



BMJ Open Role of community pharmacy in the prevention of cardiovascular disease in minority ethnic groups in the UK including barriers and facilitators: protocol for a mixed methods systematic review

Rumanveer Singh Duley ¹, Gurkiran Kaur Birdi,^{1,2} Joseph Bush,¹ Derek Connolly,^{1,3} Ahmad Shoaib,³ Ian Maidment ¹

To cite: Duley RS, Birdi GK, Bush J, *et al.* Role of community pharmacy in the prevention of cardiovascular disease in minority ethnic groups in the UK including barriers and facilitators: protocol for a mixed methods systematic review. *BMJ Open* 2025;**15**:e094168. doi:10.1136/bmjopen-2024-094168

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<https://doi.org/10.1136/bmjopen-2024-094168>).

Received 24 September 2024
Accepted 07 March 2025



© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.

¹Aston University, Birmingham, UK

²Birmingham Newman University, Birmingham, UK

³Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, UK

Correspondence to

Mr Rumanveer Singh Duley;
119084542@aston.ac.uk

ABSTRACT

Introduction Cardiovascular disease (CVD) remains a major public health issue in the United Kingdom (UK) and disproportionately affects minority ethnic groups who face higher rates of CVD, necessitating targeted interventions to address their specific health needs. Community pharmacies are accessible healthcare hubs that could address CVD and associated health inequalities. However, more promotion and research are needed to effectively reach deprived and hard-to-reach groups. Understanding the role of community pharmacies in preventing CVD in minority ethnic groups, including barriers and facilitators, is essential to improve their use in meeting this inequity. The objective of this review is to review the published literature to understand the potential role of community pharmacy in the prevention of CVD in minority ethnic groups, including barriers and facilitators.

Methods and analysis A comprehensive literature search of Medline, EMBASE, PubMed, Scopus, Web Of Science and The Cumulative Index to Nursing and Allied Health Literature to identify published primary studies reporting on the role of community pharmacy in the prevention of CVD in minority ethnic groups including barriers and facilitators will be conducted (conducted 30 September 2024–2 October 2024). Backward and forward citation tracking will be conducted to identify further studies of relevance. Additionally, OpenGrey and Google Scholar searches will be conducted to identify unpublished studies. The mixed methods appraisal tool will be employed to assess study quality. Data will be extracted using a piloted data extraction form, adapted from the National Institute for Health and Care Excellence evidence table for qualitative studies. Reporting will be in line with enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) guidelines.

Ethics and dissemination Ethics approval is not required for systematic reviews of published literature. The review will be published in a peer-reviewed journal. The findings of this review will be combined with those of the future research and will be disseminated as guidance for members of ethnic minority groups and as

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Limiting the studies to English language may exclude relevant studies published in other languages.
- ⇒ Variation in defining ethnic groups may introduce inconsistencies.
- ⇒ Consulting an information specialist helps in developing a robust search strategy.
- ⇒ Adherence to enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) and Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines improves transparency and reproducibility.
- ⇒ Use of the mixed methods appraisal tool for assessing study quality provides a systematic approach to evaluating the included studies.

recommendations for healthcare professionals and policy makers.

PROSPERO registration number CRD42024579766.

INTRODUCTION

Cardiovascular disease (CVD) refers to a group of conditions that affect the heart or blood vessels. These conditions include coronary artery disease, heart failure, stroke and peripheral artery disease.¹ CVD is one of the leading causes of death worldwide, accounting for a significant portion of global mortality each year.¹ According to data from the British Heart Foundation, there are around 7.6 million people living with CVD in the UK.² As well as being a leading cause of death, causing more than a quarter of deaths annually, it is thought that up to 80% of premature deaths from CVD could be prevented through the management of risk factors.^{3–5} These risk factors for CVD events

include atrial fibrillation, hypertension, hypercholesterolaemia, diabetes mellitus, high CVD risk score, as well as modifiable lifestyle factors such as physical inactivity, obesity, smoking and alcohol consumption.^{3 4}

Despite advances in prevention and treatment, CVD remains a significant public health concern in the UK, with its burden disproportionately affecting minority ethnic groups.³ Several minority ethnic groups in the UK experience higher rates of CVD compared with the general population; South Asian groups exhibit higher rates of CVD compared with both the White populations and the national average.³ These patterns are associated with the higher prevalence of risk factors for heart disease, stroke and diabetes among South Asians.^{3 6} In contrast, people who are Black demonstrate high incidence of stroke but a notably reduced susceptibility to heart disease, possibly attributable to the protective effect of lower cholesterol levels, despite having high prevalence in other risk factors for CVD (prevalence of hypertension and obesity).^{3 6} This highlights the need for ethnic community-specific targeted interventions.

Contributing to these health disparities are physiological susceptibility, socioeconomic inequalities, cultural beliefs, language barriers and limited healthcare access.^{3 7} Minority ethnic groups often perceive gaps in healthcare access and face negative experiences, including insensitivity and racism, which can further hinder their access to services.^{3 8}

Further research is needed to understand the specific needs of minority ethnic groups and develop tailored interventions to address CVD disparities.^{3 8} Culturally appropriate, holistic approaches have shown to improve health outcomes,^{3 9} highlighting the importance of considering individual and cultural differences. Culturally competent services are essential to address group-specific barriers and risk factors.^{3 7 8}

Research has highlighted the inequity in access to CVD care experienced by people who are Black.³ However, recent improvements in CVD outcomes in people who are South Asian may be due to increased healthcare provider awareness of the higher CVD risk within these populations.³ People who are South Asian and those who are Black in England are more likely to reside in neighbourhoods with greater levels of deprivation than those who are White.¹⁰ Importantly, it has been found that there are more pharmacies in poorer areas. This has been described as a 'positive pharmacy care law'. This is contrary to the geographical concentration of other healthcare providers such as hospitals and general practitioner (GP) practices where there is an 'inverse care law' with lower levels of access in deprived areas.^{5 11} This convenient placing of pharmacies in deprived areas has been found to increase service accessibility in minority ethnic groups, and it also goes some way in tackling socioeconomic disparities in access to care.^{5 12 13}

In England, the National Health Service (NHS) long-term plan pledges to decrease mortality and morbidity due to CVD, tackling inequalities and a transition towards

preventative approaches. Community pharmacy is identified as one of the providers through which the NHS hopes to deliver early detection services for CVD risk factors.¹⁴

In the context of CVD prevention, community pharmacists play a multifaceted role and can provide health promotion advice tailored to the needs of the communities they serve. They offer advice on lifestyle modifications, including healthy eating, physical activity and smoking cessation to reduce CVD risk factors.¹² The introduction of the hypertension case-finding service in 2021 was a key move towards increasing the role of community pharmacy in CVD screening. Patients with no prior confirmed diagnosis of hypertension were offered blood pressure measurements in the pharmacy and were then referred onwards to receive appropriate management depending on the outcome of the measurements.¹⁵ The Darzi review of the NHS emphasised the important role of health promotion interventions in preventing CVD and acknowledged the expanded role of community pharmacy, highlighting its potential in delivering hypertension management services.⁵

Community pharmacies have the potential to play a substantial role in addressing CVD and the associated health inequalities. They serve as accessible healthcare hubs within local communities, offering a range of services beyond dispensing medications.^{5 12} The contemporary research indicates that community pharmacy-based CVD screening is well-received by patients, with service users perceiving benefit from these services. However, more needs to be done to promote these services, and further research is needed to determine how best to reach specific demographics, such as the most deprived 'hard to reach' groups.¹⁶

The objective of this systematic review is to gain a comprehensive understanding of the potential role of community pharmacies in the prevention of CVD specifically within minority ethnic groups, including the identification of perceived barriers and facilitators.

METHODS AND ANALYSIS

Full review question

1. What is the role of community pharmacies in the prevention of CVD among minority ethnic groups?
2. What are the barriers and facilitators to the role of community pharmacies in preventing CVD in minority ethnic groups?

Information sources

The following electronic academic databases will be searched: Medline, EMBASE, PubMed, Scopus, Web Of Science and The Cumulative Index to Nursing and Allied Health Literature.

Additionally, citation tracking will be conducted to identify additional studies of relevance not identified by database searching alone. This will entail hand searching the reference lists of included papers, backward tracking, searching databases to identify papers that have cited the

Box 1 Search terms

(pharmacist* or pharmacy or pharmacies) NEAR/3 (community or led or based or role or intervention*)
 ((cardio* or CVD or cardiac or heart* or coronary or CHD or myocardial or "Atrial fibrillation" or AF) or (cerebrovascular or stroke or TIA or "transient ischaemic attack" or "transient ischemic attack") or ((arterial or heart) NEAR/1 disease*) or heart failure) or (lifestyle or diet* or physical activity or weight or body mass index or BMI or blood pressure or hypertension or cholesterol or advice or counselling or screening or health check or smoking or alcohol or adherence or compliance)
 Minorit* or ethnic* or multiethnic* or "multi-ethnic" or race or racial or multiracial or cultur* or (BAME or BME) or ((underserv* or disadvantag*) NEAR/2 (group* or population* or communit*)) or migrant* or immigrant* or refugee* or (asylum NEAR/1 seek*) or multilingual
 (1 and 2 and 3)

included papers and forward tracking.¹⁷ Google Scholar and OpenGrey will also be searched to identify further studies and grey literature.

Search terms

Search terms will be derived from the research question, and search strategies will be reported for each database in full.

An information specialist from Aston University was consulted in the development of the systematic review search strategy (online supplemental file 1). **Box 1** shows an example search strategy that will be used for the search, including Boolean operators and truncation.

Eligibility criteria

The eligibility criteria are based on the PICO (population, intervention, comparator and outcome) framework, adapted to the qualitative research question omitting the 'Comparison' (C).¹⁸

Population

Restrictions will be applied to exclude studies involving healthcare professions other than community pharmacy, and studies not involving minority ethnic groups and those without subgroup analysis including minority ethnic groups will be excluded. There will be no exclusion of studies based on the country of origin.

The review authors acknowledge the complexity in defining minority ethnic groups, with the categorisation inevitably varying from country to country. The UK government's preferred definition, 'all ethnic groups except the White British group. Ethnic minorities include white minorities, such as Gypsy, Roma and Irish Traveller groups.'¹⁹ will not be used in the eligibility criteria for the review as it classifies categories within the majority 'White' ethnic group as minority ethnic groups.

Minority ethnic groups experience unique barriers and facilitators with heterogeneity introduced through diverse sociocultural and religious factors. Thus, including data from majority ethnic groups would be counterproductive.^{3 7 19-21} Consequently, when considering minority ethnic groups in the UK, this review adopts

the high-level ethnic group classifications provided by the Office for National Statistics (ONS), excluding the 'White' group. This approach includes the 'Asian', 'Black', 'Mixed or multiple' and 'Other' groups.²¹ For study inclusion, eligibility will be determined based on the study authors' definitions of minority ethnic groups, due to the varying definitions used across different countries.

Although the focus will be the UK, data from other countries will be included if deemed relevant to the UK.

Inclusion criteria

- ▶ Minority ethnic groups, for which eligibility will be ascertained using the study authors' given definition of minority ethnic groups.
- ▶ Participants may be community pharmacy professionals (pharmacists and technicians) and support staff.

Exclusion criteria

- ▶ Studies not involving minority ethnic groups as defined in this review.
- ▶ Studies involving healthcare professionals and support staff other than community pharmacy will be excluded.

Intervention

For the purposes of this review, interventions to prevent CVD will include those that focus on the risk factors for CVD; these include CVD-related medication adherence, cardiovascular health-related counselling, CVD screening, cholesterol, hypertension, smoking cessation, alcohol, and diet and weight management services.⁴

Inclusion criteria

- ▶ Primary research focusing on community pharmacy interventions to prevent CVD will be included for review.

Exclusion criteria

- ▶ Studies not focusing on community pharmacy interventions to prevent CVD and studies involving other healthcare professions will be excluded.

Outcome

The main outcome for the review is to understand the potential role that community pharmacy can have in the prevention of CVD in minority ethnic groups. This has been subdivided to include the current role and the potential role of community pharmacy in CVD prevention in minority ethnic groups.

Additional outcomes for the review will be to identify barriers and facilitators for the role of community pharmacy in CVD prevention. This includes both the barriers and facilitators to the use of CVD prevention services by minority ethnic groups, as well as those impacting the delivery of these services by community pharmacy to minority ethnic groups.

Inclusion criteria

- ▶ Studies reporting on the role of community pharmacy in CVD prevention.
- ▶ Studies reporting on barriers or facilitators to community pharmacy CVD prevention services.

Exclusion criteria

- ▶ Studies that do not report on one of either—the role of community pharmacy in CVD prevention or the barriers/facilitators to community pharmacy-based CVD prevention interventions.

Study design

The search will identify primary research, in the English language, with no restrictions on study design, including dissertations and theses. There are also no restrictions on research type, including qualitative, quantitative and/or mixed methods.

Searches will not be restricted by publication date and began in September 2024.

Study quality assessment

Preliminary searches revealed that potentially eligible studies were of various study designs. The mixed methods appraisal tool (MMAT) will be used to critically appraise the included studies.²² Two reviewers, RD and GB, will independently assess the studies against the domains of the MMAT. Discrepancies will be resolved through discussion with the wider review team. Results will be reported in the narrative summaries.

Study selection

Initially, titles and abstracts will be screened for relevance, followed by screening of full papers if the former is unsuccessful in determining eligibility. Studies of no relevance will be excluded. Duplicates will be excluded at the title screening. Full papers will be obtained for the remaining studies.

Screening will be conducted by reviewers RD and GB employing the Rayyan tool.²³ Disputes arising from the screening process will be resolved through discussion with the wider review team.

Reporting will be in line with enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) guidelines and the Preferred Reporting Items for Systematic reviews and Meta-Analyses flowchart will be used to document the various stages of literature searching and selection.^{24 25}

Data extraction

Data will be extracted by RD using a piloted data extraction form, adapted from the National Institute for Health and Care Excellence evidence table for qualitative studies (online supplemental file 2).²⁶ Data extracted will be reviewed by GB, and the disputes will be resolved through discussion with the wider review team.

The fields to be extracted will include study details, research parameters, population and sample selection, outcome measures, methods and results. Extracted data

will be presented in both evidence tables and summarised narratively.

Data synthesis

A data-based convergent synthesis approach will be used, and both qualitative and quantitative findings will be analysed together using the same synthesis method.²⁷ Quantitative data will first be transformed into qualitative themes before synthesis.²⁷ Data transformation of quantitative data from both quantitative and mixed-methods studies will follow 'qualitisation', providing narrative statements which will be combined with the qualitative data from qualitative and mixed-methods studies in the data synthesis.²⁸

Qualitative synthesis will be used to synthesise the findings of this review. A qualitative synthesis has the potential to provide a useful, rich insight into the complexities of the review question.²⁹ Extracted data will be presented in tables, and results corresponding to the extracted outcome measures will be presented in the results section. A thematic synthesis methodology will be employed, as described by Thomas and Harden.³⁰ Included studies will have their findings coded line-by-line. These 'free codes' will then be grouped into descriptive themes. These will undergo further interpretation to generate 'analytical themes'. The resultant 'analytical themes' will provide novel interpretations to address the research question beyond that offered by the individual included studies.³⁰

Analysis of subgroups

Subgroup analysis will be undertaken for different minority ethnic groups to identify any group-specific findings.

Project timeline

The project will be carried out from October 2024 to June 2025.

Patient and public involvement

Patients and the public were not involved in the design or conduct of the review. However, emergent findings will be shared with a patient and public involvement and engagement group for validation.

ETHICS AND DISSEMINATION

Ethics approval is not required for this systematic review of published literature because primary data will not be collected. This systematic review protocol is registered on the International Prospective Register of Systematic Reviews (PROSPERO) (https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42024579766). The review will be published in a peer-reviewed journal. The findings of this review will be combined with those of future research and will be disseminated as guidance for members of ethnic minority groups and as recommendations to healthcare professionals and policy makers.

X Rumanveer Singh Duley @Ruman_Duley, Joseph Bush @josephbush, Derek Connolly @DrDerekConnolly, Ahmad Shoaib @DrAhmadShoaib and Ian Maidment @Prof_Ian_M

Contributors All authors (RSD, GKB, JB, DC, AS and IM) contributed equally to study design and manuscript preparation. All authors reviewed and approved the final version of the manuscript. RSD is the guarantor of the review.

Funding The authors are a part of the Listers Cardiovascular Research Group, which is co-funded by the Listers Group, Sandwell and West Birmingham Hospitals NHS Trust and Aston University. The views expressed are those of the author(s) and not necessarily those of the Listers Group, SWBH, Aston University or the Department of Health and Social Care.

Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, conduct, reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iDs

Rumanveer Singh Duley <http://orcid.org/0009-0009-0912-8661>
Ian Maidment <http://orcid.org/0000-0003-4152-9704>

REFERENCES

- World Health Organization. Cardiovascular diseases (CVDs), 2021. Available: <https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-cvds>
- British Heart Foundation. Heart and circulatory diseases in the UK, 2021. Available: <https://www.bhf.org.uk/what-we-do/our-research/heart-statistics>
- Raleigh V. The health of people from ethnic minority groups in England, 2023. Available: <https://www.kingsfund.org.uk/publications/health-people-ethnic-minority-groups-england>
- Office for Health Improvement & Disparities. Cardiovascular Disease Prevention: Applying All Our Health, 2022. Available: <https://www.gov.uk/government/publications/cardiovascular-disease-prevention-applying-all-our-health/cardiovascular-disease-prevention-applying-all-our-health>
- Darzi A. *Independent investigation of the NHS in England*. London: Department of Health and Social Care, 2024. Available: <https://assets.publishing.service.gov.uk/media/66e1b49e3b0c9e88544a0049/Lord-Darzi-Independent-Investigation-of-the-National-Health-Service-in-England.pdf>
- Office for National Statistics. Mortality from leading causes of death by ethnic group, england and wales: 2012 to 2019. 2021. Available: www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/mortalityfromleadingcausesofdeathbyethnicsgroupenglandandwales/2012to2019
- Kokab F, Greenfield S, Lindenmeyer A, et al. The experience and influence of social support and social dynamics on cardiovascular disease prevention in migrant Pakistani communities: A qualitative synthesis. *Patient Educ Couns* 2018;101:619–30.
- Birmingham City Council, Council L. Birmingham and Lewisham African and Caribbean Health Inequalities Review (BLACHIR) Report. Birmingham: Birmingham City Council and Lewisham Council, 2021.
- Stormacq C, Wosinski J, Boillat E, et al. Effects of health literacy interventions on health-related outcomes in socioeconomically disadvantaged adults living in the community: a systematic review. *JBI Evid Synth* 2020;18:1389–469.
- Ministry of Housing, Communities and Local Government. Ethnicity Facts and Figures - People Living in Deprived Neighbourhoods, 2020. Available: <https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/demographics/people-living-in-deprived-neighbourhoods/latest/#overall-most-deprived-10-of-neighbourhoods-by-ethnicity>
- Todd A, Copeland A, Husband A, et al. The positive pharmacy care law: an area-level analysis of the relationship between community pharmacy distribution, urbanity and social deprivation in England. *BMJ Open* 2014;4:e005764.
- Horgan JMP, Blenkinsopp A, McManus RJ. Evaluation of a cardiovascular disease opportunistic risk assessment pilot ("Heart MOT" service) in community pharmacies. *J Public Health (Oxf)* 2010;32:110–6.
- Barrett R, Hodgkinson J. Quality evaluation of community pharmacy blood pressure (BP) screening services: an English cross-sectional survey with geospatial analysis. *BMJ Open* 2019;9:e032342.
- NHS England. NHS Long Term Plan, 2019. Available: <https://www.longtermplan.nhs.uk/>
- NHS England. NHS community pharmacy hypertension case-finding advanced service, 2023. Available: <https://www.england.nhs.uk/wp-content/uploads/2021/11/PRN00173-adv-service-spec-nhs-community-pharmacy-hypertension-case-finding-advanced-service-v2.3.pdf>
- Taylor J, Krska J, Mackridge A. A community pharmacy-based cardiovascular screening service: views of service users and the public. *Int J Pharm Pract* 2012;20:277–84.
- Hirt J, Nordhausen T, Appenzeller-Herzog C, et al. Citation tracking for systematic literature searching: A scoping review. *Res Synth Methods* 2023;14:563–79.
- Cooke A, Smith D, Booth A. Beyond PICO: the SPIDER tool for qualitative evidence synthesis. *Qual Health Res* 2012;22:1435–43.
- Race Disparity Unit. Writing about Ethnicity, 2021. Available: <https://www.ethnicity-facts-figures.service.gov.uk/style-guide/writing-about-ethnicity>
- NICE. Type 2 Diabetes Prevention: Population and Community-level Interventions, 2011. Available: <https://www.nice.org.uk/guidance/ph35/resources/type-2-diabetes-prevention-population-and-community-level-interventions-1996299153349>
- Office for National Statistics (ONS). Ethnic group, England and Wales: Census 2021, 2022. Available: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/ethnicgroupenglandandwales/census2021>
- Hong QN, Pluye P, Fàbregues S, et al. *Mixed Methods Appraisal Tool (MMAT), version 2018*. Montreal, Canada: User guide. McGill University, 2018.
- Ouzzani M, Hammady H, Fedorowicz Z, et al. Rayyan-a web and mobile app for systematic reviews. *Syst Rev* 2016;5:210.
- Tong A, Flemming K, McInnes E, et al. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Med Res Methodol* 2012;12:181.
- Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71.
- National Institute for Health and Care Excellence (NICE). Methods for the development of NICE public health guidance, 2012. Available: <https://www.nice.org.uk/process/pmg4/resources/methods-for-the-development-of-nice-public-health-guidance-third-edition-pdf-2007967445701>
- Hong QN, Pluye P, Bujold M, et al. Convergent and sequential synthesis designs: implications for conducting and reporting systematic reviews of qualitative and quantitative evidence. *Syst Rev* 2017;6:61.
- Lizarondo L, Stern C, Carrier J, et al. Chapter 8: mixed methods systematic reviews (2020). In: Aromataris E, Lockwood C, Porritt K, et al., eds. *JBI manual for evidence synthesis* JBI. 2024. Available: <https://synthesismanual.jbi.global>. <https://doi.org/10.46658/JBIMES-24-07>
- Pope C, Mays N, Popay J. *Synthesizing qualitative and quantitative health research: a guide to methods*. Maidenhead, UK: Open University Press, 2007.
- Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol* 2008;8:45.