MacEmerg Podcast: A Novel Initiative to Connect a Distributed Community of Practice

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ABSTRACT

Background: Regional knowledge dissemination and information sharing is a challenge among physically divided groups of physicians. Many staff and resident physicians do not have easy access to share clinical and medical education and research information with each other in an academic setting. Our divisions of emergency medicine could benefit from a novel approach aimed at improving overall connection and collaborative engagement.

Innovation: By harnessing the sociomateriality properties of podcasting, we could achieve the dual goals of better connecting our faculty as well as educating the audience on aspects of clinical practice and education that are especially relevant to our region. We sought to primarily draw on local expertise for content. We developed a standardized structure for our monthly releases, with each episode composed of a main faculty segment, a resident-focused segment, and a medical education segment. Accessibility to the podcast was maximized through its publication across multiple platforms and detailed individual show notes were made available.

Outcomes: We applied logic model methodology with the intended goal of having much of our content consumed by local faculty and trainees. Using Web-based analytic data, we were able to ascertain the proportion and number of listens that occurred from within our local university-affiliated and/or catchment region. Episodes averaged 227.7 $\pm$ 67.2 listens with an overall 44.1% of those originating from within our defined region.

Reflection: Given the number of regional listeners we are consistently reaching, we have been effective in serving to connect a widely distributed group of academic physicians. As we continue to grow the podcast, we plan on collecting quantitative data to better ascertain its effect on our stated goals.

NEED FOR INNOVATION

Emergency medicine at McMaster University comprises a diverse group of staff and trainees from various educational and training backgrounds that practice in both academic and community medicine within and outside of the Golden Horseshoe Region in Ontario, Canada. Our geographic distribution

extends well beyond the city of Hamilton encompassing a region roughly 200 km in all directions around McMaster University (including Toronto, Mississauga, Oakville, and Burlington on the east; St. Catharines and Niagara region in the south; Brantford in the west and Kitchener-Waterloo and Brampton in the north). This distance between faculty groups can lead to a disconnect between the various emergency medicine clinical groups, which must collaborate to provide common curricula to both McMaster students and residents (since they float between sites). Additionally, silos have been created and there was no easy means to quickly disseminate knowledge that could benefit all groups.

Recent literature has also shown that there is a sociomateriality to podcasts that may increase listeners' perception of closeness with those featured within the podcast.[1] If this is indeed the case, it may be possible for leaders and educators to connect more fully with their audiences and with each other in a local context.

BACKGROUND

Free Open-Access Medical Education (FOAM or #FOAMed) has evolved as a popular way of sharing knowledge and contributing to medical education via social media platforms.[2,3] The number of blogs and podcasts in the emergency medicine and critical care field has grown rapidly.[4] Further, data show that residents view podcasts as accessible and personalizable forms of learning that create connections with both their local and larger scale communities.[1] As many of our faculty and residents have taken to FOAM and podcasts as a form of learning, our team saw an opportunity to create a unique local podcast with the goal of connecting physicians within our geographically diverse faculty.

Podcasts have become a novel and widely used mode of dissemination of medical and clinical education information across wide geographic areas.[5–7] There are many prominent FOAM podcasts available to the public, which have facilitated increased knowledge translation among the medical and health care community at different levels of training.[8–13] Many of these podcasts are mainly used as a resource to discuss topics that are broad and not necessarily applicable to local regions of practice.

OBJECTIVE OF INNOVATION

In an effort to connect our regional community of emergency medicine physicians and trainees, we

harnessed the sociomateriality properties of podcasts and developed an emergency medicine podcast aimed at connecting individuals in a locally practiced relevant way. As described by Riddell and colleagues,[1] we aimed to create a "water cooler"–type effect so that our regions physicians might begin to tune on our podcast so that they could converse with colleagues about shared knowledge about those within the group.

MacEmerg Podcast is an initiative created by the three divisions of emergency medicine at McMaster University (within parent departments of family medicine, medicine, and pediatrics) in 2019 to produce a podcast that is used to share relevant regional clinical, medical education, and research information targeted toward clinicians and health care professionals working in the surrounding communities (the aforementioned cities and towns). We chose these topics since they are aligned with the academic mission of McMaster University. Using this novel method, we aimed to connect our faculty geographically and foster a community of practice within this group and to create a better information sharing network between our faculty and their clinical units.

THE IMPLEMENTATION PHASE

We began our initiative with a team of four individuals and have grown to a team of eight (three faculty members, two residents, and two medical students). None of the MacEmerg podcast team members receive financial compensation, although faculty members may claim academic merit for their digital scholarship, aligned with recent guidelines and literature.[14,15] For the trainees, the podcasts are acknowledged as works of digital scholarship within their curriculum vitae.[15]

After a review of current podcasts within medical education, the team developed a consistent structure for our podcast that focused on both content and schedule for release. The skeleton of the content would showcase our region's faculty, consisting of a main faculty segment and a resident's corner. To maintain consistency, we would release the podcast on the first day of every month.

The content development, recording, and editing started a year prior to the podcast launch to ensure adequate preplanning. Through discussion and focus group activities during a continuing professional development strategic planning retreat with current faculty and trainees, we gained insight into how we might highlight local clinical, medical education, and

research expertise.[16] During our retreat, we received the mandate to showcase local talent such as research and academic accomplishments and connect our regional MacEmerg academic community of practice. Additionally, given the recent transition to competency-based medical education curriculum for the McMaster Emergency Medicine Residency Program and many other residency programs in Canada, an additional faculty development segment titled "Teaching that Counts" was added (Table 1). Finally, in response to a growing desire for digital CPD offerings, we recorded segments with invited guest speakers who visited any one of the McMaster sites. Over time, podcast creators transitioned to editing the previously recorded ("banked") content to generate completed episodes while still concurrently recording new segments for future episodes.

For dissemination, a website was created with information on the education initiative and access to podcast episodes.[17] Episodes were augmented by show notes containing additional resources pertaining to our local clinical practice. Episodes were uploaded on Soundcloud (Soundcloud Inc., Berlin, Germany) and syndicated to well-known podcast apps such as Apple Podcast (Apple, Cupertino, CA) and others. Episodes were both e-mailed and tweeted (via our @MacEmerg twitter account) to our intended and unintended audiences. Initial and ongoing expenses associated with these apps were covered by the podcast creators.

OUTCOMES

Methods

To ensure that our outcomes matched our intentions, we applied a logic model methodology[18,19] to our project; that is, we sought to make sure our intended goals were achieved in our actual outcomes. Our intention was to create a local podcast that was consumed by trainees and faculty members from within our local McMaster-affiliated catchment area, so the podcast episode listens should reflect this and the plurality of the listens should be from our local surrounding areas. Therefore, logically, if we conducted a program evaluation to audit where our listeners were located, a large proportion of our podcast listens should reflect this intended outcome (i.e., the podcast will have fulfilled its mandate to reach our local faculty members if a large group of our listens were from cities/towns around McMaster).

We extracted available Web-based analytic data from Soundcloud, which reports the number of listens we received from various cities/towns and countries and tagged all listens that originated from the McMaster area. We had two inclusion criteria for the city/town; the area had have a formal affiliations as a McMaster-affiliated teaching hospitals or hosted a McMaster-affiliated trainees regularly. Despite the fact that some of our faculty and learners live within the city of Toronto, we excluded it from our defined local listens region as we would not be able to reliably differentiate affiliated from nonaffiliated listens. We felt that a conservative estimate of our overall listens would be the most appropriate approach given our project goals.

We then calculated simple descriptive statistics (percentages, frequency) for the McMaster and non-McMaster sites. We received an exemption from our institutional ethics review board for program evaluation and quality improvement of the podcast.

Results

Our 12 podcast episodes had a total of 2,732 listens with 44.1% (n = 1,205) of the listens coming from the McMaster-affiliated and Hamilton-catchment cities/towns. With each podcast episode having on average 227.7 ± 67.2 listens and with staff and trainees tuning in from Brampton through to Kitchener and Niagara, which may indicate that our podcast has reached many within our regional campuses and surrounding communities. Table 1 lists the various topics covered in our first year. Notably, almost all the content in the first 12 months featured local faculty members or trainees, with only one segment of one episode featuring the content of one of our guest regional rounds speakers.

The podcast had a large proportion (48.9%) of its listenership from McMaster-affiliated cities/towns. Additionally, the rest of Canada (outside of the McMaster-affiliated areas) had 28.2% (n = 768) of the total listenership with our closest neighboring Canadian city (Toronto) yielding 15.6% of listens by itself. The entire country of the United States of America had 21.3% (n = 578) listens and the rest of the world had 6.3% (n = 168) over the course of the 12 months (Figure 1).

CRITICAL REFLECTION

The MacEmerg podcast highlights how a podcast strategy might be used to break geographic boundaries and

Table 1
A Complete Listing of MacEmerg Episodes in the First 12 Months

Episode Number	Main Segment	Resident Corner	Teaching That Counts	Total Number of Listens	% Number of Listens From McMaster Area
Episode 1	Recognizing Domestic Violence in the ED *Featuring Dr. Sangita Sharma (local expert)*	Resident Wellness *Featuring local trainees who are champions on this topic*	N/A	320 all-time listens 300 in first 12 months	62.8%
Episode 2	Pearls of Pediatric Emergency Medicine *Featuring Dr. Anthony Crocco (local pediatric ED chief and international speaker)*	Geriatrics Fellowship in Emergency Medicine *Featuring Dr. Chris Skappak who had just completed a fellowship in geriatrics*	N/A	206 all-time listens 183 in first 12 months	60.2%
Episode 3	Will Machines Take Over Our Jobs? Machine Learning in the ED *Featuring local PhD student*	Infographics *Featuring Dr. Alvin Chin, trainee who has been an international invited speaker on this topic*	N/A	180 all-time listens 175 in first 12 months	58.3%
Episode 4	Diagnosing Pulmonary Embolism in the ED *Featuring Dr. Kerstin De Wit (local and international thrombosis expert)*	Quality Improvement (QI) in the ED & Fellowship *Featuring our Chief Resident Dr. Rakesh Gupta, who was a QI fellow at the time*	N/A	244 all time listens 244 in first 12 months	57.4%
Episode 5	Trauma High Season Tips and Tricks *Featuring Dr. Jonathan Sherbino (local Trauma Team Leader and internationally renowned educator)*	Sirens to Scrubs Series *Featuring resident Dr. Paula Sneath who has created this series for the national FOAM blog CanadiEM*	N/A	229 all-time listens (only 11 months old)	60.3%
Episode 6	Sharing Is Caring in the World of Simulation *Featuring Dr. Kyla Caners (founder of EM sim cases and internationally renowned educator)*	Medical Education Fellowship in Emergency Medicine *Featuring Chief Resident Dr. Ashley Lubberdink, who was completing her Medical Education fellowship*	N/A	184 all time listens (only 10 months old)	54.3%
Episode 7	Clinical Teaching Tips and Tricks *Featuring Dr. Alex Chorley (locally notable educator)*	Disaster Medicine Training *Featuring Dr. Ali Mulla who has completed a Masters in Disaster Management.*	N/A	204 all time listens (only 9 months old)	54.4%
Episode 8	A Short History of Ultrasound and Importance of Lung Ultrasound *Featuring Dr. Jeff Handler (regional Ultrasound leader)*	Narrative medicine and its Power *Featuring Dr. S. Luckett-Gatopoulos who completed a narrative medicine certificate during her fellowship year.*	One-minute Preceptor Model	198 all-time listens (only 8 months old)	54%
Episode 9	MacEmerg Disaster Simulation Day *Featuring various members of our community*	Competency By Design and Growth Mindset *Featuring Dr. Chad Singh (PGY2 resident) and Dr. Teresa Chan (internationally renowned educator)*	N/A	214 all-time listens (only 7 months old)	63.1%
Episode 10	Clinical Leadership— Advice From the Hamilton Hospital Chiefs	Global Health Training In Emergency Medicine *Featuring Dr. Jodie Pritchard (PGY4)*	Tagging and Flagging Teachable Moments *Featuring Drs. Alim Nagji and Teresa Chan (both*	168 all-time listens (only 6 months old)	54.2%

Table 1 (continued)

Episode Number	Main Segment	Resident Corner	Teaching That Counts	Total Number of Listens	% Number of Listens From McMaster Area
	Featuring two of our Hamilton ED chiefs	*speaking about global health training*	*experienced educators and international speakers) contextualizing broad concepts for our local implementation*		
Episode 11	Mac Pediatric Emergency Simulation Team: "Standing on the Shoulders of Giants" *Featuring our Pediatric ED simulation team*	N/A	Tips for Filling Out EPAs in the CBD Curriculum *Featuring Drs. Alim Nagji & Teresa Chan (both experienced educators and international speakers) contextualizing broad concepts for our local implementation*	399 all-time listens (only 5 months old)	71.9%
Episode 12	A Leader's Framework for Decision Making* *Featuring Dr. Rick Winters who was a visiting lecturer and gave regional rounds*	Design and Development of the Indigenous Health Curriculum *Featuring internationally invited resident speaker Dr. Jillian Roberge*	Tailoring your teaching to the individual learner *Featuring Drs. Alim Nagji and Teresa Chan (both experienced educators and international speakers) contextualizing broad concepts for our local implementation*	186 all-time listens (only 4 months old)	48.9%

FOAM = Free Open-Access Medical education.
*Denotes a segment that features a guest speaker who is not a McMaster-affiliated trainee or faculty.

enhance the connection between geographically distanced faculty members and trainees. From our first 12 months' worth of data, we have shown that geographically disparate groups are using our podcast. We hope that this means that we are connecting listeners to our MacEmerg community, allowing those
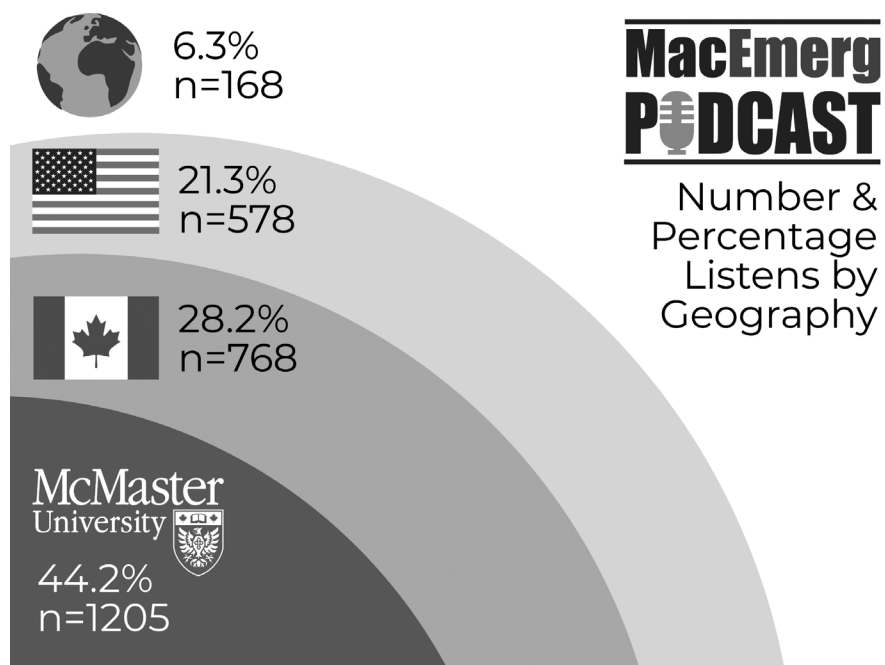

Figure 1. Number and percentage of listens by geography.

feeling that they are peripherally legitimate members thereby encouraging more participation. At the very least, there has been an emergent community of practice within our podcast team, which now has grown to include more trainees (one more resident and three medical students).

The implications of the MacEmerg podcast data we have analyzed are twofold. First, our podcast hopefully serves as a way to communicate among our geographically distanced academic community, while also providing a means to share our practice and discussions with the rest of the world. The largest proportion of our total listens (44.2%) hail from the McMaster-affiliated areas, which shows that our primary goal of disseminating information and unifying our community may be occurring. Anecdotally, faculty members have spontaneously declared to our podcast team members whom they have had great conversations spurred on by finding out new things about colleagues/trainees. Our podcast may be a vehicle for bridging communication and local knowledge dissemination between the distanced McMaster university sites. Because the data suggest a strong local following, this podcast will continue to be a useful tool to disseminate knowledge, provide support, and help bridge the social disconnect within our regional EDs. Our approach is a framework that other academic leaders can use to build the connectivity of their groups, unifying messages and sharing information within an educational community.

Second, our reach has been unexpectedly broader than we anticipated, which may indicate an unmet need for faculty development podcasts. Many of the listens are from locations outside of our target catchment. They occur mostly in the rest of Canada, but also come largely from the United States and finally from the rest of the world. These early data show that the MacEmerg podcast also acts to disseminate our local practice and expertise globally—something that we did not expect when we began the podcast.

REFLECTIVE DISCUSSION

Currently our evaluation data are limited by the geotagging capabilities of our podcasting platform that assumes that listeners have inputted correct location data into their software, which may not always be the case. This could lead to local listeners being tagged as distant learners or vice versa. Additionally, Toronto was excluded as a "local" city, but as previously stated, many of our faculty, trainees, and alumni reside in

Toronto. As such, the data likely underestimate the number of "local" listeners and it would likely increase if we were able to reliably exclude nonaffiliated consumers from within the greater Toronto area. Finally, the data are limited to understanding the number of listens and their location. We are not able to determine higher-order outcomes, such as comprehension of the podcasts or satisfaction with the content.

Our next step will be to continue to grow the podcast by creating additional content and then collecting data for continuous quality improvement. In the future, we plan to develop workshops and written guides that might assist leaders in other centers in creating their own regionally focused podcasts.

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