



**Cochrane**  
**Library**

Cochrane Database of Systematic Reviews

## Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis (Protocol)

Medley N, Taylor M, van Wyk SS, Oliver S

Medley N, Taylor M, van Wyk SS, Oliver S.

Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis (Protocol).

*Cochrane Database of Systematic Reviews* 2021, Issue 3. Art. No.: CD014756.

DOI: [10.1002/14651858.CD014756](https://doi.org/10.1002/14651858.CD014756).

[www.cochranelibrary.com](http://www.cochranelibrary.com)

Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis (Protocol)

Copyright © 2021 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

WILEY

---

**TABLE OF CONTENTS**

HEADER .....	1
ABSTRACT .....	1
BACKGROUND .....	2
OBJECTIVES .....	3
METHODS .....	3
ACKNOWLEDGEMENTS .....	6
REFERENCES .....	7
ADDITIONAL TABLES .....	8
APPENDICES .....	9
HISTORY .....	11
CONTRIBUTIONS OF AUTHORS .....	12
DECLARATIONS OF INTEREST .....	12
SOURCES OF SUPPORT .....	12

[Qualitative Protocol]

# Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis

Nancy Medley<sup>1</sup>, Melissa Taylor<sup>1</sup>, Susanna S van Wyk<sup>2</sup>, Sandy Oliver<sup>3,4</sup>

<sup>1</sup>Department of Clinical Sciences, Liverpool School of Tropical Medicine, Liverpool, UK. <sup>2</sup>Centre for Evidence-based Health Care, Epidemiology and Biostatistics, Department of Global Health, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa. <sup>3</sup>EPPI-Centre, Social Science Research Unit, UCL Institute of Education, University College London, London, UK. <sup>4</sup>Faculty of the Humanities, University of Johannesburg, Johannesburg, South Africa

**Contact address:** Nancy Medley, [nancy.medley@lstmed.ac.uk](mailto:nancy.medley@lstmed.ac.uk), [nmedley2@liverpool.ac.uk](mailto:nmedley2@liverpool.ac.uk).

**Editorial group:** Cochrane Infectious Diseases Group.

**Publication status and date:** New, published in Issue 3, 2021.

**Citation:** Medley N, Taylor M, van Wyk SS, Oliver S. Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis (Protocol). *Cochrane Database of Systematic Reviews* 2021, Issue 3. Art. No.: CD014756. DOI: [10.1002/14651858.CD014756](https://doi.org/10.1002/14651858.CD014756).

Copyright © 2021 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

## ABSTRACT

### Objectives

This is a protocol for a Cochrane Review (qualitative). The objectives are as follows:

To synthesize community views on tuberculosis active case finding programmes in low- and middle-income countries.

### Review question

In areas of the world where tuberculosis is common, what views do communities and high-risk populations hold about tuberculosis active case finding programmes?

### Target audience

Policy groups at global, national and local levels considering, recommending, designing, or implementing active case finding programmes.

Feasibility of programmes, as assessed by health staff, will not be part of this review.

## BACKGROUND

### Description of the topic

Care for tuberculosis (TB) has included a variety of approaches for public health and primary care systems to identify people with the disease and to ensure that they are put on treatment. These surveillance systems stopped improving rates of early case detection years ago (Lönnroth 2013). In 2018, one third of 10 million people with tuberculosis were not diagnosed or reported to the World Health Organization (WHO) (WHO 2019a). Standard case detection for tuberculosis has involved looking for tuberculosis within health facilities, when people present with tuberculosis symptoms such as cough, night sweats, fever or weight loss. Standard case detection is sometimes termed passive case finding and describes a patient-initiated pathway in clinics (Lönnroth 2013). More recent tuberculosis care approaches are described as active case finding (ACF), where healthcare workers actively look for people with presumptive tuberculosis in communities and amongst populations who do not spontaneously present to health facilities (Lönnroth 2013; WHO 2015). ACF is defined as "the systematic identification of people with suspected active tuberculosis in a predetermined target group by the application of tests, examinations or other procedures" (Kranzer 2013).

The WHO End TB Strategy aims to reduce tuberculosis incidence by 90% and tuberculosis deaths by 95% by 2035 (WHO 2015). Early tuberculosis case detection via ACF is a key component of this strategy. ACF describes a complex intervention with multiple components such as community tuberculosis health education, symptom screening in communities via mobile health clinics, screening during household visits from community health workers, and community or facility-based screening of close contacts of index tuberculosis patients. Dey 2019 offers a good example of ACF that includes health worker engagement in high-risk communities, door-to-door systematic tuberculosis symptom screening, referral of screen positive individuals for diagnostic testing in clinics, and community-based tuberculosis contact tracing.

Active case finding covers a wide range of tuberculosis health promotion and surveillance activities that target high-risk individuals or communities. Due to the lack of a quick, affordable and feasible point-of-care screening tool, symptom screening via a structured questionnaire is often the only tool used in ACF interventions. Mobile chest radiography (CXR) could also be used alone to screen a defined population such as all hospital staff, or in addition to symptom screening in communities. Some ACF interventions also screen for high-risk factors (e.g. HIV) in combination with tuberculosis symptom screen. Presumptive tuberculosis cases identified via ACF symptom screen must be confirmed with sputum collection and testing (sputum smear microscopy or a rapid diagnostic test such as Xpert MTB/RIF) (WHO 2015). Sputum could be collected in the community, or presumptive tuberculosis patients could be referred to a health facility for confirmation of diagnosis.

ACF programmes may identify symptomatic people with presumptive tuberculosis via symptom screening, or asymptomatic people with presumptive tuberculosis via CXR, depending upon the different components of the ACF programme. Definitions for tuberculosis case finding approaches may be found in Table 1.

### How this review might inform or supplement what is already known

The WHO developed the End TB Strategy alongside their Sustainable Development Goals, which highlight the social and structural determinants of health. Tuberculosis has long been associated with structural inequality, including poverty, poor nutrition and education, poor housing and working conditions, and poor access to health care (Lönnroth 2009). Tuberculosis reduction in high-income countries resulted from improved access to health care overall, not just for tuberculosis, and through improved nutrition and reduced poverty (Uplekar 2013). WHO guidance regarding ACF for tuberculosis is intended to address access to tuberculosis diagnosis for high-risk populations and depends on countries to adopt these policies in their national programmes.

Any public health programme requires the cooperation of the targeted population. Tuberculosis is a disease with a long history of stigma due to its associations with poor housing and diet, environmental concerns, and poor access to education and health care (Lichtenstein 2018). Tuberculosis public health programmes also operate alongside a global narrative to do with the WHO DOTS (Directly Observed Treatment, Short-Course) strategy, adopted in 1994. Furthermore, tuberculosis programmes have always navigated local social and political forces, including race (Cummiskey 2014). Efforts to identify people with tuberculosis in order to disrupt transmission and offer treatment will encounter this complex history and may well be met with resistance.

In the past, the WHO has used quantitative proxies to understand community views of tuberculosis screening. For example, a commissioned study considered programme acceptability as the proportion of eligible individuals who freely accepted tuberculosis screening (Mitchell 2012; Mitchell 2013). The authors noted a limitation of this quantitative 'acceptability' was the lack of "qualitative ethnographic work on reasons for refusal of tuberculosis screening, as well as the perceived risks and benefits of screening," especially in high-burden settings (Mitchell 2013). The authors also argued that programme acceptability was a composite construct. A recent scoping review collated primarily quantitative studies and systematic reviews to identify community- and individual-level factors that shaped tuberculosis active case finding policy (Biermann 2019). The authors of this review found stigma and discrimination, culture, fear, mistrust, and prior knowledge of tuberculosis all impact policy (Biermann 2019).

To answer Mitchell and colleagues' call for further research (Mitchell 2013), and to elaborate themes noted in Biermann 2019 and identify further themes, our evidence synthesis will consist of qualitative studies that capture community views of ACF in low- and middle- income countries (LMICs), where the tuberculosis burden is greatest.

### How the intervention might work

Tuberculosis is one of the top 10 causes of death worldwide, and primarily impacts the lungs to cause poor health. Early disease detection and treatment with antibiotics can lead to cure for most people, but approximately 1.5 million people die from tuberculosis each year. Tuberculosis overwhelmingly impacts people living in Southeast Asia and Africa, where 68% of worldwide cases were detected in 2018 (WHO 2019a).

The logic of ACF within communities and amongst household contacts of people with tuberculosis is that early case detection may improve treatment outcomes for the poor and for those remote from diagnostic and treatment facilities (WHO 2013). Active case finding programmes will also reduce prevalence and prevent onward transmission of tuberculosis within communities (WHO 2015; Wingfield 2019).

Mhimbira 2017 reviewed the effectiveness of ACF. Trial evidence showed that tuberculosis programmes probably increased case detection in the shorter term in settings where prevalence was 5% or more but may have had little or no effect on treatment success across different settings. The impact of ACF on treatment failure or mortality was not known (Mhimbira 2017).

Our review will not consider the effectiveness of individual components of ACF programmes. We are concerned with community responses to ACF programmes in LMICs, whether or not the specific components of these complex interventions are proven effective in clinical trials.

### Why is it important to do this review?

Previous research on ACF for the early tuberculosis detection has not considered qualitative studies of community views of tuberculosis programmes, because this evidence was not available. We will synthesize a new literature of qualitative, ethnographic research on the experience of ACF in LMICs, from the viewpoint of individuals with tuberculosis and their families, community members, and community healthcare workers.

### Potential concerns with active case finding

Active case finding identifies all individuals with symptoms of tuberculosis or CXR findings of tuberculosis, or both, in a target population and ensures that those individuals receive confirmatory diagnosis through sputum collection and testing. It is almost always a top-down public health approach. ACF is a type of systematic screening approach that could be used to screen high-risk groups that do not spontaneously present to health facilities. Some of these high-risk groups recommended for screening by the WHO are close tuberculosis contacts, miners, prison inmates and those residing in high tuberculosis-burden communities. The WHO also recommends HIV screening as part of tuberculosis screening algorithms (WHO 2013; WHO 2015). WHO recommendations for tuberculosis programmes are intended to shape national health policy and its implementation via health systems.

The UK National Screening Committee audit population screening programmes because screening assumes harm, and harm “requires balancing against the potential for benefit and cost-effectiveness” (McCartney 2020). Our review aims to identify community views of screening to better understand policy-in-action and the perceived benefit relative to harm of ACF.

There are several potential harms with ACF. In many societies, the stigma associated with tuberculosis persists due to its infectiousness and its relationship to poverty, poor housing, and HIV. Communities will consider active case finding, and the subsequent management of the information arising from the screening, in the context of stigma (Murray 2013).

All ACF programmes introduce the conflicting goals of public health practice and individual or parental informed choice. Where

possible, our review will consider the information available to targeted individuals and populations to enable informed individual and community consent.

ACF programmes also introduce potential for false positives. Where data allow, we will explore the unintended consequences for individuals who screen positive, but do not have active tuberculosis. A related problem for ACF programmes is providing access to health care for those who test negative for tuberculosis, but have ongoing symptoms (Tulloch 2015).

We know that, to date, there have been innovative active case finding programmes in LMICs using complex, multipronged approaches (Mhimbira 2017). We have started exploring the components of these interventions (Van Wyk in progress). What we do not know is whether there is any documentation of community views towards ACF programmes over the last 10 years and what themes their synthesis might contribute to WHO recommendations regarding ACF programmes going forward.

## OBJECTIVES

To synthesize community views on tuberculosis active case finding programmes in low- and middle-income countries.

### Review question

In areas of the world where tuberculosis is common, what views do communities and high-risk populations hold about tuberculosis active case finding programmes?

### Target audience

Policy groups at global, national and local levels considering, recommending, designing, or implementing active case finding programmes.

Feasibility of programmes, as assessed by health staff, will not be part of this review.

## METHODS

### Criteria for considering studies for this review

#### Types of studies

We will include studies that utilize a qualitative study design and data collection methodology. These include structured and unstructured interviews, focus groups, participant observation, and oral histories. Eligible studies must use qualitative methods for data analysis; this includes thematic analysis, framework analysis, or ethnographic analysis. We will include mixed methods studies where it is possible to extract the data that were collected and analysed using qualitative methods.

We will not include unpublished or grey literature. We will include studies regardless of whether they were conducted alongside studies of the effectiveness of ACF or not. We will impose no language restrictions.

We will exclude studies that analyse and report qualitative or survey data, or both, with summary descriptive statistics. Case studies drawn together according to the methods described above are eligible.

We will not exclude studies based on our assessment of methodological limitations or study quality. We will use information about methodological limitations to assess our confidence in the review findings.

### Topic of interest

Any study related to tuberculosis active case finding, which includes the targeted screening of high-risk populations, such as whole communities, miners at work, refugees in camps, prisoners in residential institutions and tuberculosis contacts. We will include studies of tuberculosis programmes that invite tuberculosis contacts to facility-based screening services. We will exclude studies of programmes that screen people seeking health care at health facilities and high-risk groups at specific care clinics, if these screening interventions are not part of a larger ACF programme in the community. Tuberculosis programmes may be organized through government services or non-governmental organizations.

### Participants and populations

We will include populations screened via active case finding activities. These populations include tuberculosis household contacts, whole communities (including refugee camps), children at school, miners or other workers at the workplace, and people in residential institutions (e.g. prisoners). This review will be constrained to community responses (individuals, families, community members and community healthcare workers) and individuals from other high-risk populations such as miners, refugees, and prisoners where applicable. The views of laboratory staff and tuberculosis programme managers delivering the programmes may be used to triangulate back to the community responses, especially where these individuals themselves have tuberculosis or describe community responses. However, we will not prioritize evidence for the effectiveness or implementation of tuberculosis programmes.

There is no age range for participation in eligible qualitative studies. Participants in qualitative studies may or may not have had tuberculosis themselves. Populations of interest must not already be situated along a competing care pathway, where they may encounter tuberculosis screening as an addition to their care (i.e. tuberculosis screening and sputum collection during antenatal care visits, or during routine HIV care).

### Setting

We will include studies of tuberculosis active case finding conducted in any LMIC setting with programmes in the community. Individuals may be approached directly for screening at work, home, residential institution, or school, or they may be approached in the community and invited to a dedicated screening service at a mobile clinic or a health facility.

We will define LMIC according to the the World Bank country rankings for 2020. We also aim to include studies in countries considered to be of high tuberculosis burden by the WHO ([Stop TB Partnership 2021](#)).

We will include studies that consider ACF of people displaced within LMICs (within and between countries), but we will exclude studies of refugees and migrants moving from areas of conflict to high-

income countries. We are concerned with the experience of ACF programmes in high tuberculosis-burden settings.

### Co-morbidities

Participants in qualitative studies may have symptoms of upper respiratory tract infection or feel healthy, without symptoms. All community views are sought, whether people have tuberculosis, have respiratory symptoms, are asymptomatic and feeling well, or are caregivers or healthcare workers with no apparent health problems.

### Interventions

Active tuberculosis case finding programmes implemented in the community at households, residential institutions, mobile clinics, schools or workplaces, and dedicated screening services at health facilities (i.e. where individuals are invited for tuberculosis screening specifically). Programmes may include health promotion activities to improve uptake of screening services. Active tuberculosis case finding may also be combined with screening for HIV as tuberculosis screening algorithms in people living with HIV may differ from tuberculosis screening algorithms used for the general population.

Please refer to [Table 1](#) for definitions of ACF and related case finding terminology. This review aims to included studies of case finding interventions that take place in the community.

### Search methods for identification of studies

#### Electronic searches

The Cochrane Infectious Diseases Group (CIDG) Information Specialist created search strategies for these databases (see [Appendix 1](#)):

- MEDLINE (Ovid);
- CINAHL (Ebsco);
- PsychINFO (Ebsco);
- Embase (Ovid);
- Global Index Medicus;
- LILACS (for South America);
- Science Citation Index (Web of Science);
- Social Science Citation Index (Web of Science).

We will search for papers published in the last ten years (from 2010) in order to capture evidence relevant to current tuberculosis screening strategies and diagnostic tests. We will not impose language restrictions. We will not apply a filter to limit studies to LMICs.

#### Searching other resources and grey literature

We will consult with tuberculosis experts for qualitative studies and follow the references of included studies and known systematic reviews to identify additional studies.

#### Selection of studies

This qualitative evidence synthesis will be conducted and reported according to the PRISMA statement ([Moher 2009](#)).

We will collate records from database searches into a reference management programme (EndNote; [endnote.com](#)) and remove

duplicates and irrelevant titles. Two authors will independently assess abstracts against a priori eligibility criteria developed with elements from PICO (population, intervention, comparison, outcome) and SPIDER (sample, phenomenon of Interest, design, evaluation, research type) (Cooke 2012). We will use Covidence software for title and abstract screening (Covidence 2020). We will retrieve the full text of all the papers identified as potentially relevant by one or both review authors. Two review authors will then assess these papers independently. We will resolve disagreements by discussion or, when required, by involving a third review author. Where appropriate, we will contact the study authors for further information. We will include a table of studies excluded at the full text stage and the reasons for exclusion.

Where the same study, using the same sample and methods, has been presented in different reports, we will collate these reports so that each study (rather than each report) is the unit of interest in our review.

### Language translation

For titles and abstracts that are published in a language that none of the review team are fluent in, we will carry out an initial translation through open source software (Google Translate; [translate.google.com](https://translate.google.com)). If this translation indicates inclusion, or if the translation is inadequate to make a decision, we will retrieve the full text of the paper. We will then ask members of Cochrane networks or other networks that are fluent in that language to assist us in assessing the full text of the paper for inclusion. If this cannot be done for a paper in a particular language, the paper will be listed as 'studies awaiting classification' to ensure transparency in the review process.

### Sampling of studies

Our qualitative evidence synthesis aims to construct a coherent picture of the literature that describes the experience of tuberculosis active case finding in communities in LMICs. If we find a large number of studies eligible for inclusion, we may consider purposeful sampling of studies with rich or useful data to represent diverse concepts and target populations. We would follow transparent methods such as those outlined in Ames 2019. In addition to an assessment of the quality of the data, dimensions to construct a sampling frame could include aspects of the intervention itself (i.e. its setting in schools, communities, or health facilities) or characteristics of prioritized risk populations (i.e. children, pregnant women).

### Data extraction

We will map basic details for eligible studies to create broad categories of study identifiers, including: study author, year of publication, language, study location, screening and diagnostic tools used, risk group or target population, background prevalence of tuberculosis and HIV, study question and rationale, method of data collection, study respondents or participants, method of data analysis, and key study findings.

We will characterize programmatic features of the interventions where this is possible: the scale of the programme, the screening and diagnostic tools used, risk group or target population, and background prevalence of tuberculosis and HIV. We will characterize the interventions, the scale and the agencies responsible for implementing them, and consider any ethical issues

and how these are managed, including consent and confidentiality. We will also examine whether qualitative researchers are part of the teams designing or implementing the tuberculosis programmes, or are separate from this delivery. We will explore whether those evaluating consumer responses are entirely independent of those designing or implementing the screening approach, or whether they are from the same research group and funding source.

### Assessing the methodological limitations of studies

Two review authors (NM and MT) will independently assess methodological limitations for each study using the Evidence for Policy and Practice Information (EPPI) centre tool (as described in Lester 2019). The tool considers the following domains of qualitative study methods: rigour in sampling, rigour in data collection, rigour in analysis, grounding of data, and the breadth and depth of study findings. We will resolve disagreements by discussion or, when required, by involving a third review author. We will report our assessments in a 'Methodological limitations' table.

### Data management, analysis, and synthesis

#### Strategy for data synthesis

We will employ inductive methods associated with grounded theory to develop codes and themes evident in the included studies and to construct synthesis statements for community views of tuberculosis active case finding programmes. We aim to produce a logic model to illustrate and explain community views of ACF.

Understanding community views of tuberculosis screening requires that included studies employ research methods that allow people to respond freely, with their own ideas and experiences. We will identify included studies that apply such methods to generate 'thick' or 'rich' data. 'Thick' or 'rich' qualitative findings provide detailed descriptions of events and contexts. 'Thick' findings capture "the drama of events, thereby permitting multiple interpretations" for readers to identify with and understand the experience and meaning of tuberculosis active case finding (Neuman 1997; Pullin 2013). Ames 2019 outlines several criteria to explain thick data, including the amount of data available and any information on its context, setting, and depth.

We will begin our data analyses by considering studies assessed to be 'thick' independently by two review authors (NM, MT). These authors will then independently identify codes and themes in the data. During discussion of codes and themes, one author (NM) will enter these data into Atlas.ti software (Atlas.ti 2020). Through discussion, the full author team will consider patterns in the data, or themes, across studies to create summaries of findings (SoFs) and overarching synthesis statements (Downe 2019). Our methods will be iterative. A single author (NM) will code remaining included studies (i.e. those not identified as 'thick') and enter these data into Atlas.ti.

We may consider additional methods such as framework analysis, endorsed by Cochrane and the WHO, to explore complex interventions (Booth 2019; Flemming 2019; Harris 2018). The author team will explore frameworks to understand how tuberculosis care operates within communities. For example, if we consider participation in tuberculosis active case finding as a desired behaviour, the data may benefit from applying a theoretical framework of behaviour change, such as the Capability-Opportunity-Motivation framework (Michie 2011).

Additional theory may be useful to characterize dimensions of tuberculosis stigma and its operation in communities ([Link 2001](#)).

This review will be finalised using RevMan software ([RevMan 2014](#)).

### Assessing our confidence in the review findings

Our data analysis will synthesize findings across studies related to active case finding. This interpretation of the whole dataset will encompass a variety of tuberculosis community interventions in terms of programmatic considerations and other contextual factors.

Our primary purpose is to use review findings, or sub-themes, to develop meaningful and compelling theory around community views of active case finding. Our earlier work has demonstrated this type of synthesis raises important factors that need to be taken into account in planning, presenting, and organizing such services, as well as demonstrating quite fundamental mismatches between what providers think they are doing, what the public want, and what is actually in the public narrative.

Two review authors (NM and MT) will use the GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative research) approach to assess our confidence in review findings, or sub-themes ([Lewin 2018](#); [Lewin 2019](#)). CERQual assesses confidence in the evidence, based on the following four key components.

- Methodological limitations of included studies: the extent to which there are concerns about the design or conduct of the primary studies that contributed evidence to an individual review finding.
- Coherence of the review finding: an assessment of how clear and cogent the fit is between the data from the primary studies and a review finding that synthesizes those data. By cogent, we mean well supported or compelling.
- Adequacy of the data contributing to a review finding: an overall determination of the degree of richness and quantity of data supporting a review finding.
- Relevance of the included studies to the review question: the extent to which the body of evidence from the primary studies supporting a review finding is applicable to the context (perspective or population, phenomenon of interest, setting) specified in the review question.

After assessing each of the four components, we will make a judgement about the overall confidence in the evidence supporting the review findings. We will judge confidence as high, moderate, low, or very low. The final assessment will be based on consensus among the review authors. All findings start as high confidence and will then be graded down if there are important concerns regarding any of the CERQual components.

### Summary of qualitative findings tables and Evidence profiles

We will present summaries of the findings and our assessments of confidence in these findings in 'Summary of qualitative findings' tables. We will present detailed descriptions of our confidence assessment in 'Evidence profiles'.

### Review author reflexivity

The author team have diverse research and clinical experience, including expertise in clinical tuberculosis care, infectious disease research, WHO guideline development and quantitative and qualitative evidence synthesis. Most authors also have experience of conducting research in low- and middle-income countries. Regular team discussions will encourage identification of personal biases and judgements as the synthesis proceeds.

NM has authored quantitative systematic reviews and was trained as an historian. This training may make her more attuned to the way local history and past experience with public health programmes shape community views of tuberculosis case finding and screening. NM has not written about tuberculosis previously.

MT has authored a similar qualitative review describing the community views of mass drug administration programmes. Wider sociopolitical influences on acceptability and the weight of benefit versus harms were key findings of the review and may influence her interpretation of the data in this study. MT has no prior knowledge of tuberculosis screening or intervention programmes.

SSvW has clinical and research experience in high tuberculosis and HIV burden communities in South Africa. She is also working on a systematic review on screening tests for active pulmonary tuberculosis in children.

SO has co-authored a similar review describing parents' and practitioners' views of newborn bloodspot screening. Her experience of this work made her sensitive to the possibility of screening pathways and false positive or false negative screen results affecting experiences of screening. She has no prior knowledge or experience with tuberculosis screening or intervention programmes.

### ACKNOWLEDGEMENTS

The Academic Editors are Professor Gerry Davies (CIDG), and Dr Meghan Bohren (Cochrane Effective Practice and Organisation of Care).

NM and MT are supported, and SSvW and SO are partly supported, by the Research, Evidence and Development Initiative (READ-It).

READ-It and the CIDG editorial base are funded by UK aid from the UK government for the benefit of low- and middle-income countries (project number 300342-104). The views expressed do not necessarily reflect the UK government's official policies.

## REFERENCES

### Additional references

#### Ames 2019

Ames H, Glenton C, Lewin S. Purposive sampling in a qualitative evidence synthesis: a worked example from a synthesis on parental perceptions of vaccination communication. *BMC Medical Research Methodology* 2019;**19**(26):1-9. [DOI: [10.1186/s12874-019-0665-4](https://doi.org/10.1186/s12874-019-0665-4)]

#### Atlas.ti 2020 [Computer program]

Scientific Software Development GmbH Atlas.ti. Version 9 Mac. Berlin: Scientific Software Development GmbH, 2020. Available at [www.atlasti.com](http://www.atlasti.com).

#### Biermann 2019

Biermann O, Lönnroth K, Caws M, Viney K. Factors influencing active tuberculosis case-finding policy development and implementation: a scoping review. *BMJ Open* 2019;**9**:e031284. [10.1136/bmjopen-2019-031284]

#### Booth 2019

Booth A, Noyes J, Flemming K, Moore G, Tunçalp O, Shakibazadeh E. Formulating questions to explore complex interventions within qualitative evidence synthesis. *BMJ Global Health* 2019;**4**(Suppl 1):e001107.

#### Cooke 2012

Cooke A, Smith D, Booth A. Beyond PICO: the SPIDER tool for qualitative evidence synthesis. *Qualitative Health Research* 2012;**22**(10):1435-43.

#### Covidence 2020 [Computer program]

Veritas Health Innovation Covidence. Melbourne, Australia: Veritas Health Innovation, Version accessed 5 March 2020. Available at [covidence.org](http://covidence.org).

#### Cummiskey 2014

Cummiskey JR. Drugs, race and tuberculosis control in Baltimore, 1950 - 1978. *Social History of Medicine* 2014;**27**(4):728-50. [DOI: [10.1093/shm/hku034](https://doi.org/10.1093/shm/hku034)]

#### Dey 2019

Dey A, Thekkur P, Ghosh A, Dasgupta T, Bandopadhyay S, Lahiri A, et al. Active case finding for tuberculosis through TOUCH Agents in selected high TB burden wards of Kolkata, India: a mixed methods study on outcomes and implementation challenges. *Tropical Medicine and Infectious Disease* 2019;**4**(134):1-16.

#### Downe 2019

Downe S, Finlayson KW, Lawrie TA, Lewin SA, Glenton C, Rosenbaum S, et al. Qualitative Evidence Synthesis (QES) for Guidelines: Paper 1 - Using qualitative evidence synthesis to inform guideline scope and develop qualitative findings statements. *Health Research Policy and Systems / BioMed Central* 2019;**17**(1):76.

#### Flemming 2019

Flemming K, Booth A, Garside R, Tunçalp O, Noyes J. Qualitative evidence synthesis for complex interventions and guideline development: clarification of the purpose, designs and relevant methods. *BMJ Global Health* 2019;**4**(Suppl 1):e000882.

#### Harris 2018

Harris JL, Booth A, Cargo M, Hannes K, Harden A, Flemming K, et al. Cochrane Qualitative and Implementation Methods Group guidance series-paper 2: methods for question formulation, searching, and protocol development for qualitative evidence synthesis. *Journal of Clinical Epidemiology* 2018;**97**:39-48.

#### Kranzer 2013

Kranzer K, Afnan-Holmes H, Tomlin K, Golub JE, Shapiro AE, Schaap A, et al. The benefits to communities and individuals of screening for active tuberculosis disease: a systematic review. *International Journal of Tuberculosis and Lung Disease* 2013;**17**(4):432-46. [DOI: [10.5588/ijtld.12.0743](https://doi.org/10.5588/ijtld.12.0743)]

#### Lester 2019

Lester S, Lorenc T, Sutcliffe K, Khatwa M, Stansfield C, Sowden A, et al. What helps to support people affected by Adverse Childhood Experiences? A Review of Evidence. London (UK): EPPI-Centre, Social Science Research Unit, UCL Institute of Education, University College London, 2019.

#### Lewin 2018

Lewin S, Bohren M, Rashidian A, Munthe-Kaas H, Glenton C, Colvin CJ, et al. Applying GRADE-CERQual to qualitative evidence synthesis findings-paper 2: how to make an overall CERQual assessment of confidence and create a Summary of Qualitative Findings table. *Implementation Science* 2018;**13**(Suppl 1):10.

#### Lewin 2019

Lewin S, Glenton C, Lawrie TA, Downe S, Finlayson KW, Rosenbaum S, et al. Qualitative Evidence Synthesis (QES) for Guidelines: Paper 2 - Using qualitative evidence synthesis findings to inform evidence-to-decision frameworks and recommendations. *Health Research Policy and Systems / BioMed Central* 2019;**17**(1):75.

#### Lichtenstein 2018

Lichtenstein B, Pettway T, Weber J. Sharecropper's Tuberculosis: pathologies of power in a fatal outbreak. *Medical Anthropology* 2018;**37**(6):499-513. [DOI: [10.1080/01459740.2017.1417282](https://doi.org/10.1080/01459740.2017.1417282)]

#### Link 2001

Link BG, Phelan JC. Conceptualizing stigma. *Annual Review of Sociology* 2001;**27**:363-85. [DOI: [10.1146/annurev.soc.27.1.363](https://doi.org/10.1146/annurev.soc.27.1.363)]

#### Lönnroth 2009

Lönnroth K, Jaramillo E, Williams BG, Dye C, Raviglione M. Drivers of tuberculosis epidemics: the role of risk factors and social determinants. *Social Science & Medicine* 2009;**68**:2240-6.

**Lönnroth 2013**

Lönnroth K, Corbett E, Golub J, Godfrey-Faussett P, Uplekar M, Weil D, et al. Systematic screening for active tuberculosis: rationale, definitions and key considerations. *International Journal of Tuberculosis and Lung Disease* 2013;**17**(3):289-98.

**McCartney 2020**

McCartney M, Fell G, Finnikin S, Hunt H, McHugh M, Gray M. Why 'case finding' is bad science. *Journal of the Royal Society of Medicine* 2020;**113**(2):54-8.

**Mhimbira 2017**

Mhimbira FA, Cuevas LE, Dacombe R, Mkopi A, Sinclair D. Interventions to increase tuberculosis case detection at primary healthcare or community-level services. *Cochrane Database of Systematic Reviews* 2017, Issue 11. Art. No: CD011432. [DOI: [10.1002/14651858.CD011432.pub2](https://doi.org/10.1002/14651858.CD011432.pub2)]

**Michie 2011**

Michie S, Van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science* 2011;**6**(42):1-11.

**Mitchell 2012**

Mitchell EM, Shapiro A, Golub J, Kranzer K, Portocarrero AV. Acceptability of TB screening among at-risk and vulnerable groups: a systematic qualitative/quantitative literature metanalysis. World Health Organization 2012.

**Mitchell 2013**

Mitchell EM, den Boon S, Lönnroth K. Acceptability of household and community-based TB screening in high burden communities: a systematic literature review. World Health Organization 2013.

**Moher 2009**

Moher D, Liberati A, Tetzlaff J, Altman DG, the PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Medicine* 2009;**6**(7):e1000097.

**Murray 2013**

Murray EJ, Bond VA, Marais BJ, Godfrey-Faussett P, Ayles HM, Beyers N. High levels of vulnerability and anticipated stigma reduce the impetus for tuberculosis diagnosis in Cape Town, South Africa. *Health Policy and Planning* 2013;**28**:410-418. [DOI: [10.1093/heapol/czs072](https://doi.org/10.1093/heapol/czs072)]

**Neuman 1997**

Neuman L. Social Research Methods: Qualitative and Quantitative Approaches. New York (NY): Allyn and Bacon, 1997.

**Pullin 2013**

Pullin AS, Bangpan M, Dalrymple S, Dickson D, Haddaway NR, Healey JR, et al. Human well-being impacts of terrestrial protected areas. *Environmental Evidence* 2013;**2**(19):1-41. [DOI: [10.1186/2047-2382-2-19](https://doi.org/10.1186/2047-2382-2-19)]

**RevMan 2014 [Computer program]**

Nordic Cochrane Centre, Cochrane Review Manager 5 (RevMan 5). Version 5.3. Copenhagen: Nordic Cochrane Centre, Cochrane, 2014.

**Stop TB Partnership 2021**

Stop TB Partnership. High burden countries. [www.stoptb.org/countries/tbdata.asp](http://www.stoptb.org/countries/tbdata.asp) (accessed prior to 17 February 2021).

**Tulloch 2015**

Tulloch O, Theobald S, Morishita F, Datiko DG, Asnake G, et al. Patient and community experiences of tuberculosis diagnosis and care within a community-based intervention in Ethiopia: a qualitative study. *BMC Public Health* 2015;**15**:187. [DOI: [10.1186/s12889-015-1523-x](https://doi.org/10.1186/s12889-015-1523-x)]

**Uplekar 2013**

Uplekar M, Cresswell J, Ottmani SE, Weil D, Sahu S, Lönnroth K. Programmatic approaches to screening for active tuberculosis. *International Journal of Tuberculosis and Lung Disease* 2013;**17**(10):1248-56.

**Van Wyk in progress**

Van Wyk S, Medley N, Young T, Oliver S. Systematic screening strategies for tuberculosis: a review of case-finding programme characteristics and features. Stellenbosch University, in progress.

**WHO 2011**

World Health Organization. Guidelines for intensified tuberculosis case-finding and isoniazid preventive therapy for people living with HIV in resource-constrained settings. Geneva, Switzerland: World Health Organization, 2011.

**WHO 2013**

World Health Organization. Systematic screening for active tuberculosis: principles and recommendations. Geneva, Switzerland: World Health Organization, 2013. [ISBN 9789241548601]

**WHO 2015**

World Health Organization. Systematic screening for active tuberculosis: an operational guide. Geneva, Switzerland: World Health Organization, 2015. [ISBN 9789241549172]

**WHO 2019a**

World Health Organization. Global tuberculosis report 2019. Geneva, Switzerland: World Health Organization, 2019. [ISBN 9789241565714]

**WHO 2019b**

World Health Organization. People-centred framework for tuberculosis programme planning and prioritization - User guide. Geneva: World Health Organization, 2019.

**Wingfield 2019**

Wingfield T, Verguet S. Active case finding in tuberculosis-affected households: time to scale up. *The Lancet Global Health* March 2019;**7**(3):e296-e298.

**ADDITIONAL TABLES**

**Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis (Protocol)**

Copyright © 2021 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

**Table 1. Tuberculosis case finding definitions**

	Definition of activity	Location	Included?	Example intervention
Active case finding (ACF)	ACF is “synonymous with systematic screening for active TB” or “the systematic identification of people with suspected active TB in a predetermined target group by the application of tests, examinations or other procedures” (i.e. symptom screen, chest radiography (CXR), or both) (WHO 2013).	Community	Yes	Symptom screening for all employees of a factory  Community TB contact tracing to invite people for screening at a clinic
Enhanced case finding (ECF)	ECF is “a type of case-finding that uses health information or education to provide information about what type of health-seeking behaviour is appropriate when people experience symptoms of TB” (WHO 2013).	Clinic or community	No unless ECF is combined with community TB activities	Community education campaign and screening via mobile clinic
Intensified case finding (ICF)	WHO guidance for ICF states, “All people living with HIV, wherever they receive care, should be regularly screened for TB using a clinical algorithm at every visit to a health facility or contact with a health worker” (WHO 2011).  Intensive case finding is also used as a general term for TB screening (WHO 2019b).	Clinic or community	No	TB screening test added during HIV clinic visit

## APPENDICES

### Appendix 1. Search strategies

#### PubMed (MEDLINE)

Search	Query
#1	Search tuberculosis Field: Title/Abstract
#2	Search "Tuberculosis"[Mesh]
#3	Search (#1) OR #2
#4	Search "case finding" or ACF or ICF Field: Title/Abstract
#5	Search "Contact Tracing"[Mesh]
#6	Search "Mass Screening"[Mesh]
#7	Search "contact screening" or "contact tracing" or "contact investigation" Field: Title/Abstract
#8	Search (#7) OR #6 OR #5 OR #4

(Continued)

#9	Search (#3) AND #8
#10	Search ((focus group [MeSH Terms]) OR "interviews as topic"[MeSH Terms]) OR social stigma [MeSH Terms] OR "Surveys and Questionnaires"[Mesh]
#11	Search belief* OR attitude* OR opinion* OR views OR interview* OR survey* or perception* OR perspective*
#12	Search (#11) OR #10
#13	Search (#9) AND #12 Filters: Publication date from 2010/01/01

### Embase

Search Strategy:

-----

- 1 tuberculosis.mp. or tuberculosis/
- 2 contact tracing.mp. or contact examination/
- 3 ("contact screening" or "contact investigation").mp.
- 4 exp case finding/
- 5 ("case finding" or ACF or ICF).mp.
- 6 2 or 3 or 4 or 5
- 7 1 and 6
- 8 focus group.mp.
- 9 Diagnostic Interview Schedule/ or telephone interview/ or interview\*.mp. or interview/
- 10 social stigma.mp. or social stigma/
- 11 questionnaire.mp. or questionnaire/
- 12 8 or 9 or 10 or 11
- 13 7 and 12
- 14 (belief\* or attitude\* or opinion\* or views or interview\* or survey\* or perception\* or perspective\*).mp.
- 15 7 and 14
- 16 13 or 15
- 17 limit 16 to yr="2010 -Current"

### CINAHL and PsycInfo (EBSCOhost)

#	Query
S11	S7 AND S10
S10	S8 OR S9

(Continued)

S9	TX belief* OR attitude* OR opinion* OR views or perception* OR perspective*
S8	TX focus group OR TX interview* OR TX ( survey or questionnaire ) OR TX social stigma
S7	S1 AND S5
S6	S1 AND S5
S5	S2 OR S3 OR S4
S4	TX case finding OR TX ( ACF or ICF )
S3	TX contact investigation OR TX contact screening
S2	TX contact tracing
S1	TI ( tuberculosis or tb ) OR AB ( tuberculosis or tb ) OR MH tuberculosis

#### Database: LILACS

Search on: tuberculosis or TB [Words] and "case finding" or "contact tracing" or "contact screening" [Words] and interview or survey or opinion\$ or perception\$ [Words]

#### Web of Science

# 4	#2 AND #1  <b>Refined by: PUBLICATION YEARS:</b> ( 2020 OR 2010 OR 2019 OR 2018 OR 2017 OR 2016 OR 2015 OR 2014 OR 2013 OR 2012 OR 2011 )  Indexes=SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH Timespan=All years
# 3	#2 AND #1  Indexes=SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH Timespan=All years
# 2	<b>TOPIC:</b> ("focus group*" or interview* or "social stigma" or survey* or questionnaire*) OR <b>TOPIC:</b> (belief* OR attitude* OR opinion* OR views OR interview* OR survey* or perception* OR perspective*)  Indexes=SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH Timespan=All years
# 1	<b>TOPIC:</b> (tuberculosis OR TB) AND <b>TOPIC:</b> ("contact tracing" or "contact screening" or "contact investigation" or "case finding")  Indexes=SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH Timespan=All years

#### Global Index Medicus ([www.globalindexmedicus.net/](http://www.globalindexmedicus.net/))

Search

(tw:(tuberculosis)) AND (tw:(contact tracing)) AND (tw:(interview or survey or opinion\*))

#### HISTORY

Protocol first published: Issue 3, 2021

**Community views on active case finding for tuberculosis in low- and middle-income countries: a qualitative evidence synthesis (Protocol)**

Copyright © 2021 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

---

## CONTRIBUTIONS OF AUTHORS

Paul Garner (CIDG Co-ordinating Editor) and NM conceptualized the review in response to a request for qualitative evidence from the World Health Organization (WHO).

All protocol authors contributed to the design and writing of the protocol, and approved the final protocol for publication.

## DECLARATIONS OF INTEREST

NM has no known conflicts of interest.

MT has no known conflicts of interest.

SSvW has no known conflicts of interest.

SO has no known conflicts of interest.

## SOURCES OF SUPPORT

### Internal sources

- Liverpool School of Tropical Medicine, UK

### External sources

- Foreign, Commonwealth and Development Office (FCDO), UK

Project number 300342-104