Evidence map for tools that assist with lipid management and identification of Familial Hypercholesterolaemia (FH) (August 2022)

Executive summary

Background and methods

Eastern AHSN (Academic Health Science Network) commissioned this high-level evidence map to identify the volume and type of published evidence available about the effectiveness of tools that assist in lipid management and familial hypercholesterolaemia (FH) identification. A formal quality appraisal of the evidence was not conducted. Searches for UK studies published since 1st January 2012 were conducted on 7th June 2022 on the electronic databases Cochrane Library, Embase, Medline and TRIP database.

Results

The volume of evidence identified was low and no controlled studies comparing different tools or strategies were identified.

A systematic review by Silva et al (2021), searched for studies assessing the effectiveness of interventions to systematically identify FH in primary care. Two of the three studies included in this systematic review were UK studies. One uncontrolled before and after study (Green et al 2016) used an FH Audit Tool to identify and tag patients with high cholesterol for further assessment. A second uncontrolled before and after study (Weng et al 2018) conducted an automated search of electronic health records to identify patients for further assessment but did not name a specific tool[1].

Other studies included in the evidence map were Qureshi et al (2021), which contrasted the performance of the FAMCAT algorithms (FAMCAT 1 and FAMCAT 2) against established case-finding criteria to detect FH cases, and a companion study by Jones et al (2022) which considered the cost effectiveness of these approaches. A further study by Ingoe et al (2021) evaluated two search strategies for identifying FH cases, the first based on the FAMCAT algorithm and the second based on the CDRC Composite algorithm.

- The study by Qureshi et al (2021) concluded that the FAMCAT 2 algorithm performed better than the FAMCAT 1 algorithm and other case finding strategies in terms of the accuracy of the tools or strategies to identify FH cases. No equivalent figures were identified for the accuracy of other tools.
- Three studies provided information on the numbers of possible or confirmed FH cases identified through the use of the tools or strategies described (Ingoe et al 2021, Green et al 2016, Qureshi et al 2016).
- One study (Weng et al 2018) provided evidence about clinical outcomes following the use of a strategy to detect patients with high lipid levels. This reported an increase in the

[1] Green et al (2016) and Weng et al (2018) were also separately included in the evidence map, along with a study by Qureshi et al (2016) which describes the same study reported in Weng et al (2018)

tests performed, collection of information on family history, diagnoses of secondary causes of hypercholesterolaemia and prescriptions for statins.
- There were no studies reporting results relating to any longer term impact of detecting and managing patients with high lipid levels, such as control of lipid levels or cardiovascular disease events.
- No evidence was identified about the acceptability or uptake of tools by healthcare staff.

Discussion and conclusions

In conclusion, the evidence map identified two types of studies. The first type considered the different algorithms that can be used to identify patients who might be at risk of FH. These encompassed consideration of the accuracy of the different tools (e.g. sensitivity and specificity), which are as important as practical issues in using the tools in healthcare settings and whether they result in higher FH diagnosis and treatment rates. The second type of study considered whether using a tool, or a tool plus patient review, increases the number of FH patients identified and/or improves lipid management, compared to standard practice in the time period before the tool was applied.

The systematic review concluded that there was evidence to support the clinical value of searching primary care electronic records to identify patients with FH. However, they concluded that there was insufficient evidence to determine the most effective method of identifying FH. The individual studies identified for this evidence map provide additional support for the ability of tools and systems to identify patients with FH and the cost effectiveness of this approach but are unlikely to provide sufficient evidence to allow any robust conclusions to be drawn about the best approach to use. The studies identified provided little evidence relating to the effectiveness of tools in improving lipid management.

References

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