Author's response to reviews

Title: The Osteoporosis Care Gap in Canada

Authors:

Dr Alexandra Papaioannou MD (papaioannou@hhsc.ca)
Ms Lora Giangregorio B.Sc. (giangrlm@mcmaster.ca)
Brent Kvern MD (bkvern@cc.UManitoba.ca)
Pauline Boulos MD (boulosp@mcmaster.ca)
George Ioannidis M.Sc. (g.ioannidis@sympatico.ca)
Dr Jonathan D. Adachi MD (jd.adachi@sympatico.ca)

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PDF covering letter
RE: Response to Reviewers for “The Osteoporosis Care Gap in Canada”

Manuscript #: 1120573674218469

Thank you for considering the manuscript “The Osteoporosis Care Gap in Canada” for publication in your journal. Below are point-by-point responses to each of the reviewers’ comments. If there are any questions or concerns about the changes or responses we have made, please let us know. Thank you again for your consideration.

Sincerely,

Alexandra Papaioannou

Reviewer: David J Torgerson

Response to Reviewer 1:

Major Compulsory Revisions:

1. *How many papers were identified at the various stages of searching?*

   The number of papers identified in the various stages of the electronic search, as well as the method by which they were identified, has been included in the methods section, as requested. The following sentence has been added to the methods section:
   “Using the above search strategy, ten articles were identified, one of which met the a priori selection criteria. One article was known to the investigators, and one was identified via consultation with experts. Another was included after hand searching the reference lists.”

2. *How long was the follow-up and what were the incidence rates?*

   The reviewer asked for both the length of follow-up in the section denoting the number of prior fractures in Table 2, as well as incidence rates. The length of follow-up has been
inserted accordingly. For one of the studies, the follow-up period varied from 6 months to 3 years, so the calculation of incidence rates was not possible. Therefore, we have included in the Table the percentage of individuals who fractured that experienced a subsequent fracture in the follow-up period, along with the duration of the follow-up period.

3. *Can the quality of studies be graded?*

The reviewer requested that we grade the quality of studies by identifying how the data in each study was derived, how sample sizes were chosen, etc. Based on a list of questions that we derived from a resource from the Centre for Reviews and Dissemination [1], we evaluated the characteristics of each study as suggested by the reviewer. Based on the answers to each question, we have constructed a Table (Table 1), which provides the reader with a synopsis of the study design for each article included. The following sentence has been added to page 5 of the results section: “In all studies, patients were selected by the reviewing of medical records to identify individuals who fractured. All those identified received a telephone interview 6 to 36 months post fracture. The sample sizes for each study were not determined a priori, but based on the number of individuals identified in the medical records that agreed to participate.” As well, we have added the following sentence to page 8 of the discussion: “The studies attempted to include representative samples of patients experiencing fragility fracture. The community-based hospital study included the smallest proportion (56.1%), where most patients who were not included could not be reached, and a small number declined to participate.”

4. *What treatments for fracture prevention were available at the time each study took place, and what was the prevalence of bone mass measurements reported in each study?*
The reviewer suggested we identify what treatments for fracture prevention were available at the time of each study, and the prevalence of bone mass measurements in each study.

The following sentence, in the first paragraph of page 6, addresses the concern about available treatments: “At the time the studies were conducted, bisphosphonates and HRT were recommended therapies for the treatment of osteoporosis however, only a small proportion of patients with fragility fracture were prescribed these medications. The following therapies were available for prescription in 1995: etidronate as of July 1995, alendronate as of December of 1995, and calcitonin was also available during the time the studies were reviewed. Raloxifene became available in Canada in January of 1999.” The prevalence of bone mass measurements appears in Table 3, as well as the last sentence in the first paragraph of page 5, however we have also added the following sentence to the discussion (paragraph 1): “The prevalence of bone mass measurements or physician follow-up among individuals experiencing a fragility fracture was less than 50%, in most cases, much less.”

**Reviewer:** David A Henry

**Response to Reviewer 2:**

1. *Could the authors address the methodological quality of the papers included in the review?*

   Based on a list of questions that we have derived based on a resource from the Centre for Reviews and Dissemination [1], we evaluated the characteristics of each study as suggested by the reviewer. Based on the answers to each question, we have constructed a Table (Table 1), which provides the reader with a synopsis of the study design for each article included. The following sentence has been added to page 5 of the results section: “In all studies,
patients were selected by the reviewing of medical records to identify individuals who fractured. All those identified received a telephone interview 6 to 36 months post fracture. The sample sizes for each study were not determined a priori, but based on the number of individuals identified in the medical records that agreed to participate.” As well, we have added the following sentence to page 8 of the discussion: “The studies attempted to include representative samples of patients experiencing fragility fracture. The community-based hospital study included the smallest proportion (56.1%), where most patients who were not included could not be reached, and a small number declined to participate.”

2. *It was a pity the authors did not do a systematic review of all available international studies.*

We are in complete agreement with the reviewer that a systematic review of all available studies would be of greater interest to an international readership. Our main concern with making international comparisons of osteoporosis management after fracture was that the outcomes might be biased by available technologies and differences in the provision of health care services. By reviewing the Canadian literature, we have established that an osteoporosis care gap exists, even in a health care system where the ability of a patient to pay for services is not an issue. For example, a survey of physicians in the United States, Canada and West Germany revealed that 73 percent of physicians in the U.S. reported that patients’ inability to afford treatment was a serious problem, compared with only 25 percent in Canada and 15 percent in West Germany [2]. Our opinion is that the data presented here is relevant and important for all health care practitioners, despite the fact that we only included Canadian studies. However, because we suspect that, despite these differences, the existence of an osteoporosis care gap is international, and that an international review would be a project of great importance to those concerned with disease management, this project will be
our next step. A quick MEDLINE search using our search criteria for all available studies revealed 1327 hits, indicating that the literature surrounding osteoporosis management and fractures is certainly not limited. We now aim to conduct a systematic review of all available studies on osteoporosis diagnosis and treatment after fragility fracture, and it will be submitted for publication when completed.

3. *Shouldn’t the argument be that fragility fracture, rather than an osteoporosis diagnosis, be the indicator for treatment?*

The reviewer makes a very good point; fragility fractures likely warrant treatment even in the absence of a diagnostic test for osteoporosis, given the increased risk of future fracture associated with fragility fractures. We have included the following sentences, the first one as the first line in paragraph one on page 7, and the second at the end of the first paragraph on page 8: “Although the diagnosis of osteoporosis after fragility fracture is important, it can only be effective in preventing future fracture if it leads to subsequent treatment of patients at risk.” and “It is essential that fragility fractures are identified as a risk factor for future fractures, and appropriate treatment measures are taken to reduce this risk”

4. *The studies reviewed were not designed to study whether fragility fractures are a risk factor for osteoporosis.*

We have removed the statement that fragility fracture is a major risk factor for osteoporosis.

References