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Editor-in-Chief Osong Public Health and Research Perspectives Korea Disease Control and Prevention Agency E-mail: ophrp@korea.kr Scholarly Publishing Office Address: [202, Osongsengmyung 2nd street, Osong eup, Heungdeok gu, Cheongju si, Chungcheongbuk do 28159, Korea]

Subject: Submission of Original Article titled: Generalizability and Explainable Framework for AI-Driven Influenza Forecasting using Multi-National Surveillance Data

Dear Editor-in-Chief,

We are pleased to submit our manuscript, titled **"Generalizability and Explainable Framework for AI-Driven Influenza Forecasting using Multi-National Surveillance Data,"** for consideration as an **Original Article** in *Osong Public Health and Research Perspectives*.

1. Significance and Relevance to OPHRP

This study addresses a critical gap in infectious disease surveillance by developing and validating an advanced AI forecasting model utilizing **multi-national influenza surveillance data**, including data from the Korea Disease Control and Prevention Agency (KDCA) and other global sources.

The novelty of our work lies in two major contributions highly relevant to OPHRP's mission of promoting public health knowledge:

1. **Enhanced Generalizability:** We rigorously test the model's performance across diverse geographical and epidemiological settings, demonstrating its utility beyond single-nation analysis.

2. **Regulatory Science Focus:** We implement an **eXplainable Artificial Intelligence (XAI)** framework (e.g., SHAP analysis) to ensure the model's transparency, interpretability, and trustworthiness, providing a robust, policy-ready tool for future pandemic preparedness and decision-making.

We believe this paper will be of significant interest to the journal's readership, particularly those involved in epidemiology, digital health surveillance, and regulatory science.

2. Declaration of Compliance and Ethics

We confirm that this manuscript is an original work, has not been published previously, and is not under consideration for publication elsewhere. We also affirm full adherence to the journal's publication ethics and author guidelines:

- **Authorship:** All authors meet the four criteria for authorship as recommended by the ICMJE and have approved the final manuscript.

- **Originality & Previous Work:** We confirm that, while portions of the underlying data or conceptual approach may have been presented in earlier, limited forms (e.g., a domestic conference or a PHWR-type technical report), this manuscript constitutes a substantially updated and significantly expanded scientific work, focusing on the novel aspects of multi-national generalizability and the XAI framework.

- **Conflicts of Interest and Funding:** All authors have completed the mandatory Conflict of Interest Disclosure Form and have transparently reported all potential conflicts and the role of the funding source in the dedicated Notes section of the Title Page.

- **Data and Code Availability:** We have included a detailed Data Availability Statement in the Title Page, affirming our commitment to research transparency and outlining the process for accessing the aggregated data and the associated model code (e.g., via a GitHub repository).

- **AI Use Disclosure:** We confirm that all uses of Generative AI tools in the preparation of this manuscript have been disclosed in the Methods section, in compliance with OPHRP's AI policy.

Thank you for your time and consideration. We look forward to hearing from you at your earliest convenience.

Sincerely yours,

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