

**Additional Interpretation:**

Our study showed that male patients were more likely to miss their appointment compared to female patients (adjusted OR: 1.08 [95% CI 1.06-1.09]). This finding contradicts with finding from studies done in neighbouring country (Kingdom of Saudi Arabia) showed that female patients were more likely to miss their hospital appointment.<sup>1,2</sup> This can be explained by the fact that most of our study population were in the working age groups (19-60 years old) which mean that they were more likely to be employed. Similar finding was found in a study conducted in UK showed that there was 33% decrease on the odd ratio of missing hospital appointment for women compared to men.<sup>3</sup>

Nationality was not a predictor for missing hospital appointment as shown in our study when we looked at the general model (adjusted OR: 1.01[95% CI 0.96-1.06]). However, when we looked at the Obstetrics & Gynaecology clinic, non-Omani patients were 14% (adjusted OR: 1.14 [95% CI 1.05-1.24]) more likely to miss their appointment compared to Omani patients. This could be explained by the fact that non-Omani patients who attend the clinic can be only expatriate patients who either work in the government sector or work in private sector. For expatriate who work in the government sector, some of them have a medical insurance provided to them in addition to their free treatment in the government hospital. So, they have the option to attend the hospital appointment or just seek the treatment in private hospital using their health insurance. Also, for the expatriate patients who do not work in the government sector, they will have to pay for the treatment when they attend the government hospital. So, some of them will obtain medical services from private hospital instead of waiting for the appointment and this can be noticed clearly in the Obstetrics and Gynaecology clinic.

1. Almalki A. Missed appointments at maternal healthcare clinics in primary healthcare centres in Riyadh city: reasons and associated factors. *J Hosp Adm.* 2014;3(4):92-100. doi:10.5430/jha.v3n4p92
2. AlSadhan SA. Frequency of missed and cancelled appointments in King Saud University orthodontic clinic. *King Saud Univ J Dent Sci.* 2013;4(2):77-80. doi:10.1016/j.ksujds.2013.04.001
3. Neal RD, Hussain-Gambles M, Allgar VL, Lawlor DA, Dempsey O. Reasons for and consequences of missed appointments in general practice in the UK: Questionnaire survey and prospective review of medical records. *BMC Fam Pract.* 2005;6:1-6. doi:10.1186/1471-2296-6-47



**Supplementary Figure 1: A map of Oman depicting the governorate regions. This image shows the official 11 governorates in the Sultanate of Oman and shows the distance from each governorate to the capital city of Muscat where the Royal Hospital is located. Image downloaded in June 2021 from : [https://d-maps.com/carte.php?num\\_car=245546&lang=en](https://d-maps.com/carte.php?num_car=245546&lang=en)**

**Supplementary Table 1: Number of appointments missed and attended by decile**

Decile	Number of prior appointments	Attend	Missed	Total	% Attended	% Missed
1*	0	137130	37547	174677	78.5	21.5
2	1	86791	32176	118967	73.0	27.0
3	2	62751	21130	83881	74.8	25.2
4	3	47843	15033	62876	76.1	23.9
5	4	37997	10904	48901	77.7	22.3
6	5 to 6	55272	14964	70236	78.7	21.3
7	7 to 9	52357	13559	65916	79.4	20.6
8	10 to 15	56077	13266	69343	80.9	19.1
9	16+	61011	13310	74321	82.1	17.9

\*Decile 1 and 2 were merged as they were the same 1 appointment (no prior appointments).

**Supplementary Table 2: Baseline characteristics for the study population overall and stratified by attended and missed appointments showing additional variables**

Variable	Patients (1) N=174677	Scheduled appointments (2) N=769811	Attended N (%) 597229 (77.7%)	Missed N (%) 171889 (22.3%)
<b>Appointment Month</b>				p value <0.001
January	14770 (8.5)	65615 (8.5)	51486 (78.5)	14129 (21.5)
February	14234 (8.1)	63416 (8.2)	50347 (79.4)	13069 (20.6)
March	15665 (9.0)	69680 (9.1)	55541 (79.7)	14139 (20.3)
April	14720 (8.4)	65927 (8.6)	51734 (78.5)	14193 (21.5)
May	15567 (8.9)	69506 (9.0)	53468 (76.9)	16038 (23.1)
June	12947 (7.4)	56594 (7.4)	42332 (74.8)	14262 (25.2)
July	12177 (7.0)	54711 (7.1)	41802 (76.4)	12909 (23.6)
August	13689 (7.8)	61016 (7.9)	46825 (76.7)	14191 (23.3)
September	13708 (7.8)	60495 (7.9)	47218 (78.1)	13277 (21.9)
October	15589 (8.9)	68002 (8.8)	53032 (78.0)	14970 (22.0)
November	15414 (8.8)	65836 (8.6)	50668 (77.0)	15168 (23.0)
December	16196 (9.3)	68320 (8.9)	52776 (77.2)	15544 (22.8)
<b>Appointment Year</b>				p value <0.001
2014	31319 (17.9)	123627 (16.1)	95959 (77.6)	27668 (22.4)
2015	31119 (17.8)	139336 (18.1)	106327 (76.3)	33009 (23.7)
2016	33215 (19.0)	155211 (20.2)	121165 (78.1)	34046 (21.9)
2017	35770 (20.5)	175806 (22.9)	136277 (77.5)	39529 (22.5)
2018	43254 (24.8)	175138 (22.8)	137501 (78.5)	37637 (21.5)
<b>Marital Status</b>				p value <0.001
Child (<13Years)	37207 (21.3)	136295 (17.7)	109244 (80.2)	27051 (19.8)
Single	256970 (14.7)	116449 (15.1)	89208 (76.6)	27241 (23.4)
Married	82648 (47.3)	406553 (52.9)	316807 (77.9)	89746 (22.1)
Divorced	588 (0.3)	3444 (0.4)	2577 (74.8)	867 (25.2)
Widow	1031 (0.6)	5360 (0.7)	3988 (74.4)	1372 (25.6)
Missing	27506 (15.7)	101017 (13.1)	75405 (74.6)	25612 (25.4)
<b>Nationality</b>				p value <0.001
Omani	164825 (94.4)	729824 (94.9)	568262 (77.9)	161562 (22.1)
Non-Omani	9852 (5.6)	39294 (5.1)	28967 (73.7)	10327 (26.3)

1. One appointment per patient scheduled during the five year period selected at random.
2. All appointments scheduled during the five year period with multiple appointments per patient.

**Supplementary Table 3: The study population by clinic, overall and stratified by attended and missed appointments by different medical specialties**

Variable	Patients (1)	Scheduled appointments (2)	Attended N (%)	Missed N (%)
	N=174677	N=769118	597229 (77.7%)	171889 (22.3%)
<b>Medical Specialty</b>	p value <0.001			
Acute Medical Admission	741 (0.4)	1810 (0.2)	1044 (57.7)	766 (42.3)
Adolescent Medicine	12 (0.0)	61 (0.0)	45 (73.8)	16 (26.2)
Anaesthesia	2288 (1.3)	10280 (1.3)	8054 (78.3)	2226 (21.7)
Cardiology (Adult Only)	20157 (11.5)	59966 (7.8)	44027 (73.4)	15939 (26.6)
Chest Medicine	3130 (1.8)	18027 (2.3)	12754 (70.7)	5273 (29.3)
Clinical Haematology	2405 (1.4)	17066 (2.2)	13658 (80.0)	3408 (20.0)
Clinical Immunology & Allergy	572 (0.3)	1671 (0.2)	1039 (62.2)	632 (37.8)
Diabetes & Endocrine	8867 (5.1)	84769 (11.0)	62351 (73.6)	22418 (26.4)
Ear Nose Throat	55 (0.0)	170 (0.0)	86 (50.6)	84 (49.4)
Gastroenterology	6616 (3.8)	29277 (3.8)	21250 (72.6)	8027 (27.4)
Genetic Disorders	217 (0.1)	575 (0.1)	347 (60.3)	228 (39.7)
Infectious Diseases	907 (0.5)	6856 (0.9)	5770 (84.2)	1086 (15.8)
Endocrinology	1090 (0.6)	4440 (0.6)	2862 (64.5)	1578 (35.5)
Hyperbaric Oxygen Therapy	21 (0.0)	91 (0.0)	46 (50.5)	45 (49.5)
Nephrology	2113 (1.2)	22637 (2.9)	19652 (86.8)	2985 (13.2)
Neurology	4100 (2.3)	11870 (1.5)	8087 (68.1)	3783 (31.9)
Obstetrics & Gynaecology	32203 (18.4)	127537 (16.6)	103648 (81.3)	23889 (18.7)
Oncology	6014 (3.4)	62041 (8.1)	53326 (86.0)	8715 (14.0)
Paediatric	44918 (25.7)	168699 (21.9)	134401 (79.7)	34298 (20.3)
Rheumatology	3553 (2.0)	18385 (2.4)	14650 (79.7)	3735 (20.3)
Surgery	18739 (10.7)	74762 (9.7)	56903 (76.1)	17859 (23.9)
Urology	15602 (8.9)	46825 (6.1)	32650 (69.7)	14175 (30.3)
<sup>‡</sup> VIP and Hospital staff	357 (0.2)	1303 (0.2)	579 (44.4)	724 (55.6)

1. One appointment per patient scheduled during the five year period selected at random.

2. All appointments scheduled during the five year period with multiple appointments per patient.

<sup>‡</sup>Very important people

**Supplementary Table 4: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictors appointment day, month and year stratified by clinic**

Fully adjusted OR (95% CI)							
	Diabetes & Endocrine	Surgery	Oncology	Urology	Gastroenterology	Obstetrics & Gynaecology	Paediatric
<b>Appointment Day</b> Reference: Sunday							
Monday	0.94 (0.90-0.98)	1.01 (0.96-1.07)	1.02 (0.94-1.09)	*	0.90 (0.83-0.97)	1.08 (1.03-1.13)	0.95 (0.91-0.98)
Tuesday	0.99 (0.94-1.04)	0.76 (0.72-0.81)	0.91 (0.85-0.97)	0.79 (0.74-0.83)	1.13 (1.00-1.28)	1.09 (1.04-1.15)	0.96 (0.92-0.99)
Wednesday	0.99 (0.94-1.03)	1.06 (1.00-1.12)	0.94 (0.88-1.01)	0.92 (0.87-0.97)	0.92 (0.84-1.01)	1.04 (0.99-1.09)	0.97 (0.93-1.00)
Thursday	0.76 (0.71-0.80)	0.96 (0.91-1.02)	0.89 (0.83-0.97)	0.83 (0.79-0.88)	1.01 (0.93-1.10)	1.12 (1.07-1.18)	0.87 (0.83-0.90)
<b>Appointment Month</b> Reference: January							
February	0.99 (0.91-1.07)	0.98 (0.90-1.07)	0.96 (0.85-1.07)	0.88 (0.80-0.98)	0.92 (0.82-1.04)	0.96 (0.90-1.03)	0.93 (0.87-0.98)
March	0.98 (0.91-1.06)	0.96 (0.88-1.04)	0.96 (0.86-1.08)	0.94 (0.85-1.03)	0.96 (0.85-1.08)	0.88 (0.82-0.94)	0.89 (0.84-0.94)
April	1.05 (0.97-1.13)	1.00 (0.92-1.09)	1.04 (0.93-1.17)	0.97 (0.87-1.07)	0.93 (0.82-1.06)	0.97 (0.90-1.04)	0.92 (0.87-0.98)
May	1.11 (1.03-1.19)	1.16 (1.07-1.26)	1.16 (1.04-1.30)	1.13 (1.03-1.25)	0.97 (0.86-1.09)	1.00 (0.93-1.07)	1.10 (1.04-1.17)
June	1.21 (1.11-1.31)	1.24 (1.14-1.35)	1.23 (1.10-1.38)	1.32 (1.19-1.46)	1.23 (1.09-1.40)	1.17 (1.09-1.25)	1.24 (1.17-1.32)
July	1.05 (0.97-1.13)	1.13 (1.04-1.24)	1.07 (0.95-1.20)	1.13 (1.02-1.25)	1.05 (0.92-1.20)	1.09 (1.01-1.17)	1.10 (1.03-1.17)
August	1.10 (1.02-1.19)	1.12 (1.03-1.22)	1.09 (0.97-1.22)	1.05 (0.95-1.15)	1.06 (0.93-1.20)	1.01 (0.94-1.09)	1.05 (0.99-1.11)
September	1.03 (0.95-1.12)	1.00 (0.91-1.08)	1.11 (0.99-1.25)	0.99 (0.89-1.09)	0.92 (0.81-1.04)	0.93 (0.87-1.00)	1.00 (0.94-1.06)
October	0.99 (0.92-1.07)	1.00 (0.92-1.08)	1.14 (1.02-1.27)	1.05 (0.96-1.16)	0.93 (0.81-1.05)	0.98 (0.92-1.05)	0.96 (0.91-1.02)
November	1.06 (0.99-1.15)	1.14 (1.04-1.24)	1.31 (1.17-1.46)	1.04 (0.94-1.15)	1.04 (0.91-1.18)	1.03 (0.96-1.10)	1.13 (1.07-1.20)
December	0.95 (0.88-1.02)	1.13 (1.04-1.23)	1.18 (1.06-1.32)	0.98 (0.89-1.08)	0.97 (0.85-1.10)	1.03 (0.96-1.10)	1.06 (1.00-1.12)
<b>Appointment Year</b> Reference: 2014							
2015	0.70 (0.65-0.75)	1.11 (1.05-1.18)	1.26 (1.17-1.37)	1.11 (1.03-1.18)	1.17 (1.07-1.27)	1.04 (0.99-1.09)	1.16 (1.12-1.21)
2016	0.98 (0.92-1.05)	1.07 (1.01-1.13)	0.91 (0.84-0.99)	1.00 (0.94-1.07)	1.08 (0.99-1.18)	0.96 (0.91-1.00)	1.02 (0.98-1.07)
2017	0.88 (0.83-0.94)	1.11 (1.05-1.18)	1.26 (1.17-1.37)	1.01 (0.94-1.08)	1.06 (0.97-1.16)	0.93 (0.89-0.97)	1.09 (1.04-1.13)
2018	0.76 (0.72-0.82)	1.04 (0.98-1.10)	1.40 (1.29-1.51)	0.99 (0.92-1.06)	0.82 (0.74-0.91)	0.84 (0.80-0.88)	1.03 (0.99-1.07)

\*No Observations recorded on this day.

**Supplementary Table 5: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictors age and marital status stratified by clinic**

Fully adjusted OR (95% CI)						
	Diabetes & Endocrine	Surgery	Oncology	Urology	Gastroenterology	Obstetrics & Gynaecology
<b>Age Categories</b> Reference: Age 31-40 years old						
19-30	0.96 (0.92-1.00)	1.17 (1.11-1.24)	1.12 (1.00-1.24)	1.27 (1.18-1.36)	1.22 (1.13-1.32)	1.13 (1.10-1.17)
41-50	0.92 (0.87-0.96)	0.89 (0.84-0.94)	1.02 (0.94-1.10)	0.93 (0.86-1.00)	0.95 (0.88-1.02)	1.13 (1.08-1.18)
51-60	0.83 (0.79-0.88)	0.87 (0.82-0.92)	0.98 (0.90-1.05)	0.88 (0.82-0.94)	1.02 (0.94-1.11)	1.28 (1.18-1.40)
61-70	0.89 (0.83-0.96)	0.97 (0.91-1.03)	1.09 (1.00-1.18)	0.94 (0.87-1.00)	1.31 (1.18-1.46)	1.83 (1.60-2.11)
71-80	0.88 (0.78-0.99)	1.12 (1.04-1.21)	1.25 (1.14-1.37)	1.25 (1.16-1.35)	1.94 (1.70-2.23)	2.15 (1.76-2.64)
81-90	0.53 (0.37-0.74)	1.62 (1.40-1.88)	1.31 (1.12-1.54)	1.48 (1.32-1.66)	1.73 (1.28-2.33)	1.70 (1.11-2.59)
>90 Years old	*	2.25 (1.46-3.46)	0.87 (0.53-1.41)	1.77 (1.28-2.44)	2.63 (1.01-6.83)	2.31 (0.97-5.47)
<b>Marital Status</b> Reference: Married						
Single	1.00 (0.96-1.05)	0.83 (0.79-0.88)	1.02 (0.94-1.11)	0.90 (0.85-0.96)	0.95 (0.88-1.02)	1.04 (0.98-1.09)
Divorced	1.18 (0.97-1.44)	1.21 (0.99-1.47)	1.43 (1.08-1.89)	0.88 (0.64-1.21)	0.96 (0.69-1.33)	1.31 (1.03-1.66)
Widow	0.94 (0.80-1.12)	1.18 (1.00-1.39)	1.40 (1.14-1.72)	1.01 (0.76-1.35)	1.12 (0.83-1.52)	1.11 (0.85-1.45)
Missing	1.12 (1.07-1.18)	1.11 (1.06-1.17)	1.03 (0.97-1.09)	1.29 (1.22-1.37)	1.21 (1.12-1.31)	1.40 (1.32-1.47)

\*Observations removed due to small numbers. Table excludes results from the Paediatric clinic as it has few observations for the categorisation variable: age category and marital status

**Supplementary Table 6: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictors sex, nationality and service cost stratified by clinic**

Fully adjusted OR (95% CI)							
	Diabetes & Endocrine	Surgery	Oncology	Urology	Gastroenterology	Obstetrics & Gynaecology	Paediatric
<b>Sex</b> <span style="float: right;"><b>Reference: Female</b></span>							
Male	0.99 (0.96-1.03)	1.07 (1.03-1.11)	1.20 (1.14-1.26)	0.96 (0.91-1.01)	0.98 (0.93-1.04)	*	1.00 (0.98-1.03)
<b>Nationality</b> <span style="float: right;"><b>Reference: Omani</b></span>							
Non-Omani	0.94 (0.84-1.05)	1.09 (0.97-1.22)	0.91 (0.77-1.09)	0.93 (0.80-1.09)	1.09 (0.89-1.34)	1.14 (1.05-1.24)	0.92 (0.80-1.05)
<b>Service Cost</b> <span style="float: right;"><b>Reference: Pay registration and visit fees only</b></span>							
<2 years old <sup>¥</sup>	*	*	*	*	*	*	1.19 (1.15-1.23)
Pay all fees	1.24 (1.07-1.43)	1.32 (1.14-1.53)	1.62 (1.35-1.96)	1.44 (1.19-1.73)	1.30 (1.00-1.67)	1.12 (1.00-1.26)	1.75 (1.51-2.02)
MSA <sup>†</sup>	0.73 (0.63-0.84)	0.65 (0.54-0.79)	0.86 (0.65-1.13)	0.59 (0.49-0.70)	0.57 (0.44-0.74)	0.76 (0.57-1.02)	0.70 (0.65-0.75)

\*This clinic does not have observations in this category

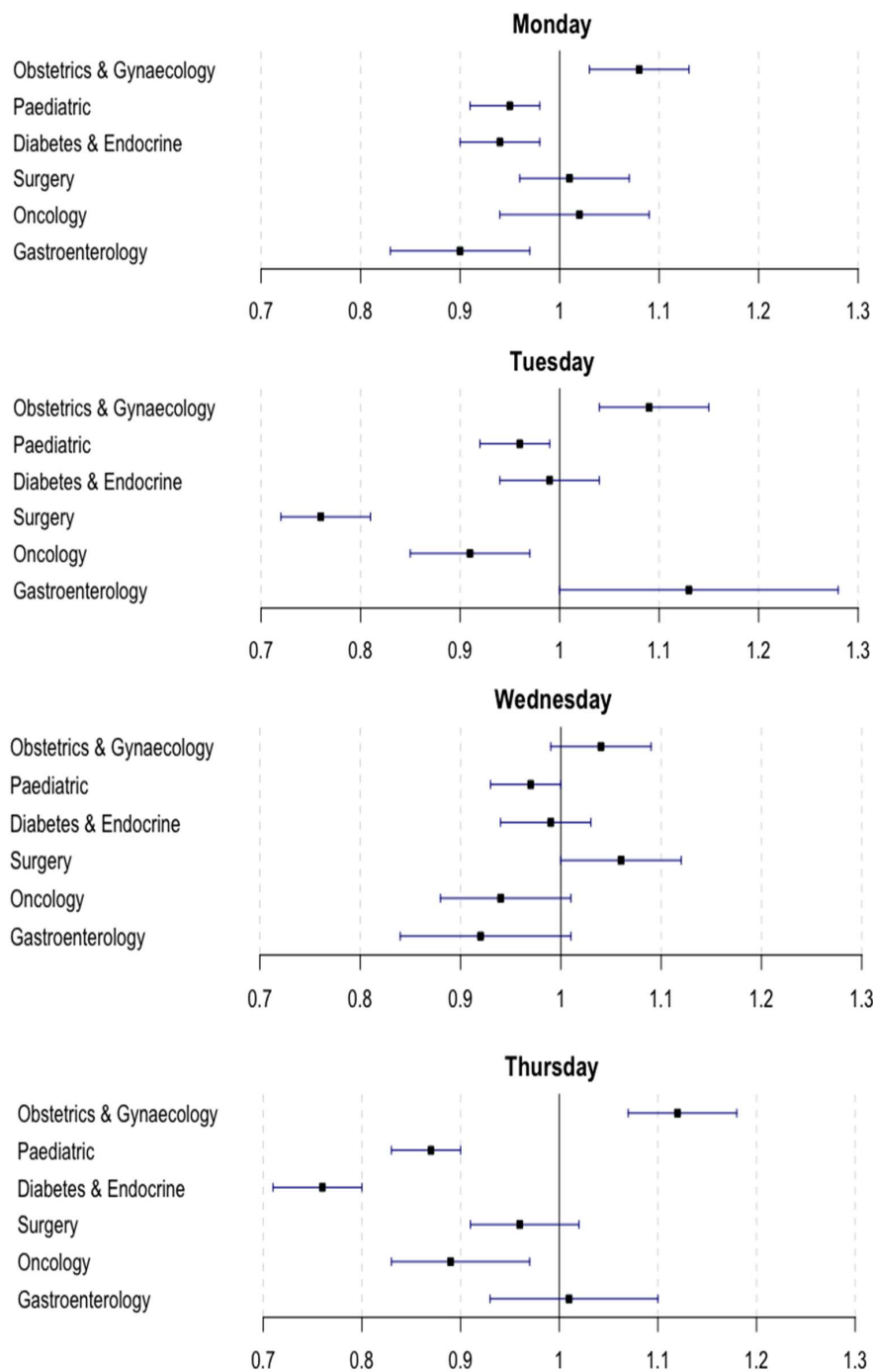
¥ Exempted from all medical service fees

† Under Ministry of social affair coverage ( exempted from all medical service cost)

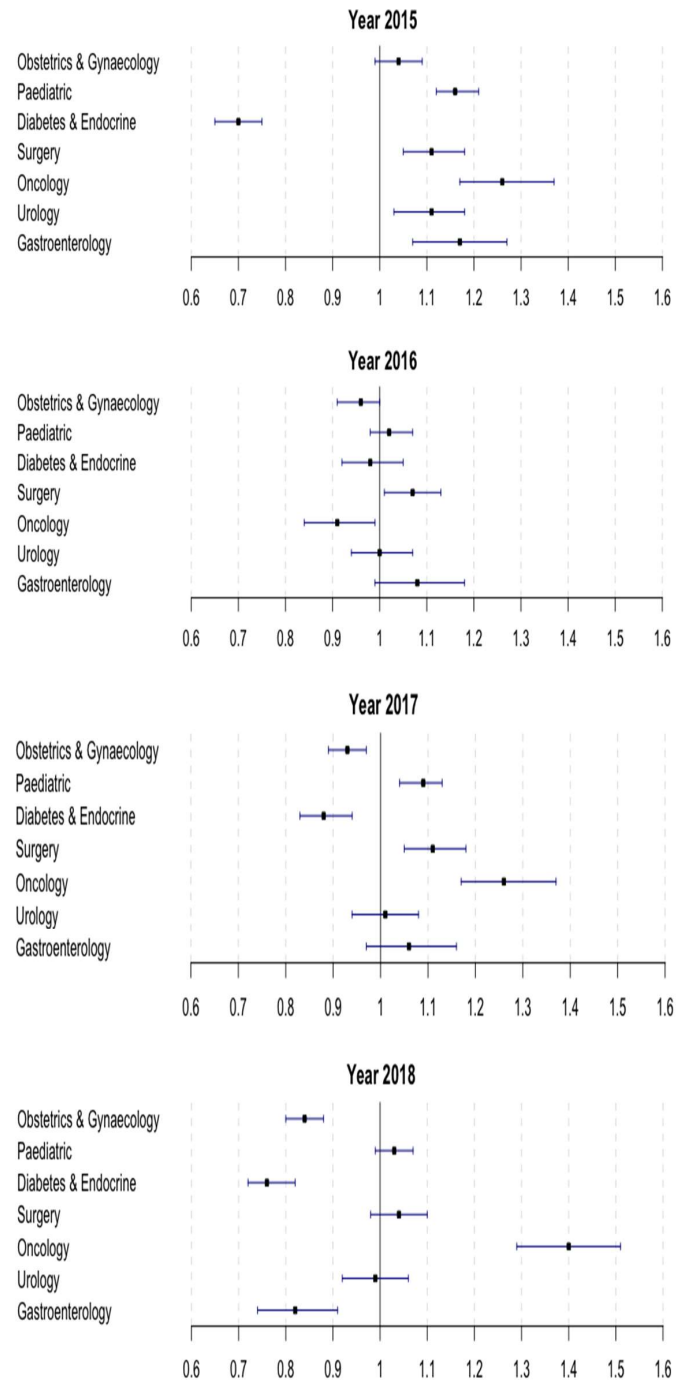


**Supplementary Table 7: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictor appointment waiting days stratified by clinic**

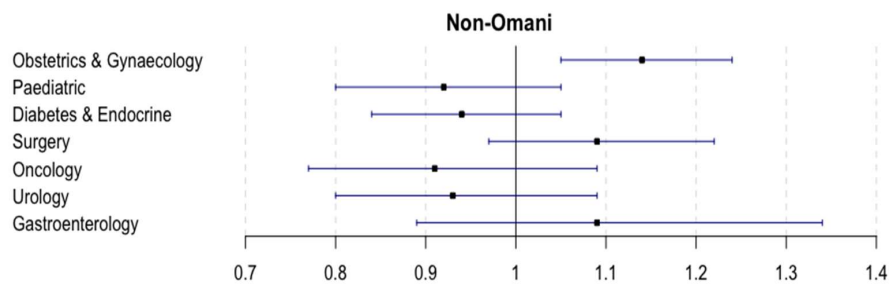
Fully adjusted OR (95% CI)							
	Diabetes & Endocrine	Surgery	Oncology	Urology	Gastroenterology	Obstetrics & Gynaecology	Paediatric
Appointment Waiting days	Reference: Waiting ≤30 Days						
31-60 days	1.28 (1.22-1.34)	1.54 (1.47-1.61)	1.26 (1.17-1.36)	1.55 (1.44-1.67)	1.79 (1.62-1.98)	1.02 (1.00-1.06)	1.37 (1.31-1.44)
61-90 days	1.14 (1.08-1.20)	1.80 (1.71-1.89)	0.98 (0.91-1.05)	1.71 (1.57-1.87)	2.03 (1.84-2.23)	1.55 (1.47-1.63)	1.33 (1.28-1.39)
91-120 days	1.21 (1.14-1.29)	2.32 (2.16-2.49)	1.20 (1.11-1.31)	1.90 (1.75-2.06)	2.31 (2.08-2.56)	2.11 (1.98-2.24)	1.47 (1.41-1.54)
> 120 days	1.63 (1.55-1.71)	2.37 (2.24-2.50)	1.26 (1.18-1.36)	2.22 (2.10-2.34)	2.32 (2.13-2.52)	2.49 (2.38-2.61)	1.72 (1.67-1.78)



**Supplementary Figure 2: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictor appointment day stratified by clinic (reference: Sunday)**



**Supplementary Figure 3: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictor appointment year stratified by clinic (reference: 2014)**



**Supplementary Figure 4: Fully adjusted odds ratios (OR) and 95% confidence intervals (CI) of missing a hospital appointment for the predictor nationality stratified by clinic (reference: Omani)**