



ORIGINAL RESEARCH

Complete Manuscript Title: Podcasts in Interventional Radiology: Where do we Currently Stand?

Satya M N K Maripi^{1*} and Konala Sunaina Reddy²

¹Countess of Chester Hospital, UK

²Aintree Hospital, UK

*Corresponding author: Satya M N K Maripi, Countess of Chester Hospital, UK, Tel: +01606330621



Abstract

Background: The medium of podcasting has seen a monumental amount of growth within the past decade; this has also been in the case in the medical field. The podcast is for many a valuable tool for a range of individuals ranging from students, academics and even at an institutional level.

Objectives: This paper aimed to evaluate the podcasts currently available in the speciality of clinical radiology.

Methods: Systematic analysis and review of the prevalence of clinical radiology podcasts from the end-user's (medical students, residents, etc.) perspective. This was completed by performing a search over the most popular podcast platforms and also a Google Search engine driven search using key terms. There was only inclusion of English language podcasts which were free and open access.

Results: For interventional radiology, there were 9 podcasts found, 7 of which were active. There was large variation in content and frequency of episode production across the cohort.

Conclusion: There is a lack of interventional radiology podcasts, it is an ever-growing speciality and we call upon educators to further accelerate and grow this podcast space within interventional radiology.

fuelled even more so by the COVID-19 pandemic [2]. The number of active podcast listeners has grown from approximately 275 million in 2019 to 425 million in 2022, this is a growth of over 60% within a span of 3 years, in addition it is predicted to reach up to 500 million by 2024 [3]. Despite this surge in global podcasts, there is a general lack of high-quality podcast in the field of interventional radiology (IR) [4,5].

As a medium for medical education, there have been studies showing positive impact on listeners [6,7]. Multiple reports of qualitative assessments describing the positive connotation with the use of podcasts in otherwise 'wasted time' such as driving and doing chores becoming productive periods of time, in addition in students who implemented podcasts as part of their routine displayed better results during examinations [8].

There have been multiple publications of otherwise more popularised medical specialities ranging from plastic surgery to emergency medicine, however only limited work has been produced for IR podcasts. This paper has aimed to specifically evaluate podcasts in the field of interventional radiology and describe an overview and current status of the cohort of podcasts.

Introduction

Podcasts as a media are characteristically audio recordings or a live stream of audio which are delivered and distributed via multiple platforms such as Apple Podcasts, Spotify and other podcasting platforms. They act as a convenient source of education and news, especially as a method to 'fill time' while doing other activities such as driving [1]. There has been an exponential growth within the world of podcasting,

Materials and Methods

A rigorous and comprehensive search of the currently available interventional radiology podcasts was performed. This was done using a range of key search terms "interventional radiology", "IR radiology" and "intervention radiology". This was done on the 5 most popular podcast hosting platforms worldwide



Citation: Maripi SMNK, Reddy KS (2024) Complete Manuscript Title: Podcasts in Interventional Radiology: Where do we Currently Stand?. Int J Radiol Imaging Technol 10:119. doi.org/10.23937/2572-3235.1510119

Accepted: January 24, 2024; **Published:** January 26, 2024

Copyright: © 2024 Maripi SMNK, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

(Spotify, Apple, Google Podcasts, Anchor and Podbean) [9] (Table 1).

In addition to this, a google search engine driven internet search was performed with the inclusion of the first 50 results. Implementation of the following exclusion criteria was implemented to ensure validity of search:

- English not primary language
- Only individual episode on interventional radiology, however overall theme of the podcast was not interventional radiology
- Free and open access

It is important to note that there is no absolute centralised database of podcasts hence it would be inaccurate to guarantee for certain that there was a sufficient search to find absolutely every eligible podcast, however by using the aforementioned methodology the aim was to limit the number of podcasts that could be missed.

Following this search, stratification of each podcast and additional data collection points for each podcast of the name, affiliation, country, and schedule, number of episodes, activity and date of first episode.

Table 1: Web addresses for each hosting platform searched.

Podcast Platform	Web Address (URL)
Spotify	https://www.spotify.com/
Apple Podcast	https://www.apple.com/uk/itunes/podcasts
Google Podcast	https://podcasts.google.com
Anchor	https://anchor.fm
Podbean	https://www.podbean.com

All of the produced data was entered and analysed using Microsoft Excel.

Results

After the application of the exclusion criteria set out in the as discussed in the methodology, there was only evidence of 9 interventional radiology themed podcasts there were identified, as shown in Table 2.

Overall, the trend with regards to the number of interventional radiology themed podcast as evidenced in Figure 1 is positive; with the exclusion of 2022 there has been the inception of at least one IR theme podcast a year from 2016. This means there has been a growth of over 80% in IR radiology content podcast. In addition, it is to be noted that 2020 was the year where there was the most number of podcasts formed, this is likely due to the COVID-19 pandemic, where there was a global phenomenon of a rapid increase in production and engagement of podcasts [10,11].

Overall, as a podcast cohort, there was a large variation in the raw number of episodes and frequency of the individual's podcast series from their conception to December 2023. Figure 2 depicts the variation. The most frequent and consistent producer of IR podcast content was the Back Table podcast, with almost 5 episodes per month, the average across the podcast was the frequency of 1.164 podcasts per month (Table 3).

When looking and individual podcast and classifying according to their subject category - we looked at the content of the episodes in specific and labelled "general" when the episodes were varied largely, educational when a majority (> 75%) of the podcasts were focussed on clinical education and finally journal podcasts. From Figure 2 we can see that most (66%) were general in

Table 2: Current interventional radiology podcasts.

Podcast name	Affiliation	Country	Schedule	Number of Episodes	Activity Status (episode within last 6 months?)	Date of first episode
The Kinked Wire	Society of Interventional Radiology	UK	Bi-Monthly	55	Yes	23/09/19
The Sound of IR	None	USA	Sporadic	39	Yes	10/03/18
JVIR: Journal of Vascular and Interventional Radiology Podcast	JVIR	USA	Sporadic	33	No	01/03/11
British Institute of Radiology Publications Podcast	BIR	UK	Sporadic	105	Yes	08/11/16
Back Table Vascular & Interventional	None	USA	Weekly	382	Yes	04/04/17
CVIR Endovascular	None	UK	Monthly	4	No	23/12/20
LINNC INR Podcast	LINNC	USA	Sporadic	8	Yes	01/12/21
IOL Radio	None	USA	Sporadic	29	Yes	03/10/20
The IR Juniors Podcast	None	UK	Monthly	1	Yes	23/12/23

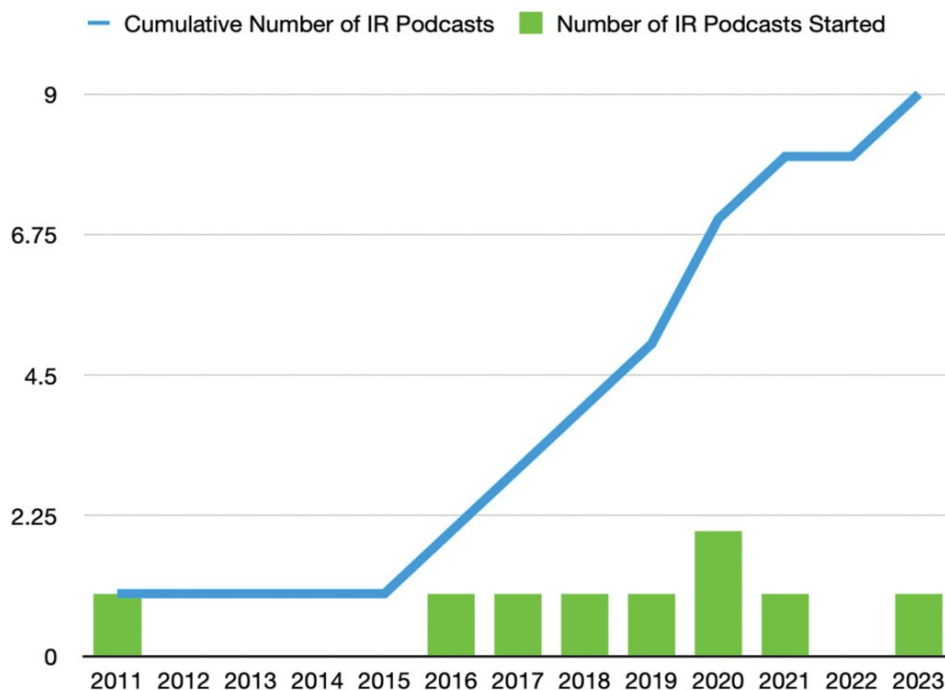


Figure 1: Depicting the start and growth of the IR podcast genre.

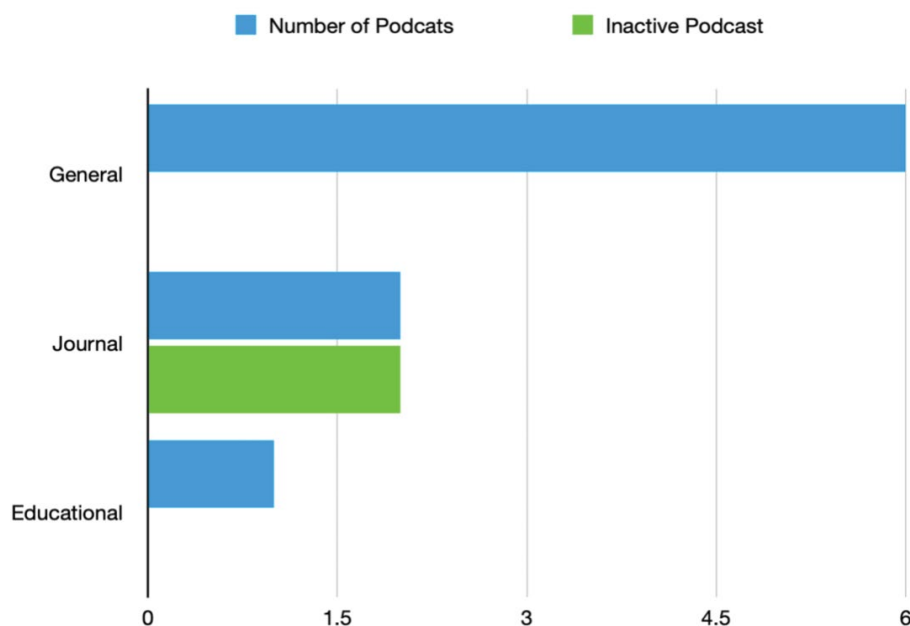


Figure 2: Analysis of the content of IR podcasts.

nature, and only only of the podcast (IOL podcast) had a focus only on clinical education. Also, the only inactive IR podcasts were the podcasts focussed on journal content only.

After reviewing the data above, it is evident that most popular and active interventional podcast therefore can be concluded to be the Back Table Vascular and Interventional podcast as evidenced above, due to its impressive catalogue of over 380 episodes, with regular weekly episodes. When looking at global podcasts in general, it is interesting to note that the 500 most popular

podcast across the world, have an average release frequency of an average of 1 episode a week [12], while the IR podcasts on average on only produce an average of 1 per month as evidenced above, the most popular of the podcasts (as per average listeners) was Back Table and this was the only IR themed podcast indeed produced at least 1 episode per week. The second most popular was the British Institute of Radiology followed by the Kinked Wire in third place. There was a wide variety with regards to the schedule of the podcasts, with only one podcast (Back Table) posting regularly weekly, the

Table 3: Analysis of the frequency of episode production.

Name of Podcast	Production According to Lifespan of Podcast	Frequency Per Month
Back Table Vascular & Interventional	382 eps in 79 months	4.8
British Institute of Radiology Publications Podcast	105 eps in 84 months	1.25
IOL Radio	29 eps in 26 months	1.15
The Kinked Wire	55 eps in 50 months	1.1
The IR Juniors Podcast	1 in 1 month	1
The Sound of IR	39 eps in 68 months	0.6
LINNC INR Podcast	8 eps in 29 months	0.27
JVIR: Journal of Vascular and Interventional Radiology Podcast	33 eps in 151 months	0.21
CVIR Endovascular	4 eps in 40 months	0.1

other podcasts were mainly sporadic/monthly in nature. Of interest, all of the interventional radiology podcasts are targeting at doctors or medical students in nature, there was no marketing or episodes allocated towards other allied health care professionals within the field. When looking at the supplementary data, 100% of the podcasts were hosted by either an Interventional Radiologist or a clinical diagnostic radiologist, with a large majority of the guests also following this same trend. It is important to note that out of the 9 IR themed podcasts 2 were inactive, and there was only one new IR themed podcast that was started within the last 1 year - the IR Juniors Podcast.

Discussion

To the best knowledge of the author's, this is the only current analysed literature focussing specifically in interventional radiology podcasts. There were no similar papers when searching PubMed database and google search engine, although a similar study has been done in the field of general clinical radiology [4].

The most listened to genre of podcast are comedy podcasts, this is followed closely by educational [13], and with this is in perspective the available data in Table 2 shows that there is a fundamental lack of active interventional radiology podcasts. When compared to other medical fields, eg Emergency Medicine with 28 active podcasts, Internal medicine with 13 active podcasts and clinical radiology with over 30 active podcasts [4,5]. This compared with IR with only 7 active podcasts delineates the need and potential for further growth in this subspecialty in the podcast space. Interventional radiology is a new and quite a niche and smaller medical field compared to other more standard and long-standing specialities within the field of medicine [14], and therefore can explain the lack of content in the podcast plane comparatively. However, the very fact that it is a new speciality and the general trend of procedures to become more and more less invasive [15] means that IR as a speciality has a large growth potential, taking this into consideration it is imperative that there is further development and ongoing education delivered in the field on

interventional radiology via podcasts. One aspect to focus on when building new IR podcast would be a focus on education, as seen in Figure 2 a portion of the IR podcast are general, when we compare this to other fields for example in general clinical radiology [4] where there was identification of over 18 educational theme podcasts, or ophthalmology (another speciality which is also quite niche) had 19 educationally themed podcasts [16]. In addition, the new Radiology curriculum in the United Kingdom for Clinical Radiology trainees specifies the need of trainees to be able to be proficient in procedural skills and has emphasised this is their revised curriculum [17], therefore podcasts in the field of interventional radiology will help support current radiology trainees not only with their daily practise but also in official college examination such are the Fellowship of the Royal College of Radiology (FRCR) exams. Furthermore, podcasts addressing IR will also extend the range of individuals who are aware of the speciality [18], thus facilitating the scope for attracting more future interest and research into the speciality.

As discussed above there is a variety of reasons why podcasts can enhance field of medical education, however it is important to note in general there are issues when using podcasting for this purpose. There has been some evidence [19] showing that the quality of podcasts needs to be taken further into consideration, the content is not exposed to extensive peer review and therefore may be inclusive of errors. Also, while podcasts have the advantage of being audio only allowing for multi-tasking and filling in space otherwise which could be wasted, it comes with a disadvantage of not being visual and being non interactive, again key components of long-term retention and understanding of content [20,21].

While every possible method has been chosen to reduce inaccuracies, the study has limitations. Even with the use of multiple methods of podcast search engines, there is still possibility of the existence of other interventional radiology podcasts due to being shadowed behind a paywall or its search being beyond the 50-capacity set out in the methodology.

Conclusions

Interventional radiology is indisputably a growing field, however the growth in podcasts as discussed in the above review is not matching the growth of the speciality. There has only been one new development of an IR podcast, and limited number of long-standing active IR podcasts. It is of our belief that pushing for further podcasts would help in the perception, education and future-proofing of the interventional radiology field.

Sources of Support

No disclosure of funding or support.

Statement of Equal Authors' Contribution

We (Satya M N K Maripi) and (Konala Sunaina Reddy) declare equal author contribution.

References

- Gottlieb M, Riddell J, Cooney R, King A, Fung CC, et al. (2021) Maximizing the morning commute: A randomized trial assessing the effect of driving on podcast knowledge acquisition and retention. *Ann Emerg Med* 78: 416-424.
- Boreskie PE, Chan TM, Novak C, Johnson A, Wolpaw J, et al. (2022) Medical education blog and podcast utilization during the COVID-19 Pandemic. *Cureus* 14: e23361.
- Götting MC (2023) Number of podcast listeners worldwide 2019-2024.
- Clarke CGD, Nnajiuba U, Howie J, Khan M, Dos Santos DP, et al. (2020) Giving radiologists a voice: A review of podcasts in radiology. *Insights Imaging* 11: 33.
- Little A, Hampton Z, Gronowski T, Meyer C, Kalnow A (2020) Podcasting in medicine: A review of the current content by specialty. *Cureus* 12: e6726.
- Malecki SL, Quinn KL, Zilbert N, Razak F, Ginsburg S, et al. (2019) Understanding the use and perceived impact of a medical podcast: Qualitative Study. *JMIR Med Educ* 5: e12901.
- Okonski R, Toy S, Wolpaw J (2022) Podcasting as a learning tool in medical education: Prior to and during the pandemic period. *Balkan Med J* 39: 334-339.
- Kalludi SN, Punja D, Pai KM, Dhar M (2013) Efficacy and perceived utility of podcasts as a supplementary teaching aid among first-year dental students. *Australas Med J* 6: 450-457.
- Gray C (2024) Podcast statistics & industry trends 2023: Listens, Gear, and More.
- Nolden C (2020) Why podcasting has survived (and thrived) during COVID-19.
- (2021) The rise of the podcast. Pinkston.
- Stocking G, Matsa KE, Naseer S, St. Aubin C, Shearer E, et al. (2023) Podcast format. Pew Research Centre.
- Leadem R (2017) The growth of podcasts and why it matters (Infographic). Entrepreneur.
- Sebastian B, Keshava SN, Lakshminarayan R (2021) The status of interventional radiology as a specialty among medical students in India-knowledge, interest, and exposure *Indian J Radiol Imaging* 31: 259-264.
- Robinson TN, Stiegmann GV (2007) Minimally invasive surgery. *Endoscopy* 39: 21-23.
- Greene II, Gold FE, Tan NE, Fang AH, Hodgson NM (2023) OphthoPods: An analysis of the educational content and changes of ophthalmology Podcasts. *J Acad Ophthalmol* 15: e248-e257.
- (2023) Clinical radiology curriculum. RCR Curriculum.
- Rodgers B, Rodgers KA, Chick JFB, Makary MS (2023) Public awareness of interventional radiology: Population-based analysis of the current state of and pathways for improvement. *J Vasc Interv Radiol* 34: 960-967.
- Wilson P, Petticrew M, Booth A (2009) After the gold rush? A systematic and critical review of general medical podcasts. *J R Soc Med* 102: 69-74.
- Bobek E, Tversky B (2016) Creating visual explanations improves learning. *Cogn Res Princ Implic* 1: 27.
- Jawed S, Amin HU, Malik AS, Faye I (2019) Classification of visual and non-visual learners using electroencephalographic alpha and gamma activities. *Front Behav Neurosci* 13: 86.