

Capstone for Impact Submission | GY2020

Project Title: Hope Ophthalmology Free Clinic: Training Videos and Website

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Advisor Names(s): Dr. Paula Anne Newman-Casey

Branch: Procedures Based Care

Path of Excellence: none

If this project can be continued by another UMMS student, please include your contact information or any other details you would like to share here: N/A

Summary: The Hope Ophthalmology Clinic provides free eye care to the community and is staffed by volunteers including medical students, technicians, residents, and physicians. Medical student volunteers complete the initial screening and portions of the exam, including using special equipment to check intra-ocular pressure, auto-refraction, and patients' current prescription with a lensometer. Students need training prior to volunteering, and often forget exam skills, how to document, or how to use equipment in the months between free clinics. Arranging training sessions for the constant turnover of new volunteers or refresher training was a burden for the staff and was difficult to coordinate among schedules. I created a series of short training videos to demonstrate skills, documentation, and equipment use to streamline training for volunteers and provide an educational resource that could be referred to at the volunteers' convenience.

Methodology:

1. Met with ophthalmology technicians and faculty to discuss the scope of the videos and which exam skills would be included.
2. Drafted a script for each video, which was reviewed in an iterative process by Kellogg Eye Center staff for corrections and suggestions for improvement.
3. Filmed each exam maneuver with a fellow student volunteer; demonstrated proper use of equipment.
4. Edited the videos using as the medical school's video editing suite. Added voiceovers, step-by-step documentation instructions, and slides with "pearls and pitfalls" to emphasize key tips.
5. Draft videos reviewed by multiple Kellogg staff members and revised based on input.
6. Created a website with links to each video that is accessible via both computer and mobile device. Kellogg Eye Center also published the videos on their YouTube channel and now includes links to them in the ophthalmology elective/rotation resources.
7. Editable versions of the videos are saved to MBox for further additions/updates.

Results: This project resulted in eight educational videos that can be accessed at the following site: <https://sites.google.com/view/hope-clinic-videos/home> or on the Kellogg Eye Center's YouTube channel.

Conclusion: The most recent cohort of volunteers utilized the videos prior to a free clinic, and both volunteers and Kellogg staff provided positive feedback. These resources will be available for the benefit of future volunteers and their patients in upcoming clinics.

Reflection/Impact Statement:

I desired to tackle a capstone project that combined elements of medical education and community service. This project at the Hope Eye Clinic satisfied both of those goals, as each clinic typically provides free eye care to approximately 40 patients, and most student volunteers have no prior experience in the skills needed to assist in the eye clinic. During my initial training as a Hope Clinic volunteer, I identified the need for educational training videos, as it was difficult for staff to coordinate the training of new volunteers, with high turnover rates. The need was also evident as fellow volunteers began asking for refresher training between clinics.

These educational resources reduce the burden of staff needed to train new volunteers. They reduce an obstacle to volunteering by allowing students to access the training on their own schedule and refer back to refresh themselves on skills they may have forgotten, and hopefully this translates into an improved patient experiences as students are able to efficiently and correctly screen patients.

Prior to undertaking this project I had very little previous experience in medical education, video editing, or website design. Fortunately, there were many people willing to assist and teach me once I asked. For example, there were technicians and quality improvement specialists at Kellogg willing to review the draft scripts. Personnel at the Health Information and Technology Services (HITS) patiently walked me through the video editing software and provided suggestions for creating the website and making it accessible on mobile devices.

Although the videos are relatively short and focus on exam skills and documentation, there are educational points and examples of pathologies students may encounter. I was pleased when the course administrator for the University of Michigan ophthalmology rotation at Kellogg requested we include the videos in the student resources folder provided to rotating students. Additionally, on an away ophthalmology rotation in Texas, the residency director asked me if he could view the videos, and later asked if he could share them with visiting students and new technicians as a resource. I made the website publicly accessible and the videos are on YouTube, so they can benefit a larger audience than Hope Clinic volunteers.

This project lends itself to continued expansion/updates. The editable versions of the video files are saved to MBox, and the staff who assisted me with the project have access to make updates or additions. For example, the Hope Clinic currently uses paper charts for documentation, and portions of the videos may need to be updated if they transition to an electronic medical record or if the equipment they use is upgraded. A preclinical medical student interested in ophthalmology recently contacted me inquiring about the process of making the Hope Clinic videos, and he has some ideas for additional videos tailored toward patient education.

For future students contemplating a capstone project, I would encourage them to choose a project related to the field or specialty they are interested in and to try to create a tangible end-product, whether it be a publication, website, design for a device, etc. It was helpful during residency interviews to have a result (website and videos) that I could share and talk about. Another point of advice is to reach out early and take advantage of the many resources on campus beyond the medical school faculty in order to produce a professional product. Starting early allows time for others to review your work and provide feedback in an iterative process that leads to a better result.