

---

# Reducing Urine Contamination in Emergency (RedUCE)

Initiative Type

Redesign

Status

Deliver

Added

30 April 2021

Last updated

04 April 2023

URL

<https://clinicaexcellence.qld.gov.au/improvement-exchange/reducing-urine-contamination-emergency-reduce>

## Summary

RedUCE provides illustrated instructions to patients to demonstrate the correct technique to collect a urine sample. What is now known as RedUCE, was initially implemented at the Princess Alexandra Hospital (PAH) as a research trial led by Dr Robert Eley. The 2016 publication demonstrated a significant reduction in rates of urine sample contamination in the PAH Emergency Department (ED).

---

This initiative was introduced to PROV-ED by Clinical Research Nurse, Chantelle Judge, and Emergency Staff Specialist ,Dr Georgina Livesay from the PAH Emergency Department, Metro South Health.

## Key dates

Mar 2021

## Implementation sites

Available to all Queensland Health Emergency Departments

## Partnerships

Queensland Emergency Department Strategic Advisory Panel (QEDSAP) Princess Alexandra Hospital Emergency Department, Metro South Health QUT Design Lab, Queensland University of Technology

## Key Contacts

PROV-ED Project

2143

manager

Healthcare Improvement Unit

07 3643 0775

[PROVED.Project@health.qld.gov.au](mailto:PROVED.Project@health.qld.gov.au)

---

## **Aim**

To reduce contamination rates in mid-stream urine samples by using posters and/or flyers to educate patients on correct collection technique.

## **Benefits**

Benefits:

- improved patient care by avoiding diagnostic delays
- cost and time savings through avoidance of repeat testing
- responsible and efficient use of pathology services

## **Background**

Mid-stream urine is a frequently performed diagnostic test in emergency departments that relies on patients using correct collection technique to avoid sample contamination. Contamination rates are typically high (approximately 25 per cent across Queensland Health).

## **Solutions Implemented**

Through collaboration with the Queensland University of Technology (QUT) Design Lab, the PROV-ED Project team has produced updated the graphics, which are displayed as repositionable vinyl posters in ED toilets. A brief education campaign is required to ensure clinical staff are aware of the tools and can instruct patients to refer to them.

## **Evaluation and Results**

By providing patient leaflets and subsequently posters, clinical researchers at the PAH demonstrated a 15 per cent reduction in mid-stream urine contamination rates in the ED. Evaluation of RedUCE under the PROV-ED Project will involve comparing pre- and post-implementation contamination rates of midstream urine from Pathology Queensland data.

---

## Lessons Learnt

- ED staff are time-poor and reliance on verbal instructions is ineffective
- Written interventions may not be suitable for many patients
- Simple illustrations are an effective option for providing clear and consistent instructions to patients
- Graphics used must strike a balance to include enough anatomical detail without being overly confronting (a small proportion of patients surveyed for the pilot implementation reported finding the original graphics confronting).

## References

Illustrations reduce contamination of midstream urine samples in the emergency department. *Journal of Clinical Pathology* Published online first: 18 February 2016. Doi: 40.1136/jclinpath-2015-203504  
[Journal of Clinical Pathology](#)

PDF saved 13/03/2025