

OP-18: Identification of data elements in Electronic Health Records in primary care: a systematic review

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Introduction: It was necessary to identify Data Elements (DEs) clinicians used and make them interoperable to build an Electronic Health Record that all clinicians can use for clinical decision making, minimising repetitive clinical exams, ancillary testing, unnecessary radiation exposure, etc.

Methods: Scopus, MEDLINE and ScienceDirect databases in the English language were searched from 2010 to 2020. Search terms were identified by a simple MEDLINE search. Researchers and an independent reviewer looked at the terms and 12 were chosen. Systematic reviews, randomised controlled trials, non-controlled interventions, service evaluations, case-control studies, case studies, questionnaire surveys and qualitative research were included. After the search, titles and abstracts were extracted to Zotero. Two reviewers looked at the titles and abstracts separately for inclusion. The two reviewers addressed and resolved disagreements. If agreement could not be reached, a third reviewer was consulted. Checklists based on CASP (Critical Appraisal Skill Programme) were used to assess the quality of each included study. The protocol for systematic review was established and documented in PROSPERO. https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=209423

Results: Five hundred and thirty DEs were identified initially. Twenty three duplicates were removed. The researcher and a group of two health informaticians checked the remaining 506 DEs. Ontology mapping and semantic duplicates were eliminated. Disputes have been settled, and agreement consensus has been reached. The final list included 187 DEs.

Conclusions: Many health information systems (HIS) are used in primary care. The majority of HIS operates in silos. Different DEs collected the same value. If DEs adhere to a common agreed-upon structure, the HIS can make the information we generated interoperable.

Keywords: data elements, electronic health record , primary care , systematic review