Perception Towards Naloxone Among Cancer Patients on Opioids Who Live Alone

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INTRODUCTION

Patients with cancer pain requiring opioids are equally at risk for opioid-related overdoses.

Naloxone, a fast-acting opioid antagonist, has been proven to save lives in the event of an opioid-related overdose.

Lee et al. showed that nationwide in the USA, adults with cancer who live alone have higher mortality compared to those with adults living with others (HR, 1.32; 95% CI, 1.25–1.39).

There is not much data available to know how patients with cancer who live alone perceive a prescription of THN.

AIM: To understand perceptions towards take-home naloxone among patients with cancer who live without a live-in caregiver.

METHODS AND MATERIALS

Cross-sectional prospective survey in patients who had a follow-up visit at our outpatient Supportive Care Center (SCC) from May 2020 to April 2022.

Eligibility Criteria: ≥18 years old, had an active cancer diagnosis, had no evidence of cognitive decline (Memorial Delirium Assessment Scale (MDAS) score <7), able to read, understand, and consent in English, were on opioids, and received a co-prescription of THN.

Exclusion criteria: uncontrolled pain (≥ 6/10), nausea (≥ 6/10), and high anxiety scores (≥ 6/10) on the Edmonton Symptom Assessment System (ESAS) and those with cognitive impairment (MDAS >7).

Reference: https://voicebot.ai/2019/10/18/pillo-health-launches-pill-dispensing-robot-companion/; Lee, H.e.a., Living alone and cancer mortality by race/ethnicity and socioeconomic status among US working-age adults. Cancer, 2024. 130: p. 86-95.

Table 1. Characteristics of Patients Surveyed and Indications for co-prescribing Naloxone

Baseline Characteristics	Total (N=150)	Patients' Living Arrangement		P-Value
		Live with family or caregivers (n= 127)	Live alone (n= 23)	
Age, mean (range)	54.6 (22-79)	54.9 (26-79)	52.8 (22-69)	0.44
Male	82 (55)	70 (55)	12 (52)	0.82
Race/ethnicity				
White	105 (70)	92 (72)	13 (57)	0.20
Hispanic	23 (15)	18 (14)	5 (22)	
African American	17 (11)	14 (11)	3 (13)	
Other	5 (3)	3 (2)	2 (9)	
Education				
Below high school	3 (2)	2 (2)	1 (4)	0.56
High school and above	47 (79)	125 (99)	22 (96)	
Employment status				
Retired	47 (31)	41 (32)	6 (26)	0.85
Employed	55 (37)	46 (36)	9 (39)	
Unemployed	18 (12)	15 (12)	3 (13)	
Other	30 (20)	25 (20)	5 (22)	
Advanced stage cancer	121 (81)	105 (83)	16 (70)	0.16
CAGE Positive	11 (7)	8 (6)	3 (13)	0.38
SOAPP Positive	19 (17)	13 (14)	6 (35)	0.07
History of Drug use (other than Marijuana) Yes	21 (14)	17 (14)	4 (17)	0.40
History of Marijuana Use Yes	46 (31)	37 (29)	9 (39)	0.45
History of smoking Yes	**60 (40)**	**44 (35)**	**16 (70)**	**0.0006**

RESULTS

- 23/150 patients surveyed lived alone
- 12/23 (52%) were male
- 13/23 (57%) were white
- 16/23 (70%) had advanced cancer

Risk factors for opioid overdoses: (most prevalent)

- High morphine equivalent daily dose of >90mg (52%)
- Concurrent use of sedative medications (61%)
- History of smoking (44/127 (35%) vs. 16/23 (70%);p=.0006).

Table 2. Characteristics of Patients Surveyed and Indications for co-prescribing Naloxone

Baseline Characteristics no. (%)	Total (N=150)	Patients' Living Arrangement		P-Value
		Live with family or caregivers (n= 127)	Live alone (n= 23)	
Risk factors for Naloxone co-prescription #				
MEDD >90	78 (52)	66 (52)	12 (52)	1.0000
Methadone	21 (14)	18 (14)	3 (13)	1.0000
Concurrent use of high-dose gabapentinoids+	42 (28)	36 (28)	6 (26)	1.0000
Concurrent use of Benzodiazepines	45 (30)	37 (29)	8 (35)	0.62
Concurrent use of other sedating drugs*	106 (71)	92 (72)	14 (61)	0.32
Hepatic or renal disease	16 (11)	15 (12)	1 (4)	0.47
Pulmonary disease (COPD/other non-malignant)	13 (9)	10 (8)	3 (13)	0.42
Home Oxygen use	3 (2)	3 (2)	0 (0)	1.0000
Sleep apnea	13 (9)	12 (9)	1 (4)	0.69

Abbreviations: CAGE: Cut-Down, Annoyed, Guilty and Eye-opener questionnaire; SOAPP: Screener & Opioid Assessment for Patients with Pain; MEDD: Morphine Daily Equivalent Dose; Gabapentinoids: COPD: Chronic Obstructive Pulmonary Disease, *other sedating drugs: zolpidem, carisoprodol, # A few patients may arry more than one risk factor, +Gabapentin >900mg/day, and Pregabalin: >150 mg/day;

DISCUSSION

A few patients with cancer using opioids that had risk factors for opioid overdose lives alone and are equally vulnerable for opioids related fatalities. Education and awareness on safe opioid use is essential.

CONCLUSION

Our patient survey shows a proportion of cancer patients with risk factors for opioid overdoses live alone, with no one to administer Naloxone in an overdose emergency.

Future research: Use of Artificial intelligence-powered voice bots and pill bots