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#### Objectives

1. Identify the specific impact ESLD has on patients and their family caregivers from their perspectives.
2. Identify the stated needs of patients and family caregivers in ESLD care from their perspectives.
3. Identify the barriers to integrating PC into care of patients with ESLD from patient and caregiver perspectives.

**Original Research Background.** Palliative Care (PC) is underutilized in persons with end-stage liver disease (ESLD) and little data exists on patient and family caregivers' perspectives on PC needs and how PC can be integrated into ESLD care.

**Research Objectives.** Identify ESLD patient and family caregiver perspectives on challenges of living with ESLD, potential PC needs, and barriers to integrating PC.

**Methods.** Semi-structured one-on-one interviews were conducted with purposively-sampled patients with ESLD and their caregivers at a tertiary care academic medical center. Patients and caregivers were asked about: 1) challenges of living with ESLD, 2) their unmet needs, and 3) their understanding and perceptions of PC and hospice, including accessing these services. Interviews were digitally recorded and transcribed. Transcripts were entered into NVivo software and analyzed using thematic analysis.

**Results.** Patients (n=7) had a mean age of 67 and were mostly female and white (70%) with ESLD due to alcohol (43%), hepatitis C (57%), non-alcoholic steatohepatitis (29%), and with concurrent hepatocellular carcinoma (43%). Most caregivers were female and white (83%), and were the patient's spouse/partner (83%). Patients and caregivers perceived that ESLD challenges occurred in all four quality of life (QOL) domains (physical, emotional, social, and spiritual). Participants' needs included better communication with providers, emotional support, caregiver support, and practical needs. A majority of patients and caregivers had a lack of understanding of PC.

**Conclusion.** Thematic analysis identified a variety of unmet patient and family caregiver needs in ESLD that could be addressed by PC services. However, a major barrier is a lack of understanding of PC services.

**Implications for Research, Policy, or Practice.** These results provide a first step in intervention development for a PC intervention to address identified patient/caregiver needs in ESLD with a focus on enhancing PC literacy.

### Perceptions of Inappropriate Critical Care Are Decreasing (S856)



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#### Objectives

1. Explain what "inappropriate critical care" mean.
2. Recognize that there has been a decrease in inappropriate critical care at one institution.

**Original Research Background.** When a patient's chance of survival is very low or the quality of life is markedly diminished, intensive care interventions that prolong life without achieving the goals of medicine are often considered "inappropriate" by health care providers. In 2012, we showed that the prevalence of inappropriate treatment was 11% at one academic health system.

**Research Objectives.** To assess whether the proportion of patients receiving inappropriate critical care has changed from 2012 to 2017, we repeated the evaluation in the same health system.

**Methods.** On a daily basis from August 28 through December 28, 2017, we surveyed critical care attending physicians in five intensive care units (ICUs) in one health system to ask whether each patient was receiving inappropriate critical care and if so, why the care was inappropriate. In-hospital and 6-month mortality was collected. Receipt of inappropriate critical care, patient characteristics and outcomes were compared between 2017 and 2012.

**Results.** Over 4 months, 55 physicians made 10,105 assessments on 1424 critically ill patients. Of these, 94 (6.6%) patients received perceived inappropriate critical care, which was less than 11% ( $p < 0.01$ ) in 2012. Comparing 2017 and 2012, patient age (mean 61.8 vs 60.6), MS-DRG (4.5 vs 4.5), length of stay (15 vs 14.9 days), and overall mortality (18% vs 20%) were not significantly different ( $p > 0.05$ ). The most common reason why treatment was inappropriate in 2012 was burdens grossly outweigh benefits (67% of patients) whereas in 2017 it was that treatment cannot achieve patient's goals (70%). In 2017, inpatient mortality was 9%, 44%, and 73% for patients receiving critical care that was perceived to be appropriate, probably inappropriate and inappropriate.

**Conclusion.** Over five years at one health system the proportion of patients receiving perceived inappropriate critical care dropped by 40%.

**Implications for Research, Policy, or Practice.** Understanding the reasons for this decrease in inappropriate critical care might elucidate how to foster further improvement.

### ***Lung Transplant Pulmonologists' Views of Specialty Palliative Care for Lung Transplant Recipients (S857)***



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#### *Objectives*

1. Differentiate how lung transplant pulmonologists' views of lung transplantation affect their use of specialty of palliative care (SPC).
2. Contrast lung transplant pulmonologists definitions of specialty palliative care with their patterns of specialty palliative care utilization for lung transplant recipients.

**Original Research Background.** Lung transplant recipients face foreshortened life expectancies and frequently experience significant symptoms. They may benefit from but rarely receive SPC services. Transplant pulmonologists' views of SPC may be key to understanding SPC utilization for this population but these have not been well characterized.

**Research Objectives.** (1) Examine how lung transplant pulmonologists view SPC and make decisions to refer transplant recipients to SPC and (2) identify any unique aspects of lung transplantation affecting transplant pulmonologists use of SPC.

**Methods.** We conducted semi-structured interviews with attending transplant pulmonologists at nine geographically diverse high-volume transplant centers with SPC services in the U.S. and Canada. All interviews were audio-recorded and transcribed verbatim. The multidisciplinary team developed a qualitative codebook using the constant comparative method. Two investigators coded all transcripts, with disagreements discussed and resolved by consensus.

**Results.** We interviewed 37 transplant pulmonologists. Only 2 participants had never referred a lung transplant recipient to SPC. While most participants correctly defined SPC and differentiated SPC from hospice, approximately half used SPC only when disease-directed therapies failed. This approach was associated with a perception that transplant and SPC are "not convergent paths" because transplant focuses on "survival and aggressive treatment," particularly in the first post-transplant year or when re-

transplantation is possible. Participants who reported using SPC alongside disease-directed therapies were more likely to view transplant as a "palliative treatment" or a "terminal illness" with an uncertain "rollercoaster" course especially after the onset of chronic rejection.

**Conclusion.** Despite viewing SPC as more than solely end-of-life care, many transplant pulmonologists view SPC as incompatible with traditional post-transplant disease-directed therapy.

**Implications for Research, Policy, or Practice.** Efforts to integrate SPC into lung transplantation will require solutions that address transplant pulmonologists perception that transplant and SPC are divergent treatment paths.

### ***The EFFECT (End-of-lIFE-Communication) Study: Acceptability, Feasibility, and Potential Impact of Using Mortality Prediction Scores for Initiating End-of-Life Goals of Care Communication in the Adult Intensive Care Unit (S859)***



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#### *Objectives*

1. Describe the role of the Sequential Organ Failure Assessment (SOFA) in calculating mortality risk prediction scores.
2. Articulate the role of mortality risk prediction scores in promoting EOL goals-of-care communication.
3. Describe a patient example in which use of mortality prediction scores promoted earlier EOL goals-of-care communication.

**Original Research Background.** Uncertainties in prognosis remain a barrier to end-of-life (EOL) communication in the intensive care unit (ICU). Mechanisms for increasing the accuracy and timeliness of EOL goals-of-care communication are needed.

**Research Objectives.** This study evaluated: 1) the acceptability and feasibility of providers' use of patient mortality prediction scores as part of routine practice, and 2) providers' intentions to change practice, related to goals-of-care communication, as a result of awareness of the scores.

**Methods.** An explanatory mixed-methods approach was used. Using Sequential Organ Failure Assessment (SOFA), patient mortality prediction scores were provided to ICU providers (12) at a large urban medical university who then completed an acceptability and feasibility questionnaire. Follow-up interviews were conducted to further understand and gain insight into providers' perceptions regarding EOL practice changes as a result of having the scores.