Author's response to reviews

Title: Drug cost by a multidisciplinary approach to potentially inappropriate medications for older patients in home care settings: cross-sectional study and propensity score analysis

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Author's response to reviews: see over
Dear Dr. Morrey,

Please find herewith our manuscript entitled *Drug cost by a multidisciplinary approach to potentially inappropriate medications for older patients in home care settings: cross-sectional study and propensity score analysis*, which we would like to submit for publication in *BMC Health Services Research*.

The cost related to potentially inappropriate medications (PIMs) is estimated to be high and it has become an important public health issue worldwide. PIMs are common among older home care patients and an important issue in developed countries with aging societies, such as Japan, where the number of older home care patients is predicted to increase rapidly in the future. Several intervention studies have revealed that a multidisciplinary approach for older patients could reduce the number with PIMs, but they have not studied the impact on drug cost.

Our study aimed to establish whether programs of home visits by nurses or pharmacists could reduce the drug cost of PIMs for older patients in home care settings. As far as we know, this is the first study to estimate the cost effectiveness of a multidisciplinary approach to PIMs, identified using the STOPP criteria, for older patients in home care settings. The strength of this study is that we conducted propensity score adjustment to reduce the impact of confounders, which is usually one of the major limitations of cross-sectional studies.

This study has two important findings. First, programs of home visits by nurses could reduce the drug cost of PIMs for older patients in home care settings, especially for patients who do not use the pharmacist home visiting programs. Second, the same effect was not seen for programs of home visits by pharmacists, especially for patients who also use the nurse home visiting programs.

We believe this study will be of interest to a broad audience and is suitable for publication in *BMC Health Services Research*.

No portion of this manuscript has been previously published or is under consideration elsewhere. We agree to transfer any relevant copyright to *BMC Health Services Research* in the event that this
manuscript is accepted for publication. This study was approved by the ethics committee of the Mito Kyodo General Hospital and conducted according to the principles expressed in the Declaration of Helsinki. All authors have contributed significantly and all agree with the content of the manuscript.

Thank you for your consideration of our manuscript. We look forward to hearing from you.

Yours sincerely,

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