



EDITORIAL

Journal Publishing: Never Ending Saga

Since its first issue, *Osong Public Health and Research Perspectives (PHRP)* has been unique in every aspect. Korea Centers for Disease Control and Prevention (KCDC) relocated to Osong technopolis, the heartland of the Republic of Korea in December 2010. The small city was planned to serve as a center of the biomedical industry and six governmental agencies in Korea: Korean National Institute of Health, Korea Food and Drug Administration, Korea National Institute of Food and Drug Safety Evaluation, Korea Human Resource Development Institute for Health and Welfare, Korea Health Industry Development Institute, and KCDC. KCDC prepared the journal since 2007 and 3 years of hard work bore fruit in December 2010 in Osong.

The PHRP started with a biannual journal in 2011, expanded to quarterly in 2012, and became a full-fledged bimonthly in 2013. PHRP is currently indexed in Scopus, PubMed/Central (PMC), Science Direct, EMBASE, Google Scholar, World Health Organization Health InterNetwork Access to Research Initiative (WHO HINARI) and CrossRef. A total of 135 manuscripts are enlisted, including the February 2014 issue. The managing editor has read 4350 references and corrected 140 manuscripts prior to the peer review process. We have tried to put at least one mathematical model paper in each issue including human immunodeficiency virus (HIV), malaria, *Vibrio vulnificus* infection, pandemic influenza, nosocomial outbreaks, and foot and mouth disease outbreaks [1–5], which is a unique feature for a biomedical journal. If you see disease or health-related research papers with population-based data in Korea, PHRP is the right journal for you. PHRP has also taken international papers. The journal's website (www.kcdc-phrp.org, www.kcdc-phrp.com) has been hit from more than 80 countries around the world. It has gained a reputation of the fastest-growing biomedical journal in the world.

In the current issue of PHRP, a mathematical model is proposed to investigate the HIV dynamics of active and inactive cytotoxic immune cells within a host [6]. The

analysis is a modified version of an existing model [7] that splits the cytotoxic immune cells compartment M into two: inactive and active immune compartments of the response cells. The idea is that cytotoxic cells are always present in the body, whereas inactive cytotoxic immune cells are activated through specific biochemical processes related to the presence of HIV. The authors investigated the impact of the immune response on HIV patients at an initial stage. The new model has been subjected to standard mathematical and numerical analyses with local and global stability tests. The results might be helpful in treating patients with more effective drug schedules in the presence of active and inactive immune responses.

A new mathematical model for Korean tuberculosis (TB) is proposed in this issue of PHRP [8]. A previous Korean TB dynamical model was developed by including time-dependent coefficients, and optimal control theory has been used to observe what would be more effective control measures to minimize the number of infected and exposed individuals [9]. A mathematical model has been proposed to model the role of the exogenous reinfection from the latent individuals [10]. The authors of the new model have modified the existing model of Whang et al [9] by incorporating the exogenous reinfection from Feng et al's model [10]. Parameter estimation for the new TB model has been carried out using the least-square method for the TB incidence from two periods, 1970–2000 and 2001–2012. The model output and the TB incidence data show a good agreement.

We would like to see the real data of Korea HIV/AIDS applied to the HIV model presented in this issue. We also hope to apply the new TB model to estimate the incidence in Korea.

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