

ONLINE TEACHING PROMOTES EQUITY IN RADIOLOGY EDUCATION BY IMPROVING OUTREACH AND REDUCING DISPARITY

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NO DI\$CLOSURE\$

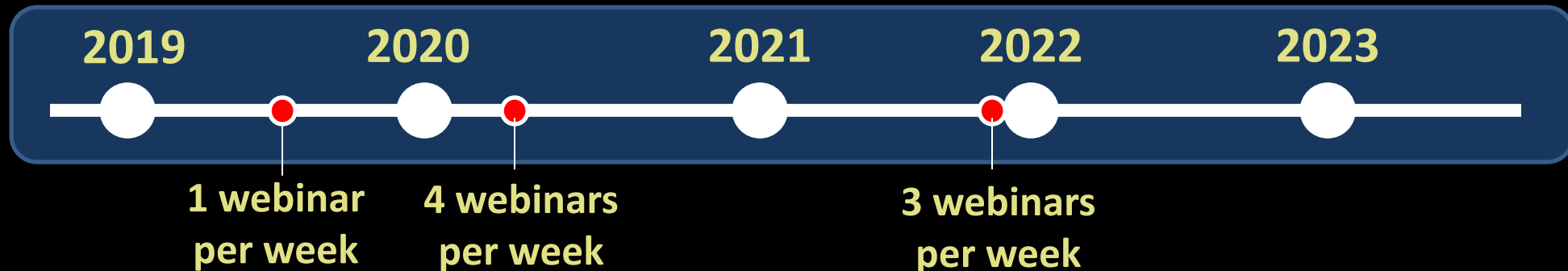


INTRODUCTION

- Formal radiology training is usually stronger in tier I city hospitals and academic institutions compared to smaller residency programs in tier II and III cities.
- Many lower and middle income countries do not have high quality residency programs with advanced imaging.
- This leads to a discordance in both national and international radiology training and practice standards.
- In order to overcome these barriers, we conduct **regular free-to-attend Zoom-based radiology webinars since the pre-Covid era, and have completed over 600 webinars.**
- The purpose of this study was to analyze the reach of the webinars.

METHODS

- The webinars were conducted on Zoom™ platform as **free-to-attend one-hour sessions** in the evenings 7-8 PM Indian Standard Time, with **approximately 45 min of didactic talk and 15 min of Q and A**.
- They began as once a week sessions every Wednesday in 2019 (pre-Covid). They were expanded to four times a week during Covid (Apr 2020), and are currently happening thrice a week since Dec 2021.
- A national speaker speaks every Wednesday and an international speaker every Sunday, while an interactive case-based session is conducted on Saturdays, simulating a viva voce.



METHODS

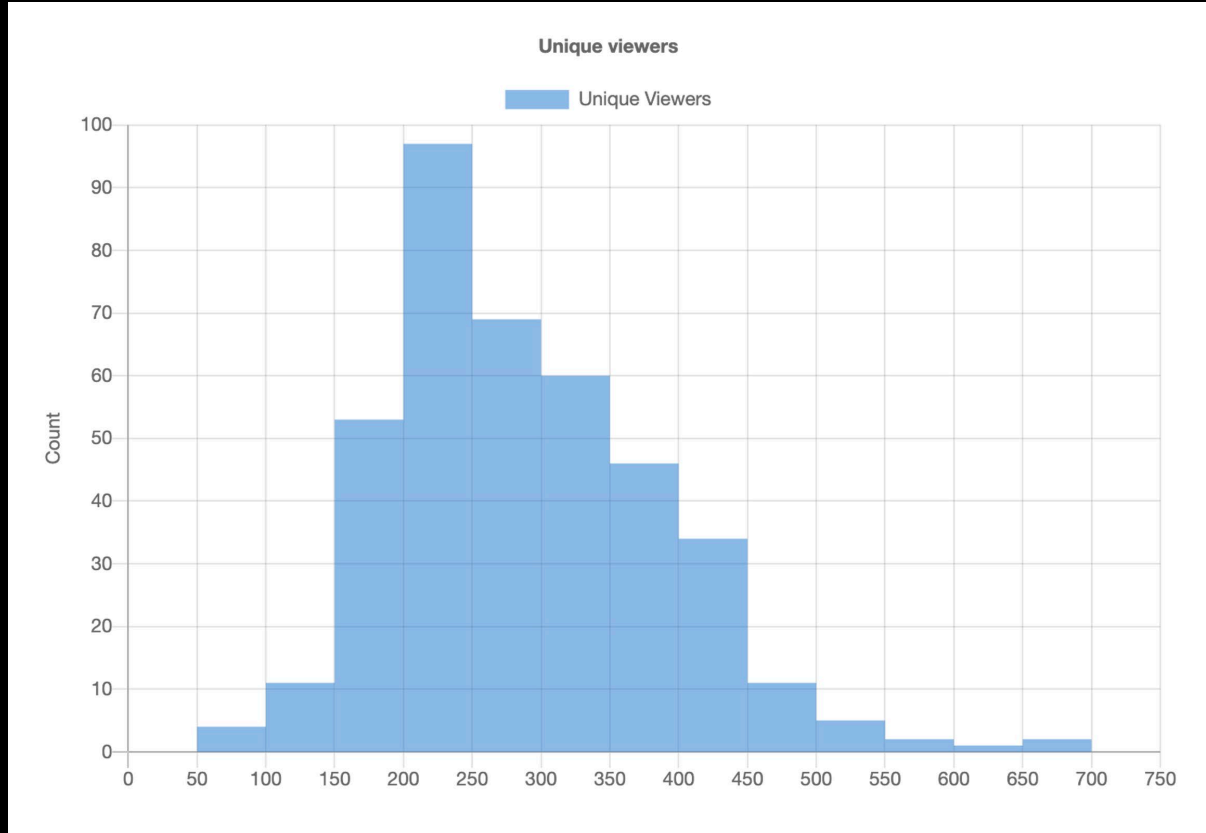
- Attendance related from the last **391 consecutive webinars** was obtained from Zoom™ for evaluation as a .csv file.
- **Unique viewers:** viewed the webinar via their computers or smart devices; phone call logins were excluded. Attendees who logged in multiple times or using multiple devices were counted only once.
- **Maximum concurrent viewers:** the maximum viewers logged in at the same time, excluding panelists (the webinars had 2-4 panelists, including speakers).
- Country wise login data was available for analysis.

RESULTS

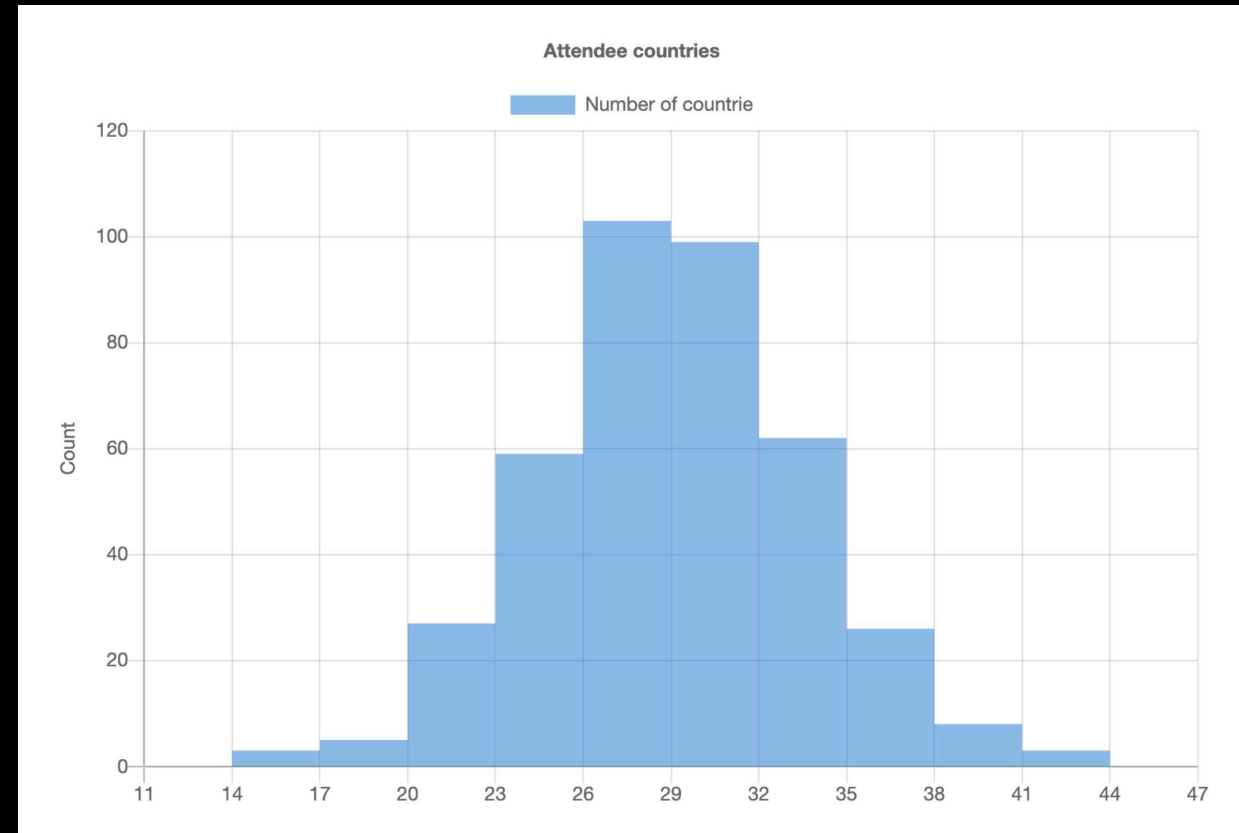
	Median	Mean	Minimum	Maximum
Unique attendees	271	286.9	67	654
Maximum concurrent viewers	209	219	46	514
Countries logging in	29	28.6	14	41
Proportion of International vs Indian attendees (calculated for the last 83 webinars)	29.8%	29.4%	13.4%	42.8%

391 consecutive webinars by 284 different speakers
conducted between Oct 2020 - Oct 2023

RESULTS



Number of unique viewers



Number of countries logging in

RESULTS

- Attendees across all six continents attended the webinars despite differing time zones (7 pm Indian time = 12.30 am Australia time = 2.30 pm UK time = 4.30 pm Kenya time = 9.30 am New York time = 10.30 am Brazil time)
- The maximum attendance was from Asian and African countries, and minimum was from Australia (likely due to webinar timing being around midnight in Australia)
- The maximum ever attendance was 1138 unique viewers on 19th Apr, 2020. This was excluded from analysis we did not have data on subsequent consecutive webinars.

✓ Albania	✓ Argentina
✓ Algeria	✓ Bahrain
✓ Australia	✓ Bangladesh
✓ Bangladesh	✓ Brazil
✓ Brazil	✓ Cambodia
✓ Cambodia	✓ Cameroon
✓ Cameroon	✓ Canada
✓ Canada	✓ Chile
✓ Egypt	✓ Egypt
✓ Ethiopia	✓ Ethiopia
✓ Germany	✓ Germany
✓ Hong Kong SAR	✓ Hong Kong SAR
✓ India	✓ India
✓ Indonesia	✓ Indonesia
✓ Iraq	✓ Ireland
✓ Israel	✓ Israel
✓ Kenya	✓ Kenya
✓ Kuwait	✓ Libya
✓ Libya	✓ Malaysia
✓ Malaysia	✓ Myanmar
✓ Myanmar	✓ Nepal
✓ Namibia	✓ Netherlands
✓ Nepal	✓ Nigeria
✓ Oman	✓ North Macedonia
✓ Pakistan	✓ Oman
✓ Poland	✓ Pakistan
✓ Qatar	✓ Palestinian Territories
✓ Saudi Arabia	✓ Qatar
✓ Singapore	✓ Saudi Arabia
✓ South Africa	✓ Singapore
✓ Spain	✓ South Africa
✓ Sri Lanka	✓ Spain
✓ Turkey	✓ Sri Lanka
✓ United Arab Emirates	✓ Tanzania
✓ United Kingdom	✓ Turkey
✓ United States	✓ United Arab Emirates
✓ Vietnam	✓ United Kingdom
✓ Yemen	✓ United States
	✓ Vietnam
	✓ Yemen

DISCUSSION

- Online free-access webinars **democratize radiology education**, by allowing everyone to have access to education from excellent radiologists and speakers. This is particularly impactful in radiology as there is no clinical examination to teach; teaching image interpretation online is almost equivalent of teaching it in a physical session.
- Webinars provide **sufficient time for Q and A's as well**. In fact, attendees also often find it easier to ask questions anonymously online compared to say physically in a conference. Our webinars usually have between 10-30 Q and A's asked, with most responded to.
- Webinars also allow attendees to gain role models and potential connections.
- More granular level data as for example audience feedback and duration of attendance per attendee was not available for analysis.

CONCLUSION

- We had a median of 271 unique attendees and 209 maximum concurrent viewers from a median of 29 countries across our last 391 webinars. Approximately a third of our attendees were from countries abroad.
- Regular online webinars are a sustainable model of radiology education and cut across local, national and international barriers.
- The individual and country-wise attendance per session exceeds that of almost all conferences.
- Educators should consider focusing more on the webinar model of education.

**Online education is like a rising tide;
It's going to lift all boats
- Anant Agarwal**

THANK YOU!



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