

Pain-related Attendances to Unscheduled Care by People with Advanced Cancer

Dr. Sarah E.E. Mills

INTRODUCTION: Unscheduled care use is common in people with advanced cancer. Unscheduled care is delivered by GP Out-of-hours (GPOOH) and Accident & Emergency (A&E) services.



AIM: To describe the frequency and patterns of unscheduled care use by people with cancer in their last year of life and to examine the associations of demographic and clinical factors with pain-related unscheduled care attendance.

METHOD: Retrospective cohort study of all 2443 people who died from cancer in Tayside, during 2012–2015. Clinical datasets were linked to routinely collected clinical data using the Community Health Index (CHI) number. Anonymised CHI-linked data were analysed in SafeHaven, with descriptive analysis, using binary or multinomial logistic regression for adjusted associations.

RESULTS: Of the 6,914 presentations to unscheduled care, across both GPOOH and A&E, 11.8% (n=818) were coded as being for pain. Pain-related presentations made up 28.8% (n=336/1165) of A&E attendances and 8.4% of (n=482/5749) of GPOOH attendances (p<0.001).

Table 1: Multivariate analysis of factors associated with pain-related presentations to unscheduled care

	Total (n=6914)	A&E Attendance (n=1,165) (reference) (ref)	GPOOH Attendance (n=5,749)	Wald p-value	Adjusted Wald OR (95%CI)
Age					
<65	1,329 (19.2)	212 (18.2)	1,117 (19.4)	<0.001	1.94 (1.41 to 2.66)
65-74	1,732 (25.1)	350 (30.0)	1,382 (24.0)	0.32	1.16 (0.87 to 1.54)
75-84	2,289 (33.1)	377 (32.4)	1,912 (33.3)	0.42	1.12 (0.86 to 1.46)
≥85 (ref)	1,564 (22.6)	226 (19.4)	1,338 (23.3)		1
Cancer Type					
Lung	1,835 (26.5)	392 (33.6)	1,443 (25.1)	0.37	0.87 (0.65 to 1.18)
Upper GI	1,440 (20.8)	212 (18.2)	1,228 (21.4)	0.16	1.26 (0.91 to 1.74)
Bowel	927 (13.4)	123 (10.6)	804 (14.0)	0.64	1.09 (0.76 to 1.59)
Breast and Ovarian	652 (9.4)	85 (7.3)	567 (9.9)	0.81	1.05 (0.69 to 1.62)
Prostate	380 (5.5)	35 (3.0)	345 (6.0)	0.06	1.64 (0.97 to 2.77)
Haematological	592 (8.6)	123 (10.6)	469 (8.2)	0.60	0.91 (0.62 to 1.32)
Other (ref)	1,008 (15.7)	195 (16.7)	893 (15.5)		1
Rurality Grouped					
Urban	4,486 (65.8)	807 (70.0)	3,679 (64.9)	0.001	0.56 (0.39 to 0.79)
Accessible	1,559 (22.9)	258 (22.4)	1,301 (22.9)	0.008	0.60 (0.41 to 0.87)
Remote (ref)	777 (11.4)	88 (7.6)	689 (12.2)		1
Deprivation					
SIMD 1	1,208 (17.7)	249 (21.6)	959 (16.9)	0.128	0.78 (0.56 to 1.08)
SIMD 2	1,069 (15.7)	200 (17.3)	869 (15.3)	0.677	0.93 (0.66 to 1.31)
SIMD 3	1,234 (18.1)	202 (17.5)	1,032 (18.2)	0.881	1.03 (0.74 to 1.43)
SIMD 4	2,224 (32.6)	330 (28.6)	1,894 (33.4)	0.695	1.06 (0.78 to 1.44)
SIMD 5 (ref)	1,087 (15.9)	172 (14.9)	915 (16.1)		1
Presenting Complaint					
Pain	818 (11.8)	336 (41.1)	482 (8.9)	<0.001	0.29 (0.22 to 0.38)
Unwell and Palliative Care	1,325 (19.2)	216 (16.3)	1,109 (19.7)	<0.001	0.43 (0.34 to 0.56)
Breathlessness	248 (3.6)	143 (57.7)	105 (42.3)	<0.001	0.26 (0.17 to 0.38)
GI Symptoms	358 (5.2)	28 (7.8)	330 (92.2)	<0.001	2.52 (1.49 to 4.25)
Infection	591 (8.5)	30 (5.1)	561 (94.9)	<0.001	4.35 (2.80 to 6.78)
Acute neurological Sympt.	214 (3.1)	164 (76.6)	50 (23.4)	<0.001	0.05 (0.03 to 0.08)
Other & Missing (ref)	3,360 (48.6)	248 (7.4)	3,112 (92.6)		1
Clinical Priority					
Highest clinical priority	569 (8.2)	227 (19.5)	342 (5.9)	<0.001	0.30 (0.22 to 0.42)
Middle clinical priority	2,467 (35.7)	613 (52.6)	1,854 (32.2)	<0.001	0.35 (0.28 to 0.44)
Lowest clinical priority (ref)	3,878 (56.1)	325 (27.9)	3,553 (58.3)		1
Outcomes of attendance					
GP Follow-up	2,315 (33.5)	143 (12.3)	2,172 (37.7)	<0.001	2.21 (1.66 to 2.93)
Admitted to hospital	1,408 (20.4)	779 (66.9)	629 (10.9)	<0.001	0.14 (0.10 to 0.18)
Passed to another clinician	193 (2.8)	89 (7.6)	104 (1.8)	<0.001	0.08 (0.05 to 0.14)
Missing & Other	1,260 (18.2)	25 (2.1)	1,235 (21.5)	0.236	0.71 (0.41 to 1.25)
No Follow-up (ref)	1,738 (25.1)	129 (11.1)	1,609 (28.0)		1
Timing of attendance					
Attend after diagnosis	1,463 (21.2)	366 (31.4)	1,097 (19.1)	<0.001	0.33 (0.25 to 0.42)
Attend before diagnosis (ref)	5,451 (78.8)	799 (68.6)	4,652 (80.9)		1
Attendance Frequency					
Normal (ref)	2,928 (42.3)	656 (56.3)	2,272 (39.5)	<0.001	1
Frequent / Very Frequent	3,986 (57.7)	509 (43.7)	3,477 (60.5)		1.42 (1.19 to 1.72)

RESULTS: Cancer decedents with pain-related presentations were more than twice as likely (p<0.001) to present to A&E rather than GPOOH. Older adults were less likely to be identified as presenting with pain (p<0.001). Patients with upper GI malignancies [AOR 1.38 (95%CI 1.05 to 1.82)], bowel cancer [AOR 1.55 (1.14 to 2.11)] and prostate cancer [AOR 2.29 (1.53 to 3.44)] had higher odds of pain related attendances. Patients presenting with pain were nearly twice as likely to be admitted (33.7%) as those without pain (n=18.6%) (p<0.001). Cancer decedents who attend unscheduled care before their cancer diagnosis had nearly double the odds of having a pain-related presentation, when compared to those who attended after their cancer diagnosis. Gender and timing of diagnosis, relative to death, were not significantly associated with pain-related unscheduled care attendance.

DISCUSSION:

These findings are consistent with other studies which have found that pain 1-10, is the commonest reasons for unscheduled care use. The association between cancer types and pain-related attendances may be due to some cancers being clinically more likely to be associated with painful conditions, including metastases or obstruction. The association between younger age and pain-related presentations may be due to older patients being less likely to report pain, to clinicians being less likely to identify pain in older adults, or to clinical comorbidities, such as dementia, which make assessing pain more difficult. Patients who present to unscheduled care before their cancer diagnosis were more likely to have their attendances coded with pain-related Read codes, than those who present to unscheduled care after having already received a cancer diagnosis. This may be because pre-diagnosis attendances are more likely to be assigned descriptive Read codes, rather than Read codes that describe prognoses or disease trajectory, such as 'palliative care'.



CONCLUSION:

Identifying factors pain-related attendances allows for Interventions targeted at improving anticipatory care planning, improving community support, and streamlining care pathways. Adequate pain relief is an important factor in improving patient journey and minimizing unscheduled care use. This research can potentially identify factors associated with unscheduled care use and suggest clinical and service provision changes that could be made to improve the patient journey in patients with terminal cancer.

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