

Staff experience of an after-hours vascular access specialist team pilot project: a single-centre, cross-sectional survey

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Introduction

Over a third of adults and up to half of children presenting to hospital meet criteria for difficult intravenous access (DIVA), characterised by non-visible and non-palpable veins either with or without a tourniquet¹⁻³. There was an organisational need for development of a formal escalation pathway after two failed peripheral intravenous catheter insertion attempts, as well as for DIVA patients. Funding was secured for a one-year nurse-led vascular access specialist team pilot project. The Vessel Health Preservation and IntraVenous Access (VIVA) Team delivered a seven-day service prioritising after hours work. As one key pilot project outcome measure, aim was to gain insights into staff experience of the VIVA team at a large tertiary-level university hospital in New Zealand.

Methods

An exploratory cross-sectional survey was conducted using a self-developed online questionnaire with 14 items on a five-point Likert scale and a further four open-ended questions. Dissemination was via internal email and posters placed around campus with a QR code to scan. Participation was anonymous and voluntary. Descriptive analysis of data was undertaken.

Results

529 respondents participated with 78% Registered Nurses, 9.7% House Officers, 6.6% Registrars and 5.7% other professional roles. 56% of respondents undertook peripheral intravenous cannulation, with 42.2% of these somewhat confident, 37.5% very confident and 12% extremely confident in their own skills (see Figure 1). 74.8% of respondents were extremely confident and a further 21.5% very confident in first attempt insertion success by the VIVA Team for even the most difficult of DIVA patients (see Figure 2). Three central themes emerged from content analysis of free text responses: a) improved standards of care for DIVA patients with reported perceptions of a reduction in multiple failed insertion attempts and enhanced patient trust (see Figure 3); b) positive impact on clinical workload efficiencies with reported perceptions of faster commencement of treatments and investigations (see Figure 4); c) campus flow disruptions with anticipated negative consequences from discontinuation of the pilot VIVA Team project reported (see Figure 5).

Conclusion

As complexity of patient care evolves, innovative models for leveraging nursing expertise in vascular access may foster best practice, vessel health preservation, enhance clinical workflows and increase first attempt insertion success for DIVA patients.

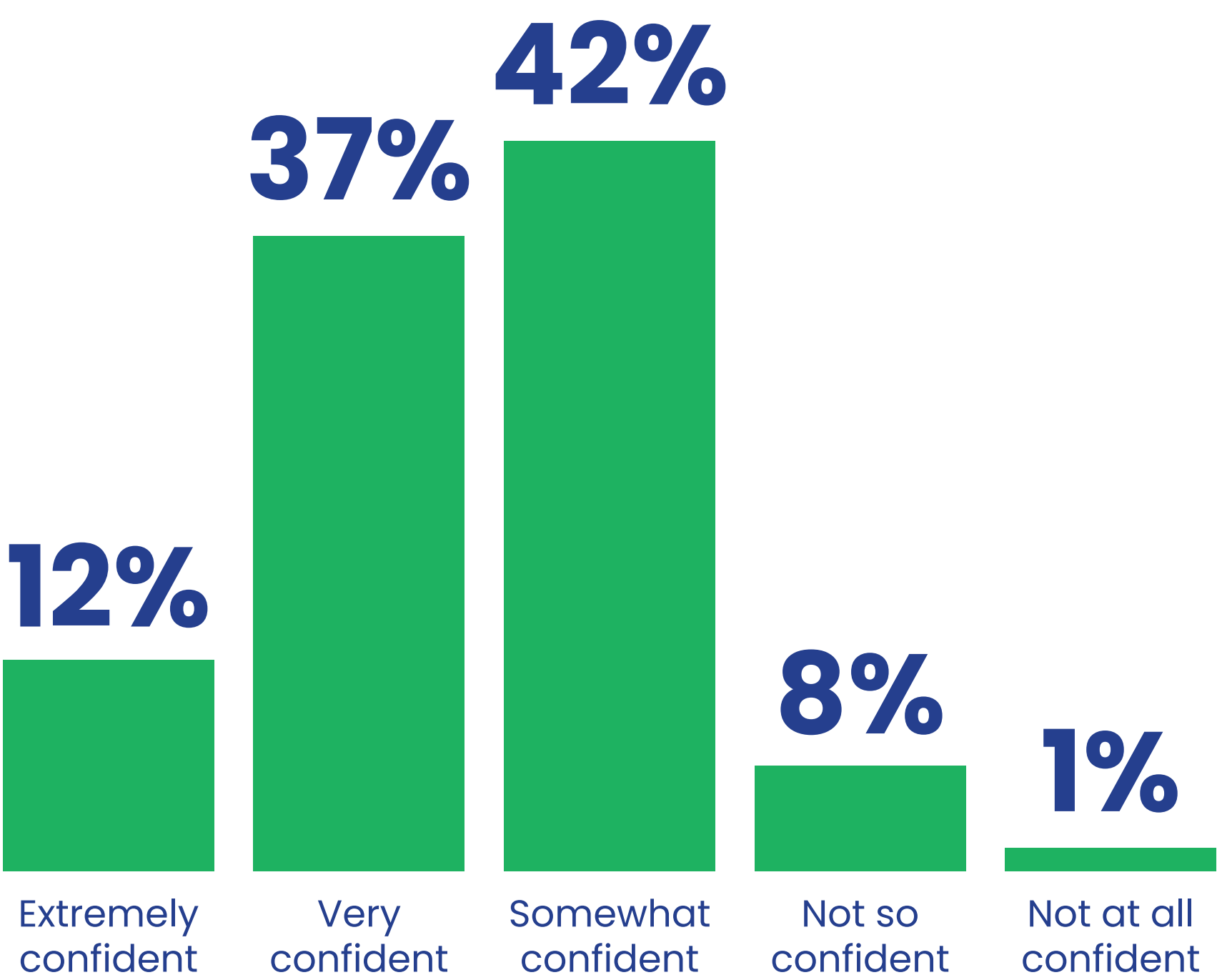


Figure 1 – Respondents self-reported confidence in own peripheral cannulation skills

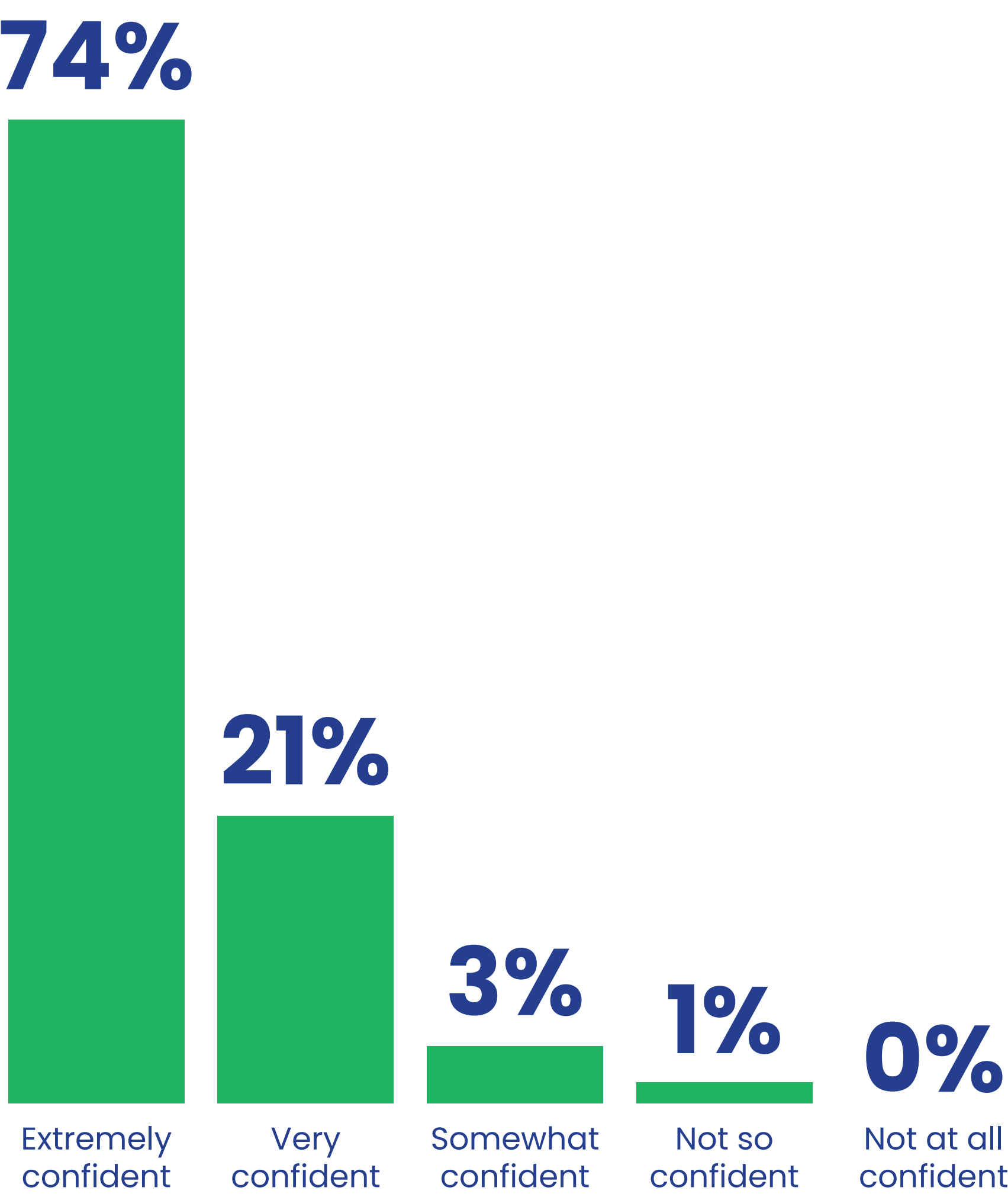


Figure 2 – Respondents confidence in first insertion success by VIVA Team

“VIVA team has been a great asset during clinical emergencies to quickly and efficiently take required bloods and insert IVs. Previously, we’ve had RNs, doctors and CTCs trying and failing at bloods but with VIVA and their ultrasound machines, I have noticed significantly quicker assessments and bloods taken and with fewer attempts, ensuring patients are more comfortable. I feel they do a very good job and have been a huge help.”



Registered Nurse

Figure 3 – Improved standards of care for DIVA patients

“VIVA team is a great resource when it comes to DIVA and urgency of the treatment. There are so many instances where I have received quick assistance with our patients IVL insertion or bloods, without any delay”



Medical Registrar

Figure 4 – Positive impact on clinical workload efficiencies

“Would be a massive detriment to DIVA patients if the VIVA team was discontinued. Would lead to delayed care, increased failed attempts and pain for patients, also have concerns regarding gaining access in [patient rapidly] deteriorating situations”



House Officer

Figure 5 – Campus flow disruptions