Beyond 30 days: Patient oriented outcomes among older adults after emergency general surgery

Beeson Graduating Scholar presentation
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November 2021
Overarching goal: Develop the evidence base supporting the integration of palliative care into routine care for vulnerable older surgical patients

Project goal: Identify opportunities to improve the care of older EGS patients by fully characterizing their clinical trajectories and care needs beyond 30-days after surgery

### Aim 1
Medicare Claims

- Outcomes:
  - Survival
  - Healthcare utilization
  - End of Life care

- **H1a.** Older EGS patients will have higher mortality and healthcare utilization, as well as lower hospice use compared to propensity-matched non-EGS patients.

### Aim 2
Phone surveys

- Symptom burden
  - Function and cognition
  - Quality of life
  - Advance care planning
  - Healthcare use
  - End of life care

- **H2a.** Modifiable factors independently associated with fewer hospital transfers will be identified
- **H2b.** Modifiable factors associated with improved quality of life will be identified

### Aim 3
Semi structured interviews

- Phenomenological qualitative analysis will reveal key themes illustrating the patient and proxy experience that will directly inform future palliative care interventions to improve quality of surgical care.
Results:
• In both groups, 1-year mortality ≥ 29.7% or higher
• ≥ 56% had a hospital encounter in the year after discharge
• ≥ 56 days away from home

Methods:
100% Medicare Claims 2016-2018
66+y
Laparotomy, bowel resection, ulcer vs. AMI, Pneumonia, CHF
Examined the association of frailty with intensity of end-of-life care (EOLC) for older adults with and without frailty who undergo EGS but die within one year.

- Not frail (32.2%)
- Prefrail (31.7%)
- Mild frailty (29.8%)
- Moderate-to-severe frailty (6.3%)

Highest odds of (in last 30d of life):
- **visiting ED** (OR = 1.19, CI = 1.13-1.27)
- **Rehospitalization** (OR = 1.23, CI = 1.16-1.31)
- **ICU admission** (OR = 1.22, CI = 1.13-1.30)

High Burden of Palliative Care Needs of Older Adults During Emergency Major Abdominal Surgery

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<table>
<thead>
<tr>
<th>Characteristic</th>
<th>High Illness Burden (n=231)</th>
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<tbody>
<tr>
<td>Age*</td>
<td></td>
</tr>
<tr>
<td>65-74</td>
<td>29.4</td>
</tr>
<tr>
<td>75-84</td>
<td>45.0</td>
</tr>
<tr>
<td>&gt;85</td>
<td>35.5</td>
</tr>
<tr>
<td>Female</td>
<td>63.4</td>
</tr>
<tr>
<td>White</td>
<td>76.6</td>
</tr>
<tr>
<td>ADL Dependence*</td>
<td>32.5</td>
</tr>
<tr>
<td>Helpers*</td>
<td>45.9</td>
</tr>
<tr>
<td>Dementia*</td>
<td>24.7</td>
</tr>
<tr>
<td>Charlson &gt; 2*</td>
<td>90.9</td>
</tr>
<tr>
<td>High Healthcare Use*</td>
<td>81.0</td>
</tr>
<tr>
<td>Lee Index &gt; 14*</td>
<td>19.1</td>
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</tbody>
</table>

Aim 1

## Recruitment data

<table>
<thead>
<tr>
<th></th>
<th>N (%)</th>
</tr>
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<tbody>
<tr>
<td>Eligible</td>
<td>207</td>
</tr>
<tr>
<td>Enrolled</td>
<td></td>
</tr>
<tr>
<td>Completed all timepoints</td>
<td>31 (15.0)</td>
</tr>
<tr>
<td>Of enrolled, missing data at</td>
<td></td>
</tr>
<tr>
<td>3mo:</td>
<td>15 (48.4)</td>
</tr>
<tr>
<td>6mo:</td>
<td>16 (51.6)</td>
</tr>
<tr>
<td>9mo:</td>
<td>19 (61.3)</td>
</tr>
<tr>
<td>12mo:</td>
<td>16 (51.6)</td>
</tr>
<tr>
<td>Not enrolled</td>
<td>176</td>
</tr>
<tr>
<td>Declined</td>
<td>54 (30.7)</td>
</tr>
<tr>
<td>Failed MoCA</td>
<td>13 (7.4)</td>
</tr>
<tr>
<td>Non-English Speaking</td>
<td>27 (15.3)</td>
</tr>
<tr>
<td>Missed – Weekend</td>
<td>12 (6.8)</td>
</tr>
<tr>
<td>Missed – Holiday</td>
<td>16 (9.1)</td>
</tr>
<tr>
<td>Other</td>
<td>29 (16.5)</td>
</tr>
<tr>
<td>Surgeon Did Not Approve</td>
<td>10 (5.7)</td>
</tr>
<tr>
<td>Could Not Reach By Phone</td>
<td>3 (1.7)</td>
</tr>
<tr>
<td>Proxy Declined/Could Not Reach</td>
<td>10 (5.7)</td>
</tr>
<tr>
<td>Trauma Patient</td>
<td>2 (1.1)</td>
</tr>
</tbody>
</table>

### Quarterly Surveys

- **a)** Symptom burden
- **b)** Function and cognition
- **c)** Quality of life
- **d)** Advance care planning
- **e)** Healthcare use
- **f)** End of life care
Aim 3

Emotions associated with in-the-moment decision making
Regret

I wish I had gone to the hospital sooner when I was having cramps. I was having cramps for about a week before I ever went to the hospital. Maybe if I had gone to the hospital sooner about the cramps I was having and problem about not having a bowel movement then maybe it wouldn’t have happened that way. So I think I didn’t think I made the decision at all. They decided...

There was no way I could not have the surgery. Everybody loves life so I would like to live... We had to move fast I guess so I don’t think there is anything different they could have done...

I didn’t think I decided at all. I don’t think there was anything different they could have done—BQ-008, 80 YM

I had no choice... I was in constant pain...

I cried and cried... He told me not to worry because they would do everything...
Sometimes patients are too sick to let their care team know their treatment preferences...what did you have in place to let the type of care you would want...?

Advance Care Planning

Sometimes patients are too sick to let their care team know their treatment preferences when they are hospitalized. Before surgery, what did you have in place to let the type of care you would want if you became too sick to speak for yourself?

Previous ACP
- Documentation of ACP
- Transfer of responsibility to surrogate decision maker

During the treatment episode
- No recollection of review of goals of care

Future ACP
- Reflections on mortality

Avoidance of future

I have a living will, everything is spelled out, signed legally, from a lawyer, so it’s all very clear—BQ-019, 76 YM

My daughter has all the rights to say yes or no. I took care of her when she was a child, she takes care of me now—MQ-006, 84 YF

I mean I think I have a DNR, I have a health care proxy. But my husband said [these documents] really wasn’t discussed—BQ-003, 65 YF

So, it was emergency, you know it wasn’t planned, and in the middle of it you know that it kept me from dying so that’s a really good thing [laugh]

When you reach our age, you know you bury parents, you bury aunts, you’ve you know you’ve buried friends, you’ve experienced friend circles. These are conversations that my generation

Oh god I don’t even want to contemplate the possibility. I have no idea—BQ-009, 83 YF

I don’t want to think about it. I’ve had three surgeries, believe me I don’t think I would survive another one, but hopefully I won’t need one—BQ-020, 85 YF

ACP = advance care planning; DNR = do not resuscitate.
## Implications and Future Directions

<table>
<thead>
<tr>
<th>Aim</th>
<th>Implication</th>
<th>Future Directions</th>
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| Aim 1   | • Due to high baseline palliative care needs, high perioperative morbidity and mortality all older EGS patients have palliative care assessments and palliative care available to them  
        • Frailty is an important screening tool to identify patients at highest risk | • ACS/ AAST EGS palliative care guidelines                                           
                                                                                           • Serious Illness communication training                                             
                                                                                           • ACS Geriatric Surgery Verification 2.0 with standards for palliative care          |
| Aim 2   | • Recruiting seriously ill older surgical patients immediately after is challenging and introduces selection bias | • Better resourced study                                                           
                                                                                           • Ethnographic Observations                                                          |
| Aim 3   | • High quality in-the-moment decision is confounded by symptom burden, fear, confusion and patients don’t feel they have a “choice.”  
        • Despite a near-death experience, advance care planning is remote for most patients | • Reconsider “shared decision making.”                                              
                                                                                           • Teachable moment                                                                
                                                                                           • Social worker conversation                                                       |
Thank you

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