enhance question clarity and order.²² Topics covered in the patient interview included information patients received about kidney quality, understanding of KDPI, decision making regarding giving consent to be waitlisted for KDPI > 85 kidneys and accepting KDPI > 85 kidneys, and perceptions of the risks of dialysis compared with the risks of transplantation. KDPI > 85 consent was an area of particular focus because patients only appear on the match run for KDPI > 85 kidney offers if they have already given consent. After covering these topics, the interviewer provided additional information on KDPI; then, patients were asked a hypothetical question about how they would decide if they could accept a KDPI > 85 kidney today or wait 2 additional years for a KDPI < 85 kidney. Patients were also asked how they would make a decision if their transplant team offered them a kidney that was expected to last for 5 y. Demographic information was collected at the end of the interview.

Topics covered in the physician interview included how transplant teams educate patients about kidney quality and KDPI, which patients benefit the most from accepting KDPI > 85 kidneys, which patients are encouraged to consent for KDPI > 85 kidneys, and why patients decline kidney offers. Topics covered in the nurse interview included how patients are educated about kidney quality and KDPI and what information patients are provided with at the time of organ offer. Demographic information was collected at the end of the interviews. The duration of the interviews was approximately 40 min to 1 h. All interviews were audio recorded. Participants were compensated 100 USD. Interview guides are available in the Supplemental Digital Content, <http://links.lww.com/TXD/A386>.

Analysis

Audio recordings were transcribed, and transcriptions were analyzed thematically, using inductive and deductive coding methods.²³ The analysis team was composed of K.S. (a research associate/project coordinator) and U.L. and M.R. (undergraduate students with training in qualitative research methods). The analysis team engaged in reflexivity by identifying how personal areas of subjectivity, potential sources of role conflict, and interests of gatekeepers in the field could influence data collection and analysis.²⁴ We reached the point of no new themes identified, following guidance on data saturation published by Guest et al.²⁵ The analysis team developed initial deductive codebooks for patients, physicians, and nurses based on interview questions. After coding the first set of transcripts, the analysis team revised the codebooks, adjusting for new responses. All transcripts were thereafter independently coded by 2 research team members using NVivo qualitative analysis software (version 12; QSR International). Coders met to resolve discrepancies and achieved an interrater reliability of $Kappa > 0.9$. The analysis team then reviewed codes to identify emergent patterns within the data and generated themes.²⁶

RESULTS

Thirty-one patients (15 transplant candidates and 16 transplant recipients) participated (38% participation rate). Thirteen were patients at Northwestern Comprehensive Transplant Center, and 18 were AAKP members. The median age was 54 y old, and the sample was evenly divided by gender (Table 1). Most identified as White ($n = 12$) or Black ($n = 12$). Candidates had been waitlisted for a median of 4 y. Recipients had received their transplant a median of 3 y prior and reported a median waiting time of 4 y.

Clinicians included 15 physicians (9 surgeons and 6 nephrologists) and 8 nurses. The participation rate for physicians was 26%. Participation rate was not calculated for nurses, as they were identified through snowball sampling. Clinicians from all 11 OPTN regions participated. Clinician demographics are presented in Table 2.

Four major themes emerged: (1) Patients reported uncertainty about the meaning of KDPI or could not recall information about KDPI; (2) patients reported uncertainty about KDPI > 85 consent status and a limited role in KDPI > 85 consent decision making; (3) patients' reported willingness to consider KDPI > 85 kidneys depended on age, health status, and experiences with dialysis and changed over time; and (4) patients underestimated the survival benefit of transplantation over remaining on dialysis. Representative illustrative quotations are presented in Table 3.

Patients Reported Uncertainty About the Meaning of KDPI or Could Not Recall Information About KDPI

Patients identified donor age and health as factors that could affect kidney quality and recognized that a higher quality kidney might survive longer or function better than a lower quality kidney; however, patients had limited knowledge about KDPI, especially transplant candidates. Only 3 of the 15 transplant candidates interviewed could provide a description of KDPI. Thirteen of the 16 transplant recipients interviewed could provide some, albeit incomplete, description of KDPI. KDPI knowledge was similar among Black and

TABLE 1.

Patient demographics

Category	N (%)
Patient type	
Transplant recipient	16 (52)
Transplant candidate	15 (48)
Gender	
Male	16 (52)
Female	15 (48)
Race	
White	12 (39)
African American or Black	12 (39)
Other	5 (16)
Asian	0 (0)
Native Hawaiian	1 (3)
Mixed or multiple races	1 (3)
Ethnicity	
Not Hispanic or Latino	25 (81)
Hispanic or Latino	6 (19)
Age	
Under 50	12 (39)
50–70	17 (55)
Above 70	2 (6)
OPTN region	
Region 1	0 (0)
Region 2	2 (6)
Region 3	3 (10)
Region 4	5 (16)
Region 5	1 (3)
Region 6	0 (0)
Region 7	13 (42)
Region 8	1 (3)
Region 9	1 (3)
Region 10	3 (10)
Region 11	2 (6)
Education level	
High school or equivalent	4 (13)
Some college but no degree	4 (13)
Technical or Associate's degree	2 (6)
4-y college degree	12 (39)
Graduate or professional degree	9 (29)
Primary insurance type	
Medicare	19 (61)
Private	12 (39)

OPTN, Organ Procurement and Transplantation Network.

White patients; 9 patients who were able to provide a description of KDPI identified as Black, and 7 identified as White.

Patients who were unable to describe KDPI commonly reported having heard or seen the term before but did not remember or understand what it meant:

I haven't heard it but I did see it in my paperwork. Not really clear exactly what that is and how that works for me. (participant 21; 44-y-old, female transplant candidate)

Patients who could provide a description of KDPI were aware that it is a measure of kidney quality but were often unsure about the factors that comprise KDPI. Patients confused KDPI with Public Health Service previously designated "increased risk" donor kidneys or related KDPI to the quality of the organ match:

TABLE 2.
Clinician demographics

Category	N (%)
Specialty	
Surgeon	9 (39)
Nurse	8 (35)
Nephrologist	6 (26)
Gender	
Male	12 (52)
Female	11 (48)
Race	
White	16 (70)
African American or Black	2 (9)
Other	1 (4)
Asian	4 (17)
Native Hawaiian	0 (0)
Mixed or multiple races	0 (0)
Ethnicity	
Not Hispanic or Latino	19 (83)
Hispanic or Latino	4 (17)
Years of experience	
<10	6 (26)
10–20	10 (44)
>20	7 (30)
Transplant center volume	
<100	3 (13)
100–199	7 (30)
200+	13 (57)
OPTN region	
Region 1	2 (9)
Region 2	1 (4)
Region 3	3 (13)
Region 4	2 (9)
Region 5	2 (9)
Region 6	1 (4)
Region 7	4 (17)
Region 8	2 (9)
Region 9	2 (9)
Region 10	2 (9)
Region 11	2 (9)

OPTN, Organ Procurement and Transplantation Network.

Well the higher the number, the... less compatible it may be, the lower the number the more compatible a kidney is what my understanding is. (participant 27; 65-y-old, male transplant recipient)

Clinicians explained that patients typically receive information about KDPI as a part of the education provided during their initial evaluation. Although some nurses and physicians said that they review information about KDPI with candidates during follow-up visits, not all clinicians reported doing so. Physicians commonly felt that information about KDPI should be repeated more frequently. Nurses reported having to reeducate patients about KDPI when contacting them about kidney offers.

Clinicians also experienced difficulty conveying that a high KDPI does not necessarily mean a “bad kidney”:

It's very difficult to sell a high KDPI kidney to patients. Like, “Mrs. Jones, I have a wonderful kidney for you.” “Oh, that's great, Doctor. How good is this kidney?” “Well, it's really

good, but 95 percent of the kidneys are better....” (participant 43, male surgeon)

Thus, some clinicians, particularly nurses, emphasized the need to better tailor information about KDPI to patients' health literacy levels and to establish trust during education sessions; however, this can be difficult given time constraints:

... we move fast and everything makes sense to us because we do it every single day. But when somebody is hearing this for the first time and then we want them to sign a piece of paper 15 min later, you know what I mean? Like it's just, you know I think sometimes people just have to rest with the information and then we'll be able to circle back and then we'll add another layer of education and another layer of trust, and sometimes the system doesn't always allow for that. (participant 52, female nurse)

Patients Reported Uncertainty About Their KDPI>85 Consent Status and a Limited Role in KDPI>85 Consent Decision Making

Only 2 of the 15 transplant candidates interviewed knew their KDPI>85 consent status. Ten of the 16 transplant recipients interviewed recalled if they had given consent to be waitlisted for KDPI>85 kidneys. Awareness of KDPI>85 consent status was similar for Black and White patients. Some candidates and recipients who were unsure of their KDPI>85 consent status recalled discussing kidney quality with their transplant team but could not confirm if they had given informed consent to be waitlisted for KDPI>85 kidneys specifically; however, some candidates did not remember their transplant team discussing kidney quality or KDPI:

I don't recall anything that they talked to me about kidneys that were lower quality or anything. (participant 25; 67-y-old, male transplant candidate)

Interviews with clinicians revealed a range of practices for educating patients about KDPI and obtaining consent for KDPI>85 kidneys. Some clinicians reported that they provided general information about KDPI but did not consistently engage in detailed conversations about KDPI>85 consent:

... we have a very, I would say, superficial way of describing it to most people and then if they have more questions, we have more... if we think that they are a good candidate for a high KDPI kidney, then we bring out the consent form and we go into it with them in a little bit more detail. (participant 41, female nephrologist)

Criteria for which patients were offered the option to consent for KDPI>85 were generally based on age, comorbidities, and expected waiting time; age was a particularly salient consideration:

... it's mainly the age that I look at when I look at high KDPI kidneys and the one that I'll put them into. (participant 45, female surgeon)

By contrast, some physicians reported that they discuss the option to be waitlisted for KDPI>85 kidneys with all patients at their center. Physicians in this group did not necessarily recommend that all patients give consent for KDPI>85, but they believed everyone should be informed:

TABLE 3.**Representative quotations****Theme 1: Knowledge gaps and misperceptions about KDPI****Patient quotes**

- "I saw those paper, any, sometime in the process they explained me, but I don't remember completely what is involved in KDPI." (participant 19; 65-y-old, male transplant candidate)
- "Well I know that they, I've heard the term but I'm not sure if I remember the whole aspect of what it is. I mean I know I know it's an index, well actually I might've forgotten about what it is. I remember in 2009 hearing about that for the first transplant. I might've heard about it in 2017 but it was so fast." (participant 18; 46-y-old, female transplant recipient)
- "It's basically a number based upon the donor's activity before death or, as a living donor, at that moment. Whether or not he is a high risk. Those variables can be age, how they died, whether they had spent any time in prison, that sort of stuff. Did they have any blood pressure, or heart disease, or a possibly diseased kidney that they are trying to donate as well. So all that good stuff." (participant 11; 50-y-old, male transplant recipient)

Clinician quotes

- "... often even though we actually educate these patients you know during their initial intake process, many patients don't remember and then tend to just be focused on the, well you know, having the best quality kidney. So it takes up a lot of you know saying the same thing 3, 4, 5 times, and sometimes it sticks and sometimes it doesn't." (participant 37, male nephrologist)
- "...on the spot, in real time they do have education sessions. But when these folks get listed, get educated and then the time that I call them, or my coworkers call them, there, you know, could have been a huge amount of time lapse." (participant 34, male, nurse)
- "... the language surrounding it, like trying not to make it so scary. Like right off, so they're not, they're not uninterested right off the bat. That I think, that's the probably the hugest thing for me." (participant 53, female nurse)
- "... that, you know, is a complicated process to get your patients to understand the level of granularity that, that comes with high KDPI and the concept of EPTS." (participant 70, male nephrologist)

Theme 2: Limited awareness of consent status and limited role in decision making**Patient quotes**

- "I'm really not sure [about KDPI > 85]. The thing that we talked about, what makes a kidney lower quality was the difference in the cadaver and the live donor. So it was that, that's the thing that we talked about, that having a live donor, all of those kidneys are of better quality than the cadaver. That's all I understand about that." (participant 35; 67-y-old, female transplant candidate)
- "...well the team that I'm with they didn't offer that as an option. So they didn't say much." (participant 21; 44-y-old, female transplant candidate)

Clinician quotes

- "... I'm calling some patients who are literally like surprised that they're listed." (participant 57, female nurse)
- "We have an internal criteria for who would qualify for those [KDPI > 85]. So we talk about the kidneys being at increased risk for delayed graft function, and the potential to have a shortened graft life, but in general what we do is see the patient, briefly review them, and then determine if they meet criteria for those organs based on our center criteria." (participant 55, female surgeon)
- "If they're a suitable candidate we would offer them to be patients who we believe are candidates for high KDPI kidneys. We don't offer them to everybody." (participant 32, male surgeon)

Theme 3: Consent preferences change over time and depend on health status, age, and experiences on dialysis**Patient quotes**

- "I would have to decide on how I feel at the time. So it would, if I think that I need... if at that moment, I have to decide, um, my quality of life and being a candidate for a different kidney if I wait for 2 y, that all depends on how I'm feeling at that moment. That's all I can say." (participant 60; 56-y-old, male transplant candidate)
- "You know I mean I can say that when I first went on dialysis or back on dialysis when my kidney rejected, I might've been a little more likely to um you know turn a higher risk kidney down, but as time has kind of gone on, it's kind of like wait a minute I've been waiting 17 y at this point, I'll take whatever I can get." (participant 20; 37-y-old, male transplant candidate)

Physician quotes

- "... If they're running out of dialysis access, if they got advancing comorbidities, you know, those patients who would certainly benefit from shorter waiting time" (participant 70, male nephrologist)
- "... when they are on the list, they come in once a year as waitlist candidate to be seen, and then that whole consent process is repeated." (participant 36, male surgeon)

Theme 4: Patients underestimate the survival benefit of transplantation over dialysis**Patient quotes**

- "... Well one of the things that I'd like to say is this, keeping it in mind that transplant is a form of dialysis. You're not cured when you are transplanted. It's another modality that you've chosen to respond to your chronic kidney disease." (participant 16; 55-y-old, female transplant recipient)
- "You know what, I personally believe it's either could work depending on the person. I, I have seen it from both ends you know. People thrive very well with the transplant and those with dialysis thrive just as well. So, I personally believe it could be either way, depends on the person." (participant 21; 44-y-old, female transplant candidate)

Physician quotes

- "... I think what some of the patients don't understand is how bad is dialysis, to stay on dialysis, how detrimental it is to, that is to your health over getting any kidney, you know... If you have an effective kidney that's working, you know, 3 y, 5 y, 10 y, that's, any number of years is better than being on dialysis, and I think getting that point across to community nephrologists, the patients themselves is the most important." (participant 45, female surgeon)
- "... so like the average person who gets a 99% KDPI kidney has a 60 plus percent 5-y survival, and the average person who stays on dialysis for that 5 y has a 40% life expectancy at 5 y. It's a reasonably large difference. And I think by, by creating this comparison that says my kidney is better than yours we have set up, we have essentially created a reference framework that encourages transplant centers and patients to decline kidneys." (participant 51, male nephrologist)

...we believe that we have an obligation to tell them that. We at the same time tell people that it isn't right for everybody. (participant 31, male surgeon)

Patients' Reported Willingness to Consider KDPI>85 Kidneys Depended on Age, Health Status, and Experiences With Dialysis and Changed Over Time

Patients' preferences on granting consent for lower-quality or KDPI>85 kidneys depended on their health status and could change over time. For example, a candidate who was listed at multiple transplant centers reported that she was initially advised to consider only high-quality kidneys; however, the amount of time she had been waiting and her declining health motivated her to consider lower-quality kidneys when she was later evaluated at a different center:

... because of all the time that has passed with me being on the list, so like I said, I've been on one at least 7 y, and my health is, um, getting progressively worse. (participant 29; 57-y-old, female transplant candidate)

Patients also reported that their experiences on dialysis motivated them to consider KDPI>85 kidneys to receive a transplant sooner:

... You know, I really wanted to be active, or more active, in my grandchildren's life. So at that time, I was just willing to do anything just to get off of dialysis and have some form of normalcy in my life. (participant 13; 56-y-old, male transplant recipient)

In response to hypothetical questions about whether to accept a KDPI>85 kidney today or wait for a higher quality kidney, patients said the decision would depend on their age, health in general, and how they are faring on dialysis. Although younger patients often cited their age as a reason to wait for a higher-quality kidney, some expressed willingness to consider KDPI>85 kidneys because of the complications they had suffered on dialysis:

... there's nothing that you could really say, that would tell me, Okay, wait 2 y and you'll have a perfect kidney. I would just say go ahead and give me this one now because I have a life to live. (participant 23; 48-y-old, female transplant recipient)

Although physicians commonly emphasized patient age when discussing who should consider KDPI>85 kidneys, many also noted the importance of experiences on dialysis. Some physicians made a point of discussing the option to consent for KDPI>85 kidneys again with patients after they had been waitlisted:

...if they have been waiting for 3–4 y and nothing's coming, they may decide to sign for something else. (participant 42, male nephrologist)

However, this was not the case at every center represented in our sample. Some clinicians noted that patients who had not granted consent at their initial evaluation may not have an opportunity to change their consent status. Thus, some physicians encouraged most, or even all, patients at their centers to consent for KDPI>85 during their initial education sessions:

... Somebody may be completely healthy, a healthy 45-y-old other than the fact that they have end stage renal disease. You

say you shouldn't sign up for any of that, and they wait 7 or 8 y on the waitlist, then during that 7 or 8 y, they've grown frail, they've had 2 arterial infarctions, they've had a hip fracture, you know, and they're doing terribly on dialysis. And if you haven't listed them for the high KDPI organs, even though they may be, at that point, candidates who would benefit from even high KDPI kidneys, you don't have that opportunity. (participant 51, male nephrologist)

Patients Underestimated the Survival Benefit of Transplantation Over Dialysis

Patients preferred transplant over dialysis because it confers a better quality of life; however, nearly one-third of patients (n = 11) were not sure if transplant helps patients live longer than dialysis:

I think persons live as long on either treatment because, well, you actually can live long on dialysis because you've got someone cleaning your blood. (participant 30; 52-y-old, male transplant candidate)

The majority of the patients who expressed uncertainty about whether patients live longer with a transplant or thought that patients survive the same amount of time with either treatment identified as Black or Hispanic (n = 9).

Clinicians commonly noted that dialysis mortality needs to be better incorporated into transplant education:

... we require consenting for so many things that are way outside of their healthcare literacy state, you know... and they don't even understand what their own mortality is on dialysis. (participant 47, female nurse)

Clinicians expressed concern that patients who do not fully understand the risks of dialysis are less willing to consider KDPI>85 kidneys. Clinicians worried that patient education comparing high KDPI kidneys against average KDPI kidneys makes patients think in terms of good versus bad organs instead of considering the benefit of potentially getting a transplant sooner compared with the risk of staying on dialysis. Although patients would prefer a standard kidney, clinicians reported that patients are willing to consider KDPI>85 kidneys when they understand their mortality risk on dialysis:

I mean most patients, if they had a choice, they would rather get a standard or normal kidney rather than a high KDPI or marginal kidney. But it's only when they realize that they do have survival advantage by selecting the high KDPI kidneys when they compare their mortality rate if they remain on dialysis. (participant 37, male nephrologist)

DISCUSSION

In our interviews with transplant patients and providers, we found that transplant candidates were generally unfamiliar with KDPI and did not recall whether they had given consent to be waitlisted for KDPI>85 kidneys. Transplant recipients were more familiar with KDPI than the transplant candidates in the sample; however, they commonly expressed confusion about the factors that comprise KDPI. The lack of awareness of KDPI, particularly among transplant candidates, is problematic because of the implications for informed consent. Our findings are also disconcerting given research demonstrating the frequency with which offered organs are declined

on behalf of patients without their knowledge, with patients who died on the waiting list receiving a median of 16 offers.²⁷ Patients have a right to education about the types of offers available so they can make informed treatment decisions.

Clinicians commonly expressed concern that patients do not understand or remember information about KDPI and reported difficulty explaining KDPI in plain language. Some physicians discussed KDPI > 85 consent in detail only with patients who fit specific center-level criteria to be recipients for high KDPI kidneys at the time of their initial evaluation. A national program to standardize transplant center education about the option to consent for KDPI > 85 kidneys is needed to ensure all patients have an understanding of KDPI and know that they have the option to be waitlisted for KDPI > 85 kidneys. This is critical because patients' reported willingness to consider KDPI > 85 kidney offers depended on age, health status, and experiences with dialysis and could change over time. These findings align with previous research on patient willingness to accept hepatitis C positive organs and organs subjected to intervention research.^{28,29} The education gaps we identified also align with previous findings regarding patient education and HCV. A majority of patients express willingness to consider HCV-positive kidneys when informed of high HCV cure rates, yet a survey found that 40% of patients were unaware that HCV is curable.^{28,30}

Additionally, our findings align with previous studies showing that end-stage kidney disease patients are often unaware of or underestimate their dialysis mortality.^{18,31} Clinicians perceived that it is difficult for patients to make informed decisions about KDPI > 85 kidneys when many do not fully understand their own mortality risk on dialysis. Although our study is not large enough to draw conclusions regarding racial or ethnic disparities in transplant education, it is also concerning that Black and Hispanic candidates were particularly likely to underestimate the risks of dialysis compared with transplantation. Transplant center education should address dialysis mortality and the relative risks of transplantation with a lower-quality kidney versus remaining on dialysis.

This study has strengths. Our qualitative interviews provided novel insights into both patients' and clinicians' perceptions of transplant education and the KDPI > 85 kidney consent process. Surgeons, nephrologists, and nurses were represented in our sample of clinicians, and patient participants included both candidates and recipients. Our national recruitment efforts resulted in a geographically and racially/ethnically diverse sample.

The study also has limitations. Recall bias may have limited participants' reports of prior discussions about KDPI. Recruitment occurred during the Covid-19 pandemic, which may have contributed to lower participation rates and increased the potential for participation bias. Patients with a college degree were overrepresented. The knowledge gaps and misconceptions discussed here could be more pronounced in the general population of transplant candidates and recipients. The majority of clinicians in the sample were from medium- or high-volume transplant centers. The education and consent practices reported may not reflect all US transplant centers.

In summary, patients have limited understanding of KDPI and are unsure of their KDPI > 85 consent status. This can result in missed opportunities for patients to make informed consent decisions that could increase their chances of receiving

a kidney transplant sooner. Transplant centers should revise their educational processes to ensure that patients understand the risks and benefits of accepting high KDPI kidneys and are aware of their own mortality risk on dialysis. All patients should be informed of the option to grant consent to be waitlisted for KDPI > 85 kidneys, and patients should have the opportunity to periodically review and update their consent status. Future research should focus on designing and implementing educational strategies to better support patient decision making about KDPI > 85 consent. Further research is also needed to quantitatively evaluate the association between education to support patients' KDPI > 85 consent decision making and centers' KDPI > 85 consent rates, kidney offer acceptance patterns, and waiting times.

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REFERENCES

1. Hart A, Smith JM, Skeans MA, et al. OPTN/SRTR 2018 annual data report: kidney. *Am J Transplant*. 2020;20 (Suppl s1):20–130.
2. Massie AB, Luo X, Lonze BE, et al. Early changes in kidney distribution under the new allocation system. *J Am Soc Nephrol*. 2016;27:2495–2501.
3. Stewart DE, Kucheryavaya AY, Klassen DK, et al. Changes in deceased donor kidney transplantation one year after KAS implementation. *Am J Transplant*. 2016;16:1834–1847.
4. Israni AK, Salkowski N, Gustafson S, et al. New national allocation policy for deceased donor kidneys in the United States and possible effect on patient outcomes. *J Am Soc Nephrol*. 2014;25:1842–1848.
5. Mohan S, Chiles MC, Patzer RE, et al. Factors leading to the discard of deceased donor kidneys in the United States. *Kidney Int*. 2018;94:187–198.
6. Bae S, Massie AB, Luo X, et al. Changes in discard rate after the introduction of the kidney donor profile index (KDPI). *Am J Transplant*. 2016;16:2202–2207.
7. Aubert O, Reese PP, Audry B, et al. Disparities in acceptance of deceased donor kidneys between the united states and france and estimated effects of increased US acceptance. *JAMA Intern Med*. 2019;179:1365–1374.
8. Bui K, Kilambi V, Mehrotra S. Functional status-based risk-benefit analyses of high-KDPI kidney transplant versus dialysis. *Transpl Int*. 2019;32:1297–1312.
9. Wey A, Salkowski N, Kremers WK, et al. A kidney offer acceptance decision tool to inform the decision to accept an offer or wait for a better kidney. *Am J Transplant*. 2018;18:897–906.
10. Browne T, Amamoo A, Patzer RE, et al. Everybody needs a cheerleader to get a kidney transplant: a qualitative study of the patient barriers and facilitators to kidney transplantation in the Southeastern United States. *BMC Nephrol*. 2016;17:108.
11. Waterman AD, Peipert JD, Hyland SS, et al. Modifiable patient characteristics and racial disparities in evaluation completion and living donor transplant. *Clin J Am Soc Nephrol*. 2013;8:995–1002.
12. Waterman AD, Peipert JD, Xiao H, et al. Education strategies in dialysis centers associated with increased transplant wait-listing rates. *Transplantation*. 2020;104:335–342.
13. Kucirka LM, Grams ME, Balhara KS, et al. Disparities in provision of transplant information affect access to kidney transplantation. *Am J Transplant*. 2012;12:351–357.
14. Kayler LK, Dolph BA, Cleveland CN, et al. Educational animations to inform transplant candidates about deceased donor kidney options: an efficacy randomized trial. *Transplant Direct*. 2020;6:e575.
15. Patzer RE, McPherson L, Basu M, et al. Effect of the iChoose Kidney decision aid in improving knowledge about treatment options among

- transplant candidates: a randomized controlled trial. *Am J Transplant*. 2018;18:1954–1965.
16. Gruttadauria M, Dunn C, Lin J, et al. Patients' expectations for longevity of kidney transplant. *Prog Transplant*. 2019;29:48–53.
 17. Ahsanuddin S, Bento S, Swerdlow N, et al. Candidate comprehension of key concepts in kidney transplantation. *Ann Transplant*. 2015;20:124–131.
 18. Hart A, Bruin M, Chu S, et al. Decision support needs of kidney transplant candidates regarding the deceased donor waiting list: a qualitative study and conceptual framework. *Clin Transplant*. 2019;33:e13530.
 19. O'Brien BC, Harris IB, Beckman TJ, et al. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med*. 2014;89:1245–1251.
 20. Kilambi V, Bui K, Hazen GB, et al. Evaluation of accepting kidneys of varying quality for transplantation or expedited placement with decision trees. *Transplantation*. 2019;103:980–989.
 21. Reese PP, Harhay MN, Abt PL, et al. New solutions to reduce discard of kidneys donated for transplantation. *J Am Soc Nephrol*. 2016;27:973–980.
 22. Singleton R, Straits B. *Approaches to Social Research*. 4th ed. University Press; 2005.
 23. Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health Serv Res*. 2007;42:1758–1772.
 24. Ahern KJ. Ten tips for reflexive bracketing. *Qual Health Res*. 1999;9:407–411.
 25. Guest G, Bunce A, Johnson L. How many interviews are enough?: an experiment with data saturation and variability. *Field Methods*. 2006;18:59–82.
 26. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3:77–101.
 27. Husain SA, King KL, Pastan S, et al. Association between declined offers of deceased donor kidney allograft and outcomes in kidney transplant candidates. *JAMA Netw Open*. 2019;2:e1910312.
 28. McCauley M, Mussell A, Goldberg D, et al. Race, risk, and willingness of end-stage renal disease patients without hepatitis C virus to accept an HCV-infected kidney transplant. *Transplantation*. 2018;102:e163–e170.
 29. Gordon EJ, Knopf E, Phillips C, et al. Transplant candidates' perceptions of informed consent for accepting deceased donor organs subjected to intervention research and for participating in posttransplant research. *Am J Transplant*. 2020;20:474–492.
 30. Couri T, Cotter TG, Chen D, et al. Use of hepatitis C positive organs: patient attitudes in urban chicago. *Am J Nephrol*. 2019;49:32–40.
 31. O'Hare AM, Kurella Tamura M, Lavalley DC, et al. Assessment of self-reported prognostic expectations of people undergoing dialysis: United States Renal Data System Study of Treatment Preferences (USTATE). *JAMA Intern Med*. 2019;179:1325–1333.