

BMJ Open Community engagement approaches for malaria prevention, control and elimination: a scoping review protocol

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ABSTRACT

Community engagement (CE) is important for malaria prevention, control and ultimately elimination. As the decline of malaria has plateaued over the last 5 years, strengthening CE approaches will be necessary to enhance health promotion practice and policy to drive malaria transmission down further. Countries have adopted a wide range of public health intervention approaches for malaria prevention and control that best suit their context. This review will examine the existing evidence on the various CE approaches adopted by malaria programmes across the world and their outcomes.

Methodology and analysis The review methodology will follow the updated Joanna Briggs Institute guide for scoping review, 2017, which is based on the framework developed by Arksey and O'Malley and further developed by Levac Colquhoun and O'Brien. Proquest, Web of Knowledge and Medline will be searched for publications from January 2000 to 31 March 2021 while Google search engine will be used to find any grey literature. The eligibility criteria will be as follows: review will include primary studies written in the English language using appropriate study designs and methods, including quantitative, qualitative and mixed methods designs; and case, programme or project reports. Information on CE approaches designed specifically for malaria prevention, control, elimination and their outcomes will be explored. Subheadings and free text terms for 'community engagement' and 'malaria' will be used for the search. The article screening and data extraction will be examined by two reviewers after the initial search, and any disputes will be resolved by a third reviewer through discussion. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews guide will be used to present the review methods and the results from the search. The scoping review results will identify and map the available evidences, sources of information and research gaps in the area of CE as one approach for malaria prevention, control and/or elimination.

Ethics and dissemination This study only aims to review secondary sources and does not require human research ethics committee approval. The findings of the scoping review will be submitted to a peer-reviewed journal for wider dissemination.

INTRODUCTION

Malaria, a vector-borne disease, remains a major public health challenge contributing to an estimated 228 million cases and

Strengths and limitations of this study

- To our knowledge, this is the first scoping review to be undertaken on community engagement (CE) approaches for malaria prevention, control and elimination.
- The University Health Science reference librarian will assist in developing a search strategy for the scoping review, a strength of the study.
- The review will include peer-reviewed published primary sources in English; therefore, publications in languages other than English, unpublished articles and multi-country studies will be excluded, a limitation of this study.
- As this will be a scoping review, the study will be limited to providing existing evidence on the topic with an aim to identify and conduct a narrative synthesis of the various CE approaches.

400 000 deaths annually worldwide.¹ Globally, between 2010 and 2014, there was a 70% decrease in malaria incidence, however, in the last 5 years, the progress towards further reduction has been relatively static.² The earlier decrease in cases was attributed to scaling up of routine interventions such as free distribution of long-lasting insecticidal nets (LLINs) or insecticide treated nets, periodic indoor residual spraying (IRS), prompt treatment of diagnosed cases and use of artemisinin-based combination therapy for the treatment of *Plasmodium falciparum* malaria.^{1 3-5} While some countries focus their strategies on malaria prevention by enabling and promoting use of LLINs/IRS/larvicides and chemoprophylaxis alongside malaria control programmes that target a reduction in the disease burden to a level where it is no longer a public health concern; countries with fewer malaria cases aim for elimination to ensure sustained zero local transmission of malaria in the population within a set geographic boundary through a strengthened surveillance system.¹

Community engagement (CE) is defined as 'a process of working collaboratively with



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groups of people who are affiliated by geographic proximity, special interests, or similar situations, with respect to issues affecting their wellbeing' (p9).⁶ CE has been adopted especially by lower and middle income countries (LMICs) in a quest to reach elimination of malaria by 2030, consistent with the WHO Global Malaria Strategy 2016–2030.^{7,8} CE has been used to codesign public health interventions and approaches for prevention and control of malaria in a variety of countries in a range of national programmes, such as: mass drug administration for malaria prevention in Myanmar and Laos^{9,10}; increasing the use of LLINs and promoting early testing and treatment in Cambodia and Kenya¹¹; and improving access to diagnosis and treatment in communities in Zambia.¹² A variety of activities have been implemented for malaria prevention, control and elimination based on CE. These include formation of community leadership groups comprising local decision-makers, elderly and youth; drama campaigns and health education programmes conducted in local languages and delivered in schools and churches; house-to-house visits by community health volunteers to improve early detection and timely treatment in rural areas with high levels of migration; and participatory action malaria research led by the community.^{9–12}

Health interventionists use CE to harness communities in health promotion practice, research and policy-related decision-making to advance knowledge and support behavioural and environmental change to improve health outcomes.¹³ Public health interventions can incorporate CE in different forms: providing information, consulting, joint decision-making, acting collaboratively and supporting the community interests independently.¹⁴ CE can be effective in dealing with health inequalities especially among disadvantaged groups who are challenged by structural, geographical, cultural, financial and language barriers.¹⁵ Internationally, a range of CE approaches that best suit the context and the target community have been used to raise awareness of malaria prevention and enable year-round access to free testing and treatment in rural hard-to-reach populations, while developing local level ownership. For example, in Malawi, the community-based health animators (volunteers who conduct peer education in Malawi) have been used by the national malaria programme as peer influencers to improve awareness and promote positive behaviour change in the community.¹⁶ In Nigeria, integrated community case management has been used to detect and treat malaria cases in remote areas using trained local community health workers, minimising travel time and the cost for patients.¹⁷ Similarly, in Cameroon and Cambodia, local volunteers and village malaria workers have been used to conduct proactive and reactive case detection in communities to prevent transmission,^{11, 18} while the Interactive Malaria Awareness Program in South Africa has successfully used home-based care workers to form local-level partnerships and to also educate communities on malaria prevention and control.¹⁹ All these different CE approaches have contributed to improved awareness,

early detection of cases and improved access and wider community acceptance of malaria prevention and treatment in the afore-mentioned countries.^{16–19}

This paper describes the protocol for a scoping review that aims to describe CE approaches targeting the prevention, control or elimination of malaria that have been/or are being implemented by countries.

REVIEW OBJECTIVES

The objectives of the review are to map the available evidence on the types of CE approaches for (1) malaria prevention, (2) malaria control, (3) malaria elimination and (4) to describe the outcomes of the CE approaches.

METHODS

Protocols and registration

During a preliminary search, a 2016 systematic review was found that focused on one element of malaria prevention (<https://doi.org/10.1186/s12936-016-1593-y>: Malaria Journal).²⁰ However, no scoping review on CE has been conducted to date that incorporates different approaches to all components of malaria prevention, control and elimination across countries.

Patient and public involvement

No patient involved.

Eligibility criteria

The review will only consider intervention studies published from 2000 onwards till the end of March 2021, a period encompassing two important landmarks, the advent of the Millennium Development Goals (2000–2014) and the Sustainable Development Goals (2015–2030).²¹

The evidence will be included if the sources are:

- ▶ primary studies.
- ▶ Written in the English language.
- ▶ Using appropriate study designs and methods, including quantitative, qualitative and mixed methods designs; and case, programme or project reports.
- ▶ Providing information on CE approaches designed specifically for malaria prevention, control and/or elimination.

The evidence will be excluded if the sources are:

- ▶ Secondary studies including systematic reviews.
- ▶ Published in languages other than English.
- ▶ Providing information on CE approaches for diseases or health issues other than malaria.
- ▶ Multicountry studies will be excluded.
- ▶ Providing anecdotal evidence without a description of the study design and methods.

Information sources and search

The search strategy will involve searching the databases for peer-reviewed published literature focusing on CE approaches conducted for malaria prevention, control or elimination. The search methodology will follow the

updated Joanna Briggs Institute guide for scoping reviews in 2017,^{22 23} which is based on the framework developed by Arksey and O'Malley²⁴ and further developed by Levac et al.²⁵ A scoping review is a valid process of synthesising evidence on a given topic, providing an excerpt of the volume of the literature or studies without seeking to analyse it.²⁶ Primarily, an exploratory approach, scoping reviews can shed light on the types of evidence available, the way studies have been conducted and help identify and map the evidence that is available in the area of interest.^{26 27}

Databases including Proquest, Web of Science and Medline (OVID) will be searched using key words: "community engagement" OR "community participation" OR "community involvement" OR "public engagement" OR "community mobilization" OR "social mobilization" OR "community action" OR "community empowerment" OR "community led" OR "community conversation" AND "prevention", "control", "elimination" AND "malaria". Similarly, advanced Google search will be used to identify grey literature including case, program or project reports using the same key words. The key words have been defined based on the objectives of the study. Initially, the search will be limited to the article title and abstract for studies published between January 2000 and 31 March 2021. The search will be further streamlined by searching for citations from the reference lists of papers selected from the initial search. For papers not available online, the first author (KRA) will contact the lead author of the publication via email requesting a copy of the paper to review.

Selection of sources of evidence

The title and the abstract obtained from the search results will be examined by two reviewers after the initial search. In the first stage of the study selection, two reviewers (JJ and JEL) independent of one another will examine the title and abstract from search results obtained by KRA. The selection of the final studies will be agreed on by three reviewers (KRA, JJ and JEL). During the final selection process, any differences regarding inclusion and exclusion of papers among the three reviewers will be discussed, and a fourth reviewer (ACAC) will be called on to reach consensus.

Data charting process

The data charting process will map the findings according to the attributes: author, date/year of publication, country/ site, aim/objectives, study population, sample size, study design, phases (prevention, control, elimination) and outcomes. The charting will be undertaken by KRA and will be reviewed by two reviewers (JJ and JEL). Any disputes or differences will be resolved by the fourth reviewer (ACAC).

Presentation of the results

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews extension

for scoping reviews will be used to present the review methods and the search results.²⁸ The 22 items checklist for reporting systematic reviews comprising two optional items (critical appraisal of sources and summary of the evidences) will be followed. The items include eligibility criteria, the search approach, methods of selecting the evidence and the data charting process. The search process and the evidence flow across various stages of the study will be presented visually using an additional diagram. Furthermore, the selected evidence based on the source, study characteristics and the major findings will be mapped and presented in tabular form. The results will be synthesised in congruence with the scoping review objectives and a narrative description will be presented. The main findings will be synthesised to highlight the limitations and provide an analysis of CE approaches paving the way for future research opportunities.

Expected results

This scoping review aims to identify the available evidence, sources of information and research gaps in the area of CE as one approach for malaria prevention, control and/or elimination. The results from this review will inform future practice and research in this area.

ETHICS AND DISSEMINATION

This study only aims to review the secondary sources and does not require human research ethics committee approval. Nonetheless being a component of a mixed methods study, human ethics approval has been obtained from Nepal Health Research Council (ERB 632/2020, reference number 1287) and Curtin University's Human Research Ethics Committee number HRE2020-0701. The findings of the scoping review will be submitted to a peer-reviewed journal for wider dissemination.

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Contributors KRA conceptualised the topic and wrote the original draft. JEL, ACAC and JJ supervised the writing process and were involved in the review and editing of the manuscript.

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