

Five Medical Education Podcasts You Need to Know

Natalie L. Lomayesva^a, Andrés S. Martín^b, Patricia A. Dowley^c, Nicholas W. Davies^c, Sam J. Olyha^d, and Thilan P. Wijesekera^{e,*}

^aMD Program, Yale School of Medicine, New Haven, CT; ^bChild Study Center, Yale School of Medicine, New Haven, CT; ^cNurse Practitioner Program, Yale School of Nursing, Orange, CT; ^dMD/PhD Program, Yale School of Medicine, New Haven, CT; ^eDepartment of Internal Medicine, Yale School of Medicine, New Haven, CT

Podcasts have become increasingly popular tools for medical education in recent years. Only requiring a computer or smart phone, podcasts are readily accessible to healthcare professionals, helping to disseminate medical information quickly and creating a wide community of listeners. With numerous medical podcasts available and limited spare time, it can be challenging for a healthcare professional to identify the most high-yield podcast. This perspectives piece describes the role of podcasts in medical education before sharing five in-depth recommendations from Yale School of Nursing and Yale School of Medicine students and faculty. These five podcasts are: *The Curbsiders Internal Medicine Podcast*, *Flip the Script*, *The Clinical Problem Solvers*, *2 Docs Talk*, and *Key Literature in Medical Education (KeyLIME) Podcast*. Each podcast summary includes its average length, the episode frequency, the intended audience, a brief description, a representative episode, and quotes from interviews with the podcast hosts.

INTRODUCTION

The innocence of a murderer, the value of salt, and the three biggest news stories of the day – these are just a few of the topics discussed on some of the top podcasts in America [1]. Since 2004, when the term “podcast” was first used by *The Guardian*, podcasts have soared in popularity [2,3], providing entertainment while exercising, cooking, and more. But podcasts are more than entertain-

ment. They are increasingly being used in medical education [3-9]. For learners in the health professions, podcasts are a form of opportunistic engagement – providing easy, engaging learning during times not usually used for studying. Podcasts foster a sense of community among peers in the hospital, similar to a book club, lending a catalyst for conversation and giving learners the language to ask faculty deeper questions. Podcasts can also be used to personalize learning in medicine – choosing different

*To whom all correspondence should be addressed: Thilan P. Wijesekera, Department of Internal Medicine, Yale School of Medicine, Harkness Hall A, Rm 306A, 367 Cedar Street, New Haven, CT, 06510; Tel: 203-737-7478, Fax: 203-737-3306, Email: thilan.wijesekera@yale.edu; ORCID iD: 0000-0002-2473-424X.

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podcasts depending on if they want to develop a broad exposure to topics or delve into specific self-identified gaps in knowledge. Studies have even found that some residents feel podcasts have a higher yield than any other teaching modality [6,10].

Podcasts are not a flawless form of communicating and learning educational content, but their role in medical education cannot be ignored. One randomized controlled trial of 130 medical students showed a significantly higher gain of knowledge from an orthopedic podcast compared to text [8]. Furthermore, the prevalence of podcasts in medical education is substantial and only growing. For example, in emergency medicine and critical care alone, the number of podcasts increased from 1 to 42 from 2002 to 2013 [11]. As of 2019, there were 200 medical podcasts available online, covering 19 specialties and a total of 13,839 episodes [12]. With so many choices, finding the right podcasts can be overwhelming. To make this choice easier, we canvassed Yale School of Nursing and Yale School of Medicine students and faculty to inform a list of five medical education podcasts you need to know.

When selecting these podcasts, our goal was to recommend those that represented the podcast listening habits and interests of the Yale healthcare community. We began by asking over 200 Yale nursing students, medical students, and faculty for their favorite medical podcasts. We then narrowed the list of more than 25 podcasts to five that were most frequently recommended, covered a diversity of topics, and varied in episode format. For each podcast, we provide information on the average episode length, the frequency of episodes, the intended audience, a general description of the podcast, a detailed review of a representative episode, and quotes from interviews with the podcast hosts. The final podcast list included *The Curbsiders Internal Medicine Podcast*, *Flip the Script*, *The Clinical Problem Solvers*, *2 Docs Talk*, and *Key Literature in Medical Education (KeyLIME) Podcast* (Table 1).

THE CURBSIDERS INTERNAL MEDICINE PODCAST

Reviewer: Patricia Dowley

Average length of episode: 1 hour

Frequency of new episodes: Weekly

Intended audience: Students and clinicians with an interest in internal medicine and primary care topics.

Brief description: *The Curbsiders* are a team of internal medicine physicians, residents, students, and clinician educators who develop podcasts on topics in the internal medicine space. Founded by Dr. Matthew Watto, Dr. Stuart Brigham, Dr. Paul Williams, and Dr. Tony Sidari – all internal medicine physicians – the podcast hosts interview an expert each week to identify

best practices, highlight clinical pearls, and share practical wisdom on a topic. While no two episodes are alike, the typical episode structure begins with podcast, book, and app recommendations from the expert guests. The group then explores a clinical topic starting with a concise pathophysiology review, followed by a clinical case example and rich discussion about possible diagnoses. *The Curbsiders* elicit expert knowledge on common and controversial subjects ranging from shoulder pain to sexual harassment in medicine – broadening perspective and answering tough questions. At an hour long, the podcasts are an ideal length for commuters. For those looking to stay apprised of *The Curbsiders'* work, the team e-mails a weekly one-page summary highlighting the key takeaways from each episode. Many of the episodes can even be used for continuing medical education (CME) credit.

Representative episode: *The Curbsiders* are dedicated to cultivating well-rounded providers who can think outside the box. This is evident in episode 19, “In-Flight Emergencies [13],” which brings the listener through a real-life example of an in-flight medical emergency and how an internal medicine chief resident intervened to provide medical care for a fellow passenger. While in flight over the Pacific Ocean with 5 hours until the first possible landing, the clinician improvised with the resources at hand to keep the passenger safe. Following the heroic tale, the podcast hosts educate listeners on the most common in-flight medical emergencies, list the medical equipment present on domestic flights, and discuss existing legal protections. The group then brainstorms creative strategies for tackling challenges like maintaining privacy and personal safety in a limited resource environment. Described by *The Curbsiders* as “a must listen before you next step on a plane,” this episode engages the audience with practical information to help tackle real-world scenarios outside the traditional brick-and-mortar clinical setting.

From the hosts: There are exciting new developments for *The Curbsiders*. When asked about any upcoming initiatives for the podcast, Dr. Matthew Watto told us that they are doing a road show with live episodes from Grand Rounds and conferences across the country. Keep an eye out at your institution.

FLIP THE SCRIPT

Reviewer: Natalie Lomayesva

Average length of episode: 30 minutes

Frequency of new episodes: Varies, 1-2 times a month

Intended audience: Professionals and students in the healthcare field.

Brief description: Hosted by Yale medical student and Howard University alumnus Max Tiako, this podcast

Table 1. Summary of Five Selected Medical Education Podcasts.

Title	Average episode length	Episode frequency	Intended audience	Brief description	Representative episode
<i>The Curbsiders</i>	1 hour	Weekly	Students and clinicians with an interest in internal medicine and primary care topics.	Interviews of experts by internists focused on clinical pearls and practice changing knowledge.	Episode #19, "In-flight Emergencies"
<i>Flip the Script</i>	30 minutes	Varies, 1-2 times a month	Professionals and students in healthcare.	Interviews of experts in health disparities.	Episode #18, "Look up 'Bigot Your Way to Success'"
<i>The Clinical Problem Solvers</i>	30 minutes	4-5 times a month	Internal medicine professionals and students interested in developing their clinical reasoning skills.	Internal medicine podcast sharing expert opinion in diagnostic reasoning.	Episode #43, "Chest Pain"
<i>2 Docs Talk</i>	15 minutes	Seasonal, 2-3 times a month	Professionals, students, and anybody interested in improving their own health.	Check-ups on current issues in medicine and health policy.	Episode #99, "Cervical Cancer and the HPV Vaccine"
<i>KeyLIME</i>	20 minutes	Weekly	Anyone interested in medical education.	Discussion of journal articles about medical education.	Episode #240, "Debriefing and feedback – two sides of the same coin?"

discusses a wide variety of topics related to health disparities not often addressed in medical education. With each episode, Tiako talks with an expert in the field – including physicians, law professors, and journalists – on topics uncovered through their research and clinical work. The conversations tackle structural, cultural, historical, and political topics that impact minority health including housing insecurity, maternal mortality disparities, the two-tiered system of addiction interventions, and many more. Some of the podcasts are New Haven-specific, such as one exploring the relationship between Yale-New Haven Hospital and the New Haven community, making the podcast especially relevant to medical professionals at Yale. In easy-to-digest 30-minute segments, this podcast helps to fill in important gaps in medical education on social determinants of health.

Representative episode: "Look up 'Bigot Your Way to Success'" is a powerful episode with Dr. Jennifer Tsai, a Yale Emergency Medicine resident and medical writer. Tiako and Dr. Tsai look at medicine and medical education with a critical eye, discussing implicit messages about race and health. Coming from an ethnic studies background, Dr. Tsai starts by discussing how uncomfortable she was transitioning from her undergraduate education to medical school. Not because of an increase in workload or long hours, but because the complexities of

the interaction between race, racial inequality, and health can get minimized in medical school. She goes on to describe how medical school curriculum reinforces race as biology, including board certifications exams as one particularly troubling area. Getting questions correct on these tests can rely on racial clues "[for example,] a four-year-old African American male comes in, you're already primed to think of sickle cell [anemia]." Tiako and Dr. Tsai dive deeper into this view of race as a biological, yet poorly defined, variable and the implications on learning, practicing, and researching medicine. Dr. Tsai also gives valuable advice on how to resist the implicit teachings of the hidden curriculum that work against equity and fairness for minorities in clinical settings. If you want to learn more about this pair of "goggles" through which we learn and practice medicine, it is definitely worth a listen.

From the host: When asked what he hopes his listeners take away from his podcast, Tiako replied, "I think a lot of times we don't get enough exposure in medical school on issues that affect health such as housing policy and drug policy, to name a few. Outside of the hospital there are a myriad of things that affect peoples' health and I hope I can bring awareness and knowledge of that landscape to my listeners."

THE CLINICAL PROBLEM SOLVERS

Reviewer: Sam Olyha

Average length of episode: 30 minutes

Frequency of new episodes: 4-5 times a month

Intended audience: Professionals and students interested in developing their clinical reasoning skills.

Brief description: *The Clinical Problem Solvers* is your one-stop-shop for all things clinical reasoning. With a wide cast of hosts including, but not limited to, Drs. Rabih Geha, Sharmin Shekarchian, and Reza Manesh, *The Clinical Problem Solvers* use a multi-modal approach to teach clinical reasoning. Their episodes come in four flavors. In the first type – a “schema” [14] episode – the hosts present prepared cases broken down into “aliquots” while walking the listener through their approach to a common chief concern. In the second type – a “clinical unknown” – the hosts invite expert and resident discussants to help them solve a case to which they are blinded. The third type – a “spaced learning series” – allows for some built-in repetition and reinforcement by reviewing previously covered content while highlighting another disease process. Finally, the newest edition – a “virtual morning report” – uses the video-conferencing platform, Zoom, for learners from across the country to not only hear students, residents, and faculty discuss cases, but actively share their own diagnostic reasoning through a chat function [15]. If the superb discussion and plethora of clinical pearls were not enough, more than 100 cases, schemas, and illness scripts can be downloaded for free on their website (clinicalproblemsolving.com). They also launched an app (*Clinical Problem Solvers*, \$4.99) in July 2019 that provides easy, offline access to all of their content.

Representative episode: One episode that particularly exemplifies *The Clinical Problem Solvers* experience is #43, Chest Pain. This is a schema episode where the hosts systematically walk listeners through a case presenting with a common chief concern: chest pain. However, the episode actually begins with a discussion carried over from social media on learner mistreatment. The hosts reinforce that trainee listeners should not interpret mistreatment as a reflection on themselves and encourage that faculty listeners advocate for their learners. This is an excellent example of how *The Clinical Problem Solvers* integrate all of their platforms and input from listeners to genuinely and holistically improve medical education.

As for the case, the hosts recommend first ruling out the 4 (cardiac) + 2 (pulmonary) + 2 (esophageal) life-threatening causes of chest pain. Then, they move onto key clinical features, which are beautifully illustrated in a schema on the website/app. Along the way, they stress the role of time course by demonstrating how

reflex diagnoses for different chief concerns change by substituting “acute” for “chronic.” They additionally refer readers to an evidence-based resource, the *JAMA* “Rational Clinical Examination” series [16], in order to discuss the operator characteristics of different findings for myocardial ischemia. Finally, *The Clinical Problem Solvers* attempt to normalize the limitations of knowledge by discussing how they deal with “diagnostic humility” when they must inform patients that they are unsure of the cause of their chest pain. I cannot wait to see all that is to come from these talented and introspective educators.

From the hosts: When asked about the most frequent feedback they receive, Dr. Geha said they often hear they “recreate the virtues of morning report in a safe learning environment.” Listeners also appreciate that the podcast facilitates morning report for those who are not morning people – allowing them access to valuable clinical reasoning experience anytime.

2 DOCS TALK

Reviewer: Nicholas Davies

Average length of episode: 15 minutes

Frequency of new episodes: 2-3 times per month, seasonal

Intended audience: Professionals, students, and anybody interested in improving their own health.

Brief description: *2 Docs Talk* is a succinct and aptly-named podcast that introduces its listeners to the ever-changing world of healthcare and medical science. In their first episode, Dr. Kendall Britt, a practicing hospitalist, and Dr. Amy Rogers, a medical writer, lament on the current business of healthcare and forced brevity of patient visits. They explain that “the following podcasts are the conversation we wish we could have with our patients, but just don’t have the time.” With over 130 episodes under their belt, our hosts deconstruct and discuss issues ranging from supplements to concussions to hospice in a manner that allows listeners to learn about evidence-based practices, scientific advances, and health policy. The harmonious rapport between the hosts makes each episode both educational and enjoyable. In an age where we are inundated by misleading news headlines, Drs. Britt and Rogers strive to arm their listeners with current scientific evidence and motivation for continued learning. Because of its 15-minute runtime, *2 Docs Talk* is not able to cover each of their topics in extensive detail. However, it arguably does something just as important – stimulating conversation and curiosity around healthcare for listeners to make more informed decisions regarding their own health and healthcare practices.

Representative episode: “Cervical Cancer and the HPV Vaccine” is a prime example of how Drs. Britt and Rogers are able to not only talk about a topic, but also ex-

plain it in a manner appropriate for all levels of listeners. The hosts weaved recent medical literature throughout their discussion about the pathophysiology of the human papillomavirus (HPV), its relationship with cervical cancer, the history of the HPV vaccine, and how vaccine adverse effects are documented in the United States. Best of all, the references were linked at the bottom of the show notes for listeners interested in additional background information. From a patient perspective, I never had a discussion about HPV with a primary care provider, and I left the episode feeling more informed about how it affects my own health. Each episode of *2 Docs Talk* strives to have these candid conversations on topics that are not normally discussed between patient and provider. After listening, I felt inspired to talk and create similar conversations with my own patients.

From the hosts: On their goals for the podcast, Dr. Britt hopes to solidify the doctor-patient relationship that has been limited by the structure of healthcare in the United States. She says, “We’re trying to tell our listeners, ‘hey, we hear you, we’re interested in you, we want to know you, and we want you to know what we’re doing for you.’” Additionally, they also want their podcast to give listeners the physician’s perspective of medicine since “patients are hearing from pharmaceutical companies, insurance companies, and even hospital corporations way more.” Lastly, Drs. Britt and Rogers are fascinated by medicine and hope their listeners can come away with some of that same joy.

KeyLIME PODCAST: KEY LITERATURE IN MEDICAL EDUCATION

Reviewer: Dr. Andrés Martin, MD, MPH

Average length of episode: 20 minutes

Frequency of new episodes: Weekly

Intended audience: Anyone interested in medical education; episodes are not specific to any training level, specialty, or field of work within medicine.

Brief description: *KeyLIME* is the best journal club you’ve never attended. Produced by the Royal College of Physicians and Surgeons of Canada, the series – hosted by a quartet of medical educators – is as smart, incisive, and welcoming as it is witty and provocative. Drs. Jason Frank and Jon Sherbino first lamented the lack of a reliable secondary source for medical education literature. As emergency physicians with an interest in a field that seemed all too often overlooked, they came up with the idea of the accessible and practical podcast format. They joined forces with Dr. Linda Snell and ultimately with Dr. Lara Varpio, and the rest is history. History in more than 250 episodes and counting. The format is consistent and effective: 1) a brief introduction and statement regarding the host’s article choice for the episode (the hosts

alternate selecting articles of high relevance, innovation, or impact from the literature); 2) a gentle and highly effective dismemberment of the article’s component parts, with care to clarify any arcane points (time-motion methodology, Delphi process intricacies, and Montecarlo statistical simulation each come to mind); and 3) a round of voting on the article’s relative strengths, weaknesses, and educational impact.

Representative episode: Among the many jewels I have discovered through *KeyLIME*, I will focus on episode #240, “Debriefing and feedback – two sides of the same coin?” based off of an article [17] in *Academic Medicine*. I will not attempt to break down the article or out-LIME the masters, but instead focus on two highlights. First: this was one of six episodes recorded live at the International Conference on Residency Education held in November 2019 in Ottawa. By “taking the show on the road,” the hosts have contributed to making medical education discussions immediately accessible, relevant, and interactive. No wonder *KeyLIME* has gone up to the tens of thousands weekly downloads. Second: this is one of many episodes that demystifies “theory,” a bugaboo word for many medical educators. The episode takes a seemingly Talmudic discussion (“feedback or debriefing?,” “tomato or tamatoe?”) into a highly relevant and applicable framework. In their lively exchange, Dr. Frank prefers “coaching” over “learning conversations.” I prefer the latter, together with the other three hosts. Call the process what you will, this much is true: *KeyLIME* is certainly a learning conversation of the highest caliber.

From the hosts: The hosts hope their listeners take a sense of community, the science behind medical education, and ways to improve scholarly investigation of it. Dr. Sherbino emphasized that he hopes listeners learn there is “a robustness, a theory, evidence and science that supports a lot of the education decisions we make.” Dr. Varpio adds that she hopes that listeners come away with the lesson that there is “no such thing as the perfect study or perfect paper.” When we asked what feedback they hear from listeners, Dr. Sherbino said that they often hear that understanding literature can feel high stakes and promote imposter syndrome, but he hopes that the podcasters’ transparency about their own struggles can make the literature more approachable.

CONCLUSION

Podcasts provide a valuable opportunity in medical education – engaging learners in an easily consumed format and democratizing knowledge from a diversity of resources. However, with numerous medical podcasts [12,18] of increasingly high quality [19] that span various formats (e.g., intended audience, episode length, and episode frequency), it can be challenging to determine which

podcast is the right fit for a busy healthcare professional. In this perspective piece, we described the scope of podcasts, advocated for their role in medical education, and identified a collection of promising examples. After surveying hundreds of Yale nursing students, medical students, and faculty, five podcasts that stood out were *The Curbsiders Internal Medicine Podcast*, *Flip the Script*, *The Clinical Problem Solvers*, *2 Docs Talk*, and *KeyLIME Podcast*. Each podcast and its hosts were marked by an expertise, creativity, and passion for their content and audience, which was highlighted in summaries of episodes and interviews with the respective podcast hosts. Our list is hardly exhaustive, though, with many more outstanding podcasts for readers to choose. Whatever the future holds for medical education podcasts, for now, they allow educators to reimagine the “always learning” mentality of medicine as more versatile and accessible.

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