Reviewer’s report

Title: Modular Programming for Tuberculosis Control, the "AuTuMN" Platform

Version: 1 Date: 15 Jun 2017

Reviewer: Chu-Chang Ku

Reviewer's report:

Thank you to the authors for the revision. Most of my previous points were clarified well. The details in package were also properly adjusted. However, I think the strength of this package has yet been fully demonstrated according to the current released code. Here are some minor comments that may help to improve the package.

1. Example in popdynamics: from the perspective of users, there is no strong incentive to use the package because the current example seems not be more friendly than crafting a model with scipy directly. To attract potential users, however, the examples for the package should be as simple and clear as possible. My suggestions are as follows. First, add a new example of TB with complex stratification and show that the complexity of code does not largely increase. If I am correct, keeping coding complexity while expanding model is an the important features of the package and it is easy to demonstrate. Second, hide the repeated functions in order to increase readability of the code. For example, multiple lines of 'set_compartment' can be simplified as 'set_compartments' with a input of a dictionary to be iterated. In addition, the IO functions, such as 'ensure_dir' and 'def make_plots', can be specified into another file and then be reformulated as a reusable function. It will be more user-friendly to include codes only for model definition and simulation in the example file.

2. Economic step (middle of page 14): I suggest not to mention incremental cost-effectiveness ratios (ICER) but use 'cost-effectiveness analysis' instead. Because the calculation of ICER requires significant difference between the effectiveness terms, it can not always be computed. If this condition fails, the variance of ICER will be diverged and further discussion based on ICER is meaningless. In terms of TB, there are many endemic settings so that the situation is not rare.

3. Simulation time (page 17): The incremental time for adding a scenario was highlighted in the revised example. However, it is more time-consuming in initialising and expanding strata space than adding a scenario. If possible, please adjust the example for addressing advantages and computation bottlenecks.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.
I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal