

Introducing Ultrasound-Guided Peripheral IV Catheter Insertion to Nursing Students Through a Student-Led Workshop

Rawane Soboh^{1,2}, Dohee Kim^{1,2}, Melanie Xie^{1,2}, Juan Avila Amariles^{1,2}, Marc-Alexandre Bourget^{1,2}, Mélodie Lewis^{1,2}, Andrea Lian^{1,2}, Chloe Luu^{1,2}, Mélanie Gauthier^{1,2}, Caroline Marchionni^{1,2}, William Landry^{1,2}

¹McGill University, Ingram School of Nursing, McGill, Montreal, QC, Canada

²McGill Vascular Access Student Club, McGill, Montreal, QC, Canada

Keywords: Ultrasound-guided (USG), Nursing students, Difficult Intravenous Access (DIVA), Peripheral intravenous insertion (PIV insertion)

Corresponding author email: juan.avilaamariles@mail.mcgill.ca

Published: 05/05/2026

<https://doi.org/10.26443/msurj.v21i2.440>

Patients with difficult intravenous access (DIVA) pose a significant challenge in clinical settings, often leading to delayed care and complications such as pain, phlebitis, and increased infection risk due to multiple insertion attempts. Although evidence supports ultrasound-guided peripheral intravenous catheter (USGPIVC) insertion as a superior approach for DIVA patients, this technique remains largely absent from undergraduate nursing curricula and is typically accessed through post-registration certification, creating workflow inefficiencies and potential delays in care. To address this gap, McGill's Vascular Access Student Club (VASC) organized a workshop to introduce USGPIVC insertion to nursing students through both theoretical and hands-on learning. Participants completed pre- and post-workshop surveys assessing familiarity with USGPIVC insertions and confidence in managing DIVA patients. Among 24 Bachelor of Nursing (Integrated) (BNI) and Bachelor of Science in Nursing (BScN) participants, 66.7% were in their first year of undergraduate studies. Second- and third-year students reported low baseline confidence in IV insertion for DIVA patients, with 95.4% reporting "not confident at all" or "slightly confident." Although 36.4% had observed USGPIVC insertions, none had received formal training. Post-workshop feedback was overwhelmingly positive: 100% rated the session as beneficial, and 62.5% advocated for training prior to clinical practice. More than 90% of participants expressed interest in advanced training. This student-led initiative reveals a critical gap in undergraduate curriculum and a strong demand for structured ultrasound-guided vascular access training. Integrating these skills early may enhance nursing preparedness for DIVA patients and lead to improved patient care.

© The Authors. This abstract is published under a CC-BY license:

<https://creativecommons.org/licenses/by/4.0/>