

Mentorship in the Digital Age

Nephrology Social Media Collective Internship

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Introduction

Use of social media in medicine is increasing. This is particularly visible in medical education, usually in the form of free open-access medical education (FOAMed) (1). FOAMed provides medical educational resources *via* the internet without barriers such as paywalls. Podcasts, visual abstracts, blog posts, wikis, tweets, YouTube videos, message boards, and video conferences all can provide FOAMed. Although social media is changing medical education, few health care professionals have formal education or training on how to participate. Additionally, few institutions have a cohort of social media experts to lead a comprehensive course, making it difficult to acquire advanced social media skills (2). Education in social media practices can help avoid pitfalls with its use (3). Social media usage follows a stereotypical pattern in which 90% of users consume content, 9% of users comment on said content, and only 1% create original content (4). The Nephrology Social Media Collective (NSMC) internship was established in 2015 with the goal of assuring that nephrology had talented, knowledgeable people creating interesting and engaging content for the other 99%. The organizers of the NSMC internship provide opportunities and guidance in the creation of novel, nephrology-oriented FOAMed. We describe the experience from the first 4 years of the NSMC internship.

The NSMC

The NSMC is a group of health care professionals, primarily nephrologists, that operate active, online, medical education endeavors. These creators wanted to find a way to train the next generation of content creators, and help them add to FOAMed in nephrology without the burden of being self-taught. These creators, along with the graduates of the first three internship classes, form the faculty of the NSMC internship. The faculty consists of 35 clinicians, educators, and scientists from the United States, Canada, the United Kingdom, Spain, India, and Australia.

Demographics of the NSMC Interns

The NSMC has enrolled 47 interns. The internship began in 2015 with four interns and has grown steadily to 25 interns selected from 65 applications in 2018. Of

the 47 interns, 57% are women. Before the internship was initiated, members of the NSMC noted a lack of women participating in nephrology social media. One of the goals was to increase participation of women to broaden the perspectives surfaced by social media. The number of women interns in have increased from 25% in 2015 to 43% in 2016, 45% in 2017, and 64% in 2018. The NSMC faculty is currently 31% women.

The interns are geographically diverse, with, 64% from the United States and Canada, 13% from Europe, 13% from Asia, 6% from Australia/New Zealand, and one each from Latin America and Africa. The majority of interns are either nephrology fellows (40%) or nephrology attendings (38%); 13% are internal medicine residents. The balance consisted of one medical student, one PhD student in nutrition, one critical care attending, and one nephrology nurse.

Structure of the Internship

The internship runs for 1 year, from January to December, and no fee is charged to the interns. The faculty also volunteer their time. The NSMC faculty reviews and scores each application consisting of a curriculum vitae, and personal statement. The highest scoring applications are invited to join the internship. After acceptance, there is an entrance discussion with each intern to discuss individual goals and expectations. Each intern is paired with two faculty mentors. Periodically, interns will engage other mentors for specific projects. Interns are expected to devote at least 4 hours every month to NSMC related activities. On the basis of an exit survey, just over one third of interns spent 4 or more hours on NSMC-related activity, with the remainder spending below that. The bulk of the day-to-day teaching occurs on the NSMC Slack channel, a private, electronic communication platform. The NSMC Slack averages around 191 messages per week (5). One of the focuses of the Slack is pointing out real-world misuse of social media. One of the channels on the Slack is called Bad Use of Social Media, and points out privacy violations, poor behavior, and other nonproductive and unprofessional uses of social media. There is a women's channel to allow protected conversation about sensitive issues. Two individuals are designated as ombudspeople for individuals to contact for concerns about conduct in the internship. In addition, a

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formal code of ethics and professional conduct has been proactively developed.

The Curriculum

The primary objective of the NSMC internship is to transform interns into active creators of nephrology-oriented FOAMed. The NSMC internship operates as an internship, not a school. The competencies expected to be achieved by the completion of the internship includes online communication skills, online professionalism, and interprofessional collaboration. The interns learn by producing FOAMed content from the first weeks of the program. The curriculum is organized into four discreet projects, as described below. Each of these projects helps the interns gain knowledge, skills, attitudes, and behaviors that are important for the successful deployment of social media in medical education.

The first project is to write a blog post on a topic that interests the intern. The topic could be clinical, policy-related, or a nephrology-related personal experience. These articles are reviewed and edited by the mentors before being posted. The post is then published on one of the NSMC-affiliated websites: Renal Fellow Network blog (renalfellow.org), Nephrology Journal Club (NephJC.com), UKidney (ukidney.com), Nephron Power (NephronPower.com), Precious Bodily Fluids (PBFluids.com), American Journal of Kidney Disease Blog (AJKDblog.org), or other site (*e.g.*, their personal blog or an institutional website). Some of these posts have garnered wide distribution; for example, a post titled “CKD for the Medical Resident” on Renal Fellow Network garnered 17,256 page views in 3 days (6).

The second project is the Twitter NephJC. NephJC is an online Twitter-based journal club, that discusses two articles every month (7). Interns are expected to attend and participate in most NephJC discussions. Additionally, interns contribute by writing a summary of the article to be discussed. Other contributions include curating a NephJC discussion, creating a visual abstract, and ultimately hosting the journal club chat.

The third project is to create supportive media for NephMadness. NephMadness is an online, medical education game where various nephrology concepts are described in a single elimination bracket (8,9). Players in the game try to pick the winners of these matchups that are decided by a blue-ribbon panel of nephrology leaders. The assignment is open-ended, and the interns have come up with various solutions, including videos, memes, blog posts, poems, crosswords, and Twitter online polls.

The final assignment is a capstone project. Interns are encouraged to finish the year with a social media project of their choosing. This is a new project for 2018. Projects included measuring the social media impact of various nephrology journals, creating a novel nephrology educational website, making a video describing a clinical trial, cataloging and indexing the NephJC website, and creating a primer of how to run and participate in a Twitter journal club.

The NSMC internship also conducts online didactic sessions to teach the interns about professionalism in social media, use of social media for academic career

advancement, and the mechanics of building a blog using WordPress and SquareSpace.

Assessment and Feedback

Mentors provide specific feedback to the interns at 6 months and at the completion of the internship. The interns are also encouraged to self-evaluate and share their thoughts on their progress at 6 months and at the conclusion of the internship.

Additional feedback occurs iteratively throughout the internship in association with individual projects and collaboration. Each project has internal and external supervision to assure that all FOAMed content is accurate, complete, and unbiased. For example, American Journal of Kidney Disease blog’s social media editor (a physician) reviews every blog post along with a member of the editorial team. Additionally, the NSMC faculty review content before turning it over for publication. Graduation occurs at the annual American Society of Nephrology Kidney Week. Interns submit anonymous feedback describing their experience of the NSMC internship, which is reviewed by the faculty for program improvement. For example, a book club writing assignment was removed from the curriculum and replaced by a capstone project in the fourth year of internship. Anonymous exit surveys (scale, 1 [minimal educational value] to 5 [high educational value]) were initiated for the 2017 graduating NSMC class (100% response rate), and demonstrated that 64% rated their overall experience with the NSMC as highly valuable (5/5), 18.2% rated it as 4/5, and the remaining rated it as 3/5. Of the 22 interns that have graduated, 12 interns currently hold leadership positions in nephrology organizations and journals.

Conclusions

Social media is an emerging form of collaboration that is influencing diverse areas of medicine including research, education, social support, and activism. The overarching goal of the NSMC internship is to promote the principle of FOAMed. The NSMC internship provides mentorship, teaching, and opportunities to produce creative medical education under the guidance of experienced practitioners of social media. The NSMC internship successfully deployed a worldwide education initiative and recruited a diverse cohort of interns who continue to generate original FOAMed content for nephrology.

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Disclosures

S.S. is associate program director of the Nephrology Social Media Collective (NSMC) and was a prior NSMC intern. J.T. is program director of the NSMC. J.T. is president of NephJC, a non-profit organization that supports the work of NephJC and the NSMC. S.S. is part of the NephJC work group. S.S. and J.T. are faculty members of the NSMC. J.T. is a member of the *American Journal of Kidney Diseases* Social Media Advisory Board, *Clinical Journal of the American Society of Nephrology* Visual Abstract Editorial Team, and *American Journal of Nephrology* Visual Abstract Team. J.T. is the creator of Precious Bodily Fluids (blog on topics related to nephrology).

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