Podcasting as an Innovative Approach to Enhance Career Counseling in Canadian Undergraduate Medical Education

Anthony Vo[2]

Corresponding author: Dr Anthony Vo avo2@ualberta.ca
Institution: 2. University of Alberta
Categories: Students/Trainees, Teaching and Learning, Technology

Received: 18/04/2018
Published: 09/05/2018

Abstract

In a 2012 Royal College of Canada survey of newly trained physicians, 53% did not receive career counseling while in medical school. The purpose of this initiative was to produce a podcast series designed to inform students of the different specialties. The podcast series featured 8 prominent physicians with long-standing experience in their specialty. The series provides students with an archive of podcasts to help them make informed career decisions. The opportunity to intimately learn about a specialty through the eyes of a physician and the flexibility podcasting offers makes this innovation a valuable and insightful resource for medical students.

Keywords: podcast; medical education; career counseling; medical specialty; undergraduate

Background

The current Canadian undergraduate medical curriculum was designed to graduate medical students after 3 to 4 years of training, depending on the medical school. During the later half of the curriculum, students are placed in clinical settings where they rotate through the different medical specialties. This is usually where students develop an initial understanding of each specialty and decide which specialty they would like to pursue. In their final year of training, students apply to their specialty of interest using the Canadian Resident Matching Service (CaRMS). In order to be a competitive applicant, students need to prepare a strong application that depicts their interest and commitment to the specialty. From the time medical school starts, students have a maximum of 2.5-3.5 years to prepare this application.

For applicants interested in highly-sought specialties, the application process can be very competitive. In 2013, the percent of medical students who matched to their first-choice surgical specialty was significantly lower than non-
surgical specialties. For example, only 52% of medical students interested in plastic surgery successfully matched to their first choice discipline in the first iteration compared to 95% for internal medicine or 97% for family medicine (Canadian Federation of Medical Students, 2013). Therefore, students are often pressured to determine their specialty early in their training so that they can prepare a more competitive application. However, choosing a specialty is often made with limited knowledge, exposure and understanding. As a result, students may commit to a specialty for which they later find that they have no interest or satisfaction. Furthermore this can lead students to entering a specialty for which there is no job market or even switching to another residency training program. In a study done by Medscape, only 41% of physicians would choose the same specialty again (Crane, 2012).

This is compounded by the lack of formal opportunities, career counseling services and resources in Canada to help students explore specialties early in their training. In 2011 and 2012, 62% and 53% of newly trained Canadian medical graduates respectively, did not receive any career counseling while in medical school. Of the career counseling provided, only 4.1% addressed the career paths available for a specialty and only 9% were satisfied with career counseling (Frechette, 2013). Canadian services and resources available provide students with a superficial understanding of a specialty, rather than an in-depth, first-hand and intimate apprehension that is necessary to make life-long career decisions. Therefore, it is essential to ensure students are given opportunities to develop an understanding of the different specialties from physicians in their respective field, especially in an era where technology is vastly available, so that they can make informed career decisions.

Developing An Innovation

It is important that when implementing an innovation, that it addresses and is easily consumable by the population it is targeting. Podcasting is a recent innovation that is extensively used and studied for educational purposes. It allows rapid and inexpensive delivery of media contents, known as podcasts, to users through a desktop or mobile platform (Boulos, 2006). Many medical students are familiar with podcasts and how they work. In one study surveying 593 medical students they found that only 2.2% were not familiar with podcasts. They also found that 79.8% of the students own an MP3 or digital media player that allowed them to listen to podcasts (Sandars, 2007). Therefore utilizing podcasting to target medical students is an ideal approach.

The purpose of this initiative was to design and produce a podcast series, Leaders in Medicine (LIM), to provide medical students with an in-depth understanding of the different specialties, in order for students to make informed career decisions.

Podcast Series Production

A podcast server was produced with a user-friendly interface for the desktop (see Figure 1) and mobile platform (Figure 2 A and B) with the help of Medtech (Information Management Services) from the Faculty of Medicine, University of Ottawa. Physicians with longstanding experience in their specialty, for example Division Chairs and Residency Program Directors, were invited to participate. The format of the podcast was unstructured in order to allow physicians the ability to talk freely about their specialty. However, prior to each podcast, physicians were asked to emphasize on key topics such as their view of their specialty, advantages and disadvantages, advice, residency application process, how residency programs select students and etc. Physicians were especially encouraged to be open about their specialty and career path, such as any personal regrets and what they wish they had known as a medical student. They also answered commonly asked questions from medical students, including
the importance of research when applying and employment.

Several measures were implemented to help make the initiative friendly to physicians who participated. Podcasts were recorded using portable high-quality voice recorders with noise cancellation features (Sony 4GB Digital Voice Recorder ICDPX333). This allowed recordings to be done at any location convenient to them. Editing of the podcast was done using Garage Band 11 (version 6.0.5, Apple Inc.). Once edited, physicians were given the opportunity to review their podcast and further edits were made before distribution. The podcasts were hosted on a password-protected media server to encourage physicians to be more open about their specialty without possible repercussions, such as regrets physicians may have or personal advices. LIM consisted of 8 podcasts, each featuring a unique perspective of the specialty from a distinguished physician (general surgery, obstetrics and gynecology, plastic surgery, endocrinology, hematology, geriatric medicine, family medicine, and ophthalmology). The length of the podcasts ranged from 7 to 48 minutes. They were archived so that all future medical students have access to these from the day they start medical school.

Figure 1. Desktop user interface for Leaders in Medicine Podcast Series.

Figure 2. Mobile user interface for Leaders in Medicine Podcast Series showing the homepage(A) and podcast player(B).
Discussion

Medical students are pressured to choose their specialty of interest early in their medical training in order to prepare a competitive application for CaRMS. This is compounded by the lack of career counseling available to students in undergraduate medical training and formal exposure to specialties in the later half of their training. Therefore students often make decisions based on limited knowledge and exposure. The purpose of this initiative was to produce an innovative podcast series, LIM, to provide students with an early and an in-depth exposure to the specialties, to allow students to make informed career decisions.

In order to successfully implement an innovation, it needs to be able to address the population it is targeting using means familiar and popular with them. For medical students, producing an innovative resource that can accommodate their schedule is crucial. Podcasting allows students to consume the resource according to their schedule. With mobile devices, such as cell phones and tablets, being more prominent among medical students today, they allow students the opportunity to listen to podcasts wherever they are. In several past studies, medical students have commented that podcasting provide students with the flexibility to be able to listen when, where, and how they want which is ideal for their busy schedule (Schreiber, 2010). In a 2008 study, one quarter of medical students reported listening to podcasts while traveling (Evans, 2008).

Canadian resources such as the Canadian Medical Association Specialty Profiles provide general overview of medical specialties, discussing topics such as the average salary, satisfaction, and scope of practice (Canadian Medical Association, 2014). However these resources lack the in-depth details about the specialties that are needed for students to make an informed career decision, such as the nuances physicians find about their specialty, how physician picked their career path and the thought process they went through during medical school. For example,
one surgeon reflected on his last day of his surgery rotation as a medical student pursuing internal medicine and stated "this is the last time I'm scrubbing in and putting on the gown, but I should've known that I wouldn't be happy in my career without that feeling again." Another surgeon discussed the poor employment opportunities available to recent surgical graduates, but stated "you can't predict who's going to make money tomorrow based on today, just find something you like to do."

To ensure physicians participate and be open about their specialty, numerous considerations needed to be addressed. Firstly, it was important to make it convenient for physicians to participate at locations convenient to them, which was addressed using portable high-quality voice recorders. Secondly the option of allowing the physician to listen and edit their podcasts and by limiting access to medical students only by using a password-protected server, addressed some of the concerns they had about the possible repercussions from being open and voicing their thoughts about their specialty. As a result of addressing these considerations, all physicians who were asked were willing to participate in this initiative.

**Conclusion**

A successful medical education innovation must address the students by using what is familiar and popular among students. Podcasting provides students with an archive of podcasts to help them make informed life-long career decisions. The opportunity to intimately learn about a specialty through the eyes of a physician and the flexibility podcasting offer makes this innovation a valuable and insightful resource for medical students.

**Take Home Messages**

1. Career counseling is lacking in the Canadian undergraduate medical curriculum.

2. The flexibility podcasting offer makes it a valuable and insightful resource for medical students.

**Notes On Contributors**

Anthony Vo, MD- a Diagnostic Radiology resident at the University of Alberta, Canada. He has a strong interest in medical education and using innovative approaches to enhance the learning experience of medical trainees.

**Acknowledgements**

The author would like to thank Dr. Alireza Jalali and Jean-Ray Arseneau for their technological expertise. This initiative was financially supported by the Ontario Medical Students Association (OMSA) Innovator Grant.

**Bibliography/References**

Boulos MNK, Maramba I, Wheeler S. (2006). Wikis, blogs and podcasts: a new generation of Web-based tools for
virtual collaborative clinical practice and education. BMC Medical Education; 6:41.

https://doi.org/10.1186/1472-6920-6-41

Canadian Federation of Medical Students. (2013). The Match Book: An annual review of the CaRMS match. CFMS, 2013. Retrieved March 23, 2014 Available from: https://www.cfms.org/files/matchbook/matchbook2013-2014.pdf

Canadian Medical Association. (2014). Becoming a physician. Canadian Medical Association. Retrieved March 23, 2014. Available from: https://www.cma.ca/En/Pages/becoming-a-physician.aspx

Crane M. (2012). Physician Fustration Grows, Income Falls—But a Ray of Hope. Medscape. Retrieved March 23, 2014. Available from: http://www.medscape.com/viewarticle/761870-4

Evans C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. Computers & Education; 50:491-98

https://doi.org/10.1016/j.compedu.2007.09.016

Frechette D, Hollenberg D, Shrichand A, Jacob C, Datta I. (2013). What's really behind Canada's unemployed specialists? Royal College of Physicians and Surgeons of Canada. Retrieved March 23, 2014. Available from: http://www.royalcollege.ca/portal/page/portal/rc/common/documents/policy/employment_report_2013_e.pdf

Sandars J, Schroter S. (2007). Web 2.0 technologies for undergraduate and postgraduate medical education: an online survey. Postgrad Med J.; 83:759-62

https://doi.org/10.1136/pgmj.2007.063123

Schreiber BE, Fukuta J, Gordon F. (2010). Live lecture versus video podcast in undergraduate medical education: A randomized controlled trial. BMC Medical Education; 10:68.

https://doi.org/10.1186/1472-6920-10-68

Appendices

Declarations

The author has declared that there are no conflicts of interest.

This has been published under Creative Commons "CC BY 4.0" (https://creativecommons.org/licenses/by-sa/4.0/)

AMEE MedEdPublish: rapid, post-publication, peer-reviewed papers on healthcare professions’ education. For more information please visit www.mededpublish.org or contact mededpublish@dundee.ac.uk.