

Figure 1: Flowchart of study design and inclusion/exclusion of patients.

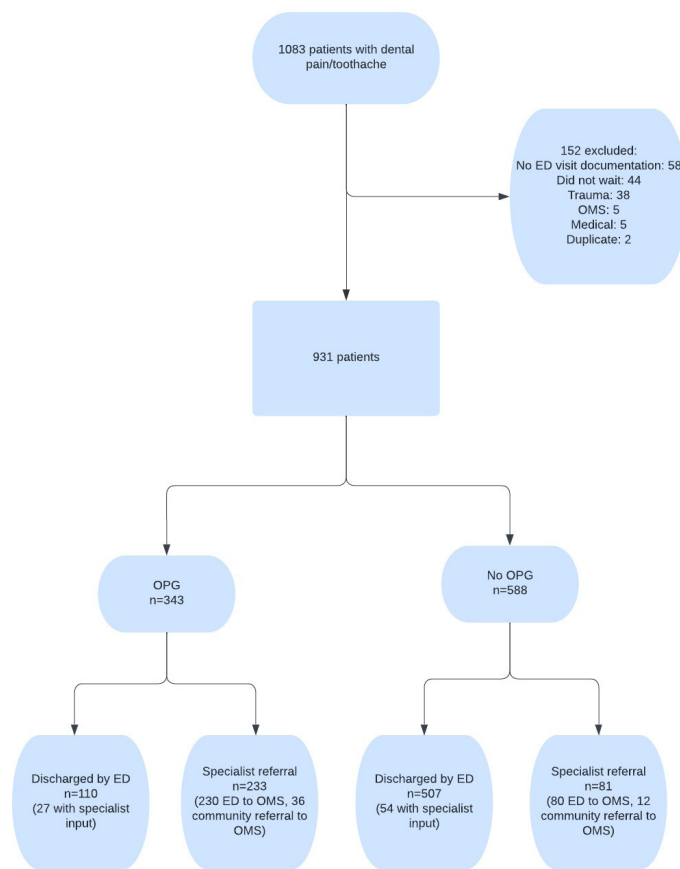


Table 1: Demographic characteristics of patients.

Patient characteristics	Number of patients n (%)	Canterbury 2020/2021 population projection*
Age		
0–19	52 (5.6%)	24.2%
20–24	170 (18.3%)	7.00%
25–34	338 (36.3%)	14.7%
35–44	164 (17.6%)	12.6%
45–54	116 (12.5%)	13.1%
55–64	65 (7.0%)	12.2%
65+	26 (2.8%)	16.2%
Gender		
Male	507 (54.5%)	50.2%
Ethnicity		
New Zealand European/Other	570 (61.2%)	74.3%
Māori	252 (27.1%)	9.8%
Pacific Peoples	69 (7.4%)	2.8%
Asian	40 (4.3%)	13.1%
NZDep*		2018 Census**
1–5	384 (31.3%)	60.4%
6–10	546 (58.7%)	39.6%

* Does not equal total as one patient was international.

** Population projections prepared by StatsNZ¹⁰ and NZ Deprivation data by University of Otago.¹¹

Table 2: Patient characteristics—OPG vs non-OPG.

	OPG n (%)	Non-OPG n (%)	Odds ratio
Number of patients	343	588	
Clinical features reported in ED*			
Extraoral swelling present	192	119	5.0 (3.7–6.7)
Intraoral swelling present	98	105	1.8 (1.3–2.5)
Trismus present	45	24	3.5 (2.1–5.9)
Tachycardic at presentation	36	17	3.9 (2.2–7.1)
Swelling (extraoral and/or intraoral) present	208	176	3.6 (2.7–4.8)
Gender			
Male	190 (55)	317 (54)	1.1 (0.8–1.4)
Ethnicity			
European	203 (59)	347(59)	1 (ref)
Māori	94 (27)	158 (27)	1.0 (0.7–1.4)
Pacific Peoples	28 (8)	41 (7)	1.2 (0.7–1.9)
Asian	15 (4)	25(4)	1.0 (0.5–2.0)
Middle Eastern/Latin American/African/Other	3 (<1)	17 (3)	0.3 (0.1–1.0)
NZDep**			
1–5	142	242	1.0 (0.8–1.3)
6–10	201	345	1.0 (0.8–1.3)
Timing of presentation			
During working hours (8 am–4 pm)	112 (33)	136 (23)	1.3 (0.9–1.8)
Weekday after hours (4 pm–8 am)	106 (31)	261 (44)	0.6 (0.5–0.9)
Weekend	125 (36)	191 (33)	1 (ref)
After hours (weekday 4 pm–8 am and weekend)	231 (67)	452 (77)	0.6 (0.5–0.8)

* Where values do not equal total, data points were “not documented”.

** Does not equal total as one patient was international.

Table 3: Clinician management—OPG vs non-OPG.

	OPG n (%)	Non-OPG n (%)	Statistics [®]
Number of patients	343	588	
ED management			
ED, no specialty input	83 (24.2)	453 (77.0)	1 (ref)
Specialty referral, seen at presentation [⊙]	232 (67.6)	85 (14.5)	14.9 (10.6–21.0)
Specialty referral, not seen at presentation	28 (8.2)	50 (8.5)	3.1 (1.8–5.1)
Median ED length of stay (hours)			
No specialty referral	2.25 (IQR 1.7–2.9)	1.66 (IQR 1.1–2.5)	p-value=<0.001
Specialty referral	3.25 (IQR 2.5–4.6)	3.05 (IQR 2.6–4.2)	p-value=0.51
ED prescribing*			
Discharged no Rx	19 (5)	101 (17)	0.3 (0.2–0.5)
Discharged with Rx	91 (27)	406 (69)	0.2 (0.1–0.2)
Discharged Rx including analgesia	76 (22)	365 (62)	0.2 (0.1–0.2)
Includes opioid	60 (18)	274 (47)	0.2 (0.2–0.3)
Discharged Rx including antibiotics	66 (19)	192 (33)	0.5 (0.4–0.7)
Augmentin	55 (16)	132 (22)	0.7 (0.5–0.9)
Amoxicillin	9 (3)	40 (7)	0.4 (0.2–0.8)
Other	2 (<1)	20 (3)	0.2 (<0.1–0.7)
Swelling (extraoral and/or intraoral) present	37 (11)	95 (16)	0.6 (0.4–0.9)
LA administered	7 (2)	39 (7)	0.3 (0.1–0.7)
Acute management†			
Conservative management ED	83 (24)	453 (77)	1 (ref)
Conservative management specialty	71 (21)	91 (15)	4.3 (2.9–6.3)
ED I&D LA	37 (11)	16 (3)	12.6 (6.7–23.7)
ED Exo LA	127 (37)	23 (4)	30.1 (18.2–49.8)
Extraction/I&D GA	24 (7)	5 (<1)	26.2 (9.7–70.6)
Admission/discharge[□]			
Admitted	29 (9)	10 (2)	5.3 (2.6–11.1)
Discharged	313 (91)	578 (98)	1 (ref)
Admission ward (specialty, OMS)	21	8	13.4 (5.8–31.1)

Table 3 (continued): Clinician management—OPG vs non-OPG.

Admission ward (specialty, other)	2	1	10.2 (0.9–113.6)
Admission HDU/ICU (OMS only)	6	1	30.6 (3.6–257.0)
Discharged by ED with f/u community	93	474	1 (ref)
Discharged by ED with f/u OMS	17	33	2.6 (1.4–4.9)
Discharged by OMS with f/u specialty	69	23	15.3 (9.1–25.8)
Discharged by OMS with f/u community	131	48	13.9 (9.3–20.7)
Self-discharged	3	0	p-value=0.005

●All values refer to odds ratio with confidence intervals in parenthesis unless specified, apart from Median ED length of stay (hours), which is a Mann–Whitney U test, and Admission/discharge: self-discharged, which is a Fisher test.

*Specialty referral includes patients referred to the Oral and Maxillofacial service (OMS); however, it also includes <5 patients referred to other specialties. An example is a patient referred to General Medicine with dental pain and diabetic ketoacidosis.

†Includes three patients reviewed by OMS but discharged by ED.

Rx refers to the prescription given to a patient on discharge.

□OPG acute management and admission/discharge does not equal total as one patient's management was not documented.

Table 4: Patient characteristics and clinical management—Māori vs non-Māori.

	Māori n (%)	Non-Māori n (%)	Statistics[®]	Statistics controlling for age
Number of patients	252	679		N/A
Patient characteristics				
Male	134 (53)	373 (55)	0.9 (0.7–1.2)	1.0 (0.8–1.4)
Age (median)	28	32	p-value=<0.001	N/A
NZDep (median)	7	6	p-value=0.01	p=0.04
Clinical features reported in ED*				
Extraoral swelling present	92	219	1.2 (0.9–1.6)	1.3 (0.9–1.8)
Intraoral swelling present	68	135	1.5 (1.1–2.1)	1.5 (1.1–2.1)
Trismus present	27	42	1.8 (1.1–3.0)	1.7 (1.0–2.9)
Tachycardic at presentation	12	41	0.8 (0.4–1.5)	0.7 (0.3–1.3)
Timing of presentation				
During working hours (8 am–4 pm)	82 (33)	166 (24)	1.6 (1.1–2.4)	1.7 (1.1–2.6)
Weekday after hours (4 pm–8 am)	97 (39)	270 (40)	1.2 (0.8–1.7)	1.1 (0.7–1.7)
Weekend	73 (29)	243 (36)	1 (ref)	1 (ref)
Total after hours	170 (67)	513 (76)	0.7 (0.5–0.9)	0.6 (0.4–0.8)
ED management†				
ED, no specialty input	144 (57)	392 (58)	1 (ref)	1 (ref)
Specialty referral, seen at presentation	86 (34)	231 (34)	1.0 (0.7–1.4)	1.1 (0.8–1.6)
Specialty referral, not seen at presentation	22 (9)	56 (8)	1.1 (0.6–1.8)	1.2 (0.7–2.0)
OPG	94 (37)	249 (36)	1.0 (0.8–1.4)	1.2 (0.9–1.6)
Median ED length of stay (hours)				
No specialty referral	1.85 (IQR=1.1–2.7)	1.73 (IQR=1.1–2.5)	p-value=0.79	p=0.49
Specialty referral	3.22 (IQR=2.8–4.7)	3.13 (IQR=2.5–4.4)	p-value=0.45	p=0.1
No OPG	1.87 (IQR=1.1–3.0)	1.76 (IQR=1.2–2.7)	p-value=0.54	p=0.85

Table 4 (continued): Patient characteristics and clinical management—Māori vs non-Māori.

OPG	3.18 (IQR=2.2–3.6)	2.95 (IQR=2.1–4.0)	p-value=0.89	p=0.38
Specialty referral + OPG	3.22 (IQR=2.7–4.8)	3.25 (IQR=2.5–4.6)	p-value=0.76	p=0.12
No specialty referral + no OPG	1.67 (IQR=1.1–2.6)	1.66 (IQR=1.1–2.5)	p-value=0.83	p=0.42
ED prescribing □				
Discharged no Rx	31 (12.3)	89 (13.1)	0.9 (0.6–1.4)	0.8 (0.5–1.3)
Discharged with Rx	136 (54.0)	361 (53.2)	1.0 (0.8–1.4)	1.0 (0.7–1.3)
Discharged Rx including analgesia	126 (50.0)	315 (46.3)	0.9 (0.7–1.2)	1.0 (0.8–1.4)
Includes opioid	97 (38.5)	237 (35.0)	1.2 (0.9–1.6)	1.1 (0.8–1.5)
Discharged Rx including antibiotics	70 (27.8)	188 (27.7)	1.0 (0.7–1.4)	1.0 (0.7–1.4)
Augmentin	54 (21.4)	133 (19.6)	1.1 (0.8–1.6)	1.1 (0.8–1.6)
Amoxicillin	14 (5.6)	35 (5.2)	1.1 (0.6–2.0)	1.1 (0.6–2.1)
Other	2 (<1)	20 (2.9)	0.3 (0.1–0.9)	0.2 (0.1–0.9)
LA	16 (4.7)	30 (5.1)	1.5 (0.8–2.7)	1.4 (0.7–2.6)
Acute management §				
Conservative management ED	144 (57.1)	392 (57.8)	1 (ref)	1 (ref)
Conservative management specialty	42 (16.7)	120 (17.7)	1.0 (0.6–1.4)	1.0 (0.7–1.5)
ED I&D LA	11 (4.4)	42 (6.2)	0.7 (0.4–1.4)	0.8 (0.4–1.5)
ED Exo LA	45 (17.9)	105 (15.5)	1.2 (0.8–1.7)	1.4 (1.0–2.2)
Extraction/I&D GA	10 (4.0)	19 (2.8)	1.4 (0.7–3.2)	1.3 (0.6–2.9)
Admission/discharge §				
Admitted	13 (5.2)	26 (3.8)	1.4 (0.7–2.7)	1.3 (0.6–2.6)
Discharged	239 (94.8)	652 (96.0)	1 (ref)	1 (ref)
Admission ward (specialty, OMS)	12	17	2.0 (0.9–4.3)	2.0 (0.9–4.4)
Admission ward (specialty, other)	1	2	1.4 (0.1–15.9)	1.7 (0.1–19.1)
Admission HDU/ICU (OMS only)	0	7	p=0.2 (Fisher test)	N/A
Discharged by ED with f/u community	147	420	1 (ref)	1 (ref)

Table 4 (continued): Patient characteristics and clinical management—Māori vs non-Māori.

Discharged by ED with f/u OMS	19	31	1.8 (1.0–3.2)	1.9 (1.0–3.6)
Discharged by OMS with f/u specialty	26	66	1.1 (0.7–1.8)	1.3 (0.8–2.1)
Discharged by OMS with f/u community	47	132	1.0 (0.7–1.5)	N/A
Self-discharged	0	3	p=0.6 (Fisher test)	

●All values refer to odds ratio with confidence intervals in parenthesis unless specified, apart from Median ED length of stay (hours), which is a Mann–Whitney U test, and Admission/discharge: self-discharged, which is a Fisher test.

*Where values do not equal total, data points were “not documented”.

†Specialty referral includes patients referred to the Oral and Maxillofacial service (OMS); however, it also includes <5 patients referred to other specialties.

□Includes three patients reviewed by OMS, but discharged by ED.

§Non-Māori acute management and Admission/discharge does not equal total as one patient’s management was not documented.

Rx refers to the prescription given to a patient on discharge.

N/A = not applicable.