

## REVIEW ARTICLE

## Updates in Hospital Palliative Care

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**Background:** This review critiques recent palliative care (PC) literature with likelihood of impacting general hospital practice in order to help address the PC needs of patients.

**Methods:** Articles published between January and December 2018 were identified through hand-search of leading PC journals and MEDLINE search. The final ten selected articles were determined by consensus based on scientific rigor, relevance to general hospital medicine, and impact to practice.

**Results:** Key findings include: Early PC interventions reduced healthcare costs; Prognostic awareness of surrogates of patients with advanced dementia was associated with reduced burdensome interventions; Care transitions, especially in the last 3 days of life, can be detrimental to caregivers' well-being and perceptions of care; Haloperidol was effective for treatment of nausea and vomiting without untoward effects; Antipsychotics did not improve delirium symptoms in hospitalized patients; A fan directed to the face improved dyspnea; Disparities in advance directive completion disappeared when equal opportunities were given; Improving communication with families of critically ill patients improved perceptions of patient-centered care; Communication-priming tools improved the quality and documentation of goals of care conversations; Discussing prognosis did not harm the patient-provider relationship.

**Conclusion:** Recent PC research affirmed the importance of PC delivery to patients with life-limiting illness and provided important guidance to hospitalists on symptom management, advance care planning, and communication.

**Keywords:** palliative care, palliative medicine, symptom management, communication, advanced care planning

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## INTRODUCTION

Palliative care (PC) aims to improve quality of life for patients and families facing serious, life-threatening illnesses through a holistic approach to care involving an interdisciplinary team (1). Hospitalists should maintain basic skills and competencies in general PC to help address the PC needs of patients and families at the time of hospitalization (2).

The aim of this paper is to review recent PC literature relevant to hospitalists. We summarized and critiqued PC research articles published between January 1 and December 31, 2018 with high likelihood of impacting the practice of hospital medicine. We hand-searched 15 leading PC journals and conducted a Medline keyword search of PC terms (see Appendix Table). All titles and/or abstracts were screened and selected for review based on the following factors: PC content, scientific rigor, impact on practice, and relevance to hospital medicine. Forty-one articles were individually reviewed and scored by all authors according to the criteria. Articles were ranked according to mean scores and ten articles (3-12) chosen for inclusion through consensus discussion.

## HEALTHCARE UTILIZATION

**Early palliative care consultation within 3 days of admission reduces healthcare costs.**

May P, Normand C, Cassel JB, *et al.* Economics of palliative care for hospitalized adults with serious illness: a meta-analysis. *JAMA Intern Med.* 2018;178(6):820-829.

**Background:** Patients with serious illness account for a disproportionate amount of healthcare expenditures without improving quality or outcomes (13).

**Findings:** This meta-analysis evaluated six studies of patients receiving a PC consultation within three days of admission to determine the association of PC consultation with total direct costs of hospital care. Of the 133,118 patients, 93.2% were discharged alive and 40.8% had a primary cancer diagnosis. 3.6% of patients received PC consultation, yielding a cost reduction of \$3237 ( $p<0.001$ ). Greater cost reduction was seen in patients with cancer compared to non-cancer diagnoses (-\$4251 vs. -\$2105,  $p<0.001$ ) and patients with  $\geq 4$  co-morbidities compared to  $\leq 2$  (\$4865 vs. \$2514,  $p<0.001$ ).

**Cautions:** The study evaluated PC consultations within three days of admission, so it is unclear whether later consultations yield similar savings. Additionally, publication bias may impact the results.

**Implications:** Consider early PC consultation, especially in hospitalized patients with cancer or multiple co-morbidities.

**Prognostic awareness is associated with less burdensome interventions among patients with advanced dementia.**

Loizeau AJ, Shaffer ML, Habtemariam DA, *et al.* Association of prognostic estimates with burdensome interventions in nursing home residents with advanced dementia. *JAMA Intern Med.* 2018;178(7):922-929.

**Background:** Patients with advanced dementia often undergo burdensome interventions, such as tube feeds, parenteral therapy, emergency room visits, or hospitalization at end of life with unclear benefit (14).

**Findings:** This secondary analysis of two prospective studies evaluated the quarterly prognostic estimates of surrogates of 764 nursing home residents with advanced dementia for accuracy and for their association with burdensome interventions. Patient mortality was higher when surrogates estimated shorter life expectancy: prediction < one month, AHR 27.53 (95% CI, 15.81-47.95). The strongest variable associated with decreased odds of burdensome interventions was a surrogate's prognosis of  $\leq$  six months (4.4% vs. 49.6%,  $p < 0.10$ , AOR 0.46, 95% CI 0.34-0.62). The strongest variable associated with a surrogate's prognosis of  $\leq$  six months was reporting being asked about goals of care (7.2% vs. 5.0%,  $p < 0.10$ , AOR 1.94, 95% CI 1.50-2.52).

**Cautions:** The content of the goals of care conversation was not identified. The population studied was limited to nursing home residents without geographic or ethnic diversity.

**Implications:** Sharing prognosis and discussing goals of care with families of hospitalized patients with advanced dementia may help promote goal-concordant care and reduce burdensome interventions. Further work is needed to facilitate goals of care conversations and prognostic awareness in advanced dementia with subsequent evaluation of patient and family outcomes.

## **Late transitions may negatively impact end-of-life care.**

Makaroun LK, Teno JM, Freddman VA, *et al.* Late transitions and bereaved family member perceptions of quality of end-of-life care. *J Am Geriatr Soc.* 2018; 66:1730-1736.

**Background:** Late transitions between care settings in the last three days of life have been increasing in the last decade (15) and are associated with fragmentation of care, increased medical errors, and burdensome interventions (16-20). This study is one of the first to assess bereaved family member perceptions of care related to late transitions.

**Findings:** Using 2012-2016 data from proxy informants of 1653 of 2212 (74.7%) decedents in a nationally representative annual survey of Medicare enrollees and proxy respondents, the authors determined that late transitions to sites other than home occurred in 272 of the 1653 (17%) decedents. Of those undergoing late transitions, 13% were institution-to-institution (between hospital and nursing home and vice versa). Decedents with late institution-to-institution transitions were statistically more likely to have a proxy report of unmet spiritual support needs for management of anxiety or sadness; not always being treated with respect; receiving care inconsistent with goals; or experiencing inadequate communication about care decisions.

**Cautions:** The sample size for subgroup analysis of institution-to-institution late transitions is small. This may underestimate the impact of late transitions on EOL quality of care and these results may still be clinically significant.

**Implications:** Interventions are needed to identify patients at risk of late transitions, and to enhance communication and care coordination before, during, and after healthcare transitions.

## SYMPTOM MANAGEMENT

### **Haloperidol relieves nausea or vomiting without significant harms.**

Digges M, Hussein A, Wilcock A, *et al.* Pharmacovigilance in hospice/palliative care: net effect of haloperidol for nausea or vomiting. *J Pall Med.* 2018;21(1):7-43.

**Background:** Nausea is a distressing symptom in PC and is often multifactorial in etiology (21). Haloperidol helps nausea through its potent D2 receptor antagonism, yet insufficient evidence exists for the effectiveness of haloperidol for nausea or vomiting in PC.

**Findings:** 150 consecutive PC patients were prescribed haloperidol for nausea or vomiting in a prospective, multicenter, consecutive case series across 22 sites in 5 countries. Patients received an average of 1.7 mg of haloperidol in 24 hours with 105/150 (70%) experiencing improvement in nausea and 39% having improvement in vomiting. Only 25% of patients experienced harms from haloperidol (predominantly constipation, dry mouth, somnolence), but 74% of harms resulted in no change in haloperidol use.

**Cautions:** 17/150 patients in the study received other anti-emetics. It is possible that benefits/harms could relate to the combination of antiemetic therapy.

**Implications:** Haloperidol is helpful for nausea and/or vomiting in PC patients without significant risk for harms.

### **Antipsychotics are not helpful for delirium in hospitalized non-ICU patients.**

Burry L, Mehta S, Perreault MM, *et al.* Antipsychotics for treatment of delirium in hospitalized non-ICU patients. *Cochrane Database of Systematic Reviews* 2018, Issue 6. Art. No: CD005594.pub3.

**Background:** Guidelines suggest limiting antipsychotic use for delirium treatment to when nonpharmacological interventions have failed. Yet, the evidence behind this is unclear.

**Findings:** This systematic review included 9 trials of 727 participants comparing antipsychotic to non-antipsychotic/placebo or typical to atypical antipsychotics in the treatment of delirium in hospitalized (non-critically ill) patients. No trial reported on duration of delirium (their primary aim). Antipsychotic treatment did not reduce delirium severity compared to non-antipsychotic drugs (standard mean difference (SMD) -1.08, 95% CI -2.55 to 0.39); nor was delirium severity significantly reduced between typical and atypical antipsychotics (SMD -0.17, 95% CI -0.37 to 0.02). Mortality was not different with treatment with antipsychotic or non-antipsychotic regimens (RR 1.29, 95% CI 0.73 to 2.27) nor between typical and atypical antipsychotics (RR 1.71, 95% CI 0.82 to 3.35). Adverse effects were poorly reported in the trials.

**Cautions:** Overall, the quality of the available evidence was poor and many clinically relevant outcomes were not reported in the studies.

**Implications:** Antipsychotics (typical or atypical) offer no clear advantage over non-pharmacologic interventions in hospitalized patients with delirium.

### **Fan directed at the face improves dyspnea.**

Kako J, Morita T, Yamaguchi T, *et al.* Fan therapy is effective in relieving dyspnea in patients with terminally ill cancer: a parallel-arm, randomized controlled trial. *J Pain Symptom Manage.* 2018;56(4):493-500.

**Background:** Fan therapy is recommended in clinical guidelines (22) for dyspnea but has limited empirical evidence in patients with terminally ill cancer.

**Findings:** This randomized clinical trial (RCT) of 40 advanced cancer patients in a PC unit with dyspnea at rest were randomized to treatment with five minutes of a motorized fan directed to one side of the face (2<sup>nd</sup>/3<sup>rd</sup> branch trigeminal nerve) or directed to the legs. Mean dyspnea scores decreased significantly (-1.35 [95% CI, -1.86 to -0.84] vs. -0.1 [CI, -0.53 to 0.33];  $p < 0.001$ ) and the proportion of patients with  $\geq 1$  point improvement in dyspnea scores (80% vs. 25%;  $p = 0.001$ ) in the fan-to-face compared with fan-to-legs groups. Drowsiness scores (absolute difference: +0.40;  $p = 0.01$ ) and facial temperatures (-1.43°C vs. -0.01°C;  $p = 0.003$ ) were the only other significant differences in the fan-to-face compared with fan-to-legs groups following the intervention.

**Cautions:** This was a single center study; a multicenter study is needed to confirm the findings.

**Implications:** A fan directed to the face is effective, readily available, and inexpensive in improving dyspnea in patients with advanced cancer.

## ADVANCE CARE PLANNING

**Disparities in advance directive completion may be due to lack of equal opportunity.**

Hart JL, Gabler NB, Cooney E, *et al.* Are demographic characteristics associated with advance directive completion? a secondary analysis of two randomized trials. *J Gen Intern Med.* 2018;33(2):145-147.

**Background:** Men, blacks, and those with less education are less likely to complete advance directives (AD)(23, 24). It is not known if this is due to lack of willingness to complete AD or lack of opportunity.

**Findings:** In secondary analyses of two single-center RCTs, the first measuring AD completion among serious ill outpatients (n=484) and the second studying use of an

AD completion module for onboarding employees (n=1279), patient demographics were not associated with AD completion. Furthermore, black or mixed-race participants in these trials had significantly higher rates of AD completion than did white participants.

**Cautions:** The population in this study may have been more motivated to complete AD and was younger than general populations given recruitment and employment biases.

**Implications:** This study challenges commonly held assumptions about disparities in AD completion. Clinicians and systems should work to provide equal opportunities and support for completing AD.

## COMMUNICATION

**Family-support intervention in the Intensive Care Unit improved communication.**

White DB, Angus DC, Shields AM, *et al.* A randomized trial of a family-support intervention in intensive care units. *N Engl J Med.* 2018;378(25):2365-2375.

**Background:** Surrogate decision-makers for incapacitated, critically ill patients often struggle with decisions related to goals of care, leading to psychological burden (25).

**Findings:** A stepped-wedge, cluster-randomized trial involving patients with a high risk of death (n=1420) and their surrogates from five intensive care units (ICUs) was conducted to compare usual care with a multicomponent, family-support intervention delivered by the inter-professional ICU team led by a PARTNER (Pairing Re-engineered ICU Teams with Nurse-Driven Emotional Support and Relationship-Building) nurse. There was no significant difference between the

intervention group and the control group in the surrogates' mean Hospital Anxiety and Depression Scale score at 6 months, or mean Impact of Event Scale score. The surrogates' mean Quality of Communication score was better in the intervention group than in the control group (69.1 vs 62.7; beta coefficient for estimated effect of intervention, 6.39, 95% CI, 2.57 to 10.20;  $p=0.001$ ) and mean modified Patient Perception of Patient Centeredness score (1.7 vs 1.8; beta coefficient -0.15, 95% CI, -0.26 to -0.04;  $p=0.006$ ; [lower scores indicating more patient- and family-centered care]). The mean length of stay in the ICU was shorter in the intervention group than in the control group (6.7 days vs. 7.4 days; incidence rate ratio, 0.90, 95% CI, 0.81 to 1.00;  $P=0.045$ ), a finding mediated by the shortened mean length of stay in the ICU among patients who died (4.4 days vs. 6.8 days; incidence rate ratio, 0.64; 95% CI, 0.52 to 0.78;  $P<0.001$ ).

**Cautions:** The baseline imbalances and high loss to follow up in this trial limit drawing conclusions regarding the shorter length of stay in the ICU.

**Implications:** Supporting families in the ICU can help improve patient and family-centered communication.

### **A communication-priming intervention improved goals of care conversations.**

Curtis JR, Downey L, Back AL, *et al.* Effect of a patient and clinician communication-priming intervention on patient-reported goals-of-care discussions between patients with serious illness and clinicians: a randomized clinical trial. *JAMA Intern Medicine.* 2018; 178(7):930-940.

**Background:** Communication about goals of care is associated with improved quality of death and reduced intensity of treatment near the end-of-life (26, 27), but it is unclear whether interventions can improve this communication. This RCT was

conducted to evaluate the efficacy of a patient-specific pre-conversation communication priming intervention (Jumpstart-Tips) targeting both patients and clinicians.

**Findings:** A multicenter, cluster-randomized trial in outpatient clinics with providers and patients with serious illness was conducted between 2012 and 2016 and randomized 132 clinicians and 537 patients to either a bilateral, pre-conversation, communication-priming intervention or usual care. The intervention resulted in significant increase in goals of care discussions at the target visit (74% vs 31%;  $P < 0.001$ ), increased medical record documentation (62% vs 17%;  $P < 0.001$ ), and increased patient-rated quality of communication (4.6 vs 2.1;  $P = 0.01$ ). Patient-assessed goal-concordant care did not increase significantly overall (70% vs 57%;  $P = 0.08$ ) but did increase for patients with stable goals between three-month follow-up and last prior assessment (73% vs 57%;  $P = 0.03$ ). Symptoms of depression or anxiety were not different between groups at three or six months.

**Cautions:** This study has several limitations: (1) only one region of the United States was included in study; (2) selection bias among clinicians and patients willing to participate may influence findings; (3) measurement of goal-concordant care is a novel and challenging area of PC research requiring further study; and (4) contamination from prior communication training for clinicians was not assessed.

**Implications:** While this communication-priming intervention has only been studied in the outpatient setting, it may be worth considering how to implement communication-priming interventions in the inpatient setting to help facilitate and improve goals of care communication during a hospitalization.

### Prognostic discussions did not hurt patient-physician relationship.

Fenton JJ, Duberstein PR, Kravitz RL, *et al.* Impact of prognostic discussions on the patient-physician relationship: prospective cohort study. *J Clin Oncol.* 2018;36(3):225-230.

**Background:** Some studies have suggested that discussion of prognosis can disrupt patient-physician relationships.(28) However, most studies to date have been cross-sectional in nature and therefore unable to assess causality (29, 30). Prior studies have also used patient-reported (31) rather than objectively observed prognostic discussions.

**Findings:** In a prospective cohort study, the clinic visits of 265 patients with advanced cancer visiting 38 oncologists were audio-recorded and coded for prognostication discussions at baseline, 2-7 days, and 3 months. Discussions of prognosis at the initial visit were not associated with worsening responses on relationship scales at subsequent time points. Rather, there may have been small improvements at 3 months.

**Cautions:** The generalizability of these findings from oncologists to other specialties is uncertain. Also, unmeasured discussions and events occurring between the initial visit and 3 months may have influenced outcomes. The influence of continuity is unclear.

**Implications:** Discussion of prognosis by oncologists did not disrupt patient-provider relationships. It is reasonable to expect these findings may apply to other fields, such as hospital medicine.

### CONCLUSION

Recent research provides important guidance for clinicians caring for hospitalized patients with serious illness. This research affirms the importance of PC delivery to hospitalized patients with life-

limiting illnesses and provides important guidance to hospitalists on symptom management, advance care planning, and communication.

### Notes

**Potential conflicts of interest:** The authors declare no conflicts of interest to report.

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### Appendix Table

#### **15 journals included in hand search for palliative care studies impacting general hospital practice**

- American Journal of Hospice and Palliative Care
- Annals of Internal Medicine
- British Medical Journal
- Journal of the American Geriatrics Society
- Journal of the American Medical Association (JAMA)
- JAMA Internal Medicine
- Journal of Clinical Oncology
- Journal of General Internal Medicine
- Journal of Hospital Medicine
- Journal of Pain and Symptom Management
- Journal of Palliative Medicine
- Lancet
- New England Journal of Medicine
- PC-FACS (Fast Article Critical Summaries for Clinicians in Palliative Care)

#### **Search Strategy for review of palliative care studies impacting general hospital practice**

Medline search for English-language articles published between January 1 and December 31, 2018

- Palliative
- Pain
- End of life
- Symptom management
- Communication
- Hospice
- Terminal illness
- Advance directives