**BACKGROUND**

- Advance Care Planning (ACP) is underutilized and difficult to reference in electronic medical records (EMR)
- Less than 33% of patients at high risk of death with end-of-life preferences have shared their preferences with their physician
- Utilization of ACP increases the propensity that patient wishes are known and followed
- ACP has been shown to increase the quality of care for patients and their families at the end of life
- Currently clinician prediction of patient survival is largely inaccurate
- Physician time constraints and inefficient care processes play a role in the underutilization of ACP
- Predictive models can be used to assist clinician prognostication of patients and help identify patients that may benefit from ACP

**PURPOSE**

To identify inpatient general internal medicine patients at high-risk for mortality and morbidity, using a machine-learning model, for a targeted advance care planning intervention and multi-disciplinary care review

**INTERVENTIONS**

- Utilized a machine learning mortality model developed by the Duke Institute for Health Innovation based on patient comorbidities and chart data at the time of admission
- Developed a standardized Advance Care Planning documentation template to ensure documentation is stored centrally in the EMR to enable easy reference for future providers
- Developed ACP education for Hospital Medicine faculty
- Collaborated with:
  - Pharmacy for discharge medication reconciliation
  - Clinical Documentation Improvement (CDI) team to reference and continue care conversations across different services
  - Case management to facilitate appropriate referrals, assist with discharge resources, and participate in ACP conversations

**PRELIMINARY RESULTS**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Intervention High-Risk Patients n = 336</th>
<th>Post-Intervention High-Risk Patients with ACP Note Documented n = 111</th>
<th>Post-Intervention High-Risk Patients (All notifications) n = 252</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP Note Completion (%)</td>
<td>5.65%</td>
<td>100%</td>
<td>44.05%</td>
</tr>
<tr>
<td>Average Length of Stay</td>
<td>10.36</td>
<td>9.59</td>
<td>9.01</td>
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<tr>
<td>30-day readmission (%)</td>
<td>20.0%</td>
<td>20.45%</td>
<td>18.84%</td>
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<tr>
<td>Change in Code Status Order (%)</td>
<td>17.56%</td>
<td>29.73%</td>
<td>21.43%</td>
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<tr>
<td>Discharge to Hospice (%)</td>
<td>14.29%</td>
<td>19.82%</td>
<td>14.86%</td>
</tr>
</tbody>
</table>

**REFERENCES**