

Review of: "The case for development of an E-cigarette Ontology (E-CigO) to improve quality, efficiency and clarity in the conduct and interpretation of research"

Arielle Selya¹

¹ Pinney Associates

Potential competing interests: I am an employee of Pinney Associates, Inc. which provides consulting services on tobacco harm reduction to JUUL Labs, Inc. My review is my own.

This preprint calls attention to an important but fairly unrecognized obstacle in e-cigarette research: the absence of standardized and consistent terminology. For example, “e-cigarette use” has been used to refer to everything from one-time experimental use to daily, established use. Similarly, the definitions of what a “tobacco product” or even the “tobacco industry” are similarly ambiguous, especially with the diversification of the market. The lack of standardized terminology introduces obstacles both within the research field and at the interface of research and policy, as it complicates clear communication of evidence.

Cox et al. present a case for the development of an ontology for e-cigarette research, as has been done in other fields such as in genomic research. They make a strong case that such an ontology can improve clarity and communication of e-cigarette research findings. I find myself convinced, and my comments below are motivated by a desire to know more about how the authors envision an ontology working.

- The authors describe how annotations can be used to link the ontology terms to the broader literature, which could also streamline querying research findings. It would be helpful to know more details about how this would work in practice: is this a manual effort that would need to be taken? Would this interface with the usual ways of searching literature (e.g. PubMed)?
- For this ontology to achieve its goals, it would need to be adopted by a large proportion of the field. Do the authors have thoughts on how to increase uptake of this ontology among researchers? Are there lessons that can be learned from other fields that have implemented an ontology?
- Minor point, but the reference to EVALI (2nd paragraph) states “FDA now acknowledges are mostly likely arising from use of illicit products” – it's worth stating that these were not even nicotine products. This underscores the point of the paper, because the conflation of nicotine e-cigarettes with illicit THC vapes led to misinformed policy: the reaction in many places was to impose restrictions on nicotine e-cigarettes (e.g. flavor bans), a policy which could not logically resolve the underlying problem.