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Letter to the Editor: A Need for Infectious Disease Specialists in Public Healthcare Centers?

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To the Editor:

The global coronavirus disease 2019 (COVID-19) pandemic has highlighted the essential roles of public healthcare centers (PHCs) as leading organizations functioning to prevent infectious diseases from spreading to the public. PHCs were primarily established to maintain and enhance the overall health status of residents through their comprehensive and multifaceted approaches to public health hygiene. As it is, their roles are not strictly limited to matters of infection prevention and control (IPC). In this age of emerging/re-emerging infectious diseases and antimicrobial resistance,^{1,2} reinforcement of PHC-led IPC activity is increasingly sought. Infectious disease (ID) specialists are expected to play a central role in promoting and heightening various IPC programs. In the future, the author anticipates that ID specialists will exert leadership and influence in the field of public health. Therefore, an understanding of the current deployment status of ID specialists in PHCs and a discussion of their necessity could lead to developing an enhanced public health platform primed to protect society from the inevitable threat of infectious diseases.

In this context, with great interest, I have read through a recent article by Kim et al.³ In this article, the authors detailed the results of an online-based, cross-sectional survey involving the participation of all active adult (n = 281) and pediatric (n = 71) ID specialists in Korea (n = 352), conducted from December 17–27, 2020, amidst the COVID-19 pandemic. The authors' efforts to propose solutions regarding the shortage and skewed distribution of ID specialists in Korea are highly appreciated as discussions, such as this, should also be considered in other countries. Interestingly, I noticed that none of the ID specialists surveyed were actually employed in Korean PHCs. Most Korean ID specialists (98.5%) worked in clinical areas, including acute-care referral hospitals (92.8%), local clinics (2.6%), non-referral hospitals (1.5%), and long-term care hospitals (0.5%). Some worked in pharmaceutical and life science companies, laboratories, and medical schools. The study only had a response rate of 55.4%; thus, some non-respondents might have worked at PHCs. However, the present data suggested that no PHCs were reported as the respondents' workplace in Korea.

By contrast, some Japanese ID specialists work in PHCs. As of 1st November 2022, there were 1,688 board-certified physicians of the Japanese Association for Infectious Diseases, the so-called ID specialists in Japan, representing 1.35/100,000 of the Japanese population.⁴ Due to the unavailability of detailed data as presented by Kim et al.,³ it is unclear how many of the Japanese ID specialists described were active or not. In the study, nine (0.53%) Japanese ID specialists were assigned to eight local PHCs (two in Hokkaido, one in Miyagi, one in Tokyo, two in Kyoto, two in Kobe, one in Yamaguchi, and one in Okinawa). As of 1st April 2022, a total of 468 local PHCs were operating in Japan,⁵ and thus, approximately 1.7% of Japanese local PHCs employ ID specialists. Their exact positions, roles, and duties at each PHC were not conveyed, and their practical contributions as experts were unfortunately veiled. However, the author deduces that they hold decisive roles in encouraging and maintaining IPC activities in the region and expects more clinical experts to make contributions to public health in the near future.

This letter does not criticize the absence of ID specialists in Korean PHCs but merely presents the circumstances at hand. Due to various discrepancies in healthcare systems, functions assigned to PHCs, and general perceptions of ID specialists (how such experts should act and what roles are expected of them) between the two countries, a discussion or comparison of both countries' current situations is too complex. Indeed, ID specialists are principally expected to contribute in various clinical fields, including diagnosis and treatment as both a physician in charge and a consultant, execution of IPC measures for routine and during disease outbreaks, leadership in antibiotic stewardship, vaccination for vaccine-preventable diseases, and so forth.³ Presently, the number of ID specialists per population in Korea was reportedly 0.47/100,000,⁶ nearly just one-third of that in Japan, comparatively suggesting a quantitative shortage of such experts in the country. Therefore, it may be unrealistic for Korean ID specialists to work in public health settings at this moment.

Because of the lack of relevant data and discussions from other countries on this point, conclusive statements cannot be made. However, the author believes that we may need to push the discussion forward regarding the necessity of deploying ID specialists in PHCs as societal groundwork against the inexorable threat of infectious diseases.

Authors' Response to the Letter

To the Editor:

We would like to thank Dr. Hideharu Hagiya for interest in this study and for the opportunity to discuss the importance of allocating ID specialists in public institutions, especially PHCs. ID specialists in public institutions play a particularly important role during an infectious disease crisis.

However, it is imperative that we define the roles of ID specialists in PHCs. Currently, PHCs in Korea primarily undertake public health functions, such as health management for at-risk groups and establishing and enforcing public health policies, so ID specialists allocated in PHCs will be expected to undertake roles in epidemiology study, infectious disease crisis response, and infectious disease-related policymaking, as opposed to patient care. Considering the current shortage of ID specialists compared to population size, it would be effective for ID specialists to work in governmental agencies in which they are

granted the authority to establish and be involved in policies, such as the Korea Disease Control and Prevention Agency (KDCA). Even if ID specialists are not hired full-time in PHCs, they can join public-private partnership bodies and contribute to infectious disease-related policymaking. In Korea, there are centers for disease control and prevention in each local district, and ID specialists in these centers serve as directors or advisors to actively provide advice on infectious disease-related issues, including responses to the COVID-19 pandemic. ID specialists are also needed in the management of HIV, tuberculosis, and viral hepatitis, as failure to promptly diagnose and treat them will intensify the burden of disease in communities.⁷ The rich experiences of an ID specialist working in a Japanese PHC will certainly benefit us in devising tailored interventions.

The job description of ID specialists is broad, encompassing the diagnosis and treatment of infectious diseases, infection control, and antibiotic stewardship. However, due to the limited number of ID specialists in Korea, most work in acute care facilities, primarily secondary or tertiary hospitals. As a result, their primary roles are often limited to inpatient and outpatient care and consultations.^{3,6} Furthermore, nationwide acute care secondary hospitals still lack generalists who can take charge of inpatient care, so these specialists are required to provide generalist care in infectious diseases, further increasing their workload and reducing their time and resources for antibiotics management and infection control.³ Therefore, increasing the staffing of ID specialists in Korea is crucial. These specialists should not be limited to acute care hospitals but should also be integrated into national control centers, such as the KDCA. To achieve this, commensurate financial incentives and social and institutional recognition of ID specialists' latent value are needed.

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