NephSIM Nephrons: A Year-Long Virtual Mentorship Program to Foster Interest in Nephrology

By Elinor C. Mannon, Matthew A. Sparks, and Samira S. Farouk

Mentorship and early educational experiences play critical roles in influencing trainees’ long-term career goals, and the field of nephrology is no exception. Like any specialty, one’s decision to pursue nephrology likely results from a combination of clinical experiences, nephrology education, and mentorship both during medical school and residency. A majority of nephrology fellows previously reported deciding to pursue a nephrology fellowship during residency (1), and 33% of US internal medicine subspecialty fellows who did not choose nephrology identified the lack of a clear mentor as being one of the reasons for not doing so (2). Additionally, almost one-quarter of respondents highlighted how a lack of positive nephrology educational experiences negatively impacted their decision to pursue nephrology as a career (2). Whereas these data reinforce the anecdotal importance of mentorship in specialty selection, opportunities for the creation and establishment of mentor-mentee relationships are not always readily available—particularly within nephrology. Creation of peer-peer networks and trainee-mentor relationships in nephrology may also be difficult given the relatively small number of applicants to nephrology fellowship programs. After the 2020 Nephrology Fellowship Match, 43% of training programs remained unfilled for the 2021 academic year (3). Further, nephrology educational experiences are often limited to preclinical coursework in medical school and both didactics and clinical experiences during internal medicine or pediatric residencies.

To address these needs within nephrology, a 1-year international, virtual mentoring program for trainees (NephSIM Nephrons) was launched in January 2021 (4). The goal of this program is to provide an array of virtual learning and networking experiences throughout the year for trainees of all levels who have an interest in learning more about nephrology as a specialty. Trainees in the program are divided into groups (tubules) of 7−8 and paired with 2−3 volunteer faculty mentors (Figure 1). Trainees and mentors have been paired to try to match similar interests as well as geographical locations. The NephSIM Nephrons faculty consists of 45 nephrologists with diverse geographical and career backgrounds. The 2021 cohort of 112 trainees are located in 24 countries, with 33% of the participants being medical students and 60% being internal medicine or pediatric residents. Other Nephrons participants include graduate students, as well as several postdoctoral trainees and research assistants.

The 1-year virtual curriculum for trainees (Figure 2) is designed to expose trainees to diverse nephrology educational experiences earlier in their medical careers and provide opportunities to identify and form relationships with nephrologists. Several of these educational sessions highlight nephrology free, open-access medical education (FOAMed) resources such as NephSIM (5), NephMadness (6), and Arkana Live Nephropathology (7) sessions. During quarterly tubule meetings, trainees have the opportunity not only to get to know their faculty mentors but also to discuss nephrology-related topics.
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tology cases and topics. Beyond case-based discussions, the diverse career paths of faculty mentors (e.g., physician-scientist, clinician educator, private practice, interventional nephrology, glomerular disease, transplant nephrology) allow trainees to learn about a variety of training opportunities in the field. The diversity of career options within nephrology (8) will be further highlighted during a career panel to be held later in the year.

Feedback from current Nephrons about their experiences has highlighted how participation in this program has positively impacted their decision to pursue nephrology in their long-term career. Carmen Cajina, a medical school graduate in Nicaragua, has found that NephSIM Nephrons “has been a unique and amazing experience. Educational events and meetings with my tubule group have allowed me to join conversation with people passionate about nephrology.” Harsha Adnani, a graduate research fellow preparing to begin internal medicine residency at Anne Arundel Medical Center in Annapolis, Maryland, also noted that, “NephSIM Nephrons is a great learning tool for an incoming generation of nephrology enthusiasts. More than anything, I have enjoyed solving clinical cases, learned a ton from the Arkana Live pathology sessions, relished the camaraderie with my tubule team, and the endless opportunities to network. This platform is a gateway to a larger, more diverse community of mentors and the endless opportunities to network. This platform is a gateway to a larger, more diverse community of mentors and educators whose goal is to help and guide you, build confidence to engage in discussions, and show you how fun nephrology can be! NephSIM provides an excellent opportunity to learn from the best in the specialty, and it has certainly advanced my interest in nephrology. I’m so grateful to be a part of this vibrant community.”

It is plausible that earlier exposure to and participation in a nephrology mentoring and educational program may increase the number of individuals in the nephrology workforce pipeline. Trainee evaluations, focus groups of both faculty and trainees, and assessment of postgraduate outcomes will be essential in understanding how impactful NephSIM Nephrons may be for trainees.

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Conflicts of interest: Elinor C. Mannon is currently enrolled in NephSIM Nephrons. Samanta S. Farouk is the co-founder of NephSIM and program director of NephSIM Nephrons. Matthew A. Sparks is an associate program director of NephSIM Nephrons. Drs. Farouk and Sparks are members of the NephMadness Executive Committee and moderators for Arkana Live Nephropathology sessions.

References

The GlomCon Virtual Fellowship in Glomerular Diseases—A Priceless Innovation in Online Learning

By Edward Kwakyi, Sayna Norouzi, Kate J. Robson, and Harish Seethapathy

The GlomCon organization is an international grass roots patient organization. Our mission is to promote collaboration among clinicians, patient organizations, and researchers to help patients with glomerular disease. With its educational arm—the GlomCon virtual fellowship (est. 2020)—we have tried to incorporate the philosophy of GlomCon with the attributes of a time-worthy online learning program that includes content, expertise, and engagement. The learning experience is further enhanced by the infusion of a student-led learning component into the program. The goal of the fellowship is to advance and complement the education provided by training programs and focus it to benefit patients with glomerular disease in the community.

The GlomCon fellowship in its inaugural year (2020–2021), admitted 52 fellows from 19 countries to be educated in the diagnosis and management of glomerular diseases by renowned experts in the area (2). The fellowship is made possible by the generosity of nearly 75 international experts who volunteer their time and effort. Due to their various geographical locations, fellows are divided into two groups based on time zones: Nephron group (America, Europe, Africa) and Podocin group (Asia, Oceania). The groups run concurrently, based on a comprehensive curriculum. The course structure consists of two-hour-long sessions that take place every 2 weeks. The sessions are a mix of active and passive learning exercises. The first hour is usually a formal clinical or pathology lecture on the specific subject for the session and involves an extensive question-and-answer portion at the end. During the second hour of the session, fellows convene in pre-formed groups (we call them “houses”) and present evidence-based solutions to clinical case scenarios, which had been sent via email a week prior, to discuss them with expert faculty. With the learning entirely virtual, fellows from around the world receive the exact same experience, with equal opportunity for learning, collaborating, and eventually becoming educators and leaders themselves. We believe our graduates will amplify the benefits of the program by focusing their efforts on improving the care of patients with glomerular diseases in our community and globally.

The GlomCon fellowship was set to begin accepting applications for its 2021–2022 class around mid-June 2021 (2). There is no cost of enrollment, and fellows are chosen through a merit-based application review.