

Supplementary Materials

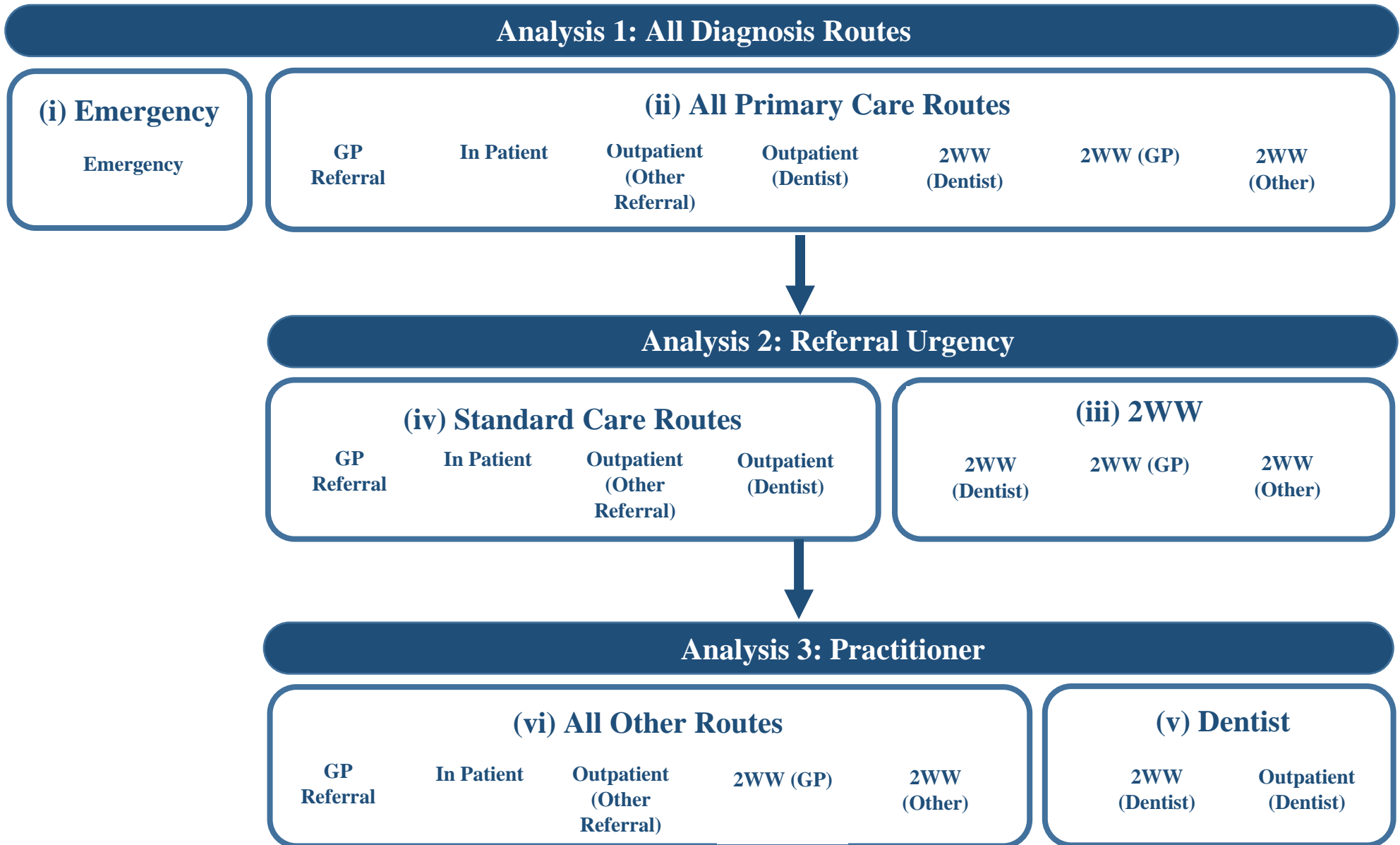
Who Presents Where? A population-based analysis of the socio-demographic inequalities in head and neck cancer patients' referral routes

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Supplementary Figure S1 Route to diagnosis categorisation by each analysis

Supplementary Table S1: Demographic and clinical characteristics of all individual HNC diagnosis routes during 2006-2014

Supplementary Figure S1 Route to diagnosis categorisation by each analysis



Supplementary Table S1. Demographic and clinical characteristics of all individual HNC diagnosis routes during 2006-2014.

Analysis 1: All Diagnosis Routes		Emergency	All Primary Care Routes						
Analysis 2: Referral Urgency			Standard Care Routes				2WW		
Analysis 3: Practitioner			All Other Routes			Dentist		All Other Routes	
Overall		Emergency	GP Referral	Inpatient	Outpatient Other Referral	Outpatient (Dentist)	2WW (Dentist)	2WW (GP)	2WW (Other)
(n=66,411; 100%)		(n=5,676; 8.5%)	(n=21,803; 32.8%)	(n=746; 1.1%)	(n=6,733; 10.1%)	(n=5,305; 8.0%)	(n=1,267; 1.9%)	(n=22,741; 34.2%)	(n=2,140; 3.2%)
Age at Diagnosis									
20-54 years	15,259 (23.0)	1,061 (18.7)	5,288 (24.3)	178 (23.9)	1,543 (22.9)	1,206 (22.7)	270 (21.3)	5,234 (23.0)	479 (22.4)
55-64 years	19,459 (29.3)	1,383 (24.4)	6,137 (28.1)	237 (31.8)	1,847 (27.4)	1,440 (27.1)	344 (27.1)	7,378 (32.4)	693 (32.4)
65-79 years	23,092 (34.8)	2,006 (35.3)	7,586 (34.8)	243 (32.6)	2,460 (36.5)	1,909 (36.0)	439 (34.6)	7,711 (33.9)	738 (34.5)
80+ years	8,601 (13.0)	1,226 (21.6)	2,792 (12.8)	88 (11.8)	883 (13.1)	750 (14.1)	214 (16.9)	2,418 (10.6)	230 (10.7)
Sex									
Male	46,241 (69.6)	4,028 (71.0)	15,050 (69.0)	526 (70.5)	4,568 (67.8)	2,863 (54.0)	773 (61.0)	16,860 (74.1)	1,573 (73.5)
Female	20,170 (30.4)	1,648 (29.0)	6,753 (31.0)	220 (29.5)	2,165 (32.2)	2,442 (46.0)	494 (39.0)	5,881 (25.9)	567 (26.5)
Cancer Site									
Oral Cavity ¹	22,620 (34.1)	1,316 (23.2)	5,831 (26.7)	204 (27.3)	2,284 (33.9)	4,523 (85.3)	1,106 (87.3)	6,802 (29.9)	554 (25.9)
Oropharynx	15,128 (22.8)	1,024 (18.0)	4,613 (21.2)	177 (23.7)	1,310 (19.5)	351 (6.6)	105 (8.3)	6,917 (30.4)	631 (29.5)
Larynx	15,885 (23.9)	1,686 (29.7)	6,228 (28.6)	189 (25.3)	1,593 (23.7)	37 (0.7)	6 (0.5)	5,631 (24.8)	515 (24.1)
Other ²	12,778 (19.2)	1,650 (29.1)	5,131 (23.5)	176 (23.6)	1,546 (23.0)	394 (7.4)	50 (3.9)	3,391 (14.9)	440 (20.6)
Deprivation Category									
IMD 1 (Least Deprived)	10,417 (15.7)	656 (11.6)	3,438 (15.8)	187 (25.1)	1,294 (19.2)	1,030 (19.4)	239 (18.9)	3,279 (14.4)	294 (13.7)
IMD 2	12,260 (18.4)	808 (14.2)	4,147 (19.0)	158 (21.2)	1,292 (19.2)	1,117 (21.1)	234 (18.5)	4,137 (18.2)	367 (17.1)
IMD 3	13,245 (19.9)	1,062 (18.7)	4,431 (20.3)	156 (20.9)	1,260 (18.7)	1,094 (20.6)	260 (20.5)	4,537 (20.0)	445 (20.8)
IMD 4	14,217 (21.4)	1,319 (23.2)	4,731 (21.7)	129 (17.3)	1,343 (19.9)	1,046 (19.7)	251 (19.8)	4,934 (21.7)	464 (21.7)
IMD 5 (Most Deprived)	16,272 (24.5)	1,831 (32.3)	5,056 (23.2)	116 (15.5)	1,544 (22.9)	1,018 (19.2)	283 (22.3)	5,854 (25.7)	570 (26.6)
Period of Diagnosis									
2006-2008	19,623 (29.5)	1,875 (33.0)	7,193 (33.0)	384 (51.5)	2,312 (34.3)	1,467 (27.7)	240 (18.9)	5,588 (24.6)	564 (26.4)
2009-2011	22,206 (33.4)	1,850 (32.6)	7,452 (28.1)	175 (23.5)	2,399 (35.6)	1,836 (34.6)	366 (28.9)	7,447 (32.7)	681 (31.8)
2012-2014	24,582 (37.0)	1,951 (34.4)	7,158 (34.8)	187 (25.1)	2,022 (30.0)	2,002 (37.7)	661 (52.2)	9,706 (42.7)	895 (41.8)

Supplementary Table S1 Continued

Analysis 1: All Diagnosis Routes		Emergency	All Primary Care Routes						
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Analysis 3: Practitioner			All Other Routes			Dentist		All Other Routes	
Overall		Emergency	GP Referral	Inpatient	Outpatient Other Referral	Outpatient (Dentist)	2WW (Dentist)	2WW (GP)	2WW (Other)
(n=66,411; 100%)		(n=5,676; 8.5%)	(n=21,803; 32.8%)	(n=746; 1.1%)	(n=6,733; 10.1%)	(n=5,305; 8.0%)	(n=1,267; 1.9%)	(n=22,741; 34.2%)	(n=2,140); 3.2%)
Ethnicity									
White	53,919 (81.2)	4,325 (76.0)	17,267 (79.2)	577 (77.3)	5,407 (80.3)	4,151 (78.2)	1,034 (81.6)	19,338 (85.0)	1,820 (85.0)
Non-White ³	3,032 (4.6)	318 (5.6)	1,130 (5.2)	30 (4.0)	375 (5.6)	336 (6.3)	71 (5.6)	694 (3.1)	78 (3.6)
Unknown ⁴	9,460 (14.2)	1,033 (18.2)	3,406 (15.6)	139 (18.6)	951 (14.1)	818 (15.4)	162 (12.8)	2,709 (11.9)	242 (11.3)
Urban/Rural Category									
Urban	54,704 (82.4)	4,889 (86.1)	17,913 (82.2)	593 (79.5)	5,569 (82.7)	4,262 (80.3)	1,023 (80.7)	18,628 (81.9)	1,827 (85.4)
Rural	11,707 (17.6)	787 (14.0)	3,890 (17.8)	153 (20.5)	1,164 (17.3)	1,043 (19.7)	244 (19.3)	4,113 (18.1)	313 (14.6)
Stage									
I	5,301 (8.0)	105 (1.8)	1,918 (8.8)	25 (3.4)	480 (7.1)	738 (13.9)	166 (13.1)	1,757 (7.7)	112 (5.2)
II	3,276 (4.9)	115 (2.0)	1,063 (4.9)	37 (5.0)	298 (4.4)	268 (5.1)	93 (7.3)	1,300 (5.7)	102 (4.8)
III	3,526 (5.3)	214 (3.8)	1,087 (5.0)	19 (2.5)	271 (4.0)	202 (3.8)	71 (5.6)	1,537 (6.8)	125 (5.8)
IV	13,043 (19.6)	1,235 (21.8)	3,312 (15.2)	96 (12.9)	1,008 (15.0)	925 (17.4)	350 (27.6)	5,600 (24.6)	517 (24.2)
Other ⁵	41,265 (62.1)	4,007 (70.6)	14,423 (66.2)	569 (76.3)	4,676 (69.4)	3,172 (59.8)	587 (46.3)	12,547 (55.2)	1,284 (60.0)
Grade									
1 (Low)	5,589 (8.4)	323 (5.7)	1,926 (8.8)	49 (6.6)	568 (8.4)	802 (15.1)	136 (10.7)	1,649 (7.3)	136 (6.4)
2	25,074 (37.8)	1,770 (31.2)	7,728 (35.4)	265 (35.5)	2,175 (32.3)	2,382 (44.9)	663 (52.3)	9,281 (40.8)	810 (37.9)
3	17,851 (26.9)	1,424 (25.1)	5,551 (25.5)	207 (27.7)	1,708 (25.3)	854 (16.1)	289 (22.8)	7,101 (31.2)	717 (33.5)
4 (High)	603 (0.9)	66 (1.2)	237 (1.1)	8 (1.1)	69 (1.0)	14 (0.3)	5 (0.4)	175 (0.8)	29 (1.4)
Unknown ⁶	17,294 (26.0)	2,093 (36.9)	6,361 (29.2)	217 (29.1)	2,213 (32.9)	1,253 (23.6)	174 (13.7)	4,535 (19.9)	448 (20.9)
Comorbidities⁷									
None	48,572 (73.1)	3,586 (63.2)	16,074 (73.7)	599 (80.3)	4,649 (69.0)	3,976 (74.9)	915 (72.2)	17,175 (75.5)	1,598 (74.7)
1	8,690 (13.1)	878 (15.5)	2,887 (13.2)	70 (9.4)	895 (13.3)	618 (11.6)	184 (14.5)	2,885 (12.7)	273 (12.8)
2+	9,149 (13.8)	1,212 (21.4)	2,842 (13.0)	77 (10.3)	1,189 (17.7)	711 (13.4)	168 (13.3)	2,681 (11.8)	269 (12.6)

¹Includes palate; ²Other cancer site refers to nasopharynx, hypopharynx, salivary glands, other sites and non-specific sites; ³Non-White refers to other ethnic groups; ⁴Unknown ethnicity refers to missing and unknown ethnicity; ⁵Other stage refers to missing and unstageable tumours; ⁶Unknown grade refers to unknown and missing tumour grades; ⁷Measured using the Charlson Comorbidity Index; Abbreviations: GP: General practitioner; HNC: Head and neck cancer; IMD: Index of multiple deprivation; 2WW: Two week wait.