Author's response to reviews

Title: Comparing estimated treatment need with treatment provided in two dental schemes in Ireland

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Author's response to reviews:

Re: MS 8941555306408419
Title: Comparing epidemiologically estimated treatment need with treatment provided in two dental schemes in Ireland

Dear Editor, BMC Oral Health,

Thank you very much for the editor and the reviewers’ comments.
We have addressed all comments systematically, and reported our responses below. We have attached our updated manuscript with the revisions highlighted. Thank you again for an opportunity to improve our manuscript and we very much look forward to your consideration of our revised manuscript.

Yours Sincerely,

Helena Guiney

Response to Editor's comments:

We have added a sentence at the end of the first paragraph in the methods section stating that ethical approval to analyse the administrative databases was provided, and another sentence at the end of the second paragraph in the methods section stating that ethical approval to carry out the national survey was provided.

We have also added a competing interests section.

Many thanks to the reviewers for their comments; we have addressed them below.
Reviewer: Gerardo Maupome:
Comment 1:
This is an interesting and cogently presented research project to compare and contrast different provisions of dental health care delivery in Ireland over a historic perspective. The authors are to be commended for addressing the many aspects of the research question in a clear way, although perhaps a bit too extensive. Considering the fiscal restraints presently affecting many health care delivery systems (and probably the Irish), the manuscript offers a solid framework to appraise the impact of clinical services organized in different ways.

Reply 1:
Many thanks for your positive comment.

Comment 2: Please change verbiage to reflect 'data' as a plural -- 'datum' being the singular noun.

Reply 2: We have changed the text to reflect data as plural

Reviewer: Anne Nordrehaug Astrom:
Comment 1: First – some conceptual clarification is needed. From the introduction I learn that professionally defined need is normative need or evaluated need. At the same time the aim of the study is to assess the relative relationship between normative need and evaluated need?

Reply 1: Normative need was measured by dentists during the national survey. It is also known as epidemiologically estimated treatment need. Evaluated need is regarded as the treatment actually provided to patients who use the schemes. Both are professionally-defined need, as opposed to perceived need, which is from a patient’s viewpoint.

We have replaced most instances of normative need with epidemiologically estimated need in the paper, and replaced most instances of evaluated need with treatment provided, for clarity and consistency.

We have also replaced estimated as ‘requiring’ treatment with ‘needing’ treatment for consistency.

We have also re-worded the background and methods sections in the abstract, and added a new paragraph to the background in the main text, to provide more information on epidemiologically estimated (normative) need.

We also added (and edited) the following sentences to the second paragraph of the background in the main text, which further explains epidemiologically estimated (normative) need and evaluated need.
“Evaluated need “represents professional judgement about people’s health status and their need for medical care” [6]. Normative (epidemiologically estimated) need does not capture the patients’ perspective. Translation of need to treatment provided requires action on the part of the patient. This action is the accumulation of a number of behavioural factors initiated by the patients’ recognition or awareness of the problem. Perceived need, reported by individuals, explains care-seeking behaviour, while evaluated need describes the type and amount of treatment that will be provided following assessment of need by the health care provider and consultation with the patient to determine their wants [6].”

Comment 2: Moreover - are data on various forms of need obtained from independent samples from the same population – or are those data coming from the same individuals? This has implications for the statistical tests utilized and should be clear. If two independent samples are compared – how comparable are they?

Reply 2: For employed adults, treatment provided in the DTBS is compared with epidemiologically estimated need for adults eligible for the DTBS. For less-well-off adults, treatment provided in the DTSS is compared with epidemiologically estimated need for adults eligible for the DTSS. This is explained in the third-last paragraph of the methods section. The data source for treatment provided is administrative data, and the data source for epidemiologically estimated need is survey data, and so they are independent. We have added Scheme 1 and Scheme 2 to reflect DTBS and DTSS, respectively, wherever possible, for clarity.

Comment 3: There is lack of details within the article about what kind of statistical analyses have been used – although some information is available in the abstract.

Reply 3: The tests used to compare proportions and means are explained in the last paragraph of the methods section. We have also added legends to Tables 3 and 4 to explain what tests were used. We also changed the statistical test, used to compare proportions, from the z-test to the chi-square test as it is more familiar to people. We have added an acknowledgement for the statistician we consulted.
Comment 4: How many individuals have generated data for what is called “evaluated need”? – What is the unit of information/analyses for those data?

Reply 4: The number of individuals from the administrative databases (treatment provided, i.e. evaluated need) are presented in Table 2. Proportions are compared in Table 3 and means are compared in Table 4.

Comment 5: I miss more detailed information about how disease measures from the national survey have been translated into categories of normative need.

Reply 5: Disease measures were not translated into categories of normative need. The fourth paragraph of the methods section explains that the dentists made the decision of whether treatment was provided based on their own clinical judgement, although general guidelines were provided. We have also added the following sentence to the second last paragraph of the background:
“Many surveys add a clinical estimation of treatment need to the record of oral health status, where the examiner first records the condition of the teeth and then records any treatment required (in their clinical opinion).”

Comment 6: The tables are incomplete and difficult to interpret.

Reply 6: We have changed the wording of the table titles. We have added Scheme 1 (DTBS) and Scheme 2 (DTSS) to Table 1, and changed the layout of Table 2. We have added standard deviations to Table 4, and added further notes to the legends of all the tables. We have also changed ‘treatment received’ to ‘treatment provided’ throughout the text.