Reviewer's report

Title: The Relationship between Body System-Based Chronic Conditions and Dental Utilization for Medicaid-Enrolled Children: A Retrospective Cohort Study

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Reviewer: Gary Slade

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2nd Review of BMC Oral Health "The Relationship between Body System-Based Chronic Conditions and Dental Utilization for Medicaid-Enrolled Children: A Retrospective Cohort Study": Manuscript 3388818965805310

In this revision, the authors have provided new results and/or text that partly addresses two of my original three concerns. However, the new results, which report probability ratios, as suggested, only reinforce concerns expressed originally in my third comment, namely that the observed differences between most medical subgroups are small and of little public health relevance. For example, the abstract draws attention to dental attendance ratios for three sets of conditions "(RR: 1.03 to 1.13; 1.0 to 1.08; 1.02 to 1.12)". Yet there is no new text stating that these are very small effect sizes.

My original concern was not merely a technical one of statistical modeling, so I repeat it here: "...a third major shortcoming of this paper, namely its discussion of interpretation and implications. The fact is, all of these groups have levels of dental care that are MUCH lower than desired when considering their medical conditions and low socioeconomic status." In their response to my critique, the authors agree, yet there is no new text in this revision that critically discusses this point. What's needed is a critical discussion of these new results. One good place to start would be the authors' own study, now cited as Reference 12, where dental attendance odds-ratios were 1.04 to 1.07. In the revised text of this paper, that same study is now referred to in this way: "In regards to dental utilization patterns, children with these conditions appear to be similar to Medicaid-enrolled children without chronic conditions [12]." If odds ratios of 1.04 to 1.07 are indicative of "similar" dental utilization patterns in Ref 12, there seems to be little justification for the claim in this abstract that "Children with respiratory, musculoskeletal, or ear/nose/throat conditions were more likely to use most types of dental care ...". In fact, with the exception of catastrophic neurological conditions, experienced by a small number of these Medicaid-enrolled children, the overall impression is that chronic dental attendance probabilities are similar across medical conditions.

On a minor note: "relative risk" is a measure of effect used in studies of disease risk. A more appropriate term is "probability ratio", and more specifically, "dental attendance probability ratio".
Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests