



Transperineal Ultrasound

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INTRODUCTION

The use of trans perineal ultrasound (TPUS) by physiotherapists for the purpose of biofeedback of the muscle action in the pelvic area is currently considered gold standard for men scheduled for prostate surgery and is growing in use in all areas related to pelvic floor function. It had been informally requested by many of our clients and the Geelong Prostate Support Group as it was already in use at the Australian Prostate Centre and many private clinics.

TPUS is associated with a number of benefits:

- Improved understanding by the patient of how to activate muscles correctly
- Shorter time for recovery post radical prostatectomy
- Improved comfort for the patient – negates the need for Vaginal Examination (VE) or Digital Rectal Examination (DRE)

The use of TPUS can demonstrate to both the client and the therapist the activation of specific muscles in men pre and post prostatectomies. Recent research has highlighted the importance of specificity of muscle action in this area as opposed to global pelvic floor activation.

In line with the Barwon Health philosophy – of right care, right place and right time, being able to reach and teach this group prior to surgery enables us to put the consumer at the forefront and give them a sense of control, empowerment and self-determination over the course of their rehabilitation.

OBJECTIVES

- Provide a safe and effective biofeedback patients who need to improve pelvic floor control. Biofeedback is a technique used to learn to control body functions by the utilisation of various forms of feedback, in a DRE the therapist will provide verbal feedback – explaining what they can feel the muscles doing, in TPUS the both the patient and therapist can see the muscle action on the screen
- Develop appropriate procedures in liaison with Infection Control to ensure best practice to prevent potential infection complications
- Development of a competency pathway for clinicians who would be utilising the new clinical practice

METHODS + IMPLEMENTATION

- Multi-disciplinary support from Urology, General Surgery and Gynaecology was obtained, in addition to the Continence Team and Physiotherapy department for the new procedure
- A New Clinical practice application was submitted to the New Technology and Clinical Practice committee with supporting documentation including; informed consent handout consent form, clinical procedure and competency pathway
- New real-time ultrasound machines and extra probes were obtained under asset replacement through Bioengineering
- Liaison with Infection Control and BMI in the development of appropriate infection control guidelines and access to high level disinfection equipment (Tropon ER).
- Partnership with the Australian Prostate Centre allowed two of our clinicians to complete the assessment part of the competency pathway

RESULTS

- In the first 6 months of implementation there have been 47 procedures performed, two staff member have completed the credentialing process and another 1 is almost completed
- There have been no adverse events and acceptance by consumers has been exceptionally high with the majority of patients ranking it's acceptability as 5/5
- Feedback has been most positive from patients who have been victims of sexual abuse and find more intimate exams too traumatic

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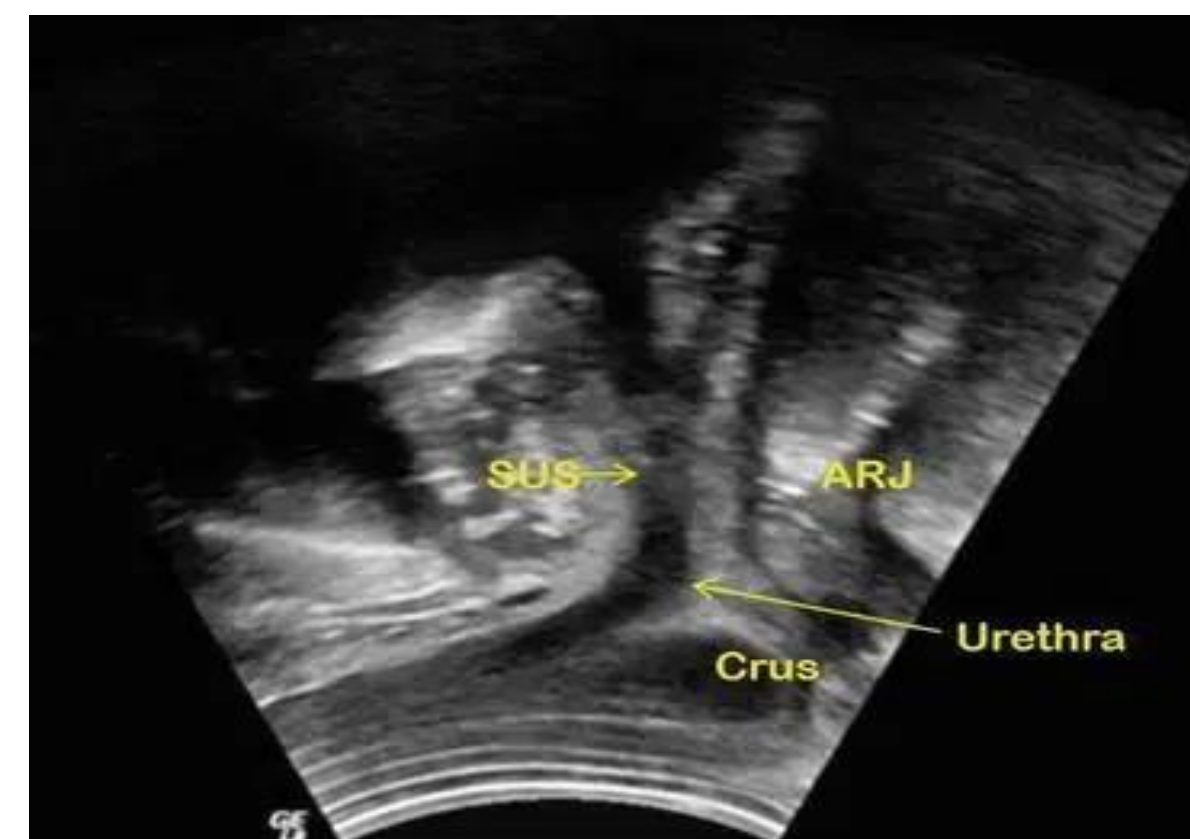
- Safe Care Personal Care
 Effective Care Connected Care

KEY LEARNINGS

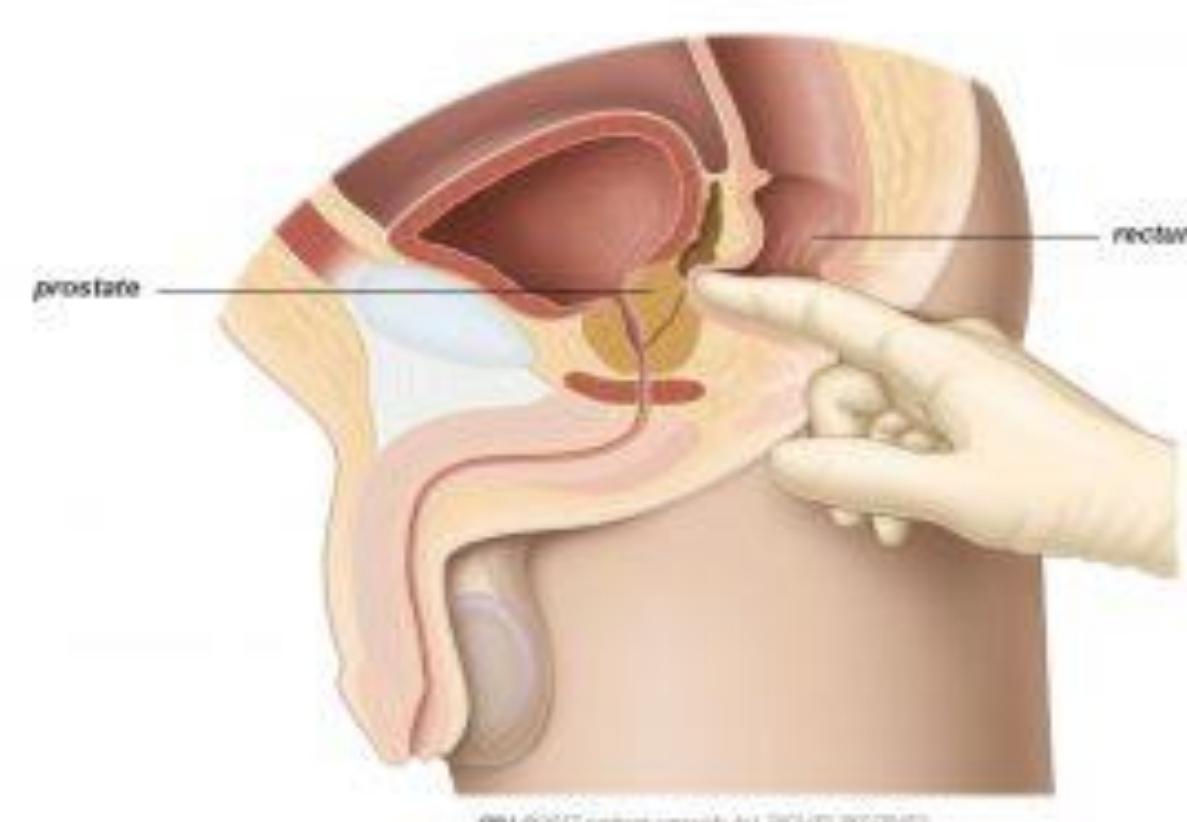
Transperineal ultrasound provides a suitable alternative to a VE or DRE to provide understandable and specific feedback to patients with pelvic floor disorders. It is a preferred option for patients who find the other methods unacceptable due to physical or psychological discomfort. Collaboration with Infection Control, Physiotherapy, Bioengineering and BMI have been key to the success of this new clinical procedure. The use of this new clinical practice application is supported by the Urology department – as is demonstrated by the referral of patients on the waitlist for prostatectomies (RP), to the continence clinic for pelvic floor physiotherapy prior to surgery. Both biological and clinical plausibility would argue that it is easier to teach new and highly specialised movement to men in tissues that have not yet been traumatised by major surgery, subsequent oedema and pain inhibition. To date there is a growing body of data supporting the value of pre habilitation for men prior to RP. Some of this evidence relates directly to the use of TPUS by physiotherapists to guide motor control training for the pelvic floor pre and post prostatectomy. Studies have shown significant stress levels in more than 40% of men diagnosed with prostate cancer. Cancer survivors are living longer and consequently greater importance has been placed upon strategies to improve or maintain health related quality of life after a diagnosis – prehabilitation shows promise in this area. There is also support from the colorectal surgeons and gynaecology. Both groups send multiple patients to Women's Men's and Pelvic Health physiotherapists. Visualisation of the pelvic floor muscles via TPUS could be extremely beneficial in defecation training, pelvic floor down training, pelvic floor strengthening and control and feedback of the impact of increases in intra abdominal pressure on the pelvic floor.

SUSTAINABILITY

Following a review in July 2021 by the New Technology and Clinical Practice committee, TPUS was promoted to accepted practice at Barwon Health. We expect numbers to rise as we are seeing more face to face clients. Despite future changes in staffing there is a sound competency pathway to enable new specialist staff to adopt this clinical practice. The use of this new clinical practice application is supported by the Urology department as is demonstrated by the referral of patients on the waitlist for prostatectomies to the continence clinic for pelvic floor physiotherapy prior to surgery. There is also support from the colorectal surgeons and gynaecology. Both groups send multiple patients to Women's Men's and Pelvic Health physiotherapists. Visualisation of the pelvic floor muscles via TPUS can be extremely beneficial in defecation training, pelvic floor down training, pelvic floor strengthening and control and feedback of the impact of increases in intra-abdominal pressure on the pelvic floor.



TPUS Image Pelvic Floor



Digital Rectal Exam