TOR VERGATA
UNIVERSITÀ DEGLI STUDI DI ROMA

**DOTTORATO DI RICERCA**
**IN SCIENZE INFERMIERISTICHE E SANITA' PUBBLICA**

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**Titolo tesi: Developing and implementing an e-health information system in a war-torn country**

## ABSTRACT

As a war-torn country, Iraq and its autonomous Kurdistan region have faced many casualties and CRBNes, weakening the public health infrastructure and system during the past decades. To help the improvement of the public health system in the Kurdistan region of Iraq in 2015, the Department of Biomedicine and Prevention of the University of Rome Tor Vergata, with the financial support of the Ministry of Foreign Affairs and International Cooperation of Italy (MAECI), set up an informatics platform for epidemiological surveillance (KRG-HIS). The informatics system gathers on a day-to-day basis health-related. This thesis describes the workflow—setup, development, implementation, field works, challenges, and lessons learned— to create, maintain and advance a Health Information Systems (HIS) in Iraqi Kurdistan. The project has adopted District Health Information System (DHIS2) and WHOs ICD-1- coding for disease registration. The HIS was tailored-made to the local needs, with user interfaces provided in Arabic and Kurdish-Sorani languages. Pentaho Data Integration tool was used to automate the data integration process and bulk import from the local system already in use. Currently, Kurdistan Region Government – Heath Information System (KRG-HIS) is retrieving data from 128 public health centers, covering nearly 50% of the health facilities in Iraqi Kurdistan. About 1,500,000 disease events have been gathered. The project has already achieved its goal to reach 120 health units within the next three years -until 2022 with the potential expansion of the system to all of Iraq. The project's main objective is to enable the local health authorities to have sufficient statistics and data to guide the development of appropriate public health interventions: a pivotal instrument to prepare the health system to respond early to future emergencies.