

Reproducibility report for: Post-Lockdown Abatement of COVID-19 by Fast Periodic Switching.

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Curation outcome summary: Successfully reproduced Figures 2-5, 7-10 and 14 as seen in the manuscript.

Box 1: Criteria for repeatability and reproducibility

Model source code provided:

Source code: a standard procedural language is used (e.g. MATLAB, Python, C)

- There are details/documentation on how the source code was compiled
- There are details on how to run the code in the provided documentation
- The initial conditions are provided for each of the simulations
- Details for creating reported graphical results from the simulation results

Source code: a declarative language is used (e.g. SBML, CellML, NeuroML)

- The algorithms used are defined or cited in previous articles
- The algorithm parameters are defined
- Post-processing of the results are described in sufficient detail

Executable model provided:

- The model is executable without source (e.g. desktop application, compiled code, online service)
 - There are sufficient details to repeat the required simulation experiments

The model is described mathematically in the article(s):

- Equations representing the biological system
- There are tables or lists of parameter values
- There are tables or lists of initial conditions
- Machine-readable tables of parameter values
- Machine-readable tables of initial conditions

The simulation experiments using the model are described mathematically in the article:

- Integration algorithms used are defined
- Stochastic algorithms used are defined
- Random number generator algorithms used are defined
- Parameter fitting algorithms are defined
- The paper indicates how the algorithms yield the desired output

Box 2: Criteria for accessibility

- Model/source code is available at a public repository or researcher's web site
 - Prohibitive license provided
 - Permissive license provided
 - Open-source license provided
- All initial conditions and parameters are provided
- All simulation experiments are fully defined (events listed, collection times and measurements specified, algorithms provided, simulator specified, etc.)

Box 3: Rules for Credible practice of Modeling and Simulation^a

^aModel credibility is assessed using the Interagency Modeling and Analysis Group conformance rubric:
<https://www.imagwiki.nibib.nih.gov/content/10-simple-rules-conformance-rubric>

- Define context clearly: Extensive
- Use appropriate data: Extensive
- Evaluate within context: Extensive
- List limitations explicitly: Insufficient
- Use version control: Extensive
- Document adequately: Adequate
- Conform to standards: Insufficient

Box 4: Evaluation

- Model and its simulations could be repeated using provided declarative or procedural code
- Model and its simulations could be reproduced

Summary comments: We appreciate the provision by the authors of downloadable model source codes via the Github link (https://github.com/V4p1d/FPSP_Covid19). These were used in our assessment of the reproducibility of the results presented in the manuscript. We successfully reproduced Figures 2-5, 7-10 and 14 as seen in the manuscript.



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