
GuideWIRE Education (WIRED)

Initiative Type

Service Improvement

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Deliver

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Summary

WIRED aims to upskill emergency clinicians to perform Guidewire Catheter Insertion utilising the Seldinger Technique for appropriate management of patients with acute urinary retention. It is a valuable skill to utilise in the case of a difficult catheterisation in the absence of Urology services. [Learn the technique](#) from [Clinical Excellence Division](#) on [Vimeo](#). WIRED is endorsed by the

Urological Society of Australia and New Zealand (Northern Section). The Australasian College for Emergency Medicine (ACEM) has included IDC Guidewire Insertion as a Scope of Practice Procedural Skill for Continued Professional Development

Key dates

Jul 2021

Implementation sites

All Queensland Health Emergency Departments and rural and remote facilities

Partnerships

Queensland Emergency Department Strategic Advisory Panel (QEDSAP) Retrieval Services Queensland (RSQ) Emergency Department Education and Training (EMET) Program of the Australasian College for Emergency Medicine (ACEM)

Key Contacts

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Aim

To improve patient care, particularly in rural and remote facilities, by upskilling emergency clinicians to perform guidewire catheter insertion, decreasing reliance on patient retrievals or after-hours uUrology services.

Benefits

improving patient care:

- reducing urethral trauma associated with repeated indwelling urinary catheter (IDC) attempts
- reducing the need to progress to more invasive procedures e.g., Supra Pubic Catheterisation (SPC)
- reduced need for transfer to larger facilities, enabling the provision of care on or closer to country
- improved equity of care by providing rural and remote patients access to care that would be readily provided in tertiary hospitals

reduce health system costs:

- reduced costs for urgent retrievals associated with urinary retention
- reducing the need for urology call-ins for catheter insertions
- reduced patient length of stay via provision of more timely care.

Background

Indwelling urinary catheter (IDC) insertion is urgently required in the setting of a urological emergency such as acute, painful urinary retention. Difficulty in placing an IDC and repeated attempts can result in significant urethral or prostatic trauma and progressing to SPC insertion is a relatively invasive procedure.

Despite being used by uUrologists for many years, guidewire catheter insertion is a relatively simple procedure yet is not widely used by emergency clinicians, mainly due to a lack of awareness. ED Staff Specialist Dr Katrina Starmer from Cairns Hospital ED developed and implemented an education package in liaison with Urology colleagues and the Cairns Emergency Medicine and Training (EMET) Hub. Its integration into emergency practice has been demonstrated to improve patient care and significantly reduce retrieval costs.

Solutions Implemented

The original education resources have been further developed under the PROV-ED Project and are been endorsed by:

- the Urological Society of Australia and New Zealand (Northern Section)
- the Queensland Surgical Advisory Committee
- the Queensland Emergency Department Statewide Advisory Panel (QEDSAP).

The guidewire catheter insertion technique utilises existing skills and involves stocking of simple equipment. Education will occur through engagement with the PROV-ED Project team and / or rural education providers such as Retrieval Services Queensland (RSQ), Emergency Department Education and Training (EMET) and Royal Flying Doctor Service (RFDS).

Resources include:

- guidewire IDC insertion training (Instructional video and factsheet)
- education resources to prompt consideration of guidewire technique after two failed standard IDC attempts
- equipment and procurement information.

Evaluation and Results

Demonstrating outcomes of WIREd will likely initially rely upon case studies and associated patient benefits and cost analyses. Longer term, it is hoped to demonstrate a reduction in urgent patient retrievals for acute urinary retention or similar.

Further Reading

PDF saved 02/04/2025