Author's response to reviews

Title: Does a mandatory clerkship in Geriatric Medicine improve care of subsequent older acute medical patients? A retrospective cohort study

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Version: 2
Date: 20 November 2013

Author's response to reviews: see over
Re: MS 1118401709846884 - Does a mandatory clerkship in Geriatric Medicine improve care of subsequent older acute medical patients? A retrospective cohort study

Dear Dr. Ker and the editorial team,

Thank you for reviewing our manuscript and providing these very helpful comments and questions. We have endeavored to respond to these below.

Reviewer: Jean S Ker

Comment 1: The improvement in clinical outcomes of those patients looked after by those who had been through the mandatory programme appears impressive and although the Charlson co-morbidity Index was calculated to draw some comparison between cases there was no clear understanding of the breadth of conditions seen.

Response: The conditions seen are listed under admitting diagnosis and comorbidities in table 1. The manuscript has been modified to highlight the breadth of these (Results section, paragraph 1).

Added: “Both groups included patients with a broad range of conditions that are commonly seen on general medical wards [13].”


Comment 2: The limitations of the study and the different confounding factors influencing the results are described to some extent but alternative explanations are not explored.

Response: The manuscript now elaborates on this (Discussion section, paragraph 6)

Added: “Clerks with geriatrics exposure were more likely to be assigned patients that were younger, and cognitively intact. This patient group may have been easier to interview for functional history and more likely to have positive clinical outcomes. Our analysis controlled for age and cognitive
impairment, but other variables such as frailty [20] and falls risk [21] have also been shown to affect patient outcomes, and these were not measured.”


Comment 3: The authors correctly identify the need to evaluate the patient outcomes form an educational intervention and this study highlights some of the inherent difficulties of doing this especially 8 years later.

Response: Thank you for your comments.

Comment 4: This paper focuses on clerkships carried out in 2005? Why isn’t this being compared to what is happening now?

Response: The mandatory geriatrics clerkship no longer exists at our institution. The current status of the geriatric clerkship, and reasons for change, are explained in the manuscript (Discussion section, paragraph 7).

Added: “A total of 820 students participated in the mandatory geriatrics clerkship. A small and static number of geriatric medicine specialists at our institution, coupled with increased medical school enrolment over the past decade eventually made this an unsustainable model. In 2007, the mandatory geriatrics clerkship was changed to an elective rotation. Only 20% of the class will participate in a geriatrics rotation in 2014. Some argue that geriatrics content is already adequately integrated into the internal medicine clerkship because most inpatients are old. However, like Diachun and colleagues [8], we demonstrated that there are unique competencies that are not taught by non-geriatrics specialists, even if they provide care for a predominantly aged population.”

Comment 5: Who are the clerks? – Are they medical or nursing and what level or qualification do they have and therefore how can they influence care outcomes?

Response: Further description of the clerk role at our institution has been added to the manuscript (Methods section, paragraph 2).

*Added:* “A typical team on the medical clinical teaching unit (CTU) rotation consists of an attending internist, a senior medical resident, 2-3 junior residents, and 2 medical students in the final year of training - clinical clerks. Clinical clerks are the most junior members of the team, but are assigned individual patients and expected to take primary responsibility for their care. Their role includes daily medical assessment, progress notes, and reporting of their patients’ clinical status with proposed management plans, to senior members of the team. All clerks during the period of this study would have received approximately 14 hours of geriatrics-based content during the pre-clerkship curriculum.”

We have proposed some ways in which they may have influenced care outcomes (Discussion section, paragraph 3).

*Added:* “Clinical clerks require cosignature for all orders and are perceived to have limited influence on patient management. However, they may still impact patient care by recognizing easily overlooked problems, and suggesting low risk, high benefit interventions. For example, in the frail elderly, rapid functional decline is often a more reliable indicator of occult illness than reported symptoms, physical exam or lab abnormalities. A clerk with geriatrics training would have learned to assess and investigate further when a patient manifests unexpected functional decline. The geriatrics rotation may have also empowered clerks to advocate for optimizing the care of patients that otherwise might be viewed as lacking potential for recovery.”

Comment 6: The study design is questionable as there is no indication of what support those who didn’t undertake the mandatory clerkship were given in relation to cognitive assessment, recognition of medications causing confusion and early removal of indwelling catheters have been given

Response: We agree that the retrospective design of the study is not ideal. More detail about the teaching available to the clerks without geriatrics exposure would be valuable. A prospective study design would have allowed...
better assessment of these important variables. We regret that the proposal for this study was retrospective. Nonetheless, a common argument we hear is that geriatrics education does not need to be deliberately planned, because is already naturally integrated throughout the clinical curriculum. That is, the status quo is okay because most inpatients are old and surely without any deliberate effort or specialized expertise, the necessary competencies will be taught out of necessity and patient volumes. We feel that despite the methodological limitations, the results of this study will be of value in challenging that belief.

Comment 7: What has the lasting impact of this educational intervention been?

Response: The results of this study are linked to an ongoing project being conducted at our institution by one of the co-authors (H McLeod). Dr. McLeod is leading a project to align the curriculum content in geriatric medicine across McMaster University’s three-year undergraduate MD program with the “Core Competencies in the Care of Older Persons” that have been identified as current best practice for the education of Canadian Medical Students [Reference 10]. This includes systematic curriculum mapping of all pre-clerkship and clerkship educational modules and experiences. Gaps in teaching of core competencies are being identified as “areas of opportunity.” Based on the present study, functional assessment appears to be a prime area of opportunity.

The next steps will involve development and implementation of educational strategies to address areas of opportunity. These strategies will be deliberately targeted to areas of greatest need, making best use of our limited resources. We propose that a framework for process and prospective evaluation of outcomes, including patient level outcomes will be important. A methodology to do this will build on the experience gained in the current study.

There are less than 250 certified geriatricians in all of Canada, which makes it challenging to deliver immersive educational programs to all those in need. We hope that the results of our study will also help support our ongoing efforts to improve recruitment to our specialty.

Comment 8: What is the process for admission of geriatric patients now? Has this changed?

Response: The inpatient geriatric assessment unit at this specific hospital closed in 2008 due to hospital budget cuts and staff shortages. Currently, geriatric patients with acute illness are admitted first to a medical CTU and once stable, are transferred to one of 4 post-acute settings:
If poor rehab candidates are in need of further discharge planning, they are transferred to a post-acute medical ward (this did not exist in 2005) or the alternate level of care ward. If in need of active rehabilitation, patients are transferred to the inpatient rehab unit, or more commonly to a slower stream rehab program offsite in a long term care facility (this did not exist in 2005). Physician extenders (physician assistants, nurse practitioners) provide care on the first 3 wards with internist oversight. A family doctor with fellowship training in care of the elderly provides care on the slow stream rehab unit. Geriatricians are consulted to participate in care as needed, not routinely.

All of these areas are considered “non-teaching” wards. Students and residents are concentrated on acute wards and outpatient clinics, with relatively little exposure to these post-acute models of care. While diversification and growth of post-acute care models and increased use of physician extenders is good, we believe that the very low engagement of medical students and residents in these settings needs critical reflection. The perception of geriatric patients as “non-teaching” cases has gained momentum over the past decade. The need to highlight the positive impact of clinical experience in geriatric medicine is at least as great as it was 10 years ago.

Comment 9: Is the clerkship mandatory for all students now?

Response: The geriatric clerkship is no longer mandatory. The reasons for this change, are explained in the manuscript (Discussion section, paragraph 7).

Added: “A total of 820 students participated in the mandatory geriatrics clerkship. A small and static number of geriatric medicine specialists at our institution, coupled with increased medical school enrolment over the past decade eventually made this an unsustainable model. In 2007, the mandatory geriatrics clerkship was changed to an elective rotation. Only 20% of the class will participate in a geriatrics rotation in 2014”
Reviewer: Philip Cotton

Major compulsory revisions/questions that need addressing:

Comment 1. What is the impact of a clerk on the CTU team - position, role, influence? How are they perceived? What does the team do with the clerk's assessment?

Response: Further description of the clerk role at our institution has been added to the manuscript (Methods section, paragraph 2).

Added: “A typical team on the medical clinical teaching unit (CTU) rotation consists of an attending internist, a senior medical resident, 2-3 junior residents, and 2 medical students in the final year of training - clinical clerks. Clinical clerks are the most junior members of the team, but are assigned individual patients and expected to take primary responsibility for their care. Their role includes daily medical assessment, progress notes, and reporting of their patients’ clinical status with proposed management plans, to senior members of the team. All clerks during the period of this study would have received approximately 14 hours of geriatrics-based content during the pre-clerkship curriculum.”

We have proposed some ways in which they may have influenced care outcomes (Discussion section, paragraph 3).

Added: “Clinical clerks require cosignature for all orders and are perceived to have limited influence on patient management. However, they may still impact patient care by recognizing easily overlooked problems and suggesting low risk, high benefit interventions. For example, in the frail elderly, rapid functional decline is often a more reliable indicator of occult illness than reported symptoms, physical exam or lab abnormalities. A clerk with geriatrics training would have learned to assess and investigate further when a patient manifests unexpected functional decline. The geriatrics rotation may have also empowered clerks to advocate for optimizing the care of patients that otherwise might be viewed as lacking potential for recovery.”

Comment 2. Does this not say as much about the need to train CTU teams to carry out functional assessments? Is there an admission checklist that includes functional assessment?

Response: We very much agree that training to carry out functional assessment is needed for the entire CTU team. Functional assessment is taught in the pre-clinical curriculum, and listed as a learning objective in the clerkship orientation package. We believe that a big barrier on busy acute medical wards is that attending staff do not consistently prioritize or value
functional assessment, even though it is listed on paper as a learning objective. A standardized admission checklist is not used at our centre, but we thank the referee for suggesting a possible way to translate knowledge into action.

**Comment 3. Why the near 8 year delay in reporting this? Did the emerging literature prompt this?**

Response: The proposal for this study arose in 2007. It was not feasible to obtain consent from clerk participants because they had graduated from McMaster University. The authors were advised that ethics approval for a waiver of consent could not be obtained until all involved clerks had completed core residency and had no further chance of being supervised by the author completing data collection. The potential for inappropriate use of student performance data by the data collector was considered a significant risk that would not meet ethics approval. Data collection was therefore delayed until after June 2010.

**Comment 4. What is being done in the curriculum now? Will you go back and re-introduce this?**

Response: The current status of the geriatric clerkship, and reasons for change, are explained in the manuscript (Discussion section, paragraph 7).

*Added:* “A total of 820 students participated in the mandatory geriatrics clerkship. A small and static number of geriatric medicine specialists at our institution, coupled with increased medical school enrolment over the past decade eventually made this an unsustainable model. In 2007, the mandatory geriatrics clerkship was changed to an elective rotation. Only 20% of the class will participate in a geriatrics rotation in 2014. Some argue that geriatrics content is already adequately integrated into the internal medicine clerkship because most inpatients are old. However, like Diachun and colleagues [8], we demonstrated that there are unique competencies that are not taught by non-geriatrics specialists, even if they provide care for a predominantly aged population.”

The results of the present study are linked to an ongoing project being conducted at our institution by one of the co-authors (H McLeod). Dr. McLeod is leading a project to align the curriculum content in geriatric medicine across McMaster University’s three-year undergraduate MD program with the “Core Competencies in the Care of Older Persons” that have been identified as current best practice for the education of Canadian Medical Students [Reference 10]. This includes systematic curriculum mapping of all pre-clerkship and clerkship educational modules and experiences. Gaps in
teaching of core competencies are being identified as "areas of opportunity." Based on the present study, functional assessment appears to be a prime area of opportunity.

The next steps will involve development and implementation of educational strategies to address areas of opportunity. These strategies will be deliberately targeted to areas of greatest need, making best use of our limited resources. We propose that a framework for process and prospective evaluation of outcomes, including patient level outcomes will be important. A methodology to do this will build on the experience gained in the current study.

There are less than 250 certified geriatricians in all of Canada, which makes it challenging to deliver immersive educational programs to all those in need. We hope that the results of our study will also help support our ongoing efforts to improve recruitment to our specialty.

Thank you again for your consideration, and please advise us if further clarification is needed.

Sincerely,

Joye St. Onge