

Goals of care discussions among hospitalized long-term care residents: predictors and associated outcomes of care

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Rationale

- Hospitalizations of long-term care (LTC) residents are known to be frequent, costly, often preventable,¹⁻³ and potentially associated with negative health outcomes.⁴
- Often, an advance directive (AD) is made at LTC home admission and updated annually when residents are in relatively stable health.
- When a LTC resident's health deteriorates and hospitalization is required, there is an opportunity to update prognosis, discuss risks and benefits of previously held treatment preferences, as well as elicit and reassess goals of care (GOC) with patients and their families or SDM.

Advance Directive

An AD is a document that helps to inform a substitute decision maker (SDM) about the consent process for life-sustaining treatments (e.g. intubation, ventilation and cardiopulmonary resuscitation) and is a resource that supports advance care planning (ACP).

Advance Care Planning

ACP is a process that allows individuals to consider, express and plan for future health care in the event that they lack capacity to make their own decisions; it takes into account a person's wishes, values and beliefs.

1. *JAMA Intern Med.* Jan 2014;174(1):156-158.
2. *J Am Geriatr Soc.* May 2012;60(5):905-909.
3. *Med Care.* Aug 2013;51(8):673-681.
4. *N Engl J Med.* Sep 29 2011;365(13):1165-1167.

Rationale (continued)

- Engaging in ACP involves decision-making for hypothetical situations that may not cover all potential scenarios, and may not reflect a patient's reality at the time of a health status decline.
- “in-the-moment” GOC discussions based on current needs have the potential to better align patient wishes with care received⁵, improve quality of life and satisfaction,⁶⁻⁸ and reduce unwanted extra care.^{9, 10}

Research suggests that GOC discussions occur infrequently

- A recent multicentre survey of elderly patients with serious illness admitted to hospital found that only 25% of patients and 32% of family members reported that they had been asked about prior ACP or AD.¹¹
- Another study of hospitalized LTC residents found that resuscitation status and family discussion was documented in only 55% and 42% of admissions, respectively.¹²

Previous studies have focused on barriers to GOC discussions, rather than the factors that are associated with them.¹³

5. *J Am Geriatr Soc.* Nov 2011;59(11):2091-2099.

6. *JAMA.* Oct 8 2008;300(14):1665-1673.

7. *JAMA.* Mar 15 2000;283(11):1437-1444.

8. *JAMA Intern Med.* Dec 2014;174(12):1994-2003.

9. *Health Serv Res.* Feb 2011;46(1 Pt 1):82-104.

10. *JAMA.* Oct 5 2011;306(13):1447-1453.

11. *JAMA Intern Med.* May 13 2013;173(9):778-787.

12. *Intern Med J.* Feb 2013;43(2):144-149.

13. *JAMA Intern Med.* 2015;175(4)(2168-6114 (Electronic)):549-556.

Approach

Better understand why GOC discussions currently happen, so that we can potentially improve how often they occur and the quality of their outcomes.

We will investigate:

- how often patients from LTC have GOC discussions
- what prompts these discussions
- what are the outcomes of these discussions

Goals of Care Discussion

A GOC discussion was considered to have taken place between physicians and the patient, family, or SDM if, in the hospital medical record (e.g. physician orders, consultation notes, interdisciplinary clinical notes) there was documentation of at least one of the following:

- (1) Understanding or expectation of treatment options;
- (2) patient's preferences for life-sustaining measures.

Examples of Documented GOC Discussions

Understanding/expectation of treatment options

Mrs. S is not for CPR or defibrillation in the event of a cardiac arrest. She is not for NIV or intubation. In the event that 48 hours of ward-based therapy does not improve her physiological state then focus of therapy should be palliative care. Discussed with Mr. S (Thomas)

Discussion with son re use of intubation and other invasive procedures if required. He will confer and discuss with team later.

Discussed with Mr. B. Deteriorating over last few years in nursing home (since husband died of CVA 3 years ago). Functional state poor. Doesn't feel heroic measures are appropriate. If no improvement despite current therapy, focus should change → palliative following.

- 1) DNR, see orders
- 2) Continue with current treatment. NB if no improvement in physiological state then focus of therapy → palliative focus

Called son, continued resuscitation until son arrived and then decision was made to pursue palliative and comfort measures.

Patient's preferences for life-sustaining measures

Discussion with family, patient has had recent wishes to be DNR, include no invasive procedures such as endoscopy

Patient's family expressed wishes for limits on care – blood, general medical care. DNR, no endoscopy / invasive procedures. If treatment painful, futile then palliation is xxx.

Family clear do not want aggressive measures / investigation but trial medical therapy

Patient seen and examined. Daughter () at bedside.

Discussions with daughter last night took place and per their wishes patient is now palliative and for comfort care only.

Daughter updated. She is agreeable with plan.

As per son, patient palliative. No further blood work. For palliation.

No labs. No Abx as per son. Plan to return to nursing home for palliation.

Methods – Study Population

- retrospective chart review
- random convenience sample (n = 200)
- patients admitted to the General Internal Medicine (GIM) via the Emergency Department (ED) between Jan 1 through Dec 31, 2012
- Toronto General Hospital and Toronto Western Hospital

Patients were eligible for inclusion if they were

- (1) a resident of a LTC home and
- (2) at least 65 years of age.

For patients with multiple admissions to GIM during the specified 12-month period, we only included data from the first hospitalization (index hospitalization).

The Hospital's Research Ethics Board approved this study.

Methods – Factors associated with GOC documentation

Patient- and visit-level predictors (EPR)

- sex
- age
- CTAS
- vital signs at time of ED admission
 - temperature
 - respiratory rate
 - oxygen saturation
- Glasgow Coma Scale (GCS)
- shock index (HR/SBP)
- discharge diagnosis
- transfer to an intensive care unit (ICU)
- hospital use (number of TGH and TWH ED visits and hospitalizations within 1 year prior to the index hospitalization).

Patient-level predictors (chart review)

- years living in LTC
- SDM
- dementia diagnosis
- functional status (mobility, feeding, continence, diet)
- advance directives completed in LTC
 - Level 1: Comfort Care – no transfer to hospital, no CPR
 - Level 2: Supportive care – administration of antibiotics and/or other procedures which can be provided within the Home, no transfer to hospital, no CPR
 - Level 3: Transfer to Acute Care Hospital – no CPR
 - Level 4: Aggressive intervention – transfer to hospital for aggressive treatment, CPR

Methods – GOC documentation in the discharge summary

For the subset of patients that survived hospitalization and were discharged back to LTC, we examined whether advance directives (AD) ordered during hospitalization were communicated back to LTC via the discharge summary.

① Were AD from hospitalization documented in the Discharge Summary back to LTC?

NO

NO AD from hospital
documented in
Discharge Summary



AD from LTC

Level 1
Level 2
Level 3
Level 4

YES

AD from hospital
documented in
Discharge Summary



②

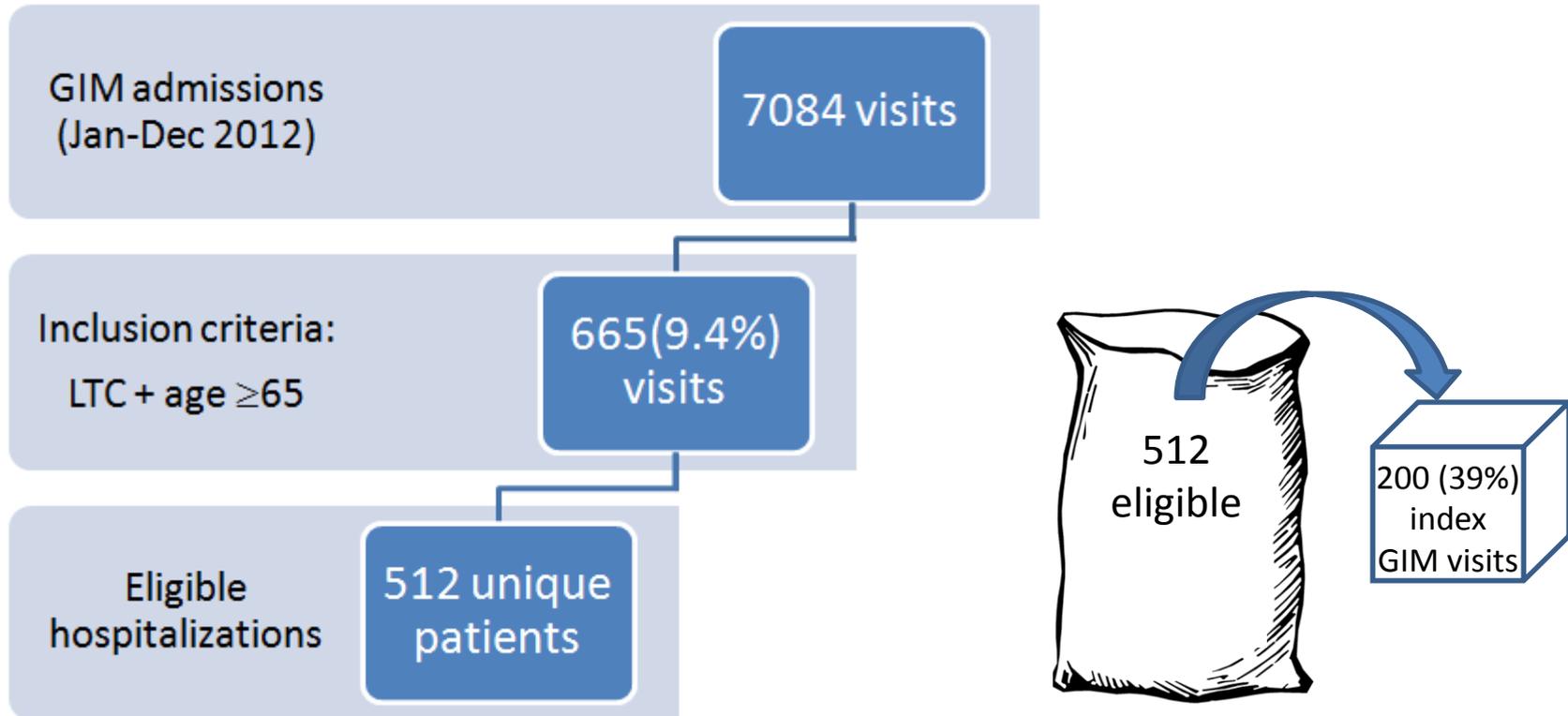
Particularly for
patients that had a
change in AD (LTC vs.
hospital) was this
change documented?

Methods – Outcomes of GOC documentation

Visit-level outcomes (EPR)

- length of stay (LOS)
- resource intensity weight or RIW (which is calculated based on patient case-mix, severity, age, and procedures performed)
- visit disposition
- number of ED visits and hospitalizations to the two study hospitals within 1 year after index hospitalization
- 1-year mortality
- physician orders for advance directives (chart review)

Results



We randomly selected a convenience sample of 200 index hospitalizations of the 512 eligible hospitalizations (39%) to perform chart review.

Of the 200 randomly sampled charts that were reviewed, 75 (37.5%) had a documented GOC discussion.

Results – Factors associated with GOC documentation

	GOC documented	
	Yes	No
<ul style="list-style-type: none"> • sex • age • arrival mode • CTAS • temperature • respiratory rate* • oxygen saturation* • Glasgow Coma Scale (GCS) ** • shock index (HR/SBP) • discharge diagnosis • transfer to ICU* • # TGH/TWH ED visits in previous year • # TGH/TWH admissions in previous year • years living in LTC • presence of an SDM • dementia diagnosis • functional status (activities of daily living) • advance directives completed in LTC 		

When these four significant characteristics were tested together in a logistic regression analysis, two remained statistically significant:

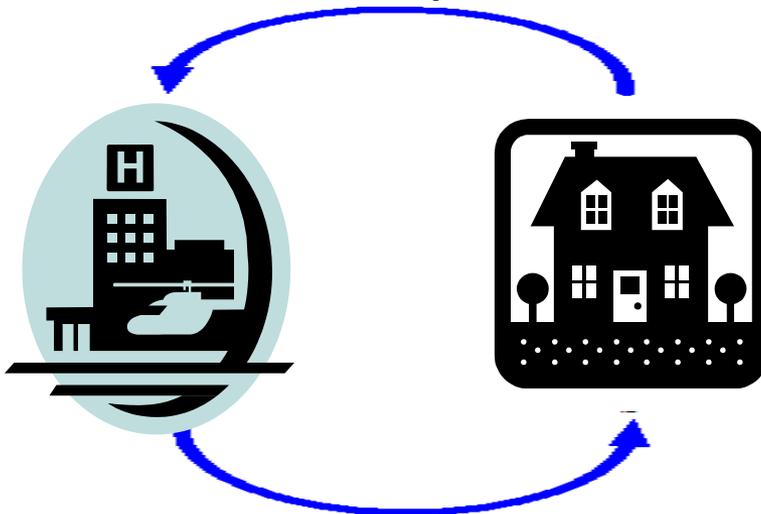
- Patients with lower GCS scores were more likely to have a GOC discussion compared with patients with highest GCS scores.
- Patients with higher respiratory rates were more likely to have a GOC discussion than those with lower respiratory rates.

*p-value <.05; **p-value <.001.

p values were calculated with the use of two-sided chi-square and Fisher's exact tests. None of the P values correct for multiple comparisons.

Results – GOC documentation in the discharge summary

n = 200 (convenience sample)
LTC residents hospitalized



176 (88%) survived hospitalization
and discharged back to LTC home

↳ 42 (24%) had a change in AD (18 patients had an AD back to LTC that was higher in care intensity while 24 patients had a decrease in AD care intensity)

↳ Only 11 (26%) had this AD change documented in the discharge summary

Results – Outcomes of GOC documentation

	GOC documented	
	Yes	No
<ul style="list-style-type: none"> • physician orders for advance directives** • length of stay* • resource intensity weight • visit disposition** • # TGH/TWH ED visits in subsequent year • # TGH/TWH admissions in subsequent year • 1-year mortality** 		

*p-value <.05; **p-value <.001.

p values were calculated with the use of two-sided chi-square and Fisher's exact tests.

None of the P values correct for multiple comparisons.

Predictors of in-hospital death and 1- year mortality

Given the significant positive associations between documented GOC discussions and in-hospital death and 1-year mortality, we performed separate logistic regression analyses to test whether documented GOC discussions independently predicted in-hospital death and 1-year mortality.

After adjusting for variables significant in their respective bivariate analyses, patients with documented GOC discussions continued to have higher odds of in-hospital death (AOR 52.0 [95% CI, 6.2- 440.4]) and 1-year mortality (AOR 4.1 [95% CI, 1.7-9.6]).

Discussion

Our retrospective study of LTC residents admitted to GIM showed that:

- LTC admissions comprised 9.4% of all admissions
- GOC discussions, documented in the medical record, occurred infrequently (37.5%).
- We found no differences in baseline patient characteristics associated with documented GOC discussions
- Patient acuity at presentation to hospital independently contributed to the likelihood of GOC discussions.
- Both in-hospital and 1-year mortality were strongly associated with having a documented GOC discussion
- No significant associations were found between documentation and subsequent hospital use.
- We found that consistent communication back to LTC home when there was a change in advance directives (code status) was very poor - only 26% of discharge summaries included this documentation.

Implications

- Patients at higher risk of dying (illness severity at assessment, mortality post-discharge) are more likely to have GOC discussions. To the best of our knowledge, no previous studies have reported these findings.
- Results suggest that clinicians are appropriately prioritizing sicker patients who might have the most pressing need for, and are most likely to benefit from, GOC discussions.
- Results also highlight the gap in care for less sick patients. Baseline characteristics expected to influence whether a GOC discussion took place (eg previous ED/IP visits) were found not significantly associated with GOC discussions. This suggests that clinicians need to broaden their practice and consider other patient characteristics including underlying conditions and functional status.

Implications

- If GOC discussions and changes in AD are not included in the discharge summary, it is very unlikely that this information will be subsequently updated in the LTC medical record, and therefore there is no way for the care the patient receives in the LTC home to be affected by what was learned/decided during hospitalization (can help explain why we did not find an association between GOC discussions and return ED/IP visits). We can only speculate that had these discussions been properly documented back to LTC, subsequent hospitalizations would have decreased in the GOC group.
- A key recommendation for hospital-based providers is ensuring that GOC discussions are clearly, consistently and completely documented in the discharge summary back to LTC home so that care provided is based on patients' wishes and needs. Consider implementing standardized protocols that accompany patients throughout the healthcare system.

Thank you!
Questions?