

Publication

Assessing the design of road traffic death information systems in Iran: a participatory systems approach

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AIM: To describe and analyze the information architecture and information pathways of the road traffic death recording, registration and reporting system in Guilan Province, northern Iran. **METHODS:** We used Business Process Mapping, a qualitative approach. This participatory and iterative approach consists of a document review, key informant interviews, development of a process map and a participatory workshop with key stakeholders to illuminate and validate the findings. We classified the tasks performed in the system into three phases: (1) Identification and recording; (2) Notification and registration, and (3) Production of statistics. **RESULTS:** We identified 13 stakeholders, with operating and influencing roles in the process of identification, registration and production of statistics about road traffic deaths in Guilan province. The three main sources of road traffic death statistics are the Ministry of Health and Medical Education, the National Organization for Civil Registration and the Forensic Medicine Organization. Our results reveal a highly fragmented system with minimal cross-sectoral data exchange. Each stakeholder operates in a silo resulting in delays and redundancies in the operating system. In the absence of an effective communication among stakeholders, the information exchange was dependent on the family of the deceased. These fragmented information silos alter the compilation of cause of death statistics and result in under-reporting and discrepancies in road traffic deaths figures. **CONCLUSIONS:** Designing a comprehensive road traffic information system that provides accurate and timely information requires an understanding of the information flow and the entangled web of different stakeholders operating in the system. Participatory systems approaches such as process mapping can assist in capturing the complexity of the system and the integration process by facilitating stakeholders' engagement and ownership in improving the design of the system.

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