

A guide to synthesising **CASE STUDIES**

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Background

Practice-based case studies¹ are widely recognised as an important source of knowledge and learning. They can represent an alternative, and complementary, form of evidence to scientific or research-based evidence as they illuminate aspects of implementation and outcomes in real life settings. The contextual information included in case studies can be particularly helpful for practitioners, policy makers and funders wishing to learn about how to apply and adapt different approaches in other contexts. Practice-based case studies can provide insight into the questions of 'how' and 'why' projects or programmes work in highly complex settings and often incorporate community perspectives and the narrative form can make them easy to understand and share.

What do we mean by practice-based case studies?

Practice-based case studies report on the evidence generated from the implementation of an intervention in a real-life practice setting. They typically provide a narrative explaining how the intervention was developed in that context and what happened, including the learning from those involved in the development and delivery of that intervention. They are most often written by practitioners involved in an intervention, but can also be developed in collaboration with funders, third sector organisations or researchers aiming to capture practice-based knowledge.

However, there is often a concern that practice-based case studies lack rigour; that data may not have been collected systematically and that findings may be biased. Case studies that are intended to be short and accessible, may not contain sufficient information on the problem, context, processes or outcomes to be used as evidence to inform an understanding of the issue.

Furthermore, the aim to uncover detailed contextual and sometimes personal information in developing practice-based case studies means anonymity, confidentiality, and informed consent are very pertinent issues. There needs to be a balance between providing the necessary rich information and protecting participants.

When judged against positivist standards of internal validity, external validity, construct validity, reliability, and generalisability, practice-based case studies are commonly considered to be poor quality.

While it is recognised that practice-based case studies may provide a valuable source of evidence complementary to research-based evidence, there has been a gap in knowledge of how to collate, review and synthesise these type of case studies and how quality should be assessed.

This guidance, which provides a step by step approach to synthesising practice-based case study evidence, is motivated by the opportunity presented by *combining* case studies, in order to make the most of the data case studies contain, whilst also producing robust, potentially transferable findings. Findings from the synthesis of a number of individual cases may allow for translation to other settings and the generalisability of the findings from the synthesis of a number of practice-based case studies may also be increased by linking back to theory.

This note suggests how to apply a pragmatic approach to gathering, reviewing and synthesising individual practice-based case studies, in order to inform our understanding and treatment of the data

¹ The term 'case study' covers multiple types of case study, ranging from in-depth research studies through to exemplars of good practice or illustrative promotional stories. This study is concerned with practice-based case studies that emerge from the experiential knowledge of stakeholders involved in activities in real life settings to report learning in a reasonably systematic way, often developed for the purpose of disseminating transferable learning from local programme implementation. This is distinct from research-based case studies, which investigate a phenomenon (e.g. a programme, a role, or a policy) within specific contexts using accepted research methods of data collection and analysis.

and findings they present. This has also led to the production of [guidance for commissioners of case studies](#) which sets out what a good case study looks like and what type of information should be included.

This guide follows a full review of synthesis approaches that might be appropriate for practice-based case study evidence. The review included testing one approach, which has been used as the basis for this guide, to illustrate how synthesis can be done in practice. This is not the only way it can be done, nor will it necessarily be the best approach, depending on the research question and associated practice-based case studies available. This guide therefore suggests an approach to case study synthesis that is systematic, transparent and pragmatic, and can be used as the basis for further methodological refinements and adaptations, so please let us know how this works in your context to support our continuous learning. You can read a [detailed account of methods used](#) in the review and pilot.

A step-by-step approach to case study synthesis

A case study synthesis will go through the same steps as a systematic review, but adapted to be relevant for the nature of the evidence in practice-based case studies. This guidance note provides some suggestions on how to conduct a practice-based case study synthesis, based on the approach piloted as part of the What Works Centre for Wellbeing's [review of case study synthesis](#).

1. Developing research questions

Review questions should be identified that are appropriate for the type of data contained in practice-based case studies. Practice-based case study evidence may usefully fill in evidence gaps identified by existing evidence reviews, particularly where the gaps are associated with understanding how interventions were implemented and contextual factors that may have had an impact. For example, existing systematic reviews may find that an intervention can be effective, whilst practice-based case studies may usefully be able to provide data on what was done, in what circumstances and suggest why interventions might work better for some people rather than others.

An important first stage is to identify or develop a conceptual framework that helps define, categorise and select interventions of interest. These could include projects, initiatives, services or programmes. This helps in searching and selection of a body of case studies that share common features and are suitable for synthesis. A framework can also be developed based on systematic review findings.

2. Searching for evidence

Not all practice-based case studies can be brought together in a synthesis. A major problem confronting any multiple-case research design is the potential heterogeneity in the cases, making it difficult to make comparisons for the synthesis. Developing a search strategy and selection criteria for case should follow a similar process to a systematic review, with attention to defining terms (using the conceptual framework). The selection process should be made transparent as this will help inform readers of any potential bias to be accounted for.

A number of collections, databases and reports of case studies exist, which contain case studies relevant to wellbeing research. Some of these databases are listed in Appendix 1². A search through these collections can be complemented by issuing a call for evidence, and disseminating this call through networks of known researchers and practitioners engaged in the subject area.

Unlike published literature, where initial searches are made on the titles and abstracts using searchable databases, there is no standardised structure of case studies where key information may be contained in abstracts for example and no standard search functions for case study collections as per scientific journal collections. Archiving and tagging of practice-based case studies is likely to be less systematic than academic databases.

As such, pragmatic search methods to identify an initial long list of case studies can be used. This is likely to involve using search functions on the publications or resources pages on websites where case studies can be found, using the research topic as the initial search criteria. Publications that include case studies can be hand searched, reviewing the title and full content of the case study.

Additionally, where relevant projects and practitioners can be identified that have relevant experience to share, case studies could be commissioned to add to the pool of studies. [Guidance for commissioning effective case studies](#) can be found here.

3. Selecting studies

Clearly detailing the criteria for deciding which case studies to include is needed to help maintain a systematic and consistent approach. A long list of studies should then be screened, and accepted or rejected for the review based on inclusion criteria.

Inclusion criteria can include:

- Common focus of all studies regarding topic or unit of analysis and the outcome (eg. changes to wellbeing), to facilitate a coherent synthesis in relation to the research questions
- Sufficient information about the intervention or project, the contextual factors relating to the unique setting in which it was delivered and outcomes and impact, demonstrating the value of specific kinds of data included in practice based case studies
- Enough methodological information to allow readers to understand how information was sourced, including the quality of the data collection and analysis and who was involved in the production of the case study.

4. Extracting data

A data extraction template should be developed to systematically extract relevant data fields from each case study. Organising the case study data using a template with common fields/domains will help with later stages of analysis. The fields should be developed based on the research question and the analysis and synthesis methods that will be used. For example if planning to use a framework analysis for qualitative data, themes and subthemes should be identified and extracted from each study.

Data should also be extracted based on the quality domains (see point 5 below) as well as a realistic expectation of the type of data that is likely to be contained in each study.

² This list is intended to be helpful, but is not exhaustive. Researchers that are aware of and have used other databases are encouraged to share these with the What Works Centre for Wellbeing to update this guide.

The data extraction template should be piloted with a selection of case studies to test its appropriateness. See appendix 2 for a sample template.

5. Assessing the quality of practice-based case studies

It is inappropriate to judge practice-based case studies by the standards of more formal/professional research or evaluation. Currently, there is no quality assessment tool available for practice-based case studies that has been tested in terms of which domains to assess, how scoring would work and whether relative weighting should be applied to domains.

However, it is important to know the relative quality of each piece of evidence with respect to how much it contributes to our understanding of the research question. This can be derived from case studies based on reviewing the accessibility of the information and how believable it is. Accessibility relates both to how well written and presented a case study is and whether there is a 'thick' description of the programme (enough to understand what happened and why). How believable a case study is depends on knowing how the case study was undertaken.

See appendix 3 for a sample quality checklist. This assesses practice-based case studies against a number of quality domains:

- Integrity
- Transparency
- Completeness
- Responsibility
- Format
- Learning reported

A useful and relevant practice-based case study would contain information against most of the quality domains. Further methodological research is needed to pilot and test quality appraisal criteria for practice-based case studies.

6. Synthesis

There is no established 'best' method for synthesising practice-based case studies and different approaches may be more or less applicable depending on the research question and evidence available³. Generally, displaying cases in a table (using the data extraction table), subdivided by fields of interest, in a condensed form that permits a systematic visualisation and comparison of the cases (cross case analysis) would be appropriate for practice-based case studies. 'Tagging' and the appropriate storing of case studies in a table can help the synthesis process and make individual case studies more accessible.

Framework Analysis is a well-recognised qualitative analysis method for applied research and was used for the pilot study. It offers a transparent and systematic process that allows for identification of patterns between cases without losing the contextual details that could be missed if data were pooled⁴. Cross case analysis is then built up in stages:

- (i) applying the data extraction template and thematic coding of data
- (ii) developing a matrix of themes within cases and across cases variable by variable

³ A realist approach may be more appropriate if the focus of the research question is on understanding mechanisms, see: Rycroft-Malone, J., McCormack, B., Hutchinson, A.M. *et al.* Realist synthesis: illustrating the method for implementation research. *Implementation Sci* 7, 33 (2012). <https://doi.org/10.1186/1748-5908-7-33>

⁴ See Gale, N. K., G. Heath, E. Cameron, S. Rashid and S. Redwood (2013). "Using the framework method for the analysis of qualitative data in multi-disciplinary health research." *BMC Medical Research Methodology* 13(1): 117. and Ritchie, J., L. Spencer and W. O'Connor (2003). Carrying out qualitative analysis. *Qualitative research practice. A guide for social science students and researchers*. J. Lewis and J. Ritchie. London, Sage: 219-262.

(ii) development of an overarching thematic framework(s) that provides a representation of the whole data set and cross-cutting themes.

This is likely to involve an iterative process as themes are identified, grouped and categorised and analytic interpretations built across the included case studies. The final stage is production of a narrative account of the synthesis results presented according to the final framework and major thematic categories. In the pilot synthesis of community projects, the major categories for reporting were: Purpose and approach; What works – what supports; and Outcomes.

7. Reporting synthesis findings and their quality and implications

The narrative account of the synthesis results should cover:

- An overview or map of the included case studies and their attributes in terms of source, population, setting, intervention, methods and comprehensiveness of reporting.
- A narrative report of major themes, which should be illustrated with contextual detail drawn from the individual cases and direct quotations of source material.
- Summary tables of the major thematic categories and themes.
- A full list of included case studies and sources.

Results from any quality appraisal, which for this pilot provided detail with respect to how much each study contributes to our understanding of the research question, should be reported. This will help end users assess the credibility and applicability of the included case studies and the final results.

Practice-based case studies are an important source of evidence and where possible, reports should draw out what added value the results offer in comparison to the formal evidence base. Case study synthesis findings can help to illuminate the key processes and practical activities that work in real life settings, providing transferable learning on project development, adaption, implementation and learning for practitioners and funders. Practitioner insights and community perspectives are often central to these accounts and can be highlighted. These aspects are usually not covered in depth in effectiveness reviews.

Appendix 1: Example collections of case studies in websites and reports

	Collection name	Purpose	Link
1	Public Health England Library**	To share learning from PH practitioners experience of implementation. Embed local, regional and national descriptions of practice or services.	https://phelibrary.koha-ptfs.co.uk/practice-examples/
2	Cambridge Institute of Public Health**	Illustrate ways in which researchers have impacted health policy at local and international levels. Aim to encourage researchers to think about knowledge exchange	https://www.iph.cam.ac.uk/public-health-policy/case-studies/
3	Think Local Act Personal**	Transforming health and care through personalisation and community based support.	https://www.thinklocalactpersonal.org.uk/Latest/?s=20
4	Social Care Institute for Excellence**	SCIE co-produces, shares and supports the use of the best available knowledge and evidence about what works in practice.	https://www.scie.org.uk/atoz/?f_az_subject_t_hesaurus_terms_s=case+studies&st=atoz
5	AHSN Atlas of Solutions in Healthcare**	Case studies from 15 AHSNs sharing examples of how to spread high impact innovation across health and social care.	http://atlas.ahsnnetwork.com/

6	Everyday interactions case studies - RSPH**	Provide examples of Everyday Interactions Impact Pathways in practice.	https://www.rsph.org.uk/our-work/policy/wider-public-health-workforce/measuring-public-health-impact/case-studies.html
7	Implementing MECC**	Examples of MECC implementation	https://www.makeeverycontactcount.co.uk/implementing/case-studies/
8	Local Government Association**	Innovative programmes councils are involved in	https://www.local.gov.uk/case-studies
9	NICE Shared Learning Case Studies**	Showing how guidance and standards can improve local health and social care services	https://www.nice.org.uk/about/what-we-do/into-practice/shared-learning-case-studies
10	What Works Wellbeing**	Best available evidence and practice examples from organisations trying to improve wellbeing	https://whatworkswellbeing.org/evidence-into-action/
11	NHS Health Check**	Aimed at commissioners and providers	https://www.healthcheck.nhs.uk/commissioners-and-providers/evidence/case-studies/
12	NHS RightCare Casebooks**	Examples of commissioning innovations	https://www.england.nhs.uk/rightcare/products/casebooks/
13	eWIN - NHS workforce information network**	Best practice relating to workforce development, efficiency and productivity	http://www.ewin.nhs.uk/tools_and_resources?tid_1%5B%5D=61

14	National Alliance for Arts Health and Wellbeing**	To provide a clear, focused voice to articulate the role creativity can play in health and wellbeing	http://www.artshealthandwellbeing.org.uk/app/inquiry-submissions
15	Arts and Health South West (part of NAAHW)**	To provide a clear, focused voice to articulate the role creativity can play in health and wellbeing	https://www.ahsw.org.uk/studies.aspx
16	Public Health Wales / Co-production Wales**	To share good practice and knowledge in the public sector in Wales.	www.goodpractice.wales/SharedFiles/Download.aspx?pageid=96&mid=187&fileid=78
17	The National Lottery Community Fund*	A library to offer access to evidence from evaluation and learning reports from projects in the community.	https://www.tnlcommunityfund.org.uk/insights/documents
Additional reports used in pilot synthesis of community wellbeing projects			
1	'Growing Livelihoods' (Carnegie UK, 2018) **	Overview of projects supporting small scale growers with a focus on cooperation and innovation.	https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/10/02160234/Growing-Livelihoods-Final-Report-s.pdf
2	'Click and Connect' (Pennycook, 2015)**	Add to the evidence base about the types of activities that hyperlocal news providers are undertaking and their impact	https://www.carnegieuktrust.org.uk/publications/click-and-connect-case-studies-of-innovative-hyperlocal-news-providers/

3	Carnegie Library Lab (Carnegie UK, 2018)**	How innovative projects in library sector have got on	https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/01/20121234/LOW-RES-3384-CLL-Cohort-2-Snapshot.pdf
4	Enabling the State in Practice (Murphy & Wallace, 2016)**	Shows the current state of play of the 'enabling state'	https://www.carnegieuktrust.org.uk/publications/enabling-state-practice-evidence-innovators/
5	Appreciating Assets (O'Leary et al, 2011)*		https://www.carnegieuktrust.org.uk/publications/appreciating-assets/
6	Rural communities: Legacy and Change (Flora & Flora, 2013)*		
7	Using Community Capitals to develop assets for positive community change (Flora et al, 2006)*		http://srdc.msstate.edu/fop/levelthree/trainarc/socialcapital/communitycapitalstodevelopassets-emeryfeyclora2006.pdf
8	Identifying and defining the dimensions of community capacity to provide a basis for measurement (Goodman et al, 1998)*		https://journals.sagepub.com/doi/pdf/10.1177/109019819802500303

9	Asset Mapping (A Handbook)*		http://rural.gc.ca/conference/documents/mapping_e.phtml
10	The abundant community (McKnight and Block, 2012)*		http://media.hudson.org.s3.amazonaws.com/files/publications/Abundant%20Community%20transcript.pdf
11	A guide to government empowerment of local citizens and their associations (McKnight, 2019)*		https://resources.depaul.edu/abcd-institute/about/Documents/A%20Guide%20to%20Government%20Empowerment%20of%20Local%20Citizens%20and%20Their%20Associations.pdf

**Resource reviewed as part of scoping exercise and searched as part of case study collection process.

* Resourced searched as part of case study collection process.

Appendix 2: Data extraction template

Data extraction fields

- Source
- Title
- Setting
- Purpose:
 - Problem / need
 - Aims or goals
- Description:
 - When
 - What
 - Who
- How funded or other resources
- Approach taken
- Who took part: participant information
- Data collection
- Impact / outcomes:
 - Reach / uptake
 - Individual level
 - Community level
 - Organisational level
- Unintended consequences?
- Reports / publications
- Enablers: supportive factors
- Barriers: constraining factors
- Key learning
- What works?
- Next steps
- Sustainability
- Further information

Other information

Appendix 3: Quality appraisal template

Name of case study:

Type of intervention:

1. Integrity					
	Yes	No	Can't tell	N/A	Comment
a. Is it clear why this case study was written?					
b. Is the research method clearly described?					
c. Is the writing accurate, balanced and objective?					
d. Is the evidence base used? (Published papers & work of relevance.)					
e. Is there attribution of authorship and contributions?					

2. Completeness					
	Yes	No	Can't tell	N/A	Comment

f. Is the setting (i.e. organisation or sector) clearly described?					
g. Is the population / community (i.e. socio-economic factors) clearly described?					
h. Is the geography or locality clearly defined (i.e. urban/rural)?					
i. Is the intervention clearly described?					
j. Are the aims / objectives of the intervention clear?					
k. Are the outcomes of the intervention clear?					
l. Are all results published regardless of outcome?					

3. Transparency					
	Yes	No	Can't tell	N/A	Comment
m. Are the funding sources and sponsors described?					
n. Are any potential conflicts of interest disclosed?					

o. Are the data collected made accessible? (e.g. link to empirical data)					
p. Is there discussion of any limitations of the intervention?					
q. Is there discussion of any limitations of the evaluation / research?					

4. Responsibility					
	Yes	No	Can't tell	N/A	Comment
r. Are the dates of when the project took place provided?					
s. Is there a clear statement that peer-review or evaluation of the case study has been undertaken?					

5. Format					
	Yes	No	Can't tell	N/A	Comment

t. Is the content in a suitable format for other practitioners? (e.g. jargon free, could guide practice of others)					
u. Is there a clear structure?					

6. Key learning/recommendations					
	Yes	No	Can't tell	N/A	Comment
v. Does the case study report key learning and/or make recommendations based on learning?					