Appendix

**This appendix was part of the submitted manuscript and has been peer reviewed.
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Table 1: Patient and service characteristics associated with odds of appropriate testing using NHMRC Guideline (unadjusted and adjusted models with and without BMI)

| Characteristic | 35+ and Tested in last 3 yrs | Odds of Appropriate Testing | | | | | |
| | | Crude | | Adjusted | | | |
	Yes (n=8330)	Odds ratios (95% CI)	p-value	Odds ratios[a] (95% CI)	p-value	Odds ratios[b] (95% CI)	p-value
Remoteness							
Major City	2789 (79%)	1.10 (0.31, 3.89)	0.9010	0.93 (0.20, 4.35)	0.9956	0.74 (0.16, 3.50)	0.8768
Inner and outer regional	3273 (80%)	1.25 (0.48, 3.27)		1.00 (0.33, 3.05)		1.10 (0.36, 3.37)	
Remote or very remote	2268 (72%)	ref		ref		ref	
Adult patient volume							
<1,000	662 (65%)	0.59 (0.24, 1.46)	0.2514	0.58 (0.19, 1.83)	0.3578	0.51 (0.16, 1.60)	0.2467
> 1,000	7668 (79%)	ref		ref		ref	
Status							
Current Patient	7166 (80%)	2.81 (2.47, 3.21)	<.0001	0.97 (0.81, 1.15)	0.7011	1.46 (1.26, 1.70)	<.0001
Transient Patient	1164 (66%)	ref		ref		ref	
Gender							
Male	3747 (77%)	0.99 (0.89, 1.09)	0.7726	1.00 (0.88, 1.12)	0.9386	1.04 (0.93, 1.16)	0.4787
Female	4583 (77%)	ref		ref		ref	
Age (years)							
35-50	5722 (77%)	0.81 (0.73, 0.90)	0.0001	0.78 (0.68, 0.89)	0.0002	0.83 (0.74, 0.94)	0.0023
>50	2608 (79%)	ref		ref		ref	
No. of visits							
<4	1173 (49%)	0.10 (0.09, 0.11)	<.0001	0.23 (0.20, 0.27)	<.0001	0.11 (0.10, 0.12)	<.0001
>4	7157 (86%)	ref		ref		ref	
BMI							
Missing/unknown	1665 (45%)	0.04 (0.04, 0.05)	<0.001	0.07 (0.06, 0.08)	<.0001	-	-
< 25 kg/m2	2106 (94%)	1.00 (0.78, 1.28)		1.01 (0.78, 1.30)		-	
25-29.9 kg/m2	1890 (94%)	1.01 (0.78, 1.31)		1.02 (0.79, 1.33)		-	
≥30 kg/m2	2669 (94%)	ref		ref		-	

[a] Sensitivity analysis in the adjusted regression performed with BMI values (sensitivity analysis performed both with and without BMI values due to the large amount of missing BMI data)

[b] Sensitivity analysis in the adjusted regression performed without BMI values (sensitivity analysis performed both with and without BMI values due to the large amount of missing BMI data)

Table 2: Patient and service characteristics associated with odds of appropriate testing using RACGP/DA Guideline (unadjusted and adjusted models with and without BMI)

| Characteristic | 18+ and Tested in last 3 yrs | Odds of Appropriate Testing | | | | | |
| | | Crude | | Adjusted | | | |
	Yes (n=15592)	Odds ratios (95% CI)	p-value	Odds ratios[a] (95% CI)	p-value	Odds ratios[b] (95% CI)	p-value
Remoteness			0.999		0.944		0.917
Major City	4983 (74%)	0.97 (0.25, 3.78)	0.968	0.89 (0.19, 4.15)	0.885	0.70 (0.13, 3.72)	0.679
Inner and outer regional	5800 (75%)	0.99 (0.36, 2.75)	0.987	0.83 (0.27, 2.49)	0.735	0.88 (0.27, 2.90)	0.831
Remote or very remote	4809 (73%)	ref		ref		ref	
Adult patient volume							
<1,000	1419 (66%)	0.66 (0.25, 1.74)	0.398	0.66 (0.22, 2.05)	0.478	0.58 (0.17, 1.97)	0.3855
≥1,000	14173 (75%)	ref		ref		ref	
Status							
Current Patient	13463 (76%)	2.43 (2.20, 2.67)	<0.001	1.04 (0.92, 1.17)	0.54	1.51 (1.36, 1.68)	<0.001
Transient Patient	2129 (66%)	ref		ref		ref	
Gender							
Male	6606 (73%)	0.84 (0.78, 0.89)	<0.001	0.94 (0.86, 1.02)	0.136	0.95 (0.88, 1.02)	0.1762
Female	8986 (75%)	ref		ref		ref	
Age (years)			<0.001		<0.001		<0.001
18-34	7262 (71%)	0.64 (0.47, 0.87)	0.005	0.49 (0.34, 0.70)	<0.001	0.72 (0.52, 1.01)	0.057
35-50	5722 (77%)	0.94 (0.69, 1.28)	0.687	0.80 (0.55, 1.14)	0.218	1.07 (0.76, 1.49)	0.71
51-70	2402 (79%)	1.20 (0.87, 1.66)	0.255	1.03 (0.71, 1.49)	0.885	1.35 (0.95, 1.90)	0.092
>70	206 (75%)	ref		ref		ref	
No. of visits							
≤4	2371 (47%)	0.12 (0.11, 0.13)	<0.001	0.26 (0.24, 0.29)	<0.001	0.13 (0.12, 0.14)	<0.001
>4	13221 (83%)	ref		ref		ref	
BMI			<0.001		<0.001		-
Missing/unknown	2928 (41%)	0.05 (0.04, 0.06)	<0.001	0.07 (0.07, 0.08)	<0.001	-	
< 25 kg/m^2	4396 (91%)	0.79 (0.68, 0.92)	0.002	0.84 (0.72, 0.98)	0.031	-	
25-29.9 kg/m^2	3464 (92%)	0.91 (0.77, 1.07)	0.259	0.94 (0.80, 1.11)	0.489	-	
≥30 kg/m^2	4804 (92%)	ref		ref		-	

[a] Sensitivity analysis in the adjusted regression performed with BMI values (sensitivity analysis performed both with and without BMI values due to the large amount of missing BMI data)

[b] Sensitivity analysis in the adjusted regression performed without BMI values (sensitivity analysis performed both with and without BMI values due to the large amount of missing BMI data)

Table 3: Patient and service characteristics associated with odds of appropriate testing using NACCHO Guideline (unadjusted and adjusted models with and without BMI)

| Characteristic | 18+ and Tested annually | Odds of Appropriate Testing | | | | | |
| | | Crude | | Adjusted | | | |
	Yes (n=3826)	Odds ratios (95% CI)	p-value	Odds ratios[a] (95% CI)	p-value	Odds ratios[b] (95% CI)	p-value
Remoteness			0.9510		0.9244		0.8744
Major City	995 (15%)	0.81 (0.18, 3.74)	0.7913	0.75 (0.14, 4.10)	0.7434	0.63 (0.10, 3.76)	0.6106
Inner and outer regional	1274 (16%)	1.03 (0.32, 3.27)	0.9585	0.81 (0.24, 2.74)	0.7353	0.82 (0.23, 2.99)	0.7681
Remote or very remote	1557 (24%)	ref		ref		ref	
Adult patient volume							
<1,000	317 (15%)	0.93 (0.30, 2.85)	0.8975	1.10 (0.32, 3.80)	0.8861	1.03 (0.28, 3.84)	0.9606
≥ 1,000	3509 (19%)	ref		ref		ref	
Status							
Current Patient	3576 (20%)	5.16 (4.47, 5.97)	<.0001	2.85 (2.43, 3.33)	<0.001	3.82 (3.28, 4.45)	<0.001
Transient Patient	250 (7.7%)	ref		ref		ref	
Gender							
Male	1473 (16%)	0.75 (0.69, 0.80)	<.0001	0.80 (0.73, 0.87)	<0.001	0.75 (0.69, 0.81)	<0.001
Female	2353 (20%)	ref		ref		ref	
Age (years)			<0.001				<0.001
18-34	1423 (14%)	0.29 (0.22, 0.38)	<0.001	0.19 (0.14, 0.27)	<0.001	0.27 (0.20, 0.36)	<0.001
35-50	1499 (20%)	0.50 (0.38, 0.66)	<0.001	0.36 (0.26, 0.51)		0.50 (0.37, 0.67)	<0.001
51-70	816 (27%)	0.80 (0.60, 1.07)	0.127	0.62 (0.44, 0.86)		0.83 (0.61, 1.13)	0.243
>70	88 (32%)	ref		ref		ref	
No. of visits							
≤4	25 (0.5%)	0.01 (0.01, 0.02)	<0.001	0.03 (0.02, 0.05)	<0.001	0.02 (0.01, 0.03)	<0.001
>4	3801 (24%)	ref		ref		ref	
BMI			<0.001				
Missing/unknown	151 (2.1%)	0.04 (0.04, 0.05)	<0.001	0.07 (0.06, 0.09)	<0.001	-	-
< 25 kg/m^2	1118 (23%)	0.56 (0.51, 0.61)	<0.001	0.57 (0.52, 0.63)		-	
25-29.9 kg/m^2	1003 (27%)	0.78 (0.71, 0.86)	<0.001	0.80 (0.72, 0.88)		-	
≥30 kg/m^2	1554 (30%)	ref		ref		-	

[a] Sensitivity analysis in the adjusted regression performed with BMI values (sensitivity analysis performed both with and without BMI values due to the large amount of missing BMI data)

[b] Sensitivity analysis in the adjusted regression performed without BMI values (sensitivity analysis performed both with and without BMI values due to the large amount of missing BMI data)