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Entitled

*ESTIMATION OF INFECTIOUS INTESTINAL DISEASE BURDEN AND DESCRIPTION OF THE
INFECTIOUS DISEASE SURVEILLANCE SYSTEM IN RAS AL KHAIMAH, UNITED ARAB EMIRATES*

by

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Abstract

Introduction: Infectious disease (ID) is an ongoing problem worldwide. In order to manage this problem, it is an important to have an integrated and effective surveillance system that can be used to estimate the burden of ID. There is a scarcity of studies published on the prevalence of IDs in the United Arab Emirates (UAE), both in hospital settings and in the community. Infectious Intestinal Disease (IIDs) have been one of the commonest IDs that have been studied in the community around the world, there are no studies on prevalence of IIDs in Ras Al Khaimah (RAK). Furthermore, while the UAE is a member state of the World Health Organization (WHO) Eastern Mediterranean Region that is working toward a plan to fulfill the implementation of the International Health Regulations, and has in recent years started developing surveillance systems for several IDs, there are no publications describing or assessing these systems.

Aims: The aim of this study is to estimate the burden of IIDs in the community and to describe the surveillance system in the emirate of RAK.

Method: In the first part of this research, a population-based cross-sectional study design using a telephone-based questionnaire was used to estimate IIDs in a representative sample of the RAK population (N= 1254; 57.3% males; 25.2 % below 18 years) from all age groups. Participants completed the questionnaire collecting the sociodemographic characteristics and information about IIDs during the four-week period prior to the telephone interview.

The second part of this study was a descriptive scoping assessment of the core activities and supportive functions of the ID surveillance system in government health institutions in RAK based on the WHO guidelines.

Results: Overall prevalence of IIDs was 4.2% in the four weeks prior to the interview. Multivariate logistic regression analysis identified that being female (odds ratio (OR) 2.43, 95% confidence interval (CI) 1.16-5.07) and having a middle-range monthly household income (~ USD 4080-<6800: OR 5.42, 95%CI 1.15-25.48; ~ USD 6800<9530: OR 7.13, 95% CI 1.47-34.57) were positively associated with IID. Age \geq 6 years was negatively associated with IID (OR 0.95, 95% CI 0.90-0.99). Nearly half (49.1%) of participants with an IID sought medical care and 20.8% took over-the-counter medication. ID surveillance systems in RAK exist at two levels: the higher level of Preventive Medicine Department (PMD) and the lower level of the hospitals. In the emirate of RAK, the basic structure, core functions and support functions of the ID surveillance systems exist at the two levels, however further development has been hampered by lack of standardization, limited training activities and absence of a formal quality improvement process.

Significant contributions: This study provides the first population-based prevalence estimates of IID in the UAE, which are similar to those reported in China (4%), but lower than those reported in Canada (10%), the Netherlands (7%), and the USA (6%). Furthermore, it is the first to describe the local ID surveillance system and identify areas for improvement.

Gap filled: It provides baseline data for IIDs in the community and documentation of the current surveillance system in RAK.

Keywords: Communicable diseases, disease notification, epidemiology, infectious diseases, infectious disease surveillance, infectious diseases surveillance system, infectious intestinal diseases, prevalence, Ras Al Khaimah, United Arab Emirates.