

Original Research Background. Trauma patients are at increased risk of unmet palliative care needs for many reasons.

Research Objectives. Develop a predictive algorithm that triggers a palliative care consult for trauma patients that can be automated within the electronic medical record.

Methods. A total of 2197 admitted patients involved in tier 1-3 trauma activations between 2014-2016 were identified from our trauma registry. Variables of clinical relevance to trauma patients were compiled from the literature and extracted from the EMR and included demographics, labs, trauma/clinical scoring systems, injuries, and comorbid conditions. We implemented a machine learning approach with 10-fold repeated cross-validation to identify predictor variables conveying the greatest odds of association with a palliative care consult using the R statistical environment.

Results. Eight different machine learning models (including logistic regression, neural network, decision tree, and random forest) were implemented. A total of 32 candidate predictor variables served as inputs for all models and yielded [minimum, maximum] sensitivities of [0.78, 0.99], specificities of [0.79, 0.99] and AUC of [0.87, 0.99] across validation folds. Model agnostic methods allow for identification of relevant predictors and comparison of variable importance across “black box models.” Variables predictive of a palliative care consult included age, TRISS, GCS, intubation status, transfusion status, QSOFA score, admission to ICU, abnormal hemoglobin, abnormal blood urea nitrogen, abnormal white blood cells, and comorbid conditions including CHF, neurological disease, and cancer.

Conclusion. Our research reveals that data extracted from the EMR can aid in the identification and prioritization of trauma patients for palliative care consultation.

Implications for Research, Policy, or Practice. This novel trigger tool will foster real-time identification of trauma patients with unmet palliative care needs, while obviating the need for additional staff devoted to manually screening daily patient admission rosters.

The Palliative Care State Policy GPS: A New Tool to Track State Policies on Palliative Care (W225C)

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Objectives

1. Compare recent palliative care state policies adopted by different states.
2. Assess the transferability of other states' palliative care policies to a provider's own state.

Original Research Background. In the United States, there are significant opportunities to advance palliative care (PC) access and quality at the state level. Recently, there has been a rise in PC policies, many of which have stemmed from increased state-level advocacy by palliative care champions.

Research Objectives. In collaboration with the Center to Advance Palliative Care, the Palliative Care State Policy GPS was created to support research on palliative care policy and to encourage policy innovation aimed at ameliorating disparities in access and reforming palliative care quality and education.

Methods. Three individuals searched LexisNexis and state health departments with search terms including “palliative care,” “home care,” “home and community-based services,” and “pain management” to find enacted and pending policies that affect PC for each state. The database will be automatically updated with new legislation and regulations by periodic input of our search terms into a search function on Westlaw.

Results. Preliminary data have been collected for thirteen states, the U.S. territories, and the Indian Health Service. The database is expected to be publicly accessible by November 1, 2020. Current data shows heterogeneity among states regarding PC policy. Some states, such as New York, have been active in legislating around PC, while other states and territories have lagged. In 2019 and 2020, 56 state laws and regulations have been enacted or proposed in seven states (New York, Utah, Texas, Louisiana, Michigan, Oregon, and Vermont). Additionally, the COVID-19 pandemic has encouraged policymaking in telemedicine and expansion of the PC workforce, both of which have positive implications for PC.

Conclusion and Implications for Research, Policy, or Practice. The creation of the Palliative Care State Policy GPS is critical to understanding how states are adopting PC policies over time, identifying barriers to policy adoption, and developing strategies to improve quality and access to PC.

Novel Communication Liaison Program in the COVID-19 Intensive Care Unit: Impact on Liaison Participants (W225D)

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Objectives

1. Explain the process for creating and implementing a Communication Liaison (CL) program.
2. Discuss the Impact of the Communication Liaison program on liaison participants.

Original Research Background. During the COVID pandemic, families were barred from their hospitalized loved ones, while surge critical care teams were overwhelmed with hundreds of patients, leaving little capacity for remote communication. We implemented a novel Communication Liaison (CL) program, following the palliative care consultative model, to facilitate communication between critical care teams and families, and to provide emotional and decisional support to families.

Research Objectives. The CL program aim was to rapidly train and deploy novice providers in communication support for families. This study evaluated the experience and impact on liaisons during the surge.

Methods. We developed “just-in-time” training in key elements of critical care and palliative medicine. To support liaisons through difficult conversations and challenging family interactions, we deployed liaisons in teams with tailored reference material, peer coaches, and palliative care subspecialists. Post-program survey and semi-structured interviews were conducted to evaluate the impact on liaisons.

Results. Liaison survey response rate was 90% (56/62). As compared to baseline, CLs agreed/strongly agreed that their ability to discuss end-of-life care decisions and handle emotional conversations with families increased from 50% to 93%, and 73% to 98%, respectively. Additionally, 100% of liaisons agreed/strongly agreed that the program provided an invaluable service to families. Themes elicited during the post-program interviews revealed an enhanced sense of purpose and a renewed connection to patient care that will change their future practice.

Conclusion and Implications for Research, Policy, or Practice. Rapid training and coaching of novice CL during COVID-19 surge was feasible and effective and is an easily scalable model of primary palliative care for subsequent surges. Despite potential for distress, liaisons reported that the experience was meaningful and increased their confidence in communication skills and difficult conversations.

Relationship Between Household Material Hardship and Distress in Parents of Children with Advanced Cancer: A Report from the PediQUEST Response Trial (T315A)



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Objectives

1. Explain the association between household material hardship and distress in parents of children with advanced cancer.
2. Propose how housing insecurity can be modified for families of children with advanced cancer through providing systematic psychosocial support.

Original Research Background. Socioeconomic status (SES) is associated with inferior health outcomes in pediatric cancer, but little is known about SES and distress in parents of children with advanced cancer.

Research Objectives. To characterize the relationship between SES as measured by household material hardship (HMH, food, energy and/or housing insecurity) and distress in parents of children with advanced cancer.

Methods. We conducted a preliminary cross-sectional analysis of baseline data from the PediQUEST Response multisite randomized controlled early palliative care trial. Primary outcomes included parental state anxiety (State-Trait Anxiety Inventory-state) and depression (Center for Epidemiologic Studies Depression-10 Scale). Regression models were fitted to characterize the relationship between each HMH domain (food, energy and/or housing insecurity) and the primary outcomes.

Results. Parent (n=82) mean age was 43.6 years (± 8.4); most were White, non-Hispanic females (n=62, 76%) and married (n=61, 74%). Child mean age was 11.5 years (± 6.3); 57% male (n=47), 44% with brain and 44% solid malignancies. Parents reported moderate state anxiety ($x = 38.2 \pm 11.4$) and high levels of depressive symptoms ($x = 10.5 \pm 4.6$). Parental state anxiety and depression were correlated (Spearman rho=.54, $p < .0001$). Forty percent of parents reported at least 1 HMH insecurity (food, 27%; energy, 13%; housing, 26%). Housing insecurity was significantly associated with increased parental state