



# The use of social media among Canadian anesthesiology training programs: a historical cohort study

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## To the Editor,

Social media has been increasingly adopted within medicine for education, research, networking, and disseminating information.<sup>1</sup> Medical residency programs maintain representative social media accounts.<sup>2,3</sup> Studying their presence and patterns of use can help understand how programs communicate publicly; however, there is no report to date describing these trends in Canadian anesthesiology residency training programs. Thus, our objective was to identify Canadian anesthesiology residency programs on social media platforms including YouTube, Facebook, Twitter, Instagram, TikTok, and LinkedIn.

This historical cohort study was conducted in June 2021. Seventeen accredited anesthesiology training programs were identified using the Canadian Resident Matching Service.<sup>4</sup> Publicly available accounts self-identifying as representing a Canadian anesthesiology training program or department were included. This study was approved by the Research Ethics Board at The Hospital for Sick

Children (Toronto, ON, Canada) prior to study initiation (REB#1000076796).

We identified social media presence by (1) hyperlinks on the department's website, (2) social media platforms using the algorithm: "Program name + (anesthesiology OR anesthesia)," and (3) Google search engine using the algorithm: "Program name + (anesthesiology OR anesthesia) + (YouTube OR Facebook OR Twitter OR Instagram OR TikTok OR LinkedIn)." Data were manually extracted from accounts meeting inclusion criteria between 1<sup>st</sup> and 30<sup>th</sup> June 2021, including the date of the first post, the number of followers, and the total number of posts. Posts from each social media platform published between 1 January 2018 and 30 June 2021 were manually collected and categorized thematically. A sample of 350 posts were initially categorized based on themes presented by Goshtasbi *et al.*<sup>2</sup> These themes were not applicable to all reviewed posts, so the initial sample assisted in theme revision to ensure better representation of collected content. The final thematic categories were achievement, conference, research, spotlight, education, community and wellness, residency program promotion, journal club, and other (see Electronic Supplementary Material [ESM], eTable 1). We used descriptive statistics; categorical variables are reported as number and percentage, and continuous variables are reported as median [interquartile range (IQR)].

Among all 17 anesthesiology training programs, 31 publicly accessible representative social media accounts were identified (see ESM, eTable 2): YouTube ( $n = 6$ , 35%), Twitter ( $n = 10$ , 59%), Instagram ( $n = 13$ , 77%), and LinkedIn ( $n = 2$ , 12%). No publicly available Facebook or TikTok accounts were identified. Sixteen of 17 (94%) programs had at least one social media account. One

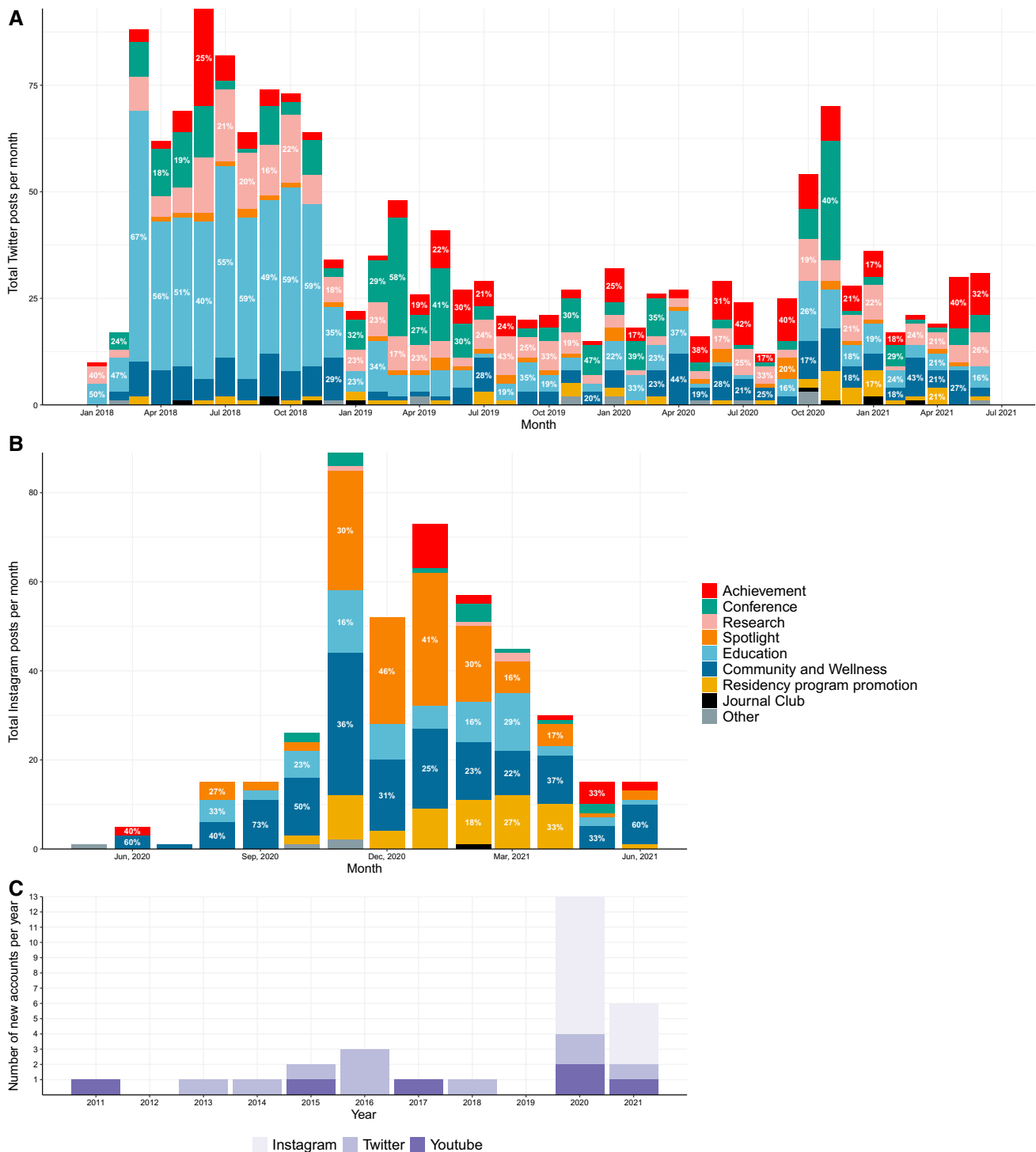
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**Figure** Monthly total social media post activity with thematic categorization of content on A) Twitter and B) Instagram. Proportion of posts within each category per month is annotated in white (when greater than 15% and less than 100%). C) The number of

new accounts per year on each social media platform (Twitter, Instagram, and YouTube).

program had accounts on four platforms, and three programs had accounts on three platforms. No posts disclosed patient personal health information.

The  $n = 6$  identified YouTube accounts had sparse activity (50 posts) and a median [IQR] of 25 [10-164] followers. The  $n = 10$  Twitter accounts generated 4,825

total posts and had a median [IQR] of 393 [232-1,024] followers. The  $n = 13$  Instagram accounts had 438 total posts and a median [IQR] of 482 [305-518] followers. The [Figure](#) shows Twitter and Instagram monthly posts over time, with Twitter activity peaking in 2018 and decreasing in 2019. No content was posted on Instagram before 2020. The largest thematic category on Twitter was education (34%), and on Instagram was community and wellness (34%). Most social media accounts became active after 2020 ([Figure](#), panel C), although some existed several years prior. We did not collect data on the personnel managing these accounts, which is a limitation of this study.

In summary, we found that most Canadian anesthesiology residency programs have one or multiple social media accounts but these generate low levels of activity. As social media may influence prospective applicants,<sup>5</sup> room exists for Canadian programs to expand their social media presence and capitalize on this opportunity for self-promotion. Furthermore, programs may benefit from developing best practice guidelines, implementing formalized training, and appointing dedicated personnel. To optimize program promotion and communication with candidates, trainees, faculty, and the public, we would suggest that Canadian anesthesiology training programs consider investing in their social media presence.

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