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Title	Successful system-wide implementation of a Choosing Wisely Canada recommendation in Alberta: A cross-sectional study of an intervention in Serum 25-hydroxyvitamin D Testing
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Reviewer 1	Christopher Sempos PhD
Institution	National Institutes of Health, Bethesda MD
General comments (author response in bold)	<p>(1) In current clinical practice there are blood tests for two very distinct vitamin D metabolites, i.e. serum total 25-hydroxyvitamin D [25-(OH)D] and 1,25-dihydroxyvitamin D3 [1,25-(OH)2D3]. I believe that it is essential to emphasize that this effort is directed to a reduction in physicians ordering tests for serum total 25-(OH)D and it has nothing to do with physicians ordering tests for 1,25-(OH)2D3. I would like to suggest to the authors that this point needs to be made clearly in the Abstract, Introduction and Interpretation sections of the paper.</p> <p>RESPONSE: These changes have been made.</p> <p>(2) The vitamin D research field is rapidly advancing. Currently, there is a great deal of research work being conducted to evaluate the association of serum total 25(OH)D and other vitamin D metabolites and related molecules with a myriad of disease states. As research proceeds, the number of diseases for which serum total 25(OH)D measurement is clinically important may change and, more importantly, while serum total 25-hydroxyvitaminD is currently regarded as the principal marker of vitamin D status that may change, as well. As a result, I would like to suggest that the authors clearly state as that as vitamin D science changes, the recommendations of the "Choosing Wisely Canada" program will be re-evaluated and updated where necessary.</p> <p>RESPONSE: This has been added to the Interpretation section. However, as I cannot vouch that the recommendations will definitely be updated as the science changes I added the phrase "...there is considerable ongoing research concerning the possible association of vitamin D levels with various diseases. As the science surrounding vitamin D progresses, the recommendations of the Choosing Wisely Canada program may require re-evaluation."</p> <p>1. Title: I suggest that the term "Serum 25-hydroxyvitamin D Testing" be substituted for Vitamin D Testing.</p> <p>RESPONSE: This change have been made.</p> <p>2. Footnotes: I would like to suggest that CIHR be spelled out.</p> <p>RESPONSE: This change have been made.</p> <p>3. Abstract: I would like to suggest that the abstract be re-written to emphasize the focus on serum total 25-(OH)D testing.</p> <p>RESPONSE: This change have been made.</p> <p>4. Abstract (Results): Suggested wording changes are: "Over the first 12 months of the intervention there was a reduction in the number of tests ordered from a predicted 342,477 tests to 29,525 test (91.4% reduction) ...</p> <p>RESPONSE: This change have been made.</p> <p>5. Abstract (Results): Is the reference to US \$ or to Canadian \$. If you feel that there will be no confusion then please ignore this comment.</p> <p>RESPONSE: This change have been made (CDN\$)</p> <p>6. Introduction (Lines 25-51): Please spell out 25-hydroxyvitamin D and specify that it is currently the principal marker for vitamin D status. You may wish to cite the recent Canadian-US supported IOM report and the Endocrine Society guidelines. I would also like to suggest that your program has nothing to do with the ordering of tests for serum 1,25-dihydroxyvitamin D3.</p> <p>RESPONSE: This change have been made (CDN\$)</p> <p>7. Interpretation: I would like to suggest that, again, the authors stress that there program is focused on reducing the unnecessary measurement of serum total 25(OH)D and that it has nothing to do with physician ordered tests for 1,25(OH)2D3. Finally, I would like to suggest that the authors note that as vitamin D science changes the "Choosing Wisely Canada" guidelines will be revised and updated as necessary.</p> <p>RESPONSE: This change have been made (CDN\$)</p>
Reviewer 2	Mamdouh M. Shubair PhD MSc BSc
Institution	University of Northern BC, School of Health Sciences, Prince George, BC
General comments (author response in bold)	<p>1. More details are needed as to the rationale/background of this work, building on previous relevant literature.</p> <p>RESPONSE: The published literature on the effectiveness of laboratory</p>

	<p>utilization management interventions in general suffers from methodological issues and is not well. We have added a sentence to this effect in the introduction as well as reference to 2 recent systematic reviews on this topic.</p> <p>2. Also, the analysis needs to expand beyond the presented time-series analysis (with intervention start point of April 2015). RESPONSE: The original analysis was expanded by including 95% confidence intervals for the reduction. We feel that this adequately addresses the analysis of this data.</p> <p>3. It is not clear the effectiveness of the intervention was? RESPONSE: We respectfully disagree with the reviewer on this point. We state clearly that there was a sustained 91.4% reduction in vitamin D requests over the first year of the intervention in the Abstract, Results and in the legend to Figure 1.</p> <p>4. How do the results mentioned compare to previous/current literature in this area? This needs further expansion in the results section, and reflection upon including implications for Vitamin D Intervention Management in this Discussion section. RESPONSE: A short section on this question was added to the Interpretation.</p>
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