
CONFERENCE ABSTRACT

MIRA: Modern Information System approach for Efficient Management and Analysis of Caredoc data

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The inability to share information across systems and between care organizations is just one of the major impediments in the health care business's progress toward efficiency and cost effectiveness.

The aim of MIRA is to design and implement a modern innovative information system using the heterogeneous data available to integrated care and handle data mining and analysis processes, while continuing to deliver high quality services to patients.

Caredoc is a not-for-profit GP co-operative providing services to over 1/3 of the Irish population; GP out-of-hours, telephone triage & remote assessment, community intervention teams, eHealth and wearable devices, providing approximately 525,000 episodes of care annually.

MIRA supports the strategic aims of Caredoc to implement the Irish National Sláintecare strategy and the Global World Health Organisation (WHO) goals of shifting care from the hospital setting to the community setting and supporting connected integrated health service delivery (2-7). This will be achieved by:

- Reviewing the information system
- Designing and developing a system that can handle data mining and analysis processes
- Developing a prototype data warehouse (DW).

Healthcare data can be utilised effectively in a DW to identify patterns of care, improve efficiencies, and improve quality of services delivered (8-19). Developing a DW requires constant monitoring and updating (9, 10, 14-16) and there are numerous methodologies for DW design and information models (9, 10, 20, 21). It is important to identify the correct information model and schema for the DW (22-25).

A mixed methodology for DW and information model design is being taken to include, data, user, and goal driven approaches using iterative design.

A review of the Caredoc information system is complete. Data to form the information model for the prototype DW has been identified. Next steps are to implement the DW, engine, and appropriate APIs for data access and analysis.

The DW will support patients through data analysis; including population health management, telehealth and targeting specific diseases, identifying patterns of care, and contributing to policy development and future service design.