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Editorial

# Challenges of infection control capacity in the Middle Eastern countries; time to be actively involved

Infection control programs are critical for the safety of healthcare systems, through reducing the risk of infection among patients, healthcare workers, and visitors [1]. This has been much emphasized during the current COVID-19 pandemic, where unprecedented high risk of hospital transmission was anticipated [2]. The World Health Organization (WHO) has defined eight core components for establishing an infection control program: program structure; guidelines; education and training; surveillance of healthcare-associated infections; multimodal strategies; monitoring, audit, and feedback of infection control practices; setting specific workload, staffing and bed occupancy; and building environment, materials and equipment for infection prevention [3]. Obviously, establishing effective infection control program requires a lot of resources, including trained staff and financial support [3,4]. The wide international variations on relevant resources are translated into parallel variations in infection control organizational structure, staffing, and activities [5,6].

In developing countries, including most of the Middle Eastern countries, infection control programs are currently receiving growing attention [7–9]. This may reflect a global evolution of rapidly changing infection control programs and regulations, including accreditation requirements [4,10]. Additionally, the emergence of different public health threats in the last two decades such as 2009 influenza pandemic, COVID-19 pandemic, and recurrent outbreaks of viral hemorrhagic fevers underscored the critical role of infection control programs [11,12]. Finally, the unique healthcare challenges in the Middle Eastern countries mandated establishing strong infection control programs [11]. The challenges included higher prevalence of healthcare-associated infection and antimicrobial resistance, the transmission of blood-borne pathogens in health care settings, and higher occupational exposure among healthcare workers [11].

The WHO Regional Office for the Eastern Mediterranean (WHO-EMRO) and the Gulf Cooperation Council (GCC) Centre for Infection Control (CIC) have responded to the above infection control challenges by supporting member states in establishing/strengthening infection control programs. This ongoing mission is based on building infection control capacity, improving educational and training opportunities, establishing a standardized surveillance system, and establishing a regional committee of experts to promote infection control standards.

Unlike the Western countries that have well-characterized infection control programs and staffing [13–15], there is lack of accurate standardized information about the current infection control capacity in the majority of Middle Eastern countries. Additionally, the available information about infection control infrastructure, resources, and staffing are very fragmented and variable [6–8]. Moreover, the role of and expectation from infection control staff in terms of education, competency, certification, and practices is actually changing [15,16]. These changes are probably occurring at different pace in high/low income countries, complicating comparisons that are based on isolated studies covering different times.

Characterization of regional gabs and deficiencies of infection control staffing and programs is very critical for the Middle Eastern countries, to set priority for new strategies and to evaluate already implemented ones. Therefore, the GCC-CIC which is also serving as WHO Collaborating Centre (WHOCC) for Infection Prevention and Control and Anti-Microbial Resistance is currently in final preparation of a collaborative project that will focus on the infection control capacity in tertiary care hospitals across the Middle Eastern countries. The project is designed as a cross-sectional survey to achieve multiple objectives. These included (1) assessment of infection control program and practice setting, (2) description of organizational structure, surveillance activities, and infection control practices, (3) characterization of infection control staffing as regards competency, professional development, and compensation satisfactions, and (4) finally identification of the challenges and gabs of infection control programs in the included hospitals, as perceived by the staff themselves. The methodology was partially based on the MegaSurvey conducted in the United States by the Association of Professionals in Infection Control and Epidemiology (APIC) [17].

The finding of the planned project will probably provide policy makers in individual countries with the first standardized infection control assessment data that can be used in future improvement activities. The importance of uncovering gabs and challenges can not be underscored more. Therefore, GCC-CIC/WHOCC is urging infection control leaders and community in the Middle Eastern countries to join the planned project and provide accurate information and honest opinions, to shape our future together.

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