

# Are Pediatric Patients Just Short Adults? Most Commonly Prescribed Drugs For Pediatric Hospice Patients

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## Background

- According to the most recently published data from National Hospice and Palliative Care Organization, approximately 78% of hospice providers in the United States serve pediatric patients, and the majority of these serve 1-10 patients per year.
- As with adult patients, palliative care for children focuses on holistic care, including the alleviation of physical, psychosocial, and spiritual suffering.
- Medications are used in hospice patients to palliate physical symptoms of terminal illness, including pain, dyspnea, nausea, and fatigue.

## Objectives

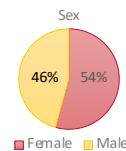
The purpose of this study was to characterize the most commonly prescribed medications and medication classes in a population of pediatric hospice patients.

## Methods

- We conducted a retrospective review of a patient information database compiled by a national hospice organization.
- The database contained demographic information, as well as information on drug name, dosage, formulation, and strength. Medications were also characterized by pharmacological class.
- We compared proportions of the most commonly prescribed pharmacological classes among the three most common admitting diagnoses: cancer, central nervous system disorders, and genetic disorders.
- We used chi-square test or Fisher's exact test to detect any associations between admitting diagnosis and drug class.
- The institutional review board at the University of Maryland determined that this study was not human subjects research.

## Results

- Of 177 patients in the database, 116 patients were included in the study; these patients were admitted to hospice on or after January 1, 2011 and discharged by death on or before December 31, 2016.
- Sixty-one patients who were discharged prior to death were excluded.
- A total of 3 017 medication orders were evaluated.



Diagnosis	Patients, n (%)
Cancer	40 (34.5)
CNS disorder	33 (28.4)
Genetic disorder	14 (12.1)
Lung/respiratory disorder	8 (6.9)
Renal disorder	4 (3.4)
Other	8 (6.9)
GI Disorder	3 (2.6)
Cardiac disorder	3 (2.6)
Nutritional/metabolic disorder	2 (1.7)
Infection	1 (0.9)

Age (years)	
Mean, SD	6, 6.1
Median, range	4, 0-18
Mode	0

Length of Stay	
Mean, SD	33.2, 54.8
Median, range	14.5, 0-411

Medication	Patients, n (%)	Medication	Patients, n (%)
Morphine	96 (82.8)	Scopolamine	15 (12.9)
Lorazepam	91 (78.4)	Gabapentin	13 (11.2)
Acetaminophen	53 (45.7)	Fentanyl	12 (10.3)
Hyoscyamine	45 (38.8)	Oxycodone	12 (10.3)
Metoclopramide	38 (32.8)	Senna	12 (10.3)
Prochlorperazine	35 (30.2)	Amoxicillin	11 (9.5)
Haloperidol	34 (29.3)	Budesonide	11 (9.5)
		Hydrocodone-	
Diphenhydramine	33 (28.4)	Acetaminophen	11 (9.5)
Albuterol	26 (22.4)	Topiramate	11 (9.5)
Atropine	26 (22.4)	Docusate	10 (8.6)
Ondansetron	26 (22.4)	Glycopyrrolate	10 (8.6)
Diazepam	25 (21.6)	Saline nasal spray	10 (8.6)
Polyethylene Glycol	25 (21.6)	Hydromorphone	9 (7.8)
Levetiracetam	24 (20.7)	Promethazine	9 (7.8)
Dexamethasone	22 (19.0)	Melatonin	8 (6.9)
Methadone	20 (17.2)	Baclofen	7 (6.0)
Bisacodyl	16 (13.8)	Famotidine	7 (6.0)
Multivitamin	16 (13.8)	Ibuprofen	7 (6.0)
Phenobarbital	16 (13.8)	Midazolam	7 (6.0)
SMX-TMP	16 (13.8)	Omeprazole	7 (6.0)
Furosemide	15 (12.9)	Potassium	7 (6.0)
Ranitidine	15 (12.9)	Sertraline	7 (6.0)

## Results

Drug Class	Admitting diagnosis, n(%)			p value
	Cancer	CNS disorder	Genetic disorder	
Opioid analgesic	40(100)	30(90.9)	12(85.7)	0.08
Anxiolytic	38(95)	28(84.8)	10(71.4)	0.06
Anticholinergic	31(77.5)	18(54.5)	6(42.9)	0.03*
Antiemetic	38(95)	11(33.3)	5(35.7)	<0.0001*
Non-opioid Analgesic	27(67.5)	12(36.4)	3(21.4)	0.003*
Anticonvulsant	22(55)	14(42.4)	3(21.4)	0.09
Antimicrobial	21(52.5)	9(27.3)	5(35.7)	0.09
Laxative	24(60)	10(30.3)	2(14.3)	0.003*
Corticosteroid	25(62.5)	8(24.2)	2(14.3)	0.0004*
Antihistamine	19(47.5)	9(27.3)	1(7.1)	0.01*
Acid Reducer	19(47.5)	8(24.2)	2(14.3)	0.03*
Antipsychotic	25(62.5)	5(15.2)	0(0)	<0.0001*
Vitamin/supplement	9(22.5)	10(30.3)	5(35.7)	0.5
Bronchodilator	8(20)	10(30.3)	1(7.1)	0.2
Diuretic	4(10)	5(15.2)	3(21.4)	0.5
Antihypertensive	6(15)	6(18.2)	0(0)	0.3
Antidepressant	9(22.5)	3(9.1)	0(0)	0.08
Intranasal agent	3(7.5)	4(12.1)	1(7.1)	0.9
Stool softener	7(17.5)	1(3)	0(0)	0.06
Topical agent	4(10)	3(9.1)	0(0)	0.7

\* Statistically significant

## Conclusions

Medications commonly prescribed for children receiving hospice care include those intended to treat symptoms including pain, dyspnea, nausea, seizures, and constipation. A general understanding of medications used in hospice care may be helpful in the development of educational materials, medications guidelines and protocols, and questions for future research.

## Bibliography

References

## Notes

Patient and medication information provided by Seasons Hospice & Palliative Care