Workload and workflow implications of health professionals using electronic risk assessment tools in general practice: a systematic scoping review

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01 Background

Electronic clinical decision support (eCDS) tools are designed to support decision making in relation to screening, diagnosis and management[1]. eCDS tools embedded in clinical IT systems are an example of attempts to alleviate some workload pressure.

GP workload is complex and increasing [2], a situation compounded by workforce shortages and COVID-19 pressures.

Understanding the impact on consultation durations, as a measure of workload, may facilitate implementation of eCDS tools.

Objective

To establish if there is evidence on potential workload implications, including impact on consultation durations, associated with the use of eCDS tools by health professionals in general practice and primary care.

02 Methodology

Systematic scoping review to identify literature using the Arksey and O'Malley methodological framework [3]

1) Initial scoping search to identify keywords

MEDLINE (Ovid), HMIC (Ovid) and Web of Science (TR)

3 areas for search strategy

- general practice / primary care
- decision support / risk assessment / tools
- consultations / workload

2) Second search to identify studies

Searches conducted in Sep 2019, updated 2021, for articles published in English since 2009.

3) Assessment of eligibility

1) Abstract & title screening; 2) Review of full-texts

Included

- Studies, reports, articles
- All 'health professionals'
- All health condition and eCDS type
- All methods

Excluded

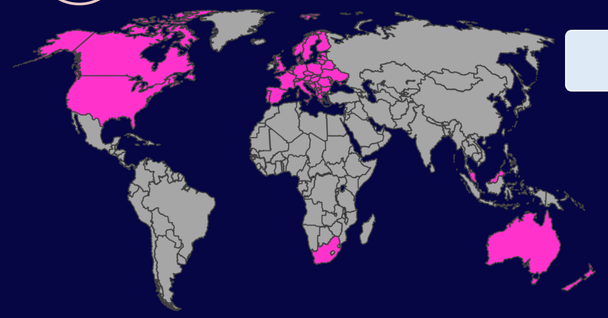
- Design of tools/algorithms
- Protocol articles (if published results available)

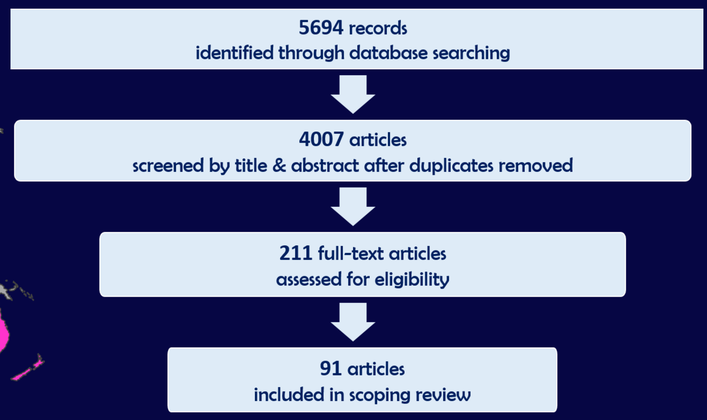
4) Data extraction

- Author(s), year of publication, study origin
- Study aims
- Type of eCDS tool, study population context
- Methods, outcome measures
- Key findings related to review question

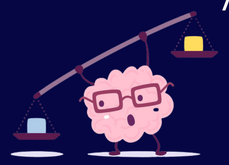
5) Key findings collated and summarised

03 Results





Perceived and objectively-measured impacts on time spent using eCDS or on consultation duration



71 studies report health professionals' perceived impacts on consultation duration (qualitative)

- Majority (36): **perceived increase**
- 6 studies: **perceived decrease**
- 19 studies: **mixed views**
- 10 studies: **no perceived impact** (3) or **no conclusion** (7)

24 studies reported quantitatively-measured impacts on consultation duration

- 3 studies: increase
- 4 studies: decrease
- 8 studies: no impact/no conclusion

7 studies reported both perceived (qualitative) and actual (quantitative) measure

- 2 studies: perception AND objective measure indicate duration increased
- 5 studies show conflict: perception of increase vs no measured impact

04 Discussion

Strong perception that eCDS increases consultation duration, not robustly evidenced by quantitative data

Why might there be no impact?

- Low usage? alert fatigue? separate appointment arranged to give more time to discuss?
- Consultations and eCDS tools for management, rather than diagnosis, likely to have different time implications

Some conflict between perceived vs objectively-measured duration

Conclusion

Limited efforts have focused on investigating the impact of eCDS tools on GP workload and workflow. Further quantitative research, including measurement of consultation duration, would help inform future design and implementation of eCDS tools.

References

1. Price S et al. Availability and use of cancer decision-support tools: a cross-sectional survey of UK primary care. Br J Gen Pract 2019;69:e437-e43
2. Hobbs FDR et al. Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007-14. Lancet 2016;387:2323-30
3. Colquhoun HL et al. Scoping reviews: time for clarity in definition, methods, and reporting. Journal of Clinical Epidemiology 2014;67:1291-4

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