



# 2018-2019 Mid-Term Credibility Plan Review

PI: Bruce Lee

#	Ten Simple Rules	REVIEWER #1		REVIEWER #2	
		Considered in the Credibility Plan?	Comments	Considered in the Credibility Plan?	Comments
1	Define context clearly	insufficient	It's intended to be a model of a community to understand obesity and different decisions that could affect obesity; but no details on what the outputs of the model are.	insufficient	Unclear what the model is capable of simulating, e.g., what types of systems are/can be modeled. Report mentions store stocking patterns, communication campaigns. Criterion validity mentions several school-related factors.
2	Use appropriate data	sufficient	They provide different sources of data used; seems like a lot of data; how do they ensure the relevance of data and how are the data used for model development vs validation?	sufficient	Table is very useful, but likely incomplete. Is there a complete table that is maintained somewhere?
3	Evaluate within context	insufficient	Because the context is unclear; it's challenging to evaluate the validity of the model in that context. Also, they focus on validation efforts, nothing about verification.	insufficient	Is verification done? How is sensitivity analysis actually being done? The Convergence and Divergence Validity criteria also fits here.
4	List limitations explicitly	insufficient	No information	insufficient	Looking for an actual list of limitations or a link to such a list
5	Use version control	insufficient	Is github versioning enough? How are they tracking decision-making that lead to changes/updates to the model/code?	sufficient	
6	Document adequately	insufficient	No details about documentation, especially related to the code, decision making; it appears they have a lot of stakeholders; how are they managing key decisions and then implementation of those aspects into the model.	insufficient	Documentation of model definition, development and validation seems adequate but unclear if documentation provided so others (internal or external) can use the model. Also where is documentation maintained?
7	Disseminate broadly	insufficient	Dissemination has focused on publications, but unclear if models themselves are or will be made available	insufficient	Dissemination focused on publications, not described if the models are to be made available
8	Get independent reviews	Somewhat sufficient	Stakeholders have weighed in on the relevance and applicability of the model; what about the modeling development and validation aspects; not just end-model?	sufficient	Great that end-users are providing feedback on the model. It would also be good to have other model developers vet the model itself aside from the publication peer-review process.
9	Test competing implementations	insufficient	Tested competing implementation for metabolic model, but unclear if this is also done for other parts of model	insufficient	Tested competing implementation for sub-models within the model, but not done for other parts of model
10	Conform to standards	N/A - insufficient	For population modeling, are their guide/standards on model development practices and validation?	N/A - insufficient	Beyond the general best practices for validating models, are there standards for the type of modeling you are doing or the disease area?



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## General Comments

### Reviewer 1:

While the team has made a great effort to include expert opinion in the model development process and harness relevant data sources, it's unclear how they're managing the decision-making, assumptions, limitations, and also making sure they're not confusing model calibration with validation with all the available data. Also, while comparing model outputs to other models supports credibility, it's not technically validation unless the comparative model is considered highly valid in the same context. There is not mention of verification, i.e. making sure they're getting the right answer for the right reason.

### Reviewer 2:

The project includes important components in its credibility plan. It is excellent to see the involvement of end-user stakeholders in the model development process. However, the lack of details describing several of the Ten Simple Rules makes it difficult to determine how well the project is meeting the guidelines.