

## Peer Review Report

# Review Report on What are the effects of electronic cigarettes on lung function compared to non electronic cigarettes? A systematic analysis

Review, Int J Public Health

Reviewer: Werner Karrer

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### EVALUATION

#### **Q 1** Please summarize the main theme of the review.

The overview article studies the effects of e-cigarettes compared with regular smoking cigarettes on lung function. The authors analyse short term e-cigarette smoking (<1 month) or long term e-cigarette smoking (>1 month). And they compare e-cigarette smoking with regular cigarette smoking. A literature review.

#### **Q 2** Please highlight the limitations and strengths.

Strengths: The overview describes a problem that is not studied very often up to now.

Limitations:

- the number of reviewed articles is small and quite different in numbers of participants and end points.
- most results are not statistically significant and so, the message is quite poor.
- In asthmatics, the review shows statistically significant results. But in this population different other factors may contribute to the outcome, but are not discussed in the paper (i.e., bronchial hyperreactivity, seasonal allergy etc.).
- the discrimination of short-term use and long-term use of e-cigarettes is arbitrarily. Long-term use defined as smoking >1 month may be too short. Even in heavy smokers, lung function parameters decrease usually after years of smoking only.
- study participants are classified in smokers, non-smokers, and asthmatic smokers. But the duration and intensity of smoking is never mentioned.
- what are the definitions of "smoker" or "asthmatic smoker"?

#### **Q 3** Please provide your detailed review report to the authors, structured in major and minor comments.

Major comments:

- lung function parameters are not good indicators for the harm of smoke or other inhaled particles in short term use. Even heavy smokers can have normal lung function parameters over years.
- The literature on this subject is small and very heterogeneous. That makes it difficult to get robust results, what is shown by the present overview.
- The history of the smokers is unknown regarding the number of cigarettes per day and per year of smoking.
- All together, results are quite poor and almost no significant difference is shown, except in asthmatics, where other problems could be responsible for a significant difference.
- to conclude, that vaping e-cigarettes has no negative effect after one month may be correct. But to define vaping e-cigarettes over one month as "long term" and conclude out of this a "long-term effect" is very courageous.
- the definition of different participant, as smokers, asthmatic smokers, should be clearly described and the definition of asthma should match the GINA guidelines. All these definitions are missing.
- overall, the power of the results can not be estimated as important.

Minor comments:

- the discussion is too long, and it describes the harm of smoking and the endemic use of e-cigarettes. But there are very few words about the issue of the paper,
- the discussion must focus on the results of the study.
- the terminology is not consistent, i.e., Asthma smokers or asthmatic smokers.

**PLEASE COMMENT**

**Q 4** Does the reference list cover the relevant literature adequately and in an unbiased manner?

As I could see, the literature selection is good, but could be more comprehensive including the term "vaping" or "vaporizing". I found some more papers matching the aim of the study.

**Q 5** Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)

Yes.

**Q 6** Does the manuscript cover the issue in an objective and analytical manner

Yes.

**Q 7** Was a review on the issue published in the past 12 months?

No.

**Q 8** Does the review have international or global implications?

Difficult to say. I think the approach to the problem of e-cigarettes, compared to cigarette smoking is difficult and needs much longer observation time to get good discriminating results. At this time, we can say, as the authors do: "We don't know". Lung function parameters should be observed over years. They are, as mentioned not a good parameter for short term damage of the lung by e-cigarettes (and also for smoking).

**Q 9** Is the title appropriate, concise, attractive?

yes

**Q 10** Are the keywords appropriate?

yes

**Q 11** Is the English language of sufficient quality?

The English should be revised thoroughly.

**Q 12** Is the quality of the figures and tables satisfactory?

Yes.

### QUALITY ASSESSMENT

**Q 13** → Quality of generalization and summary

    

**Q 14** → Significance to the field

    

**Q 15** → Interest to a general audience

    

**Q 16** → Quality of the writing

    

### REVISION LEVEL

**Q 17** → Please take a decision based on your comments:

Major revisions.