



Canadian POCUS Snapshot 2024: a picture of limited resources and untapped potential

Colin Bell¹ · Paul Olszynski² · Daniel J. Kim³

Received: 3 October 2024 / Accepted: 9 October 2024 / Published online: 21 October 2024

© The Author(s), under exclusive licence to the Canadian Association of Emergency Physicians (CAEP)/ Association Canadienne de Médecine d'Urgence (ACMU) 2024

Dear Editor,

In 2023, the Canadian Association of Emergency Physicians (CAEP) Emergency Ultrasound Committee (EUC) distributed a survey to assess the state of point-of-care ultrasound (POCUS) programs in Canadian Emergency Departments (EDs). The survey was deployed to CAEP EUC members via email and social media between September and December 2023. Topics included level of support, resources, and barriers to the growth of POCUS in Canadian EDs. Ethics approval for the survey was granted by the University of Calgary (REB23-0598).

Survey respondents were self-identified leaders of Canadian ED POCUS programs. The topics addressed included practice environment, program funding, quality assurance (QA), and education. Forty-four POCUS leaders, representing almost 5 million annual ED visits, participated in the survey. Key findings include:

- Across all responding EDs, POCUS programs require a median of 0.4 full-time equivalent (FTE) to function at current capacity. Approximately 70% of this is paid FTE. Funding for these positions came from several sources: 47% from departmental or clinical contributions, 28% from academic funding, and 25% from hospital or health-care organizations.

- Problematically, 76% of Canadian POCUS equipment remains active beyond the end of a typical service life. When due for replacement, only 32% of machines are replaced by hospital capital funding and the majority come from extra-institutional or non-recurring funding sources (donations, departmental expenses).
- Only 35% of POCUS programs reported compensation for clinical POCUS use, limiting opportunities for program development and reimbursement. Compensation linked to POCUS use has been shown to improve compliance with documentation and QA processes in the United States [1, 2].
- More than half (52%) of respondents indicated the absence of a comprehensive POCUS QA program. Among those with programs, 42% were unfunded, while others were supported by departments (36%) or academic funding (22%).
- Access to digital image archiving—a crucial component of QA and medical records—was limited, with only 36% of responding programs reporting availability.

Hospitals and health organizations have neglected to invest in this technology at a time when consequences for not performing POCUS, or doing so poorly, are increasingly real and costly [3]. The data suggest that Canadian ED POCUS programs are under-resourced, particularly compared to national and international peers, which report superior access to digital image archiving and clinical compensation for POCUS [1, 2, 4, 5].

This survey is the first to document the resources available to Canadian ED POCUS programs. The findings reveal significant variability in personnel support, QA processes, and infrastructure. It is crucial to address these resource gaps to optimize POCUS performance in Canadian EDs.

Author contributions Concept and Design: CB, PO, DJK. Drafting of Manuscript: CB, PO, DJK. Critical Revision: CB, PO, DJK.

✉ Colin Bell
Colinbell85@gmail.com

¹ Department of Emergency Medicine and Cumming School of Medicine, University of Calgary, Calgary, AB, Canada

² Department of Emergency Medicine, University of Saskatchewan, Saskatoon, SK, Canada

³ Department of Emergency Medicine, University of British Columbia and Vancouver General Hospital, Vancouver, BC, Canada

Funding None.

Data availability Data are available upon request from colinbell85@gmail.com or the CAEP EUC.

Declarations

Conflict of interest CRB has received honoraria totaling less than \$1500 from Fujifilm Sonosite Inc. DJK is on the clinician advisory board of Fujifilm Sonosite Inc. PO has no conflicts to disclose.

References

1. Adhikari S, Amini R, Stolz L, O'Brien K, Gross A, Jones T, et al. Implementation of a novel point-of-care ultrasound billing and reimbursement program: fiscal impact. *Am J Emerg Med.* 2014;32(6):592–5. <https://doi.org/10.1016/j.ajem.2014.02.051>.
2. Lahham S, Moeller J, Kurzweil A, Choi H, Saadat S, Dang E, et al. Evaluation of adherence to emergency department point-of-care ultrasound documentation and billing following intervention. *J Med Ultrasound.* 2022;30(3):211–4. https://doi.org/10.4103/jmu.jmu_76_21.
3. Prager R, Wu D, Garber G, Finestone PJ, Zang C, Aslanova R, et al. Medico-legal risks of point-of-care ultrasound: a closed-case analysis of Canadian Medical Protective Association medico-legal cases. *Ultrasound J.* 2024;16(1):16. <https://doi.org/10.1186/s13089-024-00364-7>.
4. Slemko JM, Daniels VJ, Bagshaw SM, Ma IWY, Brindley PG, Buchanan BM. Critical care ultrasound training: a survey exploring the “education gap” between potential and reality in Canada. *Ultrasound J.* 2021;13(1):48. <https://doi.org/10.1186/s13089-021-00249-z>.
5. Abo AM, Nordberg A, Pearman R, Gaspari RJ. The Society for Clinical Ultrasound Fellowships 2018 benchmark survey: summary of salary and administrative data. *The Am J Emerg Med.* 2022;56:275–9. <https://doi.org/10.1016/j.ajem.2021.07.018>.