



ABSTRACT

- **Background:** Predicting survival in patients with advanced cancer receiving care at home is quite challenging, because we usually depend on subjective data. The palliative prognostic index (PPI) is commonly used to predict life expectancy.
- **Methods:** Retrospective analysis of records of 80 patients received home health care visits at King Hussein Cancer Center, in Jordan.
- **Results:** PPI has a high sensitivity to predict survival in the last 3 weeks (sensitivity of 97.5%). The presence of delirium and dyspnea at rest are highly specific to approaching toward the end-of-life.
- **Conclusion:** PPI is a useful tool to predict survival. However, more prospective studies should be done in inpatient and home care settings to determine the cutoffs values to predict survival accurately.

BACKGROUND

Predicting survival in patients with advanced cancer is quite challenging and stressful to the patient, family and the clinician. Improved prognostication would enable patients and their carers to be better prepared for their impending death, and would allow clinicians to make better informed decisions about place of care and goals of care.

Palliative Prognostic Index (PPI) is a useful tool to predict survival, it is the sum of Palliative performance scale (PPS) and other clinical variables (oral intake, edema, resting dyspnea, and delirium). The PPI can acceptably predict whether or not a patient will survive >3 or >6 weeks, and it has been tested by other authors in inpatient setting, but was not studied at patient's home.

OBJECTIVES

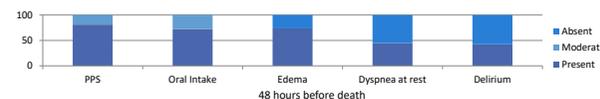
- To predict survival for patients in home care setting
- To validate PPI as a prognostic tool at home setting
- To study the poor prognostic signs that are linked with death.

METHODS

- We conducted this study on 80 patients receiving home care visits at King Hussein Cancer Center in Amman, Jordan between 1 January 2017 and 31 December 2017.
- Conducted retrospective analysis of PPI scores for the patients at home, in the last 48 hours of life, 3 weeks, and 6 weeks before death.
- Inclusion criteria were: patients receiving home care visits, followed by home care team for 6 weeks before death, and spent the last 3 days at home.
- Patients who died at the hospital were excluded.

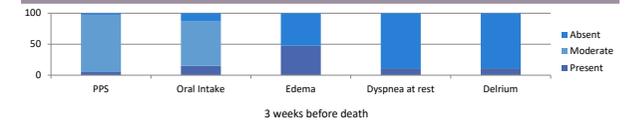
RESULTS

- In our sample, we had 80 patients were followed by home care team at King Hussein Cancer Center
- Average age at time of death was 63.5 years (22-90 years old)
- 58.75% were females (n= 47)
- PPI score was calculated within 48 hours of death
- The results showed that average score PPI 48 hours before death was 10 (ranges between 2.5 – 15)
- The performance status in the last 48 hours according to Palliative Performance Scale (PPS) was 10 or 20% in 65 patients (81.25%) and between 30 and 50% in 15 patients (18.75%), none of our patients had a performance status above 50%
- The oral intake was severely reduced in 58 patients (72.5%), and was moderately reduced in 21 patients (26.25%) and was normal in 1 patient (1.25%)
- 59 patients had lower limbs edema (73.75%) and 36 patients had shortness of breath at rest (45%) and 34 patients had delirium (42.5%)
- 4 of our patients had a PPI score of 15 in the last 48 hours of their life.

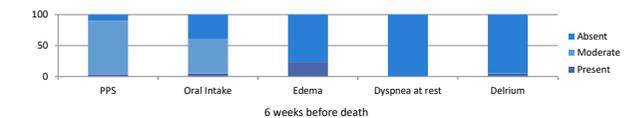


- Three weeks before death the results were different
- The average PPI score was 4.5 (ranges between 2 and 12)
- 74 patients had PPS score between 30 and 50% (92.5%), 4 patients had a score of 20 or 10 and 2 patients had a score above 50.
- Oral intake was severely reduced in 12 patients, and moderately reduced in 58 patients and normal in 11 patients.
- Edema was present in 38 patients. Dyspnea in 9 patients as well as delirium.

RESULTS



- Six weeks before death, the average PPI score was 3.5 (ranges between 0 – 10)
- Three patients had a performance status below 30, 69 patients had a performance status between 30 and 50, and 8 patients had a performance above 50
- Four patients had severely reduced oral intake, whereas 45 patients had moderately reduced intake, and 31 patients with normal intake.
- 19 patients had edema in lower limbs. None of the patients had dyspnea at rest and only 4 patients had delirium



- Dyspnea at rest and delirium were found to be the most specific factors related to a poor prognosis, with death should be expected within less than three weeks. Specificity of delirium is 83.64% (95% CI 71.2% - 92.23) and sensitivity 32.38% (95% CI 23.57 – 42.21%). Whereas for dyspnea at rest the specificity is 83.04% (95% CI 70.2% - 91.93%) and sensitivity is 33.64% (95% CI 24.8% - 43.42%)
- The cut-offs values for PPI score is still controversial, but we considered a cut-off value of 6 to predict mortality within 3 weeks, and this result has a sensitivity of 97.5% (95% CI 91.26% - 99.7%) and a specificity of 75% (95% CI 64.06% - 84.01%), with a negative predictive value of 96.77%.

CONCLUSIONS

- PPI is a useful prognosticator of life expectancy of patients in palliative care receiving their care at home
- The presence of delirium and dyspnea at rest are linked to a poor prognosis
- PPI score below 6 can predict a survival of more than 3 weeks

Health-related quality of life of advanced cancer patients who express a wish to hasten death

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BACKGROUND

Patients with advanced cancer sometimes express a wish to hasten death (WTHD) (1). The WTHD is a reaction to the suffering that results from the impact of and deterioration associated with a life-threatening condition (2). Suffering arise from physical, psychological, existential, social and financial concerns (3).

Health-related quality of life (QoL) is a measure of well-being that encompasses the impact of these concerns from the patients' point of view. Some studies showed correlation between QoL and WTHD in terminally ill patients (4).

OBJECTIVE

To explore in depth the QoL perception of advanced cancer patients who expressed a WTHD.

METHODS

Design: A descriptive cross-sectional study.

Subjects: From January 2016 to June 2017 we recruited 49 advanced cancer patients (defined by the American Society of Clinical Oncology (ASCO) as those with distant metastases, late-stage disease, cancer that is life limiting, and/or with a prognosis of 6 to 24 months) with a WTHD.

Procedure: Consecutive patients were first assessed with a WTHD screening question ("Some people in your situation may think that living like this isn't worth it anymore. In the last week, have you thought that living like this is not worth it?"). We then assessed the QoL of all patients who responded yes to this question, using for this purpose the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire - Core 15 - Palliative Care (EORTC QLQ-C15-PAL). The EORTC QLQ-C15-PAL comprises two functional scales (physical and emotional functioning) and seven symptom scales (fatigue, pain, nausea/vomiting, dyspnoea, insomnia, appetite loss, constipation), on which items are rated from 1 (not at all) to 4 (very much), as well as a final question asking about overall QoL during the past week, rated from 1 (very poor) to 7 (excellent).

METHODS

Statistical analysis: Standard descriptive statistical analysis and correlation analysis were done. The level of significance was set at $p < .05$, and the analyses were performed using SPSS 21.0 (SPSS Inc., Chicago, IL).

RESULTS

The median score for overall QoL was 4 (IQR 2-4), although 14 patients (28.6%) rated their overall QoL as very poor or poor (**Figure 1**). In terms of physical functioning, 19 patients (38.7%) reported having a lot of difficulties, while 13 (26.5%) experienced quite a lot of difficulty in this regard.

Figure 1. Frequency of scores of the overall health-related quality of life.

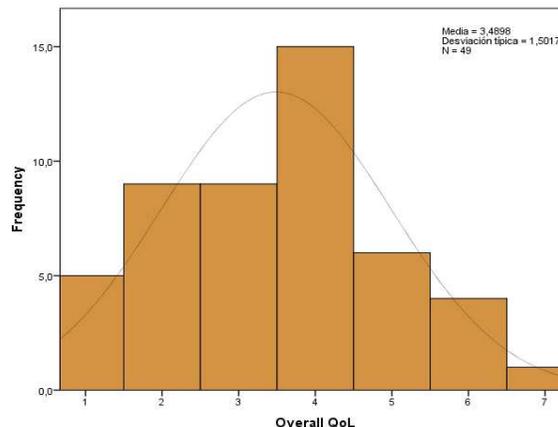


Table 1 shows the frequency of physical symptoms. The most common in this patients were fatigue, constipation and appetite loss.

Regarding emotional functioning, 31 patients (63.1%) reported having felt quite or very anxious and depressed during the past week.

There was a negative correlation ($\rho = -.283$, $p < .05$) between the intensity of the WTHD and physical functioning.

RESULTS

Table 1. Frequency of physical symptoms by the patients' point of view.

	Not at all	A little	Quite a bit	Very much
Fatigue	4 (8.2%)	16 (32.6%)	23 (46.9%)	6 (12.2%)
Nausea and vomiting	29 (59.2%)	7 (14.3%)	9 (18.4%)	4 (8.2%)
Pain	10 (20.4%)	16 (32.7%)	16 (32.6%)	7 (14.3%)
Dyspnoea	18 (38.8%)	8 (16.3%)	15 (30.6%)	7 (14.3%)
Insomnia	16 (32.6%)	10 (20.4%)	16 (32.6%)	7 (14.3%)
Appetite loss	11 (22.4%)	2 (4.1%)	23 (46.9%)	13 (26.5%)
Constipation	17 (34.7%)	10 (20.4%)	9 (18.4%)	13 (26.5%)

CONCLUSIONS

- Advanced cancer patients with a WTHD report poor overall QoL and difficulties with both physical and emotional functioning.
- Impaired physical functioning may be a factor that intensifies the WTHD.
- Improving QoL should be a key clinical objective in the care of patients who express a WTHD.

REFERENCES

1. Monforte-Royo C et al. The wish to hasten death: a review of clinical studies. *Psychooncology*. 2011; 20(8):795-804.
2. Balaguer A, et al. An international consensus definition of the wish to hasten death and its related factors. *PLoS One* 2016;11:e0146184.
3. Chochinov HM, et al. Understanding the will to live in patients nearing death. *Psychosomatics* 2005;46:7e10.
4. Robinson S, et al. The Relationship Between Poor Quality of Life and Desire to Hasten Death: *J Pain Symptom Manage*. 2017;53(2):243-249

A Survey of U.S. Hospice Professionals Regarding Medical Cannabis Practices

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ABSTRACT

Introduction: With medical cannabis remaining illegal at the federal level, hospice programs are unsure how to handle requests for medical cannabis, particularly since hospice is largely funded with federal dollars. The purpose of this survey was to determine respondents' comfort level with medical cannabis use in hospice, what processes and logistics hospice programs are employing when dealing with medical cannabis, and to determine what, if any, education hospice programs are providing to their staff. **Methods:** An anonymous online survey assessed a variety of factors surrounding hospice staff practice, experience, and opinions regarding medical cannabis. The survey was disseminated to employees of clients of a large hospice benefit manager as well as through a national hospice and palliative medicine professional organization. **Results:** Three hundred and ten hospice professionals responded to the survey. More than half of the respondents were nurses followed by administrators and physicians. Regardless of legal status, hospice staff members were overwhelmingly in agreement that medical cannabis is appropriate for hospice patients to have access to and use medical cannabis. Several barriers to use were identified including discordant legal status between state and federal governments, concerns about clinical efficacy and safety, and myriad other societal factors. Wide variations in medical cannabis documentation, and education practices between hospices were noted. **Discussion:** The data suggest overwhelming support in legalizing cannabis on a federal level for medical use. Our findings highlight important opportunities to support hospice providers and their patients through education and the development of policies around medical cannabis.

BACKGROUND

- Evidence on the effectiveness of medical cannabis dates back thousands of years, providing relief from pain, muscle spasms, anorexia, nausea, vomiting, and cachexia.^{1,2}
- While there are several FDA-approved pharmaceutical cannabinoid products on the market, plant-based cannabis is now legal for medical use in 30 of 50 U.S. states and DC.³
- Hospice care providers, patients, and caregivers are calling for the use of plant-based cannabis to relieve pain and other symptoms.^{4,5,6}
- Hospice programs are unsure how to handle requests for medical cannabis, particularly since it is illegal at the federal level and hospice is largely funded with federal dollars.

OBJECTIVES

- Purpose**
 - Determine respondents' comfort level with the use of medical cannabis in hospice
- Understand existing processes and logistics in hospice for dealing with medical cannabis
- Determine what education hospice programs are providing to their staff

METHODS

- Anonymous survey
- Approved by University of Maryland School of Pharmacy Institutional Review Board
- Study duration: 18 days
 - Survey period: August 29, 2018 – September 15, 2018
- Study Population:
 - Enclara Pharmacia, a national full-service PBM and mail order supplier of medications and clinical services for the hospice industry sent an email invitation to participate in the survey to over 500 hospice clients.
 - A link to the survey was also included in two National Hospice and Palliative Care Organization (NHPCO) NewsBriefs newsletters and posted in the "Research Opportunities" section on NHPCO.org.

Characteristic, (n=310), n (%)	Value
Baseline Characteristics	
Hospice Role	
Physician	36 (11.6%)
Pharmacist	7 (2.2%)
Nurse (RN, LPN)	181 (58.3%)
Advanced Practice Nurse	11 (3.5%)
Social Worker	7 (2.2%)
Aide	4 (1.2%)
Administrator	44 (14.1%)
Other	20 (6.4%)
Average daily census where you practice	
0-50 patients	99 (31.9%)
51-200 patients	138 (44.5%)
201-500 patients	35 (11.3%)
>500 patients	38 (12.3%)
Hospice profit status	
Not for profit	212 (68.3%)
For profit	95 (30.6%)
Government	3 (0.9%)
Geographic setting of hospice?	
Primarily urban	18 (5.8%)
Primarily rural	74 (23.8%)
Primarily suburban	36 (11.6%)
Mixed urban, rural, suburban	182 (58.7%)
Is cannabis (marijuana) legal in your state?	
Legal for medical use	149 (48.0%)
Legal for recreational use	0 (0.0%)
Legal for both medical and recreational use	44 (14.1%)
Not legal, but decriminalized	6 (1.9%)
Not legal	96 (30.9%)
Not Sure	15 (4.8%)

RESULTS

- Respondent characteristics**
 - 310 U.S. hospice professionals across 40 states, primarily nurses.
 - Sixty-two percent of respondents reported being from states where medical cannabis was legal either for medical or recreational use.
 - Thirty-three percent were from states where it was not legal and a small number of respondents reported being unsure of the legal status in their state.

RESULTS

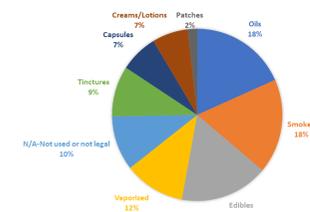
Practice, experience, and opinions

- A majority of respondents agreed (91.2%) that medical cannabis is appropriate for hospice patients.
- A majority of respondents (82%) reported that their physicians do not recommend or certify patients for medical cannabis.
- While most clinicians are not fearful of having patients use medical cannabis, their opinions regarding how others feel (patients, family members, coworkers) are mixed.

Processes, education, and access to care

- Documentation practices vary widely with most respondents documenting medical cannabis use within the medication profile or progress note.
- Almost one-quarter (24.5%) do not alert the pharmacist/medication reviewer when a patient is using medical cannabis.
- Only 19% of respondents stated that their hospice has a medical cannabis policy.

Figure 1. What forms of cannabis are your patients using? (Select all that apply) (Responses=894 responses, n=310)



CONCLUSIONS

- The data suggest overwhelming support in legalizing cannabis on a federal level for medical use.
- There are still a variety of barriers/concerns with use
 - Discordant legal status between state and federal governments
 - Concerns about clinical efficacy and safety
 - Societal factors.
- Opportunities to support hospice providers
 - Education
 - Development of policies around medical cannabis.

REFERENCES

- Urishy T, McPherson M, Pradit F. Assessment of hospice health professionals' knowledge, views, and experience with medical marijuana. *J Palliat Med* 2013;14(12):1293-1295.
- Stovner TB. Cannabisoids in palliative medicine. *J Palliat Med* 2012;20(7):693-694.
- 60 Peer-Reviewed Studies on Medical Marijuana. Procon.org. 2016. Available online at: https://medicalmarijuana.procon.org/view_resource.php?resourceID=000884. Accessed October 1, 2018.
- Aggarwal SK. Use of cannabinoids in cancer care: palliative care. *Curr Onc* 2016;23(suppl2):S33-S36.
- Smith CA. Isn't it about time for hospice to get on board with medical marijuana? *Cannabis Journal*. Aug 2017. Available online at: <http://www.cannabisjournal.com/volume-2-issue-3-august-2017/2017/8/20/lets-talk-about-time-for-hospice-to-get-on-board-with-medical-marijuana>. Accessed October 1, 2018.
- Halperin A. Medical marijuana offers hope for hospice patients. *LA Weekly*. Jan 2017. Available online at: <http://www.laweekly.com/news/medical-marijuana-offers-hope-for-hospice-patients-792600>. Accessed October 1, 2018.

