

Listen and Learn: How the Podcast Revolution Is Shaping Medical Education

Braedon R. Paul¹

Citation: UBCMJ. 2019; 10.2 (50-51)

Since the dawn of portable music players and smartphones, podcasts have rapidly earned their way into the pockets of consumers across the world. The term “podcast” was first coined in 2004 to describe regularly published audio excerpts that can be downloaded from the Internet and listened to on personal computers or mobile devices.¹ Young people are particularly fond of this rising form of digital media, with 41% (and counting) of Canadians aged 18–34 having listened to one or more podcasts in the past month.² This statistic is not particularly surprising, given the multitude of podcasts that are publicly available. According to a recent survey, over 525,000 active podcasts and 18.5 million episodes in topics ranging from comedy to investigative journalism to current events have been produced as of 2018.³ Although podcasts are perhaps most well-known as a source of entertainment, many have turned to them for their educational value. The medical field, for instance, although a newcomer to the podcast world, has started to embrace this unique medium of communication to educate medical trainees and professionals at all levels and specialties around the world.

With respect to subject matter, medical education podcasts fall into a variety of subcategories based on the target demographic, whether it be medical students, residents, fellows, or full-fledged family/specialist physicians. Depending on the listener population, these podcasts can have vastly different objectives. For the busy physician, for instance, podcasts offer an efficient and practical means by which one can stay up to date on the medical literature in his or her respective field. Moreover, podcast developers often perform the most time—and resource—intensive tasks themselves by sifting through and hand-selecting the most recent and relevant literature, while simultaneously supplementing it with their own critical analyses and clinical pearls. The BS Medicine Podcast, produced by the Therapeutics Education Collaboration in Vancouver, for example, provides healthcare professionals with “current, evidence-based, practical, and relevant information on rational drug therapy”⁴ and is freely and publicly available to anyone with Internet access. Among the podcasts targeted towards students, objectives more commonly involve conveying general clinical knowledge and preparing students for written and clinical exams. Surgery 101, produced by the University of Alberta in Edmonton, for example, is a popular series of surgical education podcasts aimed at teaching clerkship students and residents about the basics of surgery. Although a small number of other open-access medical podcasts exist, the supply remains markedly overshadowed by the growing demand for high-quality podcasts.

Podcasts provide users with advantages that cannot be offered through more traditional methods of learning. One clear benefit regards the flexibility afforded to learners to study at their own pace, wherever and whenever they may choose. Medical students in one study, for example, reported listening to educational podcasts while commuting, shopping, exercising, and performing household chores.⁵ Listeners may also rewind, fast-forward, pause, or increase the episode speed to their choosing and are free to listen to the podcast as many times as necessary.⁶ The implications from this are significant: busy students of today are no longer restricted to the classroom or the library to study but can instead

look outside these traditional settings to chart their own schedules and learn “on the go.” Podcasts also help cater education to students with a range of learning styles and study habits, particularly auditory learners. Indeed, studies have suggested greater benefits to long-term memory if material is listened to as opposed to read.^{7,8}

To the podcast skeptics, early studies have even shown test score improvements among students who used podcasts when compared to controls using text resources, though further research is needed to establish stronger links.⁹ Supporting these early results are a collection of qualitative findings demonstrating that educational podcasts reduce exam-related stress and anxiety, help consolidate information, and allow for multitasking among medical students.^{10,11} Regarding the podcast style, medical students in past studies particularly enjoyed conversational and case-based episodes, as they were simultaneously engaging and clinically relevant.¹¹⁻¹³ Students also benefitted from wrap-up summaries at the end of podcasts,¹¹ a welcome addition given the “multitasker-friendly” design of podcasts and subsequent potential to miss pertinent information. Listeners across multiple studies also tended to prefer podcasts under 30 minutes of duration.⁹ Importantly, however, such time restraints limited the volume of information that could effectively be packed into a single podcast. As such, students often tended to prefer podcasts as supplements to live lectures and textbooks rather than replacements.¹⁰ Others yet preferred podcasts as extracurricular tools, i.e., for learning outside of direct curricular needs.¹¹ Thus, although podcasts have demonstrated their worth as adjuncts to core curricular content, podcasts alone are likely not sufficient as a sole learning resource for medical students. This is further supported by the fact that podcasts are pre-recorded resources and thus prevent listeners from contributing to discussions or asking questions as they would during a live lecture or seminar. Another limitation involves the money, time, and labour costs required to develop a high-quality podcast. As a result, medical education podcasts such as PedsCases, produced by the University of Alberta in Edmonton, accept podcast submissions written and recorded entirely by medical students, thus reducing costs while offering eager students a platform to gain experience in their field of interest.

Despite the recent emergence of medical education podcasts, relatively few studies have explored their effectiveness and formal podcast development guidelines have yet to be established. However, data from existing studies are consistent: podcasts are valuable learning tools that, among other benefits, improve and individualize learning by offering total flexibility with regards to when and how one chooses to learn. Test scores agree, with early studies demonstrating score improvements among podcast learners as compared to control groups. Add this to the relative ease at which episodes can be distributed and shared online and it is clear to see why many medical educators are so enticed by them. In the future, educators should focus on developing objective and validated evaluation tools and producing evidence-based guidelines for the creation of new podcasts. In the meantime, however, one thing is clear: thanks to this exciting new form of media, education can be as simple as hitting “play.”

¹MD Program, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada

Correspondence
Braedon Paul (braedon.paul@alumni.ubc.ca)

References

1. Hammersley B. Audible revolution. *The Guardian* [Internet]. 2004 [cited 2018 Oct 19];10–3. Available from: <https://www.theguardian.com/media/2004/feb/12/broadcasting.digitalmedia>
2. Edison Research TD. The Infinite Dial Canada 2018 [Internet]. 2018 [cited 2018 Oct 17]. Available from: <https://www.edisonresearch.com/infinite-dial-canada-2018/>
3. Edison Research TD. The Infinite Dial 2018 [Internet]. 2018 [cited 2018 Oct 17]. Available from: <https://www.edisonresearch.com/infinite-dial-2018/>
4. Therapeutics Education Collaboration. BS Medicine Podcast [Internet]. 2017 [cited 2018 Oct 18]. Available from: <https://therapeuticseducation.org/bs-medicine-podcast>
5. Long SR, Edwards PB. Podcasting: making waves in millennial education. *J Nurses Staff Dev*. 2010;26(3):96–101.
6. Shantikumar S. From lecture theatre to portable media: students' perceptions of an enhanced podcast for revision. *Med Teach*. 2009;31(6):535–8.
7. Sandars J. Twelve tips for using podcasts in medical education. *Med Teach*. 2009;31(5):387–9.
8. Brown A, Ajufo E, Cone C, Quirk M. LectureKeeper: a novel approach to studying in the adaptive curriculum. *Med Teach*. 2018 Aug 3;40(8):834–7.
9. Cho D, Cosimini M, Espinoza J. Podcasting in medical education: a review of the literature. *Korean J Med Educ*. 2017 Dec;29(4):229–39.
10. Kalludi SN, Punja D, Pai KM, Dhar M. Efficacy and perceived utility of podcasts as a supplementary teaching aid among first-year dental students. *Australas Med J*. 2013;6(9):450–7.
11. Chin A, Helman A, Chan TM. Podcast use in undergraduate medical education. *Cureus*. 2017 Dec 9;9(12):e1930.
12. Kamel Boulos MN, Maramba I, Wheeler S. Wikis, blogs and podcasts: a new generation of web-based tools for virtual collaborative clinical practice and education. *BMC Med Educ*. 2006 Dec 15;6(1):41.
13. White JS, Sharma N, Boora P. Surgery 101: evaluating the use of podcasting in a general surgery clerkship. *Med Teach*. 2011;33(11):941–3.