

Research Poster Awards 2023



Title Expanding urological services into regional Australia and reducing inter-hospital transfers – how the nurse practitioner can help.

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INTRODUCTION & OBJECTIVES

A visiting urology service has been in place at Hamilton Base Hospital, Western Victoria for 25 years, serving an unmet need. A Urology Nurse Practitioner (UNP) provides care and management of urology patients working in close association with visiting urologists. We aim to assess the impact of the UNP role in the delivery of regional urological care and how it may affect the need for transfer of patients.

METHOD

A retrospective analysis of medical records identified all clinical interventions by the UNP between January 2016 and December 2019. Each encounter was graded according to a clinical severity scale from grade 1 to 5 and assessed for UNP management of patients and the prevention of inter-hospital transfers.



Figure 1: Regional Victorian Map including driving times between regions.

Table 1. Clinical entries according to adapted clinical severity scale

Category:	1	2	3	4	5	Total
Total Clinical interventions (Row %)	505 (77%)	118 (18%)	28 (4%)	3 (0.5%)	0	654
After hours recall (Column %)	13 (3%)	72 (61%)	27 (96%)	3 (100%)	0	115 (18%)
Origin of call (Column %)						
• Ward	9 (69%)	51 (71%)	5 (19%)	3 (100%)	0	68 (59%)
• Emergency	4 (31%)	21 (29%)	16 (59%)	0	0	41 (36%)
• Unknown?			6 (22%)			6 (5%)
Avoidance of interhospital transfer	0	0	19	0	0	19

Table 2. Transfer cost assessment

Route	Transportation to Geelong or Warrnambool	Additional road transport cost	Total cost per transfer	Evaluation for 19 urgent care patients
Road transfer non-urgent	\$577	\$0	\$577	\$10,963
Emergency road transfer	\$1,866	\$0	\$1,866	\$35,454
Fixed wing	\$2,242	\$3,232	\$5,474	\$104,006
Rotary wing	\$11,280	\$1,866	\$13,146	\$249,774

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RESULTS

184 patients with 654 individual assessments were identified for inclusion and classified according to the adapted clinical severity scale. Most interventions for category 3 and 4 patients related to major bleeding, catheter difficulties, and haemodynamic instability. A total of 19 patients whose urological issues would typically require inter-hospital transfer were able to be managed locally.

Table 3. Adapted clinical severity scale and reason for UNP intervention

Category 1	Category 2	Category 3	Category 4	Category 5
Routine post-operative clinical review	Semi-Urgent call (review within 60 minutes),	Urgent review (review within 10 minutes)	Emergency review	Death
Example				
- Ward review	- Review in ward or Emergency Department	- Painful acute urinary retention	- Emergency code	
- Non-urgent		- Clinical deterioration	- Shock	
- No acute pain or clinical deterioration	- Pain, retention of urine	- Fever, bleeding	- Acute haemorrhage	
	- Clinical deterioration	- Haemodynamic instability	- Emergency transfer pending	
Reason for Urology Nurse Practitioner intervention				
Indwelling urinary catheter change	Acute urinary retention	Acute urinary retention	Perforated bladder, extravasation	Nil
IDC drainage issues	Acute abdominal pain	Acute clot retention	Abdominal distention	
Persistent bleeding	Clot retention	Failure of Suprapubic catheter balloon	Major fluid shift	
General post-operative review	Indwelling urinary catheter blockage	Dislodged Suprapubic catheter	Post Transurethral resection syndrome	
		Meatal stricture		
		Urethral stricture with acute retention		
		Misplaced Indwelling urinary catheter/false passage		
		Renal colic		

DISCUSSION & CONCLUSION

Transferring an acute patient from a regional to a tertiary hospital for specialist care is often necessary but costly and not ideal for the patient, and their family. The presence of a dedicated UNP in a regional centre is important for patient care and has an important role in the prevention of unnecessary transfers. This is a vital component of a visiting urological service to a rural community.