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Design and Development of a Web-Based Saudi National Diabetes Registry

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Abstract

Background:

Given that diabetes is an extremely common disorder in Saudi Arabia, the National Diabetes Registry was designed by King Saud University Hospital Diabetes Center in collaboration with King Faisal Specialist Hospital & Research Center, Riyadh, Saudi Arabia, in the year 2001. The aim of the registry is to identify risk factors related to diabetes and to provide statistics to public health programs and health care professionals for use in planning and evaluation. The registry was designed to provide information on the extent and nature of specific types of diabetes, diabetes complications, and treatment of diabetes in the Kingdom.

The registry has been available since 2001, with major collaborations from 26 hospitals as part of Phase I in which 100,000 patient data is to be collected on a regional level from Ar-Riyadh before extending the program to other regions of Saudi Arabia.

Methods:

The web application was designed using relational database techniques along with on-line help topics to assist users to get acquainted with application functionalities. All Internet forms were designed with validation checks and appropriate messages to ensure quality of data.

The security measures established within the application ensure that only authorized users can gain access to the functionalities of the registry at allowed times. Administrative features were designed to manage the registry-related operations easily.

Results:

The diabetes registry has been in operation for almost 10 years, and around 67,000 patients have been registered to date. The Web-application offers an anytime-anywhere access to the registry's data, removing geographical boundaries and allowing the national registry to provide real-time data entry, updates, reporting, and mapping functionalities more easily.

Conclusion:

Merging related information in the form of databases can provide improved health care operations through instant access to data, ease of managing complex data structures, and creation of reports to be used by health care planners and hospital administrators.

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Abbreviations: (MRN) medical record number, (NID) national identification number, (SNDR) Saudi National Diabetes Registry

Keywords: centralized, diabetes, Internet, registry, Web-based

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