2020 Next Generation for Biosecurity Competition

Submission Outline

Prompt: What are technical and/or political actions global health security community stakeholders should take either nationally or internationally to reduce biosecurity-related risks associated with COVID-19 and future outbreaks/pandemics?

Executive Summary (200-300 words)

Provide a stand-alone summary of your team's approach, results, and recommendations. The summary section also should reference which members of the international community are addressed in your submission (ex. organizations, regions, sectors, and etc.) The information in this section can be creatively formatted if desired.

Background (500-700 words)

The Background section should provide information on the biosecurity and biosafety landscape relevant to your analysis. Contextualize your submission's background to the country or region, governance structures, sectors, and available metrics that are detailed in your results.
- What is your central hypothesis?
- Who are the key stakeholders?
- What data did you use to analyze the current biosecurity and biosafety landscape?
- What modernized data analytics opportunities exist within your topic area?
  - If using epidemiological methods, forecasting, or regressions, please detail the assumptions of your applied models.

Discussion (1,000-1,400 words total)

The qualitative and quantitative analysis results may be based on similar or different, yet related, aspects of global biosecurity/biosafety preparedness and response to both the current COVID-19 pandemic and potential future global outbreaks.

Quantitative Analysis (500-700 words)

Please use the Global Health Security (GHS) Index and other publicly available data sources to identify gaps and needs in international pandemic preparedness specifically relevant to biosecurity, biosafety, and dual-use technologies. This data can be reported on through any form of quantitative analysis (frequencies, logistical regression, histograms, etc.)

Qualitative Analysis (500-700 words)

Describe how risks related to biosecurity, biosafety, and dual-use technologies have been addressed in the past and what needs to change at the national, regional, or international level to address the persistent gaps identified in your quantitative analysis. Below are questions to consider:

- What obstacles have prevented national, regional, and/or international leadership from successfully implementing biosecurity, biosafety, and dual-use technology-related risk-reduction measures in the past? How are these risks impacted by the ongoing COVID-19 pandemic? How might these obstacles be overcome in the future to inform preparedness for future pandemics?
- Are there examples where biological risk reduction has been successfully implemented and sustained? How might these examples be altered to apply to your proposed stakeholders/region?
- How does the GHS Index and any other qualitative or quantitative data sources that your submission includes inform the challenges presented by preparedness for and response to the COVID-19 pandemic?

Recommendations (300-500 words)

Recommendations should reflect actionable findings from your qualitative and quantitative results. Successful recommendations are those with defined scope and evaluation metrics, and those that demonstrate clear mechanisms for implementation at the national, regional, and/or international level.

Conclusions (200-300 words)

Present the key findings and summary of your analysis. Consider the future directions of biosecurity and biosafety preparedness and response related to the COVID-19 pandemic as well as potential future global catastrophic biological events and efforts needed to reduce risks of accidental or intentional biological events.

References

Please submit all references in MLA format.

Appendix

Quantitative Analysis:
- If analysis was performed using a program (ex. R studio, SAS, STATA, SPSS), please include annotated code and relevant output.

Qualitative Analysis:
- If additional coding of primary/secondary sources was performed, please include a codebook here.
- Abbreviations used in the submission text may be explained here.

Relevant Published Figures:
- If figures from papers are cited in the submission, please include the full figure and appropriate citation here.