



## EDITORIAL

# Is the Public Transportation System Safe from a Public Health Perspective?

Last winter kept us warm, covering the earth in snow and feeding a little life to dried tubers in the earth. Spring was harsh, but broke the wasteland with flowers. Summer surprised us with heavy rains. Autumn embraced us with a misty blue dawn. Another winter sees the first anniversary of our journal.

This is the first anniversary issue of *Osong Public Health and Research Perspectives* (PHRP). We have witnessed the surprising debut of the journal in SCOPUS within 5 months of the launch of the first issue. We have also issued a first supplement issue in December 2011. We are indebted to all the authors, reviewers and readers of our journal for their enthusiastic support. It represents a flower in the wasteland.

Microbes in public areas can be a critical issue in public health because of the ease of the transfer of pathogens from individual to individual [1]. Public areas such as restaurants, public transportation systems, parks, schools, daycare centers, and other community areas can facilitate the transmission of microbes to a large number of people [1]. This is a particular concern when microbes are drug-resistant and pathogenic. While many drug resistant pathogens are primarily nosocomial, some are increasingly community-acquired, including methicillin-resistant *Staphylococcus aureus* (MRSA) [2]. Therefore, there has been increased focus on environmental microbes, and the numbers and strains of bacteria found in public places [3].

The *Staphylococcus* genus comprises many pathogenic species, often found on the skin. These include *S. aureus*, which is a pathogen of concern owing to the existence of MRSA, as well as strains resistant to vancomycin (vancomycin-resistant *S. aureus*, VRSA) [4]. Within the last 5 years, MRSA has moved from being a primarily nosocomial pathogen to one that is also found in community areas and public places [2]. Community-acquired strains have been documented in areas such as

daycare centers, fire stations, and universities [5–7]. Furthermore, there are many other pathogenic species of *Staphylococcus*, and knowledge on the distribution of these species in public areas is still poor [3].

Mass transit systems have become increasingly important in urban areas. With the revitalization of many downtown areas in large urban centers [8] and increased awareness of energy-saving methods of transportation, there has been a global push for increased use of mass transit systems [9].

In this issue, Yeh et al. examine the abundance and distribution of *Staphylococcus* spp. in several micro-locations in the public transportation system for Portland, a medium-sized city in the USA. They investigate which areas on buses and trains harbor the most bacteria, whether these bacteria are drug-resistant, and what the diversity of *Staphylococcus* is. The authors found six different strains of *Staphylococcus*, and while there were varying levels of drug resistance, they did not find extensive levels of multi-drug-resistant bacteria, and no *S. aureus* was found. Floors and cloth seats on buses and trains had particularly high levels of bacteria. These findings can inform both personal hygiene and public policy regarding cleaning frequency or areas on which to focus cleaning efforts, as well as choice of seat type (cloth vs. vinyl) to minimize exposure to potentially harmful bacteria [10].

We expect more papers on the same topic covering metropolitan areas with a population of more than 10 million people, such as Seoul, Korea.

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