
Appendix 1. Independent variables used in analyses

Patient variables	Age
	Aboriginal and/or Torres Strait Islander status
	NESB
	New to practice
	New to general practice registrar
Registrar variables	Gender
	Term of training
	Additional postgraduate women's health training
	Year of graduation
	Location of first medical degree – AMG or IMG
Practice variables	Bulk-billing (accepted government rebate as full payment for consultation)
	Regional training organisation sub-region
	Rurality/urbanicity (assessed by the ASGC-RA ²¹ by practice postcode)
	Decile of socioeconomic status (according to the SEIFA-IRSD ²⁰ by practice postcode)
Consultation variables	Old or new problem
	Consultation duration (minutes)
	Whether in-consultation information or assistance was sought from supervisor, or other sources
	Referral made
	Pathology ordered
	Imaging ordered

AMG, Australian medical graduate; ASGC-RA, Australian Standard Geographical Classification – remoteness area; IMG, International medical graduate; NESB, non-English-speaking background; SEIFA-IRSD, Socio-economic Indexes for Areas – Index of Relative Socio-economic Disadvantage.

Appendix 2. ICP-2 codes used to define heavy menstrual bleeding problems

Category	Description	ICPC-2 PLUS codes	
Hypermenorrhoea	Hypermenorrhoea	X06	2
Menorrhagia; premenopausal	Premenopausal menorrhagia	X06	3
Menorrhagia; puberty	Menorrhagia at puberty	X06	4
Menorrhagia	Menorrhagia	X06	5
Menstruation; excessive	Excessive menstruation	X06	6

ICPC-2 PLUS, International Classification for Primary Care version 2.

Appendix 3. ATC codes for OHMs

Categorisation	ATC code	Medication name
Hormonal – general (oral)	G03A	Hormonal contraceptive for systemic use
Hormonal – progesterone-only contraceptive pill	G03AC03/G03AD01	Levonorgestrel
Hormonal – combined oral contraceptive pill	G03HB01	Cyproterone and estrogen
	G03AA12	Drospirenone and ethinylestradiol
	G03FA17	Drospirenone and estrogen
	G03FA14	Dydrogesterone and estrogen
	G03AA10	Gestodene and ethinylestradiol
	G03AA07	Levonorgestrel and ethinylestradiol
	G03AB03	Levonorgestrel and ethinylestradiol
	G03FA11	Levonorgestrel and estrogen
	G03AA14	Nomegestrol and estradiol
	G03FB12	Nomegestrol and estrogen
	G03AA05	Norethisterone and ethinylestradiol
	G03FA01	Norethisterone and estrogen
	G03AB04	Norethisterone and ethinylestradiol
	Hormonal – oral progestogens	G03DA02
G03DC02		Norethisterone
G03DA04		Progesterone
G03AC10		Drospirenone
G03AC01		Norethisterone
Hormonal – gonadotropin antagonist (oral)	G03XA01	Danazol
Hormonal – oestrogen only	G03CA57	Conjugated estrogens

ATC, Anatomical Therapeutic Chemical; OHM, oral hormonal medication.

Appendix 4. Proportion of TXA prescribed by year of consultation, for all HMB problems, and for problems where TXA or OHMs were prescribed

Year	Count	TXA prescribed, proportion of all HMB problems (95% CI)		TXA prescribed, proportion of HMB problems for which TXA or OHMs prescribed (95% CI)	
		Raw	Adjusted	Raw	Adjusted
2010	1	0.05 (0.00–0.26)	0.09 (0.04–0.13)	0.14 (0.00–0.58)	0.30 (0.16–0.43)
2011	2	0.05 (0.01–0.18)	0.09 (0.05–0.13)	0.25 (0.03–0.65)	0.32 (0.20–0.44)
2012	2	0.04 (0.00–0.13)	0.10 (0.06–0.14)	0.15 (0.02–0.45)	0.34 (0.23–0.45)
2013	19	0.15 (0.10–0.23)	0.11 (0.07–0.14)	0.46 (0.31–0.63)	0.36 (0.26–0.46)
2014	18	0.14 (0.08–0.21)	0.12 (0.09–0.15)	0.37 (0.23–0.52)	0.39 (0.30–0.47)
2015	20	0.14 (0.08–0.20)	0.13 (0.10–0.16)	0.38 (0.25–0.53)	0.41 (0.34–0.48)
2016	15	0.16 (0.09–0.25)	0.14 (0.11–0.16)	0.45 (0.28–0.64)	0.43 (0.37–0.49)
2017	18	0.11 (0.07–0.17)	0.15 (0.13–0.17)	0.39 (0.25–0.55)	0.45 (0.41–0.50)
2018	39	0.14 (0.10–0.18)	0.16 (0.14–0.18)	0.46 (0.35–0.58)	0.48 (0.44–0.52)
2019	62	0.20 (0.16–0.25)	0.17 (0.16–0.19)	0.56 (0.46–0.65)	0.50 (0.46–0.54)
2020	46	0.19 (0.14–0.25)	0.19 (0.16–0.21)	0.55 (0.44–0.66)	0.53 (0.48–0.57)
2021	74	0.22 (0.18–0.27)	0.20 (0.17–0.23)	0.64 (0.55–0.73)	0.55 (0.49–0.61)
2022	64	0.20 (0.15–0.24)	0.21 (0.18–0.25)	0.53 (0.44–0.62)	0.57 (0.50–0.64)
2023	35	0.20 (0.14–0.27)	0.23 (0.18–0.28)	0.56 (0.43–0.69)	0.60 (0.51–0.68)

CI, confidence interval; HMB, heavy menstrual bleeding; OHM, oral hormonal medication; TXA, tranexamic acid.

Appendix 5. Missingness of independent variables in all HMB problems in the study period

Group	Variable	Non-missing (n)	Missing (n)	% missing
Outcome	TXA prescribed	2438	0	0.0
Time	Year of consultation	2438	0	0.0
Patient	Patient age	2406	32	1.3
	Patient/practice status (new or existing)	2406	32	1.3
	NESB	2157	281	12.0
	Aboriginal and/or Torres Strait Islander background	2199	239	9.8
Registrar	Registrar gender	2424	14	0.6
	Training term/post	2438	0	0.0
	Additional training in women's health	2401	37	1.5
	Qualified as a doctor in Australia	2407	31	1.3
	Year of graduation	2398	40	1.6
Practice	Practice routinely bulk bills	2357	81	3.3
	Rurality	2438	0	0.0
	Socioeconomic indices for area	2426	12	0.5
	Registrar training region	2438	0	0.0
Consultation	Consultation duration	2351	87	3.6
	New problem	2347	91	3.7
	Sought assistance	2438	0	0.0
	Pathology ordered	2438	0	0.0
	Imaging ordered	2438	0	0.0
	Referral ordered	2438	0	0.0

HMB, heavy menstrual bleeding; NESB, non-English-speaking background; TXA, tranexamic acid.

Appendix 6. Characteristics associated with prescribing TXA for all HMB problems, and among problems where TXA or OHMs were prescribed (2010–23)

Variable group	Variable	Class	TXA prescribed			TXA vs OHM		
			Yes	No	P	TXA	OHM	P
Time	Year of consultation	Mean (SD)	2019 (3)	2018 (3)	<0.001	2019 (3)	2018 (3)	<0.001
Patient	Patient age	Mean (SD)	34 (12)	33 (12)	0.47	34 (12)	28 (13)	<0.001
	Patient/practice status	Existing patient	189 (46)	973 (49)	0.26	189 (46)	177 (44)	0.22
		New to registrar	181 (44)	875 (44)		181 (44)	198 (49)	
		New to practice	40 (10)	148 (7)		40 (10)	26 (6)	
	NESB	No	340 (92)	1640 (92)	0.81	340 (92)	348 (96)	0.063
		Yes	30 (8)	147 (8)		30 (8)	15 (4)	
	Aboriginal and/or Torres Strait Islander background	No	354 (95)	1779 (97)	0.065	354 (95)	355 (96)	0.82
Yes		17 (5)	49 (3)	17 (5)		15 (4)		
Registrar	Registrar gender	Male	88 (22)	406 (20)	0.54	88 (22)	91 (22)	1.00
		Female	321 (78)	1609 (80)		321 (78)	317 (78)	
	Training term/post	Term 1	120 (29)	763 (38)	<0.001	120 (29)	147 (36)	0.016
		Term 2	137 (33)	704 (35)		137 (33)	142 (35)	
		Term 3	158 (38)	556 (27)		158 (38)	121 (30)	
	Additional training in women's health	No	364 (90)	1806 (91)	0.65	364 (90)	362 (89)	0.99
		Yes	42 (10)	189 (9)		42 (10)	43 (11)	
Qualified as a doctor in Australia	No	87 (21)	357 (18)	0.095	87 (21)	69 (17)	0.10	
	Yes	320 (79)	1643 (82)		320 (79)	336 (83)		
Year of graduation	Mean (SD)	2012 (5)	2012 (5)	0.30	2012 (5)	2012 (5)	0.29	
Practice	Practice routinely bulk bills	No	285 (71)	1376 (70)	0.87	285 (71)	298 (75)	0.24
		Yes	116 (29)	580 (30)		116 (29)	100 (25)	
	Rurality	Major city	239 (58)	1169 (58)	0.60	239 (58)	208 (51)	0.17
		Inner regional	136 (33)	690 (34)		136 (33)	162 (40)	
		Outer regional/remote	40 (10)	164 (8)		40 (10)	40 (10)	
	Socioeconomic indices for areas	Mean (SD)	5 (3)	5 (3)	0.97	5 (3)	5 (3)	0.79

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Appendix 6. Characteristics associated with prescribing TXA for all HMB problems, and among problems where TXA or OHMs were prescribed (2010–23) (cont'd)

Consultation	Consultation duration	Mean (SD)	22 (10)	22 (10)	0.99	22 (10)	21 (10)	0.22
	New problem	No	236 (59)	1170 (60)	0.81	236 (59)	248 (63)	0.29
Yes		165 (41)	776 (40)		165 (41)	148 (37)		
Sought assistance	None		267 (64)	1557 (77)	<0.001	267 (64)	267 (65)	0.002
	Supervisor		28 (7)	153 (8)		28 (7)	58 (14)	
	Other sources		120 (29)	313 (15)		120 (29)	85 (21)	
Pathology ordered	No		250 (60)	1280 (63)	0.26	250 (60)	293 (71)	0.002
	Yes		165 (40)	743 (37)		165 (40)	117 (29)	
Imaging ordered	No		271 (65)	1462 (72)	0.021	271 (65)	355 (87)	<0.001
	Yes		144 (35)	561 (28)		144 (35)	55 (13)	
Referral ordered	No		350 (84)	1637 (81)	0.12	350 (84)	351 (86)	0.55
	Yes		65 (16)	386 (19)		65 (16)	59 (14)	

Data are presented as n (%) unless otherwise stated.

HMB, heavy menstrual bleeding; NESB, non-English-speaking background; OHM, oral hormonal medication; SD, standard deviation; TXA, tranexamic acid.