157 ASSESSING THE METHODOLOGICAL QUALITY OF DECISION SUPPORT SYSTEM (DSS) SYSTEMATIC REVIEWS BY AMSTAR CHECKLIST

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Background and aims: It is all accepted that high-quality evidence is essential for clinical decision making. As Haynes "6S pyramid", systems including decision support systems are at the top of this pyramid as the highest level of evidence. There are numerous systematic reviews which have assessed various aspects in this field. The aim of this study is evaluating the methodological quality of decision support system (DSS) systematic reviews.

Methods: A comprehensive literature search using MEDLINE (via Ovid), Embase, PubMed and Cochrane Library was conducted until September August 2016. The search was limited to systematic reviews and with no language restriction. Meta-reviews were excluded. Only results of searching for "decision support systems" or "decision support system" keywords and limited to title of documents were included in this study. Two independent authors screened the results. Disagreement was resolved by discussion. The assessment of multiple systematic reviews (AMSTAR) checklist was used to assess methodological quality of selected studies. Data were extracted into Excel 2013.

Results: A total of 47 systematic reviews (SRs) were enrolled which only 7 of them had meta-analysis. About 25.5% of studies were published in specialized publications. There was a dramatic increase in the number of SRs in recent decade and near to 66% of studies were published from 2011. The mean AMSTAR score of SRs was 6.78 (out of 9) and 9.71 (out of 11) for SRs with meta-analysis. Meanwhile 52.5% of SRs received a score between 7 and 8 while 70% of them scored more than 7. Near 83% of studies performed a reasonable comprehensive literature search, presented characteristics of the included studies and also stated conflict of interest. It was remarkable that 76.6% of studies had not a list of excluded studies. In more than 95% of SRs the scientific quality of the included studies was mentioned in conclusions.

Conclusion: It seems that the quality of reporting in the field of DSS is acceptable. But although the score of literature search was good, lack of full presentation of search strategies was observed. Few meta-analyses in the included studies was notable and most of SRs stated heterogeneity as the reason. It seems that because of the overall view in AMSTAR scoring methods and its questions, it is hard to determine the specific bias and failures in the quality assessment of systematic reviews.