

A Long-Term Care—Comprehensive Geriatric Assessment (LTC-CGA) Tool: Improving Care for Frail Older Adults?



Emily G. Marshall, PhD¹, Barry S. Clarke, MD, CCFP, COE¹, Nirupa Varatharasan, MSc¹,
Melissa K. Andrew, MD, PhD, FRCPC²

¹Department of Family Medicine, Dalhousie University, Halifax;

²Division of Geriatric Medicine, Dalhousie University, Halifax NS

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ABSTRACT

Background

Most older adults living in long-term care facilities (LTCF) are frail and have complex care needs. Holistic understanding of residents' health status is key to providing good care. Comprehensive Geriatric Assessment (CGA) is a valid assessment method which aims to embrace complexity. Here we aimed to study a CGA that has been modified for use in long-term care (the LTC-CGA) and to investigate its acceptability and usefulness to stakeholders and users.

Methods

This mixed methods study, conducted in 10 LTCFs in Halifax, Nova Scotia, reviewed 598 resident charts from pre- and post-implementation of the LTC-CGA. Qualitative methods explored stakeholder perspectives (physicians, nurses, paramedics, administrators, residents and families) through focus groups.

Results

The LTC-CGA was present in 78% of LTCF charts in the post-implementation period though it did not appear in acute care charts of transferred residents, despite the intention that it accompany residents between care sites. Some items had suboptimal completion rates (e.g., Advance Directives at 56.4%), though these were located in other sections of the LTCF chart (98.2%). Nevertheless, qualitative findings suggest the LTC-CGA describes a clinical baseline health status which enabled timely and informed clinical decision-making.

Conclusions

The LTC-CGA is a useful resource whose full capacity may not yet have been realized.

Key words: long-term care, geriatric assessment tool, mixed method evaluation, interdisciplinary care, comprehensive geriatric assessment

INTRODUCTION

Most long-term care facility (LTCF) residents require medical care because they are frail; a majority have cognitive impairment or dementia, and many are nearing the end of their lives. As such, they have complex care needs. Comprehensive assessment of health and functional status is key to planning and providing good care for frail older adults who live in LTCF. Comprehensive Geriatric Assessment (CGA) is a validated method for assessing frail older adults in ambulatory and acute care environments which embraces this complexity.^(1,2) CGA is a holistic assessment which documents an older patient's health status, including cognition (e.g., dementia, delirium), mood, mobility, function, appetite, weight, bowel and bladder function, medical conditions, and medications.⁽¹⁾

An adapted CGA, the "LTC-CGA", has been modified and validated for use in LTCF.⁽³⁾ Modifications to better suit the LTC setting include documentation of behavioural disturbances common in dementia, foot and dental care requirements, skin integrity, whether a legal next of kin has been appointed (including name), and goals of care (e.g., whether resuscitation is to be attempted or hospital transfer for acute illness). The LTC-CGA also includes a frailty measure which is a focused version of the CSHA Clinical Frailty Scale.⁽³⁻⁴⁾ Since no LTCF residents would be expected to be on the low/non-frail end of the Frailty Scale (i.e., the "very fit", "well", "well, with treated comorbid disease", and "apparently vulnerable" categories, all of which have no dependence for Instrumental or Basic Activities of Daily Living), these categories were not included on the LTC-CGA tool. The LTC-CGA currently exists in a one-page paper format on the resident's chart (Figure 1).



Long-Term Care Comprehensive Geriatric Assessment Form

WNL = Within Normal Limits ASST = Assisted
 IND = Independent DEP = Dependent

Chief lifelong occupation: _____ Education: (years) _____

Cognitive Status **Emotional** **Behaviours**

WNL WNL Ψ Mood Verbal Non-aggressive
 Dementia Depression Anxiety Verbal Aggressive
 Other Other Hall/Del Physical Non-aggressive
 MMSE _____ Physical Aggressive

Communication:

Speech **Hearing** **Vision** **Footcare needed** **Dental care needed**

WNL WNL WNL Y N Y N
 Impaired Impaired Impaired **Skin Integrity Issues**
Strength Y N

WNL Weak Upper: PROXIMAL, DISTAL, R, L
 Lower: PROXIMAL, DISTAL, R, L

Mobility	Transfers	IND	ASST	Dep
	Walking Aid	IND	Slow ASST	Dep
Balance	Balance	WNL	Impaired	
	Falls	N	Y	Frequency
Elimination	Bowel	CONSTIP	CONT	INCONT
	Bladder	CATHETER	CONT	INCONT
Nutrition	Weight	STABLE	LOSS	GAIN
	Appetite	WNL	FAIR	POOR
ADLs	Feeding	IND	ASST	Dep
	Bathing	IND	ASST	Dep
	Dressing	IND	ASST	Dep
	Toileting	IND	ASST	Dep

Legal Nok: _____

Advanced Directives Y N

Code Status

Do Not Attempt to Resuscitate
 Do Not Hospitalize
 Resuscitate

Marital Status **Family Stress**

Married None
 Divorced Low
 Widowed Moderate
 Single High

Problems/Past history Med adjust req. Associated Medication

1. _____ _____
 2. _____ _____
 3. _____ _____
 4. _____ _____
 5. _____ _____
 6. _____ _____
 7. _____ _____
 8. _____ _____
 9. _____ _____
 10. _____ _____
 11. _____ _____
 12. _____ _____
 13. _____ _____
 14. _____ _____
 15. _____ _____

Current Frailty Score

Scale

1. Mildly frail 2. Moderately frail 3. Severely frail 4. Very severely ill 5. Terminally ill

Physician: _____ Date: _____

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FIGURE 1. LTC-CGA Tool

As part of a larger “Care by Design” program which aimed to improve the quality of care and health outcomes for frail older residents of LTCF, the LTC-CGA was implemented in LTCF within Capital District Health Authority (CDHA) in Nova Scotia in June 2011. Family physicians caring for LTCF residents are mandated to complete the LTC-CGA for every resident, and to keep it updated every six months and after any significant change in health status. The tool is meant to have a prominent place in the LTCF chart in order to guide care in that setting, and should accompany residents who are transferred between facilities and to acute care to ensure clear communication of baseline health and function. The LTC-CGA has the potential to be a powerful tool for assessment and communication in LTCF; however, its uptake (i.e., is it completed fully, is it accompanying residents who are transferred to acute care settings?) and acceptability (i.e., is it easy to use, useful, meeting needs?) to end-users are not known.

The present study is part of a larger study of the “Care by Design” model and its impact on health and health-care outcomes (notably ambulance transfers to acute care).⁽²⁾ Here we evaluate the use and benefits of the LTC-CGA using a mixed methods approach. Specifically, the objectives of this

study were to evaluate the implementation of the LTC-CGA and determine its utilization and utility, with both process and outcome goals. Process goals were to determine the uptake of the LTC-CGA (completion rates and completeness), as well as acceptability to users. Outcome goals aimed to evaluate the efficacy of the LTC-CGA as a tool for improving the care for older LTC residents. We focused specifically on transfers to acute care and Emergency Departments, as one of the reasons the tool was implemented was with to have it accompany residents who were transferred to acute care, thus improving completeness and accuracy of communication between care settings. We also sought to determine whether the LTC-CGA was useful in helping to clarify goals of care at end of life.

METHODS

We used a mixed methods approach including chart reviews in both LCTF and acute care for quantitative measures and focus groups for qualitative inquiry. Full details of the study methods have been published elsewhere.⁽²⁾

Sample

Ten of the 12 LTCF in the Halifax Regional Municipality participated in the study, representing a total of 1,482 beds. Two LTCFs were excluded because they represented variations on the model of primary care and are, therefore, not representative.

Time Periods

Here we report results from the “pre” and “post” phases of the LTC-CGA implementation. Pre-phase data were collected retrospectively for the time period September 1, 2008 to February 28, 2009; post-phase data came from the period September 1, 2011 to February 29, 2012, allowing time for the LTC-CGA to have been fully implemented.

Measures

Quantitative Measures

In the post-implementation time period LTC charts were reviewed to identify completion rates for the LTC-CGA (i.e., the proportion of charts with an up-to-date LTC-CGA), as well as completeness of items within the tool. Acute care charts were reviewed to see whether the LTC-CGA accompanied residents who were transferred to the Emergency Department. Individual items were compared between the “pre” and “post” phases to give an indication of whether the item in question would have been easily locatable in the LTC chart prior to the implementation of the LTC-CGA.

Prior to initiating the chart reviews we performed a power calculation to determine the required sample size. A sample of 171 charts would be required to estimate the proportion of completed LTC-CGAs of N = 1,482 LTCF beds with a 99%

confidence interval.⁽⁵⁾ In keeping with our overall study's focus on residents for whom emergency ("911") calls had been made, charts of all residents for whom a 911 call was made were included in our data collection, along with a sample of 100 non-911 involved residents for each time period. This yielded a total sample of 598 reviewed charts.

Qualitative Data Collection

A total of 11 focus groups (FG) were conducted with key stakeholder groups: Care by Design physicians (1 FG), nurses (3 FG), administrators (1 FG), extended care paramedics (1 FG), care assistants (2 FG), residents and family members (3 FG), for a total of 75 participants. Each FG was limited to a single stakeholder group for balanced participation and to encourage open expression of perceptions and experiences. Facilitators were trained in conducting focus groups, with specific attention to research bias, professional dress, and ethics. All focus groups were conducted in private settings and were digitally audio-recorded to ensure accuracy of transcription. Participants were theoretically sampled;⁽⁶⁾ with recruitment continuing until saturation was achieved.⁽⁷⁾ Audio recordings were then transcribed verbatim by experienced research transcriptionists. Transcribed qualitative data were subject to rigorous data quality checks.⁽⁶⁾ Transcriptions were entered into Atlas.ti qualitative data analysis software.⁽⁸⁾ Data were coded using an agreed-upon coding scheme that was developed by the entire research team. Framework analysis^(9,10) was conducted of narrative responses to open-ended questions about participants' knowledge of the LTC-CGA, its acceptability, its impact on clinical care, and its usefulness in defining goals of care.

Ethics

The study was approved by the Capital District Health Authority Research Ethics Committee and individual Research Ethics boards of participating LTCF, where these required.

RESULTS

Quantitative

70% of the LTC residents whose charts were reviewed were women. The mean age was 83.0 (SD 12.1) and 60% had a diagnosis of dementia (Table 1). A total of 598 residents were included in the study (both "pre" and "post" time periods), of whom 460 (77%) had emergency 911 calls and 306 (67%) were transferred to acute care at least once.

The LTC-CGA was present on 78% of the LTCF charts in the post-implementation phase (2011/12). For residents

TABLE 1.
Description of resident characteristics

<i>Resident Characteristics</i>	<i>Pre-implementation LTC-CGA (N = 203)</i>	<i>Post-implementation LTC-CGA (N = 395)</i>
<i>Age (years)</i>	<i>Median (IQR)</i>	<i>Median (IQR)</i>
Median age of residents	86 (81-93)	85 (77-90)
<i>Sex</i>	<i>% (N)</i>	<i>% (N)</i>
%Female	72.91 (148)	68.10 (269)
<i>Marital Status</i>	<i>% (N)</i>	<i>% (N)</i>
Married	18.72 (38)	16.71 (66)
Single	16.26 (33)	11.90 (47)
Divorced	11.33 (23)	8.61 (34)
Widowed	51.72 (105)	38.48 (152)
Unknown	1.97 (4)	24.30(96)
<i>Cognitive Status</i>	<i>% (N)</i>	<i>% (N)</i>
Dementia	57.14 (116)	62.03 (245)
Within normal limits	38.42 (78)	25.57 (101)
Other	1.97 (4)	1.77 (7)
Missing	2.46 (5)	10.63 (42)

LTC-CGA = Long Term Care Comprehensive Geriatric Assessment.

who had a LTC-CGA, the items most likely to be filled in were Influenza vaccination status (Yes or No; 100%), Speech (Within Normal Limits vs. impaired; 93% complete), Current Frailty Score on the Clinical Frailty Scale⁽⁵⁾ (91% complete), functional abilities in basic Activities of Daily Living (87%–90% complete), mobility transfers and balance (90%), and cognitive status (88%). Items describing the resident's background were frequently missing (e.g., only 28% listed occupation, 23% documented educational attainment, and 48% rated family stress). Bowel continence was noted in 85%. Presence or absence of falls was documented in 78%, though the number of falls was missing in half. Advance directives were listed on the LTC-CGA in only 56%, while resuscitation wishes were documented on 68% of LTC-CGA tools.

When items were not optimally completed in the LTC-CGA, they may have been present in other areas of the chart (Table 2). This was the case with advance directives, which were present in 86 of 88 charts (98%), but were only documented on 56% (chi-square $p < .0001$) of the LTC-CGA forms.

In the comparison between the pre- and post-implementation time periods, while cognition as measured by the Mini Mental State Examination (MMSE⁽¹¹⁾) was documented on the LTC-CGA in 73% of charts, it was possible to ascertain through detailed chart review in only 56% of the "pre" time period charts (chi-square $p < .0001$). Likewise, balance was also relatively under-recorded (or difficult to locate) in the "pre" charts (present in 75%), while it was documented on the LTC-CGA in 90% of cases (chi-square $p < .0001$). Some

*The confidence interval is of the form $p \pm ME$, where p is the sample proportion and ME is the margin of error: $ME = z \times \sqrt{\{p \times (1-p)/(n-1)\} \times \sqrt{1-n/N}}$; where z is a critical value from the normal distribution, p is the sample proportion, n is the sample size, and N is the population size. ⁽⁵⁾ The "worst case" $p = .5$ was used in this calculation.

TABLE 2.
Clinical data from Long Term Care Facility chart or LTC-CGA

<i>Item</i>	<i>Pre-Care by Design (Time = 1) (N = 203)</i>		<i>Post-Care by Design (Time = 3) (N = 395)</i>	
	<i>In Chart Only (N = 203)</i>	<i>N Chart Only (LTC-CGA absent) (N = 88)</i>	<i>In LTC-CGA (LTC-CGA present) (N = 307)</i>	<i>Information from Chart or LTC-CGA (N = 395)</i>
<i>Demographics</i>	% (N)	% (N)	% (N)	% (N)
Occupation	22.7 (46)	28.4 (25)	28.3 (87)	29.4 (116)
Education	51.7 (105)	39.8 (35)	23.3 (71)	27.3 (108)
Marital Status	98.0 (199)	86.4 (76)	70.0 (215)	75.7 (299)
<i>Infection Control</i>	% (N)	% (N)	% (N)	% (N)
Information Present	-	-	75.6 (232)	-
Flu shot in chart	100 (203)	100 (88)	100 (307)	100 (395)
Flu shot given	87.2 (177)	83.0 (73)	59.3 (182)	91.4 (361)
<i>Cognitive Status</i>	% (N)	% (N)	% (N)	% (N)
Information Present	97.5 (198)	90.9 (80)	87.6 (269)	89.4 (353)
MMSE	55.7 (113)	54.5 (48)	73.0 (224)	70.4 (278)
<i>Emotional Status</i>	% (N)	% (N)	% (N)	% (N)
Information Present	75.4 (153)	72.7 (64)	82.7 (254)	81.8 (323)
<i>Behaviours</i>	% (N)	% (N)	% (N)	% (N)
Information present	87.7 (178)	78.4 (69)	59.0 (181)	63.8 (252)
<i>Communication</i>	% (N)	% (N)	% (N)	% (N)
Speech	-	-	92.5 (284)	-
Hearing	-	-	90.6 (278)	-
Vision	-	-	88.6 (272)	-
Strength	-	-	79.5 (244)	-
<i>Mobility</i>	% (N)	% (N)	% (N)	% (N)
Transfers	97.0 (197)	89.8 (79)	90.2 (277)	92.7 (366)
Walking	94.1 (191)	78.4 (69)	81.1 (249)	82.5 (326)
Aids	81.8 (166)	73.9 (65)	63.2 (194)	67.6 (267)
<i>Balance Information</i>	% (N)	% (N)	% (N)	% (N)
Balance	75.4 (153)	78.4 (69)	90.2 (277)	89.4 (353)
Falls	-	-	77.9 (239)	-
Fall Frequency	97.0 (197)	95.5 (84)	49.2 (151)	98.7 (390)
<i>Elimination</i>	% (N)	% (N)	% (N)	% (N)
Bowel	97.0 (197)	88.6 (78)	85.0 (261)	88.4 (349)
Bladder	98.5 (200)	88.6 (78)	84.7 (260)	88.1 (348)
Cr. Clearance	-	-	57.98 (178)	-
<i>Legal Information</i>	% (N)	% (N)	% (N)	% (N)
Advance Directives	97.0 (197)	97.7 (86)	56.4 (173)	98.2 (388)

LTC-CGA = Long Term Care Comprehensive Geriatric Assessment.

TABLE 3.
Qualitative findings

Themes and Interpretation	Quotes
<i>Key Theme 1) Benefits of the LTC-CGA</i>	
a. Encourages proactive care and review for resident's regular providers	<p>"But even but even, like I said, you when with the drug attached to what it's for, I mean, you don't always remember why a drug you know, has... (another physician) Has started sixteen years ago.</p> <p>... even in the patients that you're that you're seeing all the time. And you think you look at it and go okay there's a problem comes up and you go okay well I, I really should be looking at the drugs and you go through all the drugs and you're going that I could get rid of and that might solve this problem with the electrolytes or something like that." (physician)</p> <p>"I think it it's when we do it with one particular doctor and sit down with him and do it I think sometimes you go "oh, you know what, we haven't checked this in a while." Or "oh," you know, "how come we took him off that?" Or it's not on the same one [document]. It makes us go back and look." (nurse)</p> <p>"I think the care directives are being done more frequently because we've got the CGAs, because we're doing the med reviews and we're talking about the patients." (physician)</p> <p>"Yeah, so that way, you know, naturally you know, we can gravitate towards being more proactive because these things are now are part of the system [pause]. So maybe next year you'll feel like "hey I'm a new proactive..." (physician)</p>
b. Useful reference for providers who are less familiar with the resident	<p>"I did one two weeks ago and there was no CGA. I was there from eleven until twenty to twelve trying to figure out a diagnosis besides the dwindles." (physician)</p> <p>"Yeah if you were going in to see, say if you're on a call, and you're going in to see a sick person you might look at the CGA and say 'okay I understand where this person is in their dementia' or whatever." (physician)</p> <p>"Well I think they'll be extremely useful when you go in to see like if you get called in because somebody's sick on call because it has an area where it says whether they're demented or not and whether they're aggressive behaviours aggressively behaved have aggressive behaviours, that kind of thing so that you know. You'll be able to look at it and say okay is this is a new thing or an old thing because sometimes you'll get a nurse that's just floating that doesn't know the patient so that sort of it's a nice one page boom summary. And then sometimes they're on a drug and you don't know what it's for without that and this actually says 'okay this person is on this drug for this reason' and then you that which I find extremely helpful because then if you want to discontinue it you know 'oh can't do that because, you know for various reasons.'" (physician)</p> <p>"You get a lot of information of them [general agreement]. Especially if they're new to the floor and stuff..." (CCA/PCW)</p> <p>"I've used it. Now that I'm not the unit coordinator. And I will quickly look at it to see if somebody was on that med [sic]. Although, if it was done five months ago..." (nurse)</p>
c. Information continuity during transitions in care	<p>"I make sure it's photocopied and sent. Because everything is on there [general agreement] pretty much everything. Presently some of mine are still getting filled out but my physician is very busy so the pertinent part on the bottom he's been filling out but he's been asking us to fill out the rest." (nurse)</p> <p>"...I think some of the other subtle changes that they do, like consistency amongst charts, how they're organized, having that sheet that has medications on one side and the pathologies that go with them on the other. It's nice having the consistency amongst paperwork." (ECP)</p> <p>"She said they were really great for when they moved all they got those sixty people from transitional care or whatever they got when they opened. She said they were great for then." (administrator)</p> <p>"The LTC-CGA form may have some real benefits for transfer situations..." (administrator)</p> <p>"And then you send it and it comes back in the same envelope that it went in [laughs]. I get the same envelope back! Oh look at all that I did! They haven't opened it. They haven't looked at it. It comes back with their little scribbled note or they don't send it back a note at all and like, you know, it's really aggravating because you don't have enough time in a day as an RN to be running around making papers for doctors that are not even looking at them." (nurse)</p>

TABLE 3.
Continued

<i>Themes and Interpretation</i>	<i>Quotes</i>
2) <i>Challenges which remain with the LTC-CGA</i>	
a. Timing, concern it is out of date	<p>“a lot could change between six months so my personal philosophy is that if the person has a stroke then you’ve made some changes...” (physician)</p> <p>“So if they can make a form for CGA, which is a whole other job for me in that form, but, you know, there’s other forms that are far more important that are causing us a lot more grief then... Because the nurses can tell you what’s on that form. If you have a unit coordinator who knows his people she can rattle off everything that’s on that form for all hundred, hundred and twenty-one people or sixty people or whatever they can give you a pretty good idea of what’s going on.” (nurse) (also in who completes)</p> <p>“I won’t trust it anyway. And the only thing that you could possibly trust on there is who their substitute decision maker is and what is their creatinine clearance. We don’t anything else I’m still gonna [sic] look through the chart. And they’re in my facility.” (nurse)</p>
b. Financial compensation	<p>“He signs it and he’s gotten paid to do that form. Or the doctors say “can you have them ready for me when I come in?” And you have them ready on the chart and...” (nurse)</p>
c. Inconsistency on which health professional is responsible for completing the LTC-CGA	<p>“Physicians fill them out.” (nurse)</p> <p>“Completely done by the physician.” (nurse)</p> <p>“The nurse is still doing the majority of the top work and the physician come in and write off what meds they’re on and what problems they have and sign it off so...”</p> <p>“It was it’s an extra sheet of paper that’s been added that that really upset my nursing staff for sure “oh no not another form to be filled out.” Because it was a duplication of what they were already doing only it was called the CGA right?” (administrators)</p>
d. Only as good as the person filling it out	<p>“It’s only as good as the person filling it out too.” (physician)</p> <p>“those forms are only as good as who updates them.” (administrator)</p> <p>“but how up-to-date they are and...”</p> <p>“there’s no they’re not good.” (administrators)</p>
3) <i>Recommendations for the LTC-CGA</i>	
a. Importance of consistency and a prominent location in chart	<p>“just something as simple as the order of the chart where do you find stuff when on call? Because everyone does it differently, you know.” (physician) and “get them filled out and have them right on the front.” (physician)</p> <p>“So so we need to be cued [laughter] to do that somehow.” (physician)</p> <p>“You know, but to me like in some ways it’s a useless tool other than when the first when a person first comes in to try to organize yourself if you’re not going to update it when the person’s condition changes.” (physician)</p> <p>“Yeah and again the frustration I find is you gotta write it there and then you gotta write it in the progress note to me it should be it should be in one spot and you shouldn’t have to duplicate.” (physician)</p> <p>“Even an email once a month saying ‘Remember! When there’s a critical incident update your CGA.’” (physician)</p>
b. Importance of care providers outside of the LTCF utilizing the tool for informational continuity	<p>“it’s helpful doctor to doctor more so than a nursing perspective.” (nurse)</p>
c. Need for training	<p>Were you provided any training on it?</p> <p>I didn’t do any training on it.</p> <p>I didn’t either.</p> <p>There was a little bit of training.</p> <p>I had the forms arrive.(nurses)</p>

items were reported less frequently in the “post” time period, including marital status, which dropped from 98% to 70% (chi-square $p < .0001$), and bowel and bladder continence which were 97%–98% in the “pre” period and 85% in the “post” period (chi-square $p < .0001$).

The LTC-CGA did not appear in archived ED charts of any of the residents who had been transferred to acute care during this time period.

Qualitative Findings

Three key themes emerged from the focus group data analysis: 1) Benefits of the LTC-CGA; 2) Challenges which remain with the LTC-CGA; and 3) Recommendations for the LTC-CGA. (Supporting quotes for all themes can be found on Table 3 Qualitative Findings).

1. LTC-CGA Benefits

Benefits included: a) that stakeholders found the LTC-CGA encourages proactive care and increased opportunities to review residents care plans and needs; b) that the LTC-CGA was a useful reference for providers who are less familiar with the resident, such as on-call physicians and nurses or clinical care aids learning about a new resident; c) that the LTC-CGA provided information continuity during transitions in care between providers and facilities.

Benefits of the LTC-CGA were identified by different stakeholder groups. Physicians and nurses described the LTC-CGA as being a useful tool to review previous care decisions, especially when questioning why care decisions were made or why residents were prescribed particular medications. Physicians found the tool assisted them in tracking systems of changes made in care, including medication adjustments, and adverse events. The LTC-CGA was found to be a useful tool for end of life care planning.

Various care team staff members stated the LTC-CGA was valuable as a reference tool when providing care to a resident who was new to them, especially on-call physicians or extended care paramedics. Nurses and clinical care aids found the tool oriented them to the needs of a new resident. The LTC-CGA was also found to provide information continuity within the LTCF and for care providers outside of the LTCF.

2. Remaining Challenges

Challenges which remain with the LTC-CGA include a) timing and concern that the form was out of date; b) financial compensation wanted to complete the form; c) inconsistency on which health professional is responsible for completing the form; and d) the form is perceived to only be as good as the person filling it out.

The topic of financial compensation came up numerous times in the focus groups. In particular, registered nursing staff care team members expressed concern that physicians were additionally compensated for completing the LTC-CGA, though it was often a team process to complete. Physicians felt

restricted in being able to bill only twice a year for completing the LTC-CGAs, causing concern as to whether the tool was up-to-date by a variety of stakeholders.

Whose role it was to complete the forms was unclear and some nurses felt it was extra work for them. Inconsistency emerged between different facilities, and even within facilities, on how much of the work was done by nurses versus physicians depending on the physician involved in the care.

3. Recommendations

Numerous recommendations emerged from the focus group conversations. Physicians discussed the importance of having a reminder system in place that would provide them with cues as to when the LTC-CGA is to be updated (i.e., upon admission, every six months and after an adverse event). Care team members also expressed concern regarding the duplication of information and wanted policies to minimize the doubling of efforts. For example, nurses stated that, when preparing for residents to be transferred to the Emergency Department, they would have to copy several other clinical summary documents along with the LTC-CGA, creating extra work for them. Nurses also indicated they had not received training on the tool or information on why it was being implemented. Care team members also expressed the importance of consistency in the completion of the tool and the tool’s location in the chart.

If the LTC-CGA tool is to be used to its full capacity, it is important that outside care providers read it and take the information provided on it into consideration when deciding on a care path for the individual. Nurses provided examples of sending the tool with a resident during a transfer to the Emergency Department and then finding the unopened envelope being sent back with the resident. It is clear that it is a tool that is valued for providing information between providers, but not necessarily in the day-to-day work of the nursing staff, or in some outside care environments.

DISCUSSION

We found that the LTC-CGA was acceptable to users, with most health-care provider stakeholders finding it to be a useful summary of a resident’s health status. Completion rates were good, as it was identified on 78% of the LTCF charts in the post-implementation period. Completeness varied by item; some items had high completeness (e.g., Influenza vaccination, ADL function, sensory impairments) and others lower completeness (e.g., education, occupation and family stress). The LTC-CGA was not located in any of the acute care charts when residents had been transferred to hospital.

Our study has certain strengths. Its mixed methods design allows us to both quantify and understand the use of the LTC-CGA. Our sample size was large. The chart review was done in both “pre” and “post” implementation time periods, allowing for comparison of documentation of important items with and without the use of the standardized LTC-CGA. Our study also

has certain limitations. The LTC-CGA was implemented in June 2011, along with the fee code reimbursing physicians for its completion. While we tried to time data collection allowing for physicians to “catch up” with completing the LTC-CGA, it is possible that completion rates may have been higher had we done our chart reviews following a longer time lag. It is possible that our chart reviewers may not have been able to locate a LTC-CGA on the chart despite it having been filled out, although we tried to minimize this possibility with standardized chart review protocols. The LTC-CGA was not identified in the acute care charts when residents were transferred to the ED. It is possible that it may have accompanied residents when they were transferred to acute care but not scanned into the permanent electronic chart record. (Anecdotally, LTC-CGAs for residents transferred from LTCF have been encountered by MKA, an author on our study who works as a geriatrician seeing consults in the ED). Thus, ensuring that it is included in chart documentation would be an important area for future improvement in its use, in order to maximize its usefulness as a tool for improving health care for frail older residents of LTCF. One specific way to ensure that the LTC-CGA is included in the permanent hospital record and not discarded in the scanning process would be to ensure that it is labelled with the proper barcodes to direct its inclusion in a specific section of the acute care chart when the paper chart is sent to medical records for scanning and assembling into the permanent computerized record. As a further recommendation, moving to an electronic medical record with integration between LTCF, Emergency Health Services, Emergency Departments, and acute care settings would ensure that the usefulness of the LTC-CGA for continuity of care is optimized.

The LTC-CGA is but a single part of the larger “Care by Design” model of care.^(2,12) Care by Design includes primary care reform with a dedicated primary care physician per ward or unit, guaranteed weekly family physician visits for rounds, participation in multidisciplinary care conferences, and a clear system of on-call coverage. Care by Design also includes an Extended Care Paramedic program and ongoing team education and evaluation. Clearly other factors also play a role in implementation of Best Practices in LTCF, including staffing complement and ratios and the physical layout of the facilities.

Comprehensive Assessment of Older Adults in LTCF: Barriers and Solutions

Thorough medical assessments for older adults in LTCF take time. Many family doctors balance patient care in LTCF with busy office practices, leaving limited time to provide care in LTCF. One benefit of the LTC-CGA is it streamlines the assessment process, allowing multidisciplinary teams to address all important medical and functional issues in a focused and standardized fashion. The LTC-CGA is based on the philosophy of “Comprehensive Geriatric Assessment”

in which a holistic view of a patient’s medical, functional, and social issues is taken. CGA is therefore a structured approach to creating a unified view of many different parts of a clinical assessment and will, in effect, include consideration of a patient’s cognition, mood, sensory function, mobility, function in Activities of Daily Living, medical problems, medications, care plan, and social history. In this way, one might argue that it is pulling together pieces from other assessments, but we would suggest that going through a formal CGA process on a regular basis (on admission to LTCF, every six months, and as needed following significant changes in clinical status the LTC-CGA) enables comprehensive and dedicated clinical thinking to be applied to the resident’s care. This is supported by our qualitative findings (that clinicians in different disciplines find it useful), and also by quantitative findings demonstrating differences in the frequencies of completion of the various elements. Other models of completion could be also explored, including using a purpose-designed care partner CGA which would be completed by a family member or other care partner who knows the prospective resident well.⁽¹³⁾

Under “Care by Design”, residents do not keep their previous family physician when they move into LTCF; instead, primary care is provided by a dedicated physician per floor or unit.⁽²⁾ This may explain the observed decrease in documentation of occupation, education, and historical biographical information which may have been well known to community family physicians prior to moving to LTC. An important recommendation would be to formalize a process of transfer of care from the previous community provider to the Care by Design team. Ideally the community physician would complete a “transfer of care” LTC-CGA, which would help preserve continuity of information.

As part of the implementation of the LTC-CGA, education and training on the tool were provided to physicians and staff, though as we heard in the focus groups that more education could have been helpful. The low completion of the code status and advanced directives on the LTC-CGA is a concern. A way to maximize the utility of the tool would be to provide further education on the importance of fully completing the form as a summary resource in times when informational continuity between providers is critical and timely.

The audience for the LTC-CGA includes care providers who are new to residents. The LTC-CGA provides an easy-to-find, standardized resident summary. This information is important in assessing status and change in critical situations for physicians-on-call, paramedics, consultants, acute care providers off-site, and new LTC care staff. When a critical incident occurs it can be put in perspective in relation to the baseline captured on the last date of completion of the LTC-CGA. This, in conjunction with real-time communication with the care team, can assist with a more timely assessment and development of an appropriate management plan.

We found that completion of certain items (e.g., MMSE scores and mobility status) improved using the LTC-CGA.

This, along with the fact that the LTC-CGA is meant to represent the single most up-to-date summary of a resident's health and care needs, is expected to bring benefits for clinical care planning and outcomes. From the qualitative results, clinicians commented on using the LTC-CGA as the go-to place in the chart for determining whether a resident's observed clinical status was consistent with their prior baseline or whether the current health issue represented a new crisis or decline. This ability to assess in relation to the fuller LTC-CGA assists in decision about whether transfer to hospital would be beneficial or, in contrast, whether a more palliative focus would be appropriate. Although completion rates for Advanced Directives were suboptimal on the LTC-CGA (56.4%), these were easily located in the residents' charts (98.2%). In this case, it is likely that referring to the standard Advance Directives (AD) form (on which these ADs are documented) in addition to the LTC-CGA (rather than expecting the LTC-CGA to represent the resident's full AD wishes) is the way to ensure fuller representation of a resident's Goals of Care, as they may change over time and are difficult to fit into a single tick box item on the LTC-CGA.

The LTC-CGA as a Knowledge Translation Tool

Benefits of comprehensive geriatric assessment include identification of issues that affect an older person's health, provision of a framework within which to plan interventions to address these problems, and establishing a platform for discussing and setting goals of care appropriate to the older person's level of frailty and comorbidity.⁽¹⁴⁻¹⁶⁾ Until now, CGA has not been a consistent feature of primary care provided in Nova Scotia LTCF. The introduction of changes to the model of primary care delivery affords an important opportunity for Knowledge Translation; knowledge about how to conduct a CGA which is based on years of clinical and research experience can now be applied to a setting in which it has the potential to greatly improve care.

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CONFLICT OF INTEREST DISCLOSURES

The authors declare that no conflicts of interest exist.

APPENDICES

Appendix 1: Long-term Care Comprehensive Geriatric Assessment Form (pdf available as Supplementary Material on the website)

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Correspondence to: Melissa K. Andrew, MD, PhD, FRCPC, Division of Geriatric Medicine, Dalhousie University, 5955 Veterans' Memorial Lane, Halifax, NS B3H 2E1, Canada
E-mail: mandrew@dal.ca