

## Resident-as-teacher to provide multidisciplinary online medical education on Instagram

### Les résidents enseignent : capsules d'enseignement médical multidisciplinaire sur Instagram

Chaocheng Liu,<sup>1</sup> Sanjay Sharma<sup>2</sup>

<sup>1</sup>Department of Dermatology and Skin Science, University of British Columbia, British Columbia, Canada; <sup>2</sup>Department of Ophthalmology and Epidemiology, Queen's University, Ontario, Canada

Correspondence to: Chaocheng Liu, MD, 835 West 10th Ave Dept of Dermatology & Skin Science, 3rd Fl, University of British Columbia Vancouver, BC Canada V5Z 4E8; email: [cl13@ualberta.ca](mailto:cl13@ualberta.ca)

Published ahead of issue: June 14, 2021; published: November 1, 2021. CMEJ 2021, 12(5). Available at <http://www.cmej.ca>

© 2021 Liu, Sharma; licensee Synergies Partners

<https://doi.org/10.36834/cmej.72347>. This is an Open Journal Systems article distributed under the terms of the Creative Commons Attribution License. (<https://creativecommons.org/licenses/by-nc-nd/4.0>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is cited.

#### Implication Statement

Instagram is an easy-to-use smartphone-based program and an increasingly popular platform for medical education. A total of 17 weekly structured resident-led education sessions that cover 15 different medical specialities were hosted on an Instagram account (@medskldotcom) to publish clinical “pearls” – short pieces of free standing, evidence-based, clinically relevant information designed specifically for medical students. With the cancellations of out-of-province clerkship electives during COVID-19 pandemic, the number of resident-led Instagram accounts to promote residency programs have increased. Our initiative can be easily adapted by residents or even clinicians to provide medical education to medical students, showcase residents, and attract followers on Instagram.

#### Énoncé des implications de la recherche

Instagram, application facile à utiliser sur téléphone intelligent, est une plateforme de plus en plus populaire pour l'enseignement médical. Au total, 17 séances d'enseignement structurées couvrant 15 spécialités médicales différentes et animées par des résidents ont été publiées à raison d'une par semaine sur un compte Instagram (@medskldotcom). Ces « perles » cliniques sont de courtes capsules d'information autonomes, fondées sur des données probantes et pertinentes sur le plan clinique, conçues spécialement pour les étudiants en médecine. En raison des annulations des stages hors province pendant la pandémie de la COVID-19, le nombre de comptes Instagram lancés par des résidents pour promouvoir les programmes de résidence a augmenté. Notre initiative peut être facilement adaptée par les résidents ou même les cliniciens pour offrir un enseignement médical aux étudiants en médecine, pour mettre en valeur le travail des résidents et pour attirer des adeptes sur Instagram.

#### Introduction

Instagram, a platform delivering image-based information, has over one billion users worldwide.<sup>1</sup> It can serve as a platform for medical education content, for example, through images pertaining to infectious disease and radiology.<sup>2,3</sup> Many popular Instagram accounts that provide medical education content are run by practising physicians in specific disciplines, and their content is often unstructured and not designed specifically for medical

students.<sup>4</sup> Resident-as-teacher programs have been implemented in various specialities.<sup>5</sup> Residents may serve a great resource in providing online medical education. We launched an innovation of structured resident-led weekly teaching sessions on clinical “pearls” – short pieces of free standing, evidence-based, clinically relevant information – cross multiple disciplines for medical students on Instagram to address the need of continued clinical teaching during the COVID-19 pandemic. This study was exempt from Research Ethics Board review.

## Innovation

Medskl.com is a medical education website to provide free and open access to medical educational materials. Eighteen residents (PGY1 to fellow) volunteered their time as Section Editors for its Instagram account (managed by two medical students). The Section Editors published daily Instagram posts on weekdays to teach clinical pearls of their choice that were peer reviewed by other residents. The specialties rotate weekly (content for each weekday shown below).

1. History-taking: medical history questions to ask for a common clinical presentation;
2. Examination Skills: key components of a clinical examination/procedure;
3. Laboratory/Imaging Interpretation: tips to interpret laboratory results and imaging;
4. Resident Spotlight: a headshot image and a resident biography (residents used the account to share resident life using Instagram Stories);
5. Lecture: a post to announce 30-min lectures by residents

Seventeen weekly rotations of Instagram posts were delivered by 15 specialties between September 2020 to March 2021.

## Outcomes

The number of followers increased by 4-fold, from 300 in August 2020 to 1,220 in March 2021. The followers are from Canada (36.2%), the United States (11.9%), India (11.4%), Kenya (6.8%), and Other (33.7%); Most followers are between the ages of 25-34 and 18-24 (47.8% and 37.7%, respectively).

Reach (number of users who have viewed posts) and the number of Likes were measured and calculated based on the types of posts. The average Reach per post increased by 5-fold from 96 to 481 after 17 weeks. Reach for Laboratory/Imaging Interpretation (image) was the highest, followed by History-taking (image), and Examination Skills (image) (Table 1). The average Reach for image posts is significantly higher than that for video posts. The average number of Likes per post is 21 and not significantly different between image/video posts.

## Next steps

This innovation provided insight into ways of delivering structured online medical education led by residents on Instagram. Resident-as-teacher (in this case, Resident-as-

editor) may serve as an effective way to manage an Instagram account with a focus on medical education to attract more followers and reach more users. The results also remind Instagram educators that image posts are more effective in attracting views than video posts on Instagram (Table 1).

The next step is to evaluate residents' experiences as teachers in this initiative, and medical student satisfaction, learning, and behaviour change.

Table 1. Average reach and number of likes for Instagram posts by category

Type of Post		Reach		Likes	
		Mean (SD)	P-value	Mean (SD)	P-value
History-taking	Image	576 (82)	< .001	25 (6)	.41
	Video	379 (84)		21 (10)	
Examination Skills	Image	527 (144)	.007	23 (10)	.13
	Video	368 (104)		17 (9)	
Lab/Imaging Interpretation	Image	606 (215)	< .001	26 (14)	.11
	Video	334 (100)		17 (11)	
Resident Spotlight		492 (87)	–	22 (9)	–
Lecture		433 (70)	–	16 (5)	–
Total		481 (142)	–	21 (9)	–

SD = standard deviation

**Conflicts of Interest:** None

**Funding:** None

**Authorship:** Both authors (Dr. Chaocheng Liu and Dr. Sanjay Sharma) contributed to the study conception and design. Data collection and analysis were completed by Dr. Chaocheng Liu. The first draft of the manuscript was written by Dr. Chaocheng Liu, and Dr. Sanjay Sharma commented on previous versions of the manuscript. Both authors read and approved the final manuscript.

**Acknowledgments:** We would like to thank all other MEDSKL Section Editors who contributed to the development of educational materials for the Instagram posts, including Drs. Ariel Gershon, Obaidullah Khan, Nataliya Perera, Palak Suryavanshi, Shivani Dadwal, Liz Miazga, Shannon Willmott, Jordan Leitch, Dana Archibald, Esther Kim, Hisham Akhtar, Maria Fadous, Noemie Villeneuve-Cloutier, Alison Castle, Shirley Shuster, Samantha Bruzzese, and Alis Xu (in the order of launching the educational sessions on Instagram).

## References

1. Alsobayel H. Use of social media for professional development by health care professionals: a cross-sectional web-based survey. *JMIR med educ.* 2016 Sep 12;2(2):e6232. <https://doi.org/10.2196/mededu.6232>
2. Gauthier TP, Bratberg J, Loi K, DiVall MV. Delivery of educational content via Instagram.® *Med Ed.* 2016 May 1;50(5):575-6. <https://doi.org/10.1111/medu.13009>
3. Shafer S, Johnson MB, Thomas RB, Johnson PT, Fishman EK. Instagram as a vehicle for education: what radiology educators need to know. *Acad radiol.* 2018 Jun 1;25(6):819-22. <https://doi.org/10.1016/j.acra.2018.03.017>
4. Katz M, Nandi N. Social media and medical education in the context of the COVID-19 pandemic: scoping review. *JMIR Med Educ.* 2021 Apr 12;7(2):e25892. <https://doi.org/10.2196/25892>
5. Burgin S, Zhong CS, Rana J. A resident-as-teacher program increases dermatology residents' knowledge and confidence in teaching techniques: a pilot study. *J Am Acad Dermatol.* 2020 Aug 1;83(2):651-3. <https://doi.org/10.1016/j.jaad.2019.12.008>