

Supplementary Material

The impact of management option on out-of-pocket costs and perceived financial burden among men with localised prostate cancer in Australia within 6 months of diagnosis

Daniel Lindsay^{A,B,*} (PhD, Senior Research Officer), *Penelope Schofield*^{C,D,E} (PhD, Professor), *Doreen Nabukalu*^A (PhD student), *Matthew J. Roberts*^{E,G,H} (MBBS, PhD, FRACS (Urol), Consultant Urologist), *John Yaxley*^{B,F,I} (MBBS, FRACS (Urol), Urological Surgeon), *Stephen Quinn*^J (PhD, Associate Professor), *Natalie Richards*^D (BNurs, Research Nurse), *Mark Frydenberg*^{K,L} (MBBS, FRACS, FAICD, Professor), *Robert Gardiner*^{B,F,G} (MBBS, Emeritus Professor), *Nathan Lawrentschuk*^{M,N,O} (MBBS, PhD, FRACS, Professor), *Ilona Juraskova*^P (PhD, Professor), *Declan G. Murphy*^{E,Q} (MBSS, FRACS (Urol), Professor) and *Louisa G. Gordon*^{A,B,R} (PhD, Professor)

^AHealth Economics, Population Health Department, QIMR Berghofer Medical Research Institute, 300 Herston Road, Herston, Brisbane, Qld 4006, Australia

^BFaculty of Medicine, The University of Queensland, Qld, Australia

^CDepartment of Psychology, Swinburne University of Technology, Melbourne, Vic., Australia

^DBehavioural Science Unit, Peter MacCallum Cancer Centre, Melbourne, Vic., Australia

^EPeter MacCallum Department of Oncology, The University of Melbourne, Melbourne, Vic., Australia

^FDepartment of Urology, Royal Brisbane and Women's Hospital, Qld, Australia

^GCentre for Clinical Research, The University of Queensland, Qld, Australia

^HDepartment of Urology, Redcliffe Hospital, Qld, Australia

^IWesley Urology Clinic, Wesley Hospital, Qld, Australia

^JDepartment of Health Science and Biostatistics, Swinburne University of Technology, Melbourne, Vic., Australia

^KDepartment of Urology, Cabrini Institute, Cabrini Health, Vic., Australia

^LDepartment of Surgery, Monash University, Melbourne, Vic., Australia

^MEJ Whitten Foundation Prostate Cancer Research Centre, Epworth HealthCare, Melbourne, Vic., Australia

^NDepartment of Surgery, University of Melbourne, Melbourne, Vic., Australia

^ODepartment of Surgery, Royal Melbourne Hospital, Melbourne, Vic., Australia

^PCentre for Medical Psychology and Evidence-based Decision-making (CeMPED), School of Psychology, University of Sydney, Sydney, NSW, Australia

^QDivision of Cancer Surgery, Peter MacCallum Cancer Centre, Melbourne, Vic., Australia

^RSchool of Nursing and Cancer and Palliative Care Outcomes Centre, Queensland University of Technology, Qld, Australia

Supplementary file

Supplementary Table 1: Median (IQR) and sum OOP costs for all services covered in self-reported survey data

In the LAST 3 MONTHS, how much would you estimate to have spent on the following for your prostate cancer out of your own money. I.e. the amount you paid that was not covered by Medicare or your health insurance?	OOP cost (\$AU)	
	Median (IQR) per person	Sum
Medications (total for prescription and non-prescription) (n = 215)	\$0 (0 – 90)	\$19,342
Seeing your local GP (n = 210)	\$0 (0 – 40)	\$8,338
Seeing your specialist (n = 212)	\$73.5 (0 – 300)	\$71,584
Hospitalisations (for treatment and complications) (n = 204)	\$0 (0 – 0)	\$132,967
Medical tests (e.g. PSA and ultrasounds) (n = 207)	\$0 (0 – 0)	\$34,794
Medical equipment and supplies (n = 204)	\$0 (0 – 0)	\$5,395
Ambulance services (n = 204)	\$0 (0 – 0)	\$0
Transport costs (e.g. fuel, bus, taxi, parking) (n = 207)	\$0 (0 – 60)	\$13,829
Accommodation costs (n = 205)	\$0 (0 – 0)	\$3,950
Home and self-care assistance (n = 204)	\$0 (0 – 0)	\$1,338
Home modifications (e.g. plumbing, ramps) (n = 206)	\$0 (0 – 0)	\$1,280
Special food (n = 205)	\$0 (0 – 0)	\$4,490
Other (n = 192)	\$0 (0 – 0)	\$4,505

Supplementary Table 2. Demographic and clinical information for study participants, stratified by consent to provide MBS and PBS data (n = 302)

Variable	Level	Consented (n=256)	Did not consent (n=46)	Sig
Age (years) - M (SD)		66 (7.5)	64 (7.6)	0.10
Study group – N (%)	<i>Navigate</i>	134 (52)	20 (43)	0.27
	Usual care	122 (48)	26 (57)	
Management option – N (%)	Active surveillance	220 (86)	37 (80)	0.01
	Active treatment	16 (6)	7 (15)	
	No treatment	20 (8)	2 (4)	
Referral location – N (%)	Public centre	93 (36)	13 (28)	0.04
	Private centre	78 (31)	11 (24)	
	Unknown [†]	85 (33)	22 (48)	
Referral type – N (%)	Treatment centre	141 (55)	22 (48)	0.56
	Clinician referred	83 (32)	16 (35)	
	Self-referral	32 (13)	8 (17)	
Country of birth – N (%)	Australia	188 (73)	33 (72)	0.81
	Other	68 (27)	13 (28)	
Employment status – N (%)	Employed	152 (60)	31 (67)	0.37
	Retired	97 (37)	15 (33)	
	Unemployed	7 (3)	0	
Highest education completed – N (%)	Secondary/primary schooling	75 (29)	12 (26)	0.13
	Trade/TAFE college	55 (22)	30 (65)	
	Tertiary education	126 (49)	4 (9)	
Marital status – N (%)	Married/de facto	211 (82)	41 (89)	0.61
	Other	45 (18)	5 (11)	
Annual household income – N (%)	Prefer not to say	51 (20)	5 (17)	0.39
	\$0 – 37,000	44 (17)	3 (10)	
	\$37,001 – 80,000	55 (21)	9 (30)	
	\$80,001 – 180,000	61 (24)	11 (37)	
	Over \$180,000	45 (18)	2 (7)	
PSA level - M (SD) [‡]		5.4 (3.1)	5.1 (2.6)	0.53
Gleason score [§] – N (%)	3+3=6	192 (75)	34 (74)	0.81
	3+4=7 or 4+3=7	64 (25)	12 (26)	
No. of comorbidities - M (SD)		1.9 (1.5)	N/A [^]	

Note: M = mean. SD = standard deviation. Sig = p-value. TAFE = technical and further education. PSA = prostate-specific antigen. *sig at p<0.05. [^]Unable to be calculated as PBS data not obtained for this group. [†]Unknown indicates referral from clinicians working in both private and public treatment centres or participants who self-referred into the study. [‡]PSA levels ≥10 are indicative of intermediate risk prostate cancer.^{3,4} [§]Gleason scores of 6 are categorized as Grade Group 1 prostate cancer, which is typically low-risk prostate cancer. Gleason scores of 7 are categorized as Grade Group 2 prostate cancer and are more indicative of intermediate risk prostate cancer.⁴

Supplementary Table 3. Demographic and clinical information for study participants, stratified by whether or not participants incurred a cost for specialist services (n = 212)

Variable	Level	Incurred cost (n=112)	Did not incur cost (n=100)	Sig
Age (years) - M (SD)		66 (6.8)	67 (8.0)	0.67
Study group – N (%)	<i>Navigate</i>	60 (54)	55 (55)	0.83
	Usual care	52 (46)	45 (45)	
Management option – N (%)	Active surveillance	94 (85)	87 (88)	0.23
	Active treatment	9 (8)	3 (3)	
	No treatment	7 (7)	9 (9)	
Referral location – N (%)	Public centre	17 (15)	55 (55)	<0.001
	Private centre	45 (40)	20 (20)	
	Unknown [†]	50 (45)	25 (25)	
Referral type – N (%)	Treatment centre	47 (42)	65 (65)	<0.01
	Clinician referred	45 (40)	25 (25)	
	Self-referral	20 (18)	10 (10)	
Country of birth – N (%)	Australia	90 (80)	72 (72)	0.15
	Other	22 (20)	28 (28)	
Employment status – N (%)	Employed	73 (65)	52 (52)	0.051
	Retired	39 (35)	48 (48)	
	Unemployed	-	-	
Highest education completed – N (%)	Secondary/primary schooling	22 (20)	34 (34)	0.03
	Trade/TAFE college	24 (22)	42 (42)	
	Tertiary education	66 (58)	24 (24)	
Marital status – N (%)	Married/de facto	92 (82)	82 (82)	0.98
	Other	20 (18)	18 (18)	
Annual household income – N (%)	Prefer not to say	18 (16)	11 (11)	0.17
	\$0 – 37,000	8 (7)	6 (6)	
	\$37,001 – 80,000	33 (30)	41 (41)	
	\$80,001 – 180,000	26 (23)	28 (28)	
	Over \$180,000	27 (24)	14 (14)	
PSA level - M (SD) [‡]		5.4 (2.8)	5.7 (3.6)	0.59
Gleason score [§] – N (%)	3+3=6	76 (68)	84 (84)	0.02
	3+4=7 or 4+3=7	36 (32)	16 (16)	
No. of comorbidities - M (SD)		1.9 (1.5)	1.9 (1.5)	0.96

Note: M = mean. SD = standard deviation. Sig = p-value. TAFE = technical and further education. PSA = prostate-specific antigen. *sig at p<0.05. [†]Unknown indicates referral from clinicians working in both private and public treatment centres or participants who self-referred into the study. [‡]PSA levels ≥10 are indicative of intermediate risk prostate cancer. ^{3,4} [§]Gleason scores of 6 are categorized as Grade Group 1 prostate cancer, which is typically low-risk prostate cancer. Gleason scores of 7 are categorized as Grade Group 2 prostate cancer and are more indicative of intermediate risk prostate cancer.⁴

Additional information on multiple imputation methods

Imputed treatment choice was adjusted for Gleason score, prostate specific antigen level, number of comorbidities, highest education attainment, COST-FACIT score, having been on the Medicare safety net, cost of prostate cancer treatment causing distress and cost of treatment influencing treatment decision. Imputed self-reported cost values were adjusted for Gleason score, prostate specific antigen level, number of comorbidities, COST-FACIT score, having been on the Medicare safety net, cost of prostate cancer treatment causing distress and cost of treatment influencing treatment decision.

*Correspondence to: Email: Daniel.lindsay@qimberghofer.edu.au