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Each presentation is 10
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HEALTH
SCIENCES



Electronic DDx Enhances Clinicians' Differentials

Matt Sibbald, Sandra Monteiro, Jon Sherbino, Andrew LoGiudice, Charles Friedman, Geoffrey Norman

Does EDS improve diagnostic accuracy?

If so, should it be used early or late in the diagnostic process?



Just how good is your differential diagnosis?

With only a chief complaint



5 diagnoses



99 seconds



12% contain correct diagnosis

After all initial consultation info



7 diagnoses



189 seconds



27% contain correct diagnosis

Can electronic differential diagnosis support help?



+2 diagnoses



+137 seconds



8% more contain correct diagnosis

Does it matter when you use it?

+2 diagnoses in 89 seconds after the chief complaint
+1 diagnosis in 189 seconds after all consult info available

8% more correct diagnoses either way

DDx = differential diagnosis
EDS = electronic diagnostic support



Trauma 101: A virtual case-based trauma conference as an adjunct to medical education

K Singh MD, FRCPC², S Farquharson BScN¹, EY Liu BHSc¹, RQ Mao BHSc¹, T Amir BHSc¹, L Lan BHSc¹, J Yan BSc, FRCSC¹, and A Allard-Coutu BSc, MDCM, FRCSC¹
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BACKGROUND

COVID-19 significantly impacted medical school curriculum, limiting access to simulation-based trauma education and core surgical clerkship rotations. The effectiveness of virtual learning for teaching critical concepts in trauma resuscitation has not been validated.

METHODS

Medical students were invited to attend a two-day virtual trauma conference. The event included nine interactive presentations by physicians and residents in five specialties, followed by virtual small-group case discussions. A best-match algorithm assigned students to their preferred small-group sessions. Participants completed anonymous pre- and post-conference trauma knowledge tests and feedback questionnaires. Results were analyzed using paired t-tests and descriptive content analysis

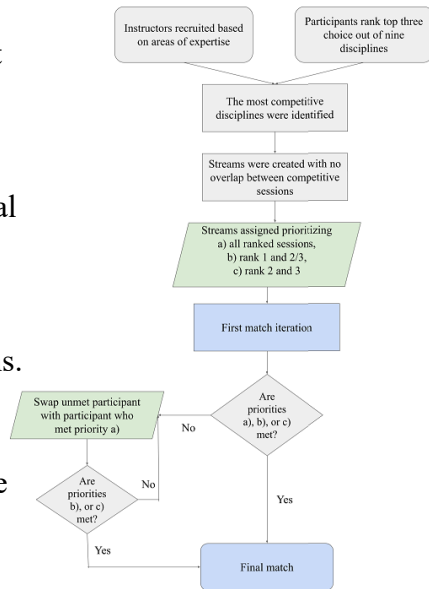
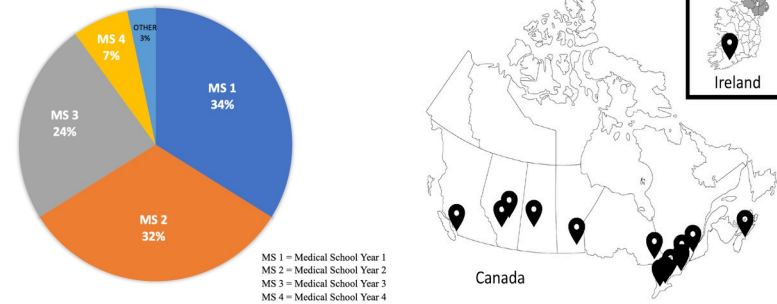


Figure 1. Best-match algorithm used to allocate participants to desired small group sessions.

RESULTS

A total of 360 students from over 17 medical schools in five countries registered to attend the conference. There was a peak of 167 simultaneous connections during presentations and 68 participants during small-group discussions.

Figure 2 Participant Demographics



95.2% of participants agreed that the online platform was effective and 78.3% endorsed that the conference was helpful preparation for clerkship. The response rate for feedback forms for the small group sessions was 58.8% (40/68).

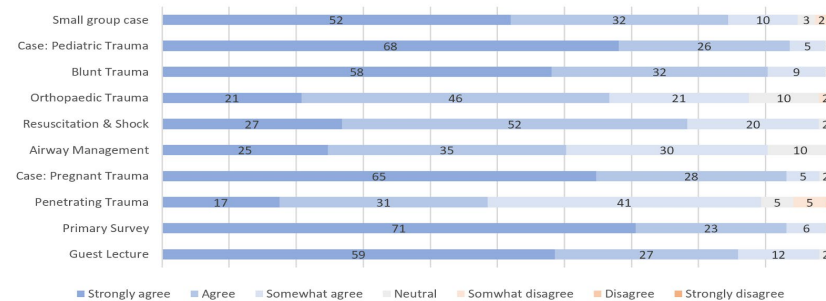
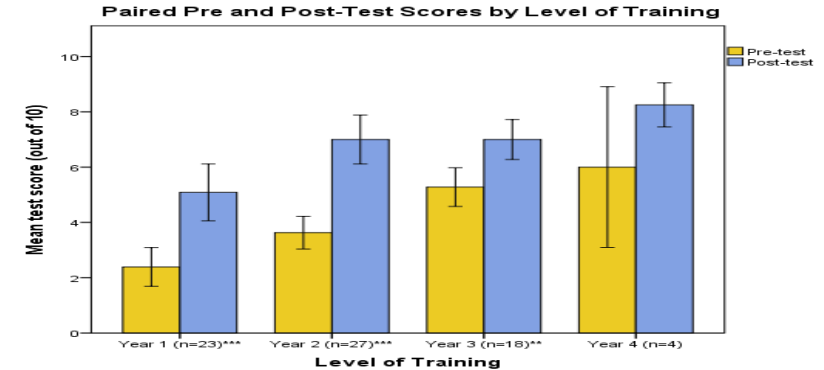


Figure 3. Percentage of participants rating each component of the conference as effective

Among students who completed both pre- and post-tests (20%, n=73), paired t-test analysis revealed significant improvement of mean score of 2.7/10 (SD= 2.3, 95% CI=2.17 to 3.23, p<0.001). No correlations between years of education and school attended with pre-test performance were found.



Error Bars: 95% CI
 * p < 0.05, ** p < 0.01, *** p < 0.001

Level of training	Paired Differences (post - pre)				t	df (n - 1)	Sig. (2-tailed)
	Mean	Std. Deviation	95% CI				
			Lower	Upper			
Year 1	2.696	1.941	1.856	3.535	6.661	22	.000
Year 2	3.370	2.604	2.340	4.400	6.726	26	.000
Year 3	1.722	2.081	.687	2.757	3.511	17	.003
Year 4	2.250	1.500	-.137	4.637	3.000	3	.058

CONCLUSIONS

Virtual small-group case-based discussions and social media were beneficial in enhancing participant engagement. This study has important implications for the future design and implementation of international virtual conferences.

The Anesthesia Clerkship Pocket Guide: Promoting free online access medical education resources in anesthesia

Grace M. Xu BHS¹, Kevin Latchford MD PhD², Daniel Cordovani MD MSc³

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Introduction

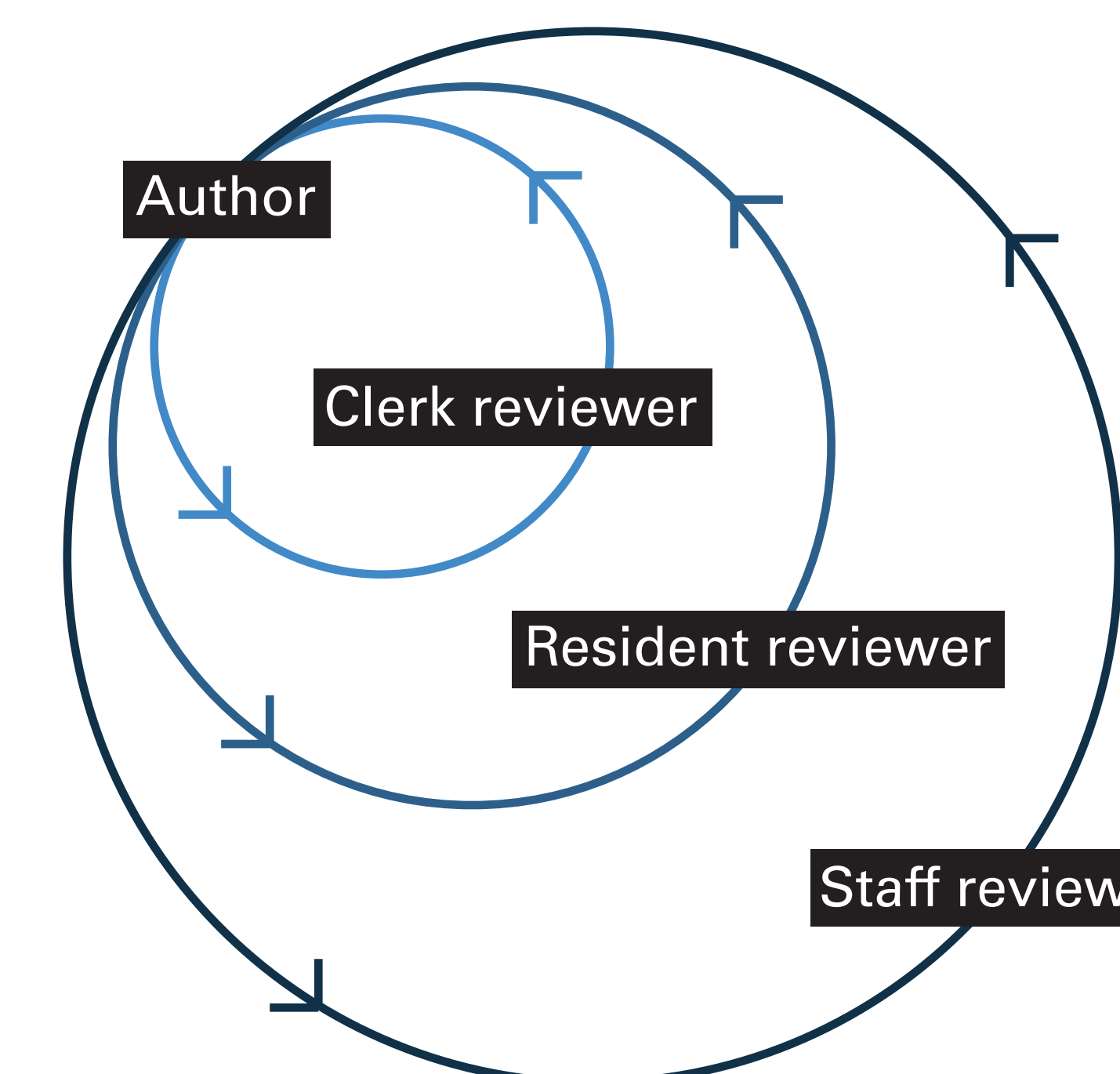
Anesthesia is a mandatory two-week clerkship rotation in most Canadian medical schools, yet student exposure and anesthesia-specific teaching remains low in undergraduate medical education. There is no Canadian-based quick-reference handbook specific to anesthesiology for medical students.

Objective

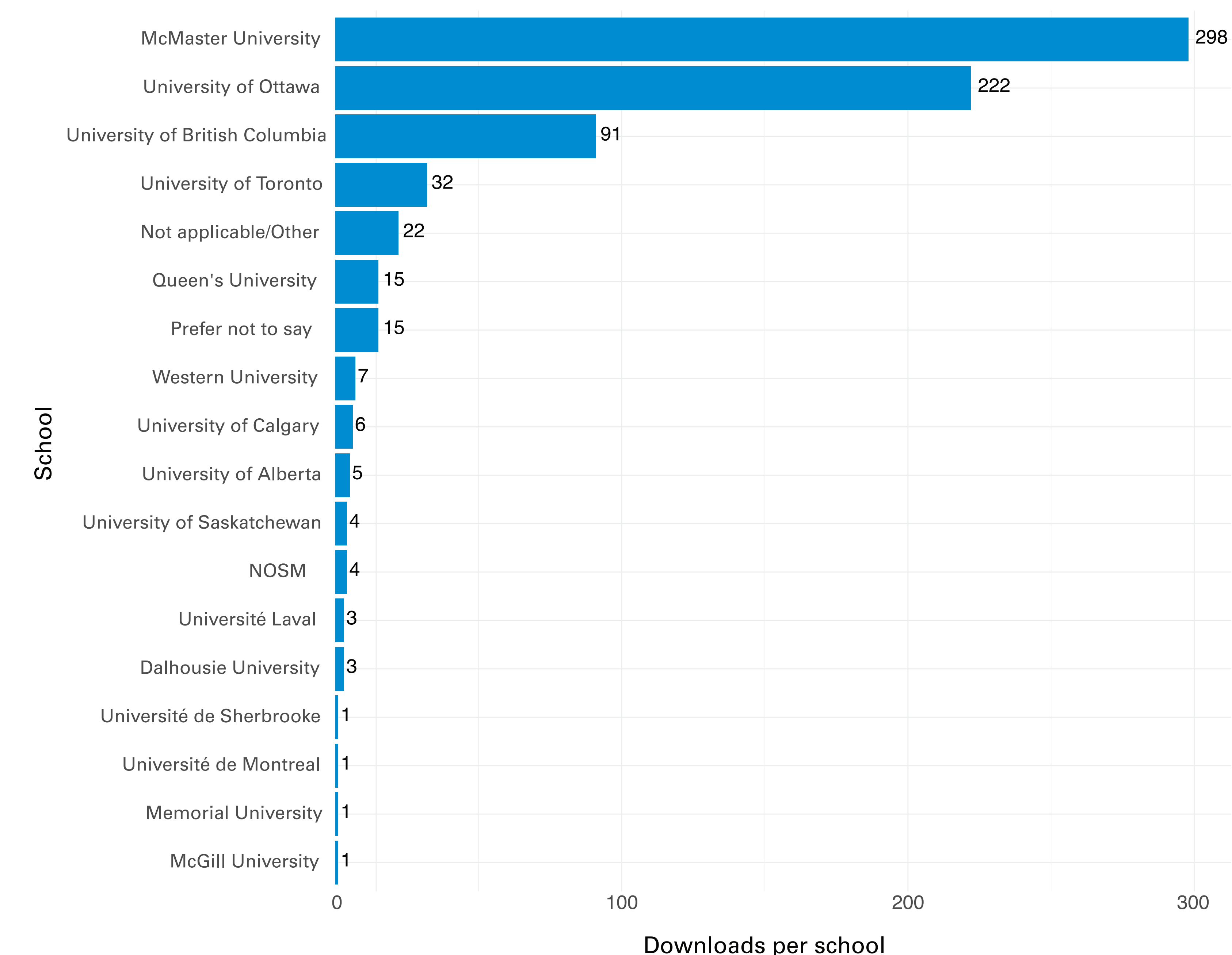
To create a free anesthesia-specific resource specifically for medical students designed to maintain accessibility during a clinical shift to enhance experiential learning and to supplement required readings and modules.

Methods

Our scope was based on McMaster's UGME anesthesia clerkship learning objectives. We used an iterative review process with clinical clerks, anesthesia residents, and staff anesthesiologists for accuracy. The resource was disseminated through social media and to the UGME anesthesia clerkship directors across Canada, available electronically at <https://mcmasteracp.ca>.



Survey respondents per medical school



Current year of study and expected graduation dates of respondents

Current year of study	Respondents (n, %)	Expected graduation date	Respondents (n, %)
First year of medical school	75 (10)	Class of 2020	19 (3)
Second year of medical school	148 (20)	Class of 2021	325 (44)
Third year of medical school*	409 (56)	Class of 2022	285 (39)
Fourth year of medical school	23 (3)	Class of 2023	35 (5)
Resident	20 (3)	Other	3 (<1)
Faculty	32 (4)	Not applicable	64 (9)
Not applicable	24 (3)		

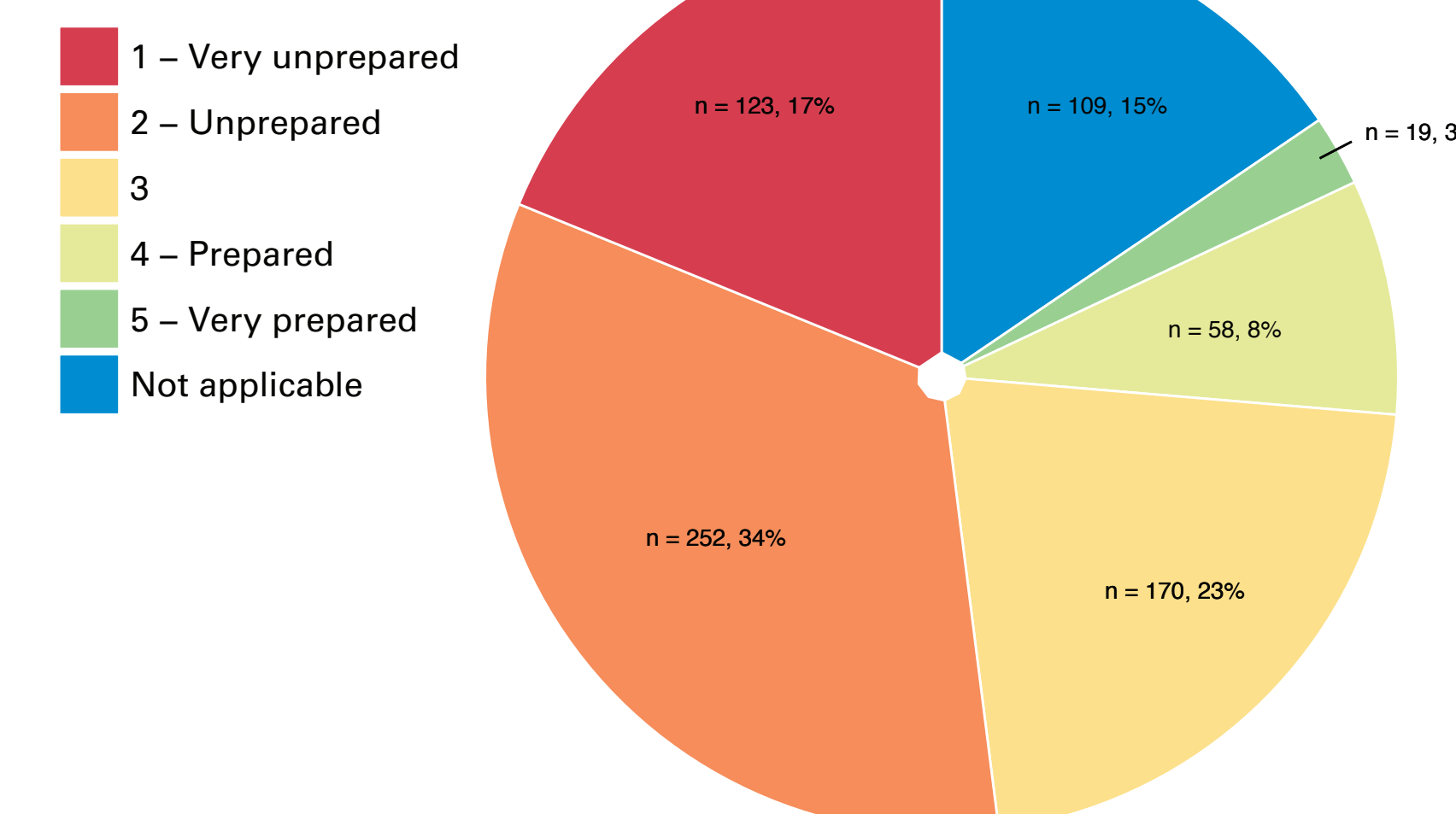
*Note: McMaster University and University of Calgary have three year MD programs.

Results

From 13 April 2020 to 16 February 2021, there have been 731 survey respondents from 16 Canadian medical schools and internationally. McMaster University, the University of Ottawa, and the University of British Columbia have included this resource into their respective anesthesia core rotations and their students represent the majority of respondents.

52% of students felt either "unprepared" or "very unprepared" to enter their anesthesia core rotation.

Student-reported preparedness for anesthesia core



51% of students were not interested in pursuing anesthesiology as a career.

Student-reported interest in anesthesiology as a career



How respondents heard about the resource

Source	Respondents (n, %)
Preceptor	212 (29)
Medportal	194 (27)
Social media	187 (26)
Word of mouth	117 (16)
Interest group	18 (2)
Other	3 (<1)

Page excerpts demonstrating general design and format

Conclusion

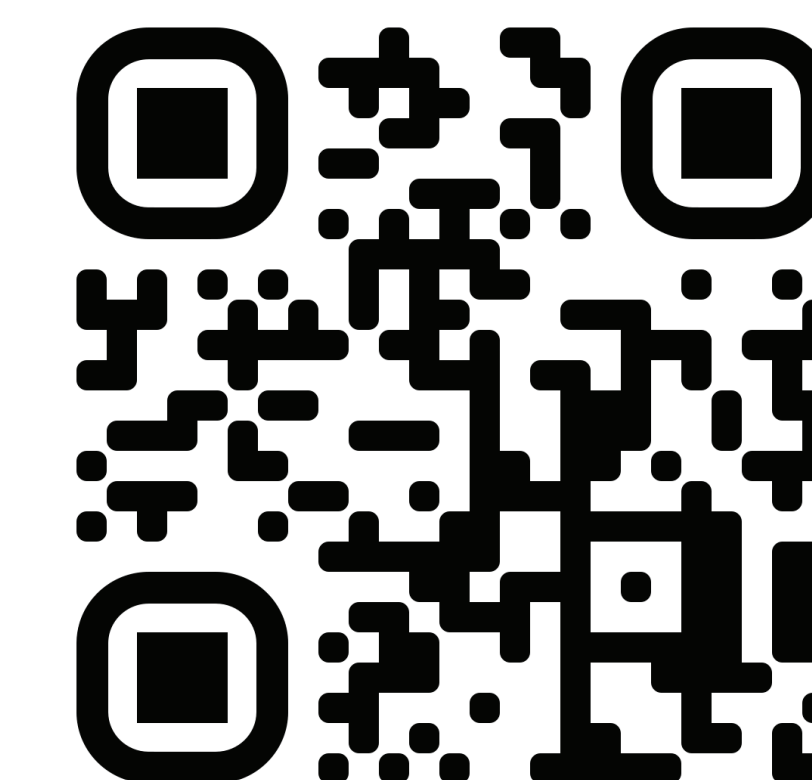
These survey results correspond with previous research highlighting the lack of significant pre-clerkship exposure and teaching in anesthesia. Next steps include continuing to support free and accessible anesthesiology resources targeted for medical students and eliciting specific topics contributing to student unpreparedness and addressing them in a pre-clinical setting.

Acknowledgements

I would like to sincerely thank the Michael G. DeGroot School of Medicine Waterloo Regional Campus Research for their generous support and funding.

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<https://mcmasteracp.ca>

Why do Residents Create? Using a Podcast to Explore the Resident Experience During Creation of Teaching Presentations

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1. Western University, Department of Medicine 2. McMaster University, Department of Medicine 3. University of Toronto, Department of Medicine

BACKGROUND

- Peer-assisted learning (PAL) is an established teaching method which is mutually beneficial for both the resident teacher and learner¹
- The Royal College of Physicians and Surgeons in Canada states that the ability for residents to teach student learners is a core internal medicine competency under the "Scholar" role², and thus, most internal medicine programs mandate teaching presentations throughout training
- "The Intern at Work" is a learner-generated podcast series. Script writing was offered to residents as a voluntary scholarly project at McMaster University starting in 2017

RESEARCH QUESTION

We sought to understand learner motivation and engagement during the creation of a podcast for the "The Intern at Work" in contrast to the creation of mandated teaching presentations.

METHODS

- Purposive sampling was used to recruit residents from Master University in 2020-2021 who wrote a podcast for "The Intern at Work."
- Focus groups were completed using semi-structured interviews
- Constructivist grounded theory was used to inform our analysis
- 3 focus groups were conducted with 12 participants in total
- Composed of: 2 PGY1's, 3 PGY2's, 4 PGY3's, 3 PGY4-5's, 7 females and 5 males, 11 internal medicine residents and 1 dermatology resident

RESULTS

- All residents stated they would create a podcast script again, only 1 stated they would create a mandatory teaching presentation again




References:

- Bugaj, T. J., Blohm, M., Schmid, C., Koehl, N., Huber, J., Huhn, D., Nikendei, C. (2019). Peer-assisted learning (PAL): skills lab tutors' experiences and motivation. *BMC Medical Education*, 19(1), 353. doi:10.1186/s12909-019-1760-2 PMID – 31521146
- Royal College of Physicians and Surgeons in Canada. Internal Medicine Competencies. 2018: 1. 25-27.
- Potts, H. W. W. (2011). Student experiences of creating and sharing material in online learning. *Medical Teacher*, 33(11), e607-e614. doi:10.3109/0142159x.2011.610839 PMID – 22022914.

An intrinsic motivator, self-directed process and tangible benefit fostered resident engagement and intent to create podcasts.



Table 1: Key factors that increased learner motivation and engagement in the creation of a podcast for "The Intern at Work"

Factors	Themes	Quotes
1. Intrinsic Motivator 	Curiosity	"It's a very novel and unique activity, and it's not something I've done before" (FG1)
	Enthusiasm to teach with a pragmatic approach	"I would find a pragmatic thing more enjoyable and more fun to do...that idea of helping people manage things later verses reviewing all the evidence in something doesn't excite me as much." (FG2)
2. Self-Directed Process 	Autonomy and Authority	"...I didn't feel rushed to have it to do it at a certain deadline...I think giving us the flexibility to just have it on our own timelines did help...especially going into PGY2 which is one of the busier years. (FG2)
	Collaboration	"...I feel like I'm always under the microscope and they're evaluating me, and here [with the podcast] it was like we're trying to come up with this together to disseminate to other learners. So I didn't feel to be in the learner role. It was more of a collaborative role." (FG1)
3. Tangible Benefit 	Academic Portfolio	"...For me it was more trying to get some exposure to some of the faculty, especially because I didn't do medical school at McMaster...So that was a good way to get my foot in the door and get to know some people." (FG3)
	Teaching Script	"...the way the podcast was organized mentally for me, I think I used that same approach to do the teaching using a Blackboard... so that allowed me to make comparisons to myself about how I go about teaching things as well." (FG3)

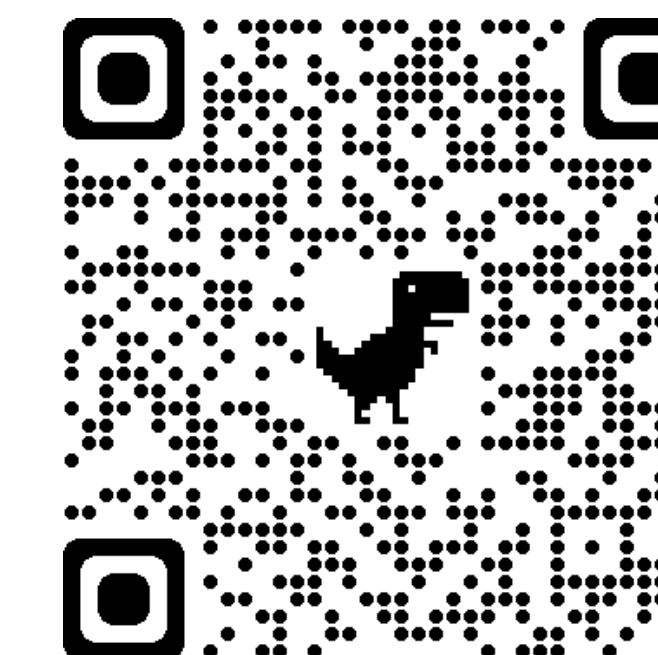
DISCUSSION

- This project examines 3 motivational factors that increased engagement with a voluntary scholarly project that can inform development of future mandatory residency activities
- "The Intern at Work" is an example of asynchronous PAL that has similar benefits to direct PAL from a resident teacher perspective³

Yelp for HPE Literature:

The Library of Essential Papers and Resources

HPEWorld.com



Yusuf Yilmaz PhD^{1,2,3}, Leslie Martin MD MHPE^{1,4}, Daniel Brandt Vegas MD MHPE^{1,4,5}, Aljeena Rahat Qureshi BHSc¹, Amy Keuhl MA OCT¹, Samantha Applewhite BA¹, Christopher Peter Nickson BSc(Hons) MBChB MCLinEpid^{6,7}, and Jonathan Sherbino, MD^{1,8}

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Introduction

- Literature in health professional education (HPE) grows exponentially each year.
- While citations and Altmetrics capture the impact of manuscripts, early career researchers and educators struggle with how to approach the broad HPE literature.
- This project introduces a crowdsourced, digital library for HPE, and provides preliminary data about the scope of content and user functionality.

Methods

- An initial list of papers and resources was curated by a team of HPE subject matter experts
- The resources were grouped into categories, and key papers marked as “must read” or “should read.”
- The database is hosted on a web app **hpeworld.com**, a platform that allows the global community to browse, rate, and comment on resources within the database and suggest new additions.
- Descriptive analytics were generated for the first three months (Feb 18- May 26) after the launch.

Conclusions

- The Library is an open-access, searchable, categorized resource of over 400 curated key HPE papers and resources.
- It uses crowdsourcing to rank and solicit additional papers and resources.
- Analysis of the launch showed that The Library has received considerable international engagement.
- Future scholarship should focus on the impact of expert versus crowdsourced recommendations of key papers and resources.

New users
923

Returning users
180

Views
2.9K

Event count
8.9K



HPEWorld.com

COUNTRY	USERS
United States	269
Canada	174
Mexico	113
Portugal	82
Australia	60
United Kingdor	31
South Africa	20

 **Criteria for social media-based scholarship in health professions education**
Resource

Sherbino J, Arora VM, Van Melle E, Rogers R, Frank JR, Holmboe ES. Criteria for social media-based scholarship in health professions education. Postgrad Med J. 2015;91(1080):551-555. doi:10.1136/postgradmedj-2015-133300

Reviews: 5 ★★★★★
Ratings: 2
Comments: 1
Reads: 18

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11 Main Categories
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417 Articles