Author's response to reviews

Title: Correcting Misdiagnoses of Asthma: A Cost Effectiveness Analysis

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Reply to Review:

Major Compulsory Revisions
The authors’ response 5) that “the subjects lived a maximum of 50 years since the time of diagnosis” leaves out their assumptions regarding quality of life and adverse events. The analysis implicitly assumes that there is no difference in quality of life or adverse events for non-asthmatics on treatment versus off treatment. This assumption should be stated explicitly and the limitations and direction of effect discussed.

More information has now been added to the manuscript (in green).

The unit costs presented in Table 1 are informative, but even more informative for researchers undertaking similar analyses in other countries would be the resource use. This could be done by presenting the average daily use of each of the treatments.

This information has been added to the table 2 (in green).

Minor Essential Revisions
As the authors state that cost savings in the US is conjecture the statement "Thus, in the US, cost savings of secondary asthma screening would be expected to generate even greater savings than in Canada." should be removed.

This statement has been removed.

Discretionary revisions
I will try to be more clear regarding my point, 13) in your responses. You are not recommending that all patients are screened for asthma, however, is there a risk the threshold for diagnostic use will decrease given these recommendations and therefore increase costs?

We do not diagnose someone to have high blood pressure without recording their blood pressure or we do not diagnose someone to have diabetes without measuring their blood sugar. Thus, all pulmonologist feel that no one should get a diagnosis of asthma or COPD without measuring their lung function. This has been in the guidelines from all the major societies (ATS, BTS, CTS, GINA).

In the subsequent paper based on the same data as this study (Lucks et al 2010, ERJ) it was demonstrated that, in more than 90% subjects the diagnosis of asthma was either ruled in or ruled out with the first two steps of the diagnostic algorithm i.e. pre- and post-bronchodilator spirometry and one time methacholine challenge test. Thus, with a systematic diagnostic approach, in subjects where a diagnosis of asthma is clinically suspected, we do not think the cost will increase.