Author’s response to reviews

Title: Concordance Between Physiotherapists and Physicians for Care of Patients with Musculoskeletal Disorders Presenting to the Emergency Department

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(letter included in submitted documents)

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We appreciate the time invested by the reviewers for their thoughtful comments and for the opportunity given by the editor to improve our manuscript for publication. We provide detailed actions regarding specific comments below.

Reviewer 1’s (Sebastien Beaune) comments:

1) Methodology is complex but well written and described. It would be uneasy to repeat this study for another medical team.

Indeed, our methodology is complex, which reflects the complexity of the implementation of a research project in an ED, where there are a lot of moving parts to consider in order to properly implant a project but without interfering with the proper functioning of the ED.

2) I didn't get what was the primary goal of this study and so on which objective to achieve what determined the sample size.

The objectives of the study were to determine the diagnostic interrater reliability between ED physicians and APPs, as well as to assess treatment and discharge plan concordance, including medical imaging requests and medication recommendations, and patient satisfaction between both healthcare providers in this new model for ED patients with minor MSKD. Our sample size was based on a sample of convenience and we wanted to recruit sample of sufficient size to maximise the representativeness of various minor MSKD cases.
Reviewer 2’s (Romain Jouffroy) comments:

3) The subject is interesting, as mentioned the authors in the introduction underlining the worldwide overcrowding in ED. Nevertheless, their results deserve this because APPs have a longer consultation time (13.5 +/- 8.6 minutes vs 5.8 vs 4.2 minutes). Beyond this, I fully agree that long ED waiting times are not only influenced by ED physicians' activities. The waiting time reflects more the efficiency of the system in the ED since admission to exit (ward or home). The increase of ED waiting time is affected by the increase of ED patients' admission. APP could be an help to ED physicians for the diagnosis establishment but, in my opinion, the choice of treatment (type and planification) should remain to the physicians responsibility.

Indeed, ED waiting times are influenced by many variables, which includes consultation times. APPs had indeed longer consultation times than physicians in this study. One of the main reasons for this is the fact that we noticed physiotherapists provided more education and explanations to the patients in their treatment, which made for a longer consultation time overall. Even thought APPs had longer consultation times, their mean times (13.5 minutes) was still very low and realistic for an ED setting. APPs would indeed be of great contribution to ED physicians regarding diagnosis establishment, but also treatment options. We believe that ED physicians and physiotherapists could provide complementary treatment options to patients to improve outcomes for patients with minor MSKDs. A recent systematic review by our team does support a more autonomous role for physiotherapists in the ED since benefits include, greater reduction in pain and function limitations, less imaging tests and medication prescriptions and greater satisfaction with care for patients (1, 2)

4) I am not sure that APP models of care could be a key solution to improving access to care in Canada, because, as clearly stated by the authors "ED physicians mentioned informally … that they often hesitate to refer to physiotherapy care since they know that a significant portion of the population does not have access to services within the public system and does not have insurance or the resources to pay for physiotherapy care in the private sector". APP models are not a solution for Canadian disparities in access to care.
Indeed, ED physicians are sometimes reluctant to refer to outpatient physiotherapy in a private setting since not all of ED patients have the necessary insurances or means to cover it. We believe that in the contrary, APP in EDs would improve access to care by providing alternative pathways of access to care, which are covered within the public health care system. In the ED, physiotherapists could provide initial diagnosis, treatment and provide the necessary education to patients which would improve self-management by patients compared to the current model of care with no physiotherapy care. We agree that access to physiotherapy care needs to be improved not only in ED settings, but all along the various points of access to care for patients with MSKDs.

5) In my opinion, there is a major selection bias because the 3 physiotherapists involved in the study are experimented and work since long time in the 2 ED involved in the study ("The three physiotherapists participating to this study were already working in both recruitment sites and were already involved in the ED. They had previous experience working in theses EDs as secondary contact providers, with experience ranging from 2 years to 14 years, and had experience for care of patients with MSKD, in both an inpatient and outpatient settings, with experience ranging from 2 to 29 years"). Thus, it is expected, prior to the study, that the agreement between practitioners (physicians and physiotherapists) will be elevated.

Indeed, there is a potential bias regarding the included physiotherapists, but we believe that the fact that physiotherapists were already involved in the EDs reflects the reality of this model of care. You could say that it is a pragmatic approach, where you do want a physiotherapist to have training and experience in this setting. Even though physiotherapists and physicians had previously worked together, patients’ conditions varied greatly, there were a significant number of ED physicians (which not necessarily all of them had worked with the ED physiotherapists before) and the protocol was built as so both providers provided independent assessment and management recommendations. Finally, the patients seen by the physiotherapists in this study are usually not those seen in their daily work, where they provide second contact care. Still, we have added this potential bias in the limitations section (page 14, lines 314-318).
6) Another moderate selection bias affects the results. As the physiotherapists are experimented, they know the benefits of their practices, therefore it is expected that they prefer physiotherapy than drug medication (the argument is the identical for physicians with drug medication prescription).

Indeed, we expected that physiotherapists recommend more physiotherapy care than physicians and in the contrary that physicians recommend more medication than physiotherapists as these providers to do use the same tools to treat the same pathology. This reflects the particularity of both professions. Whether one approach is better than the other needs to be formally evaluated with a RCT for example.
