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Reporting guideline for synthesis without meta-analysis (SWiM)

Hilary Thomson and Mhairi Campbell

MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, UK; Cochrane Public Health

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MRC/CSO Social and Public Health Sciences Unit, University of Glasgow.



Conflict of Interest declaration

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- Hilary Thomson and Mhairi Campbell are funded by the UK Medical Research Council and the Scottish Government Chief Scientist Office
- Hilary Thomson and Mhairi Campbell have received funding from Cochrane Strategic Methods Fund (Improving the Conduct and reporting of Narrative Synthesis of Quantitative data, ICONS-Quant, 2017-2019)
 - now known as **SWiM: Synthesis Without Meta-analysis**

Other

- Hilary Thomson is joint co-ordinating editor of Cochrane Public Health, and co-investigator with the NIHR Complex Reviews Support Unit
- No other interests known to declare

Outline: SWiM Webinar 2

Introduction: recap of Webinar 1
(available at www.swim.sphsu.gla.ac.uk)

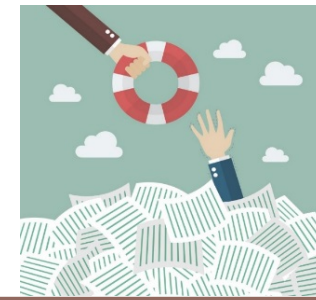
- **Synthesis Without Meta-analysis (SWiM) reporting guideline**
 - Organising groupings of studies
 - Standardised metrics, synthesis methods, limitations
 - Prioritise results, investigate heterogeneity, assess certainty
 - Data presentation, reporting results

Recap of Webinar 1: “Narrative synthesis” of quantitative effect data in Cochrane reviews: current issues and ways forward, Feb 2020

- “Narrative synthesis”: Cinderella of systematic review methods
 - widely used (half of Cochrane reviews use narrative approach):
“the data were heterogeneous so the data were synthesised narratively”
 - poorly reported
 - no clear definition
 - little guidance
 - does it fit within systematic review approach?



From “narrative synthesis” to SWiM



- **Avoid heart sink of “narrative synthesis”- SWiM!**
 - Synthesis Without Meta-Analysis (SWiM)
 - SWiM reporting guideline (BMJ Jan 2020)
 - **Scope:** Synthesis of **quantitative intervention effect data** where meta-analysis of standardised effect sizes not used
 - Closely aligned with conduct guidance in Chapter 12 (“*Synthesizing and presenting findings using other methods*”), Cochrane Handbook
 - Not the last word for narrative synthesis - more research & lively discussion needed...

MRC/CSO Social and Public Health Sciences Unit, University of Glasgow.

RESEARCH METHODS AND REPORTING

OPEN ACCESS

Check for updates

Synthesis without meta-analysis (SWiM) in systematic reviews: reporting guideline

Mhairi Campbell,¹ Joanne E McKenzie,² Amanda Sowden,³ Srinivasa Vittal Katikireddi,¹ Sue E Brennan,² Simon Ellis,⁴ Jamie Hartmann-Boyce,⁵ Rebecca Ryan,⁶ Sasha Shepperd,⁷ James Thomas,⁸ Vivian Welch,⁹ Hilary Thomson¹

For numbered affiliations see end of the article.

Correspondence to: M Campbell
Mhairi.Campbell@glasgow.ac.uk
(ORCID 0000-0002-4416-7270)

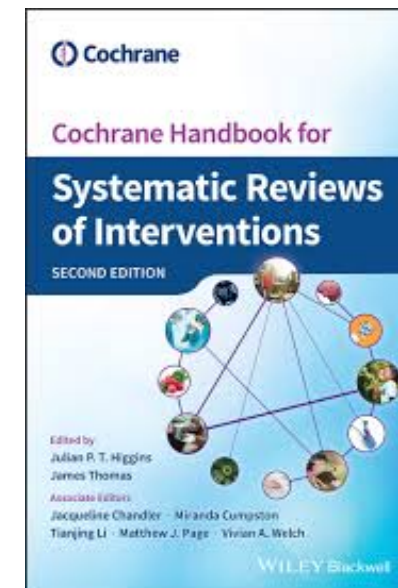
Additional material is published online only. To view please visit the journal online.

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In systematic reviews that lack data amenable to meta-analysis, alternative synthesis methods are commonly used, but these methods are rarely reported. This lack of transparency in the methods can cast doubt on the validity of the review findings. The Synthesis Without Meta-analysis (SWiM) guideline has been developed to guide clear reporting in reviews of interventions in which alternative

item checklist, was developed to facilitate improved reporting of systematic reviews.² Extensions are available for different approaches to conducting reviews (for example, scoping reviews³), reviews with a particular focus (for example, harms⁴), and reviews that use specific methods (for example, network meta-analysis.⁵) However, PRISMA provides limited guidance on reporting certain aspects of the review, such as the methods for presentation and synthesis, and no reporting guideline exists for synthesis without meta-analysis of effect estimates. We estimate that 32% of health related systematic reviews of interventions do not do meta-analysis,^{6,8} instead using alternative approaches to synthesis that



SWiM reporting guideline: Nine items

1. Grouping studies for synthesis
2. Describe standardised metric and transformation methods used
3. Describe synthesis methods
4. Criteria used to prioritise results for summary and synthesis
5. Investigation of heterogeneity in reported effects
6. Certainty of evidence
7. Data presentation methods
8. Reporting results
9. Limitations of the synthesis

SWiM reporting items

- Aim: to improve transparent reporting
 - Not prescriptive
 - Not conduct guidance
 - Not quality assessment measures of synthesis
- Transparent reporting of synthesis method and structure
 - Ideally set out in protocol but...
 - iterative changes are common (and often necessary) especially for complex questions and where meta-analysis was planned but not appropriate

Poll 1

Have you synthesised data without using meta-analysis?

Options:

- a. Yes
- b. No
- c. unsure

Webinar outline

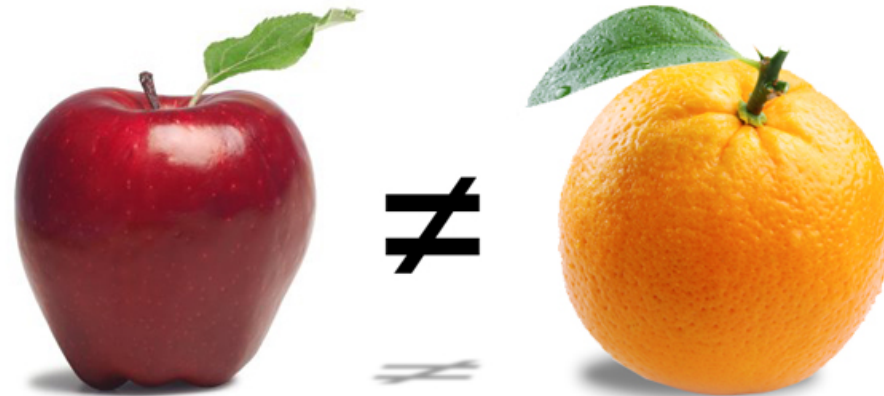
- Introduction & recap
- **Organising groupings of studies**
- Standardised metrics, synthesis methods, limitations
- Prioritise results, investigate heterogeneity, assess certainty
- Data presentation, reporting results

SWiM reporting items

1. Grouping studies for synthesis

2. Describe standardised metric and transformation methods used
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Dealing with heterogeneity in reviews



Principles of synthesis: combining outcomes or interventions etc.
that are conceptually similar

Synthesis of heterogeneous data: level of similarity or commonality may vary



But what about fruit salad?!

If you are synthesising you are assessing that there is a level of commonality to merit synthesis

Item 1: Grouping studies for synthesis

1a: Provide description of, and rationale for, the groups used in the synthesis (e.g. groupings of interventions, populations, outcomes, study design)

Item 1: Grouping studies for synthesis

1a Reporting how studies have been grouped

- Deciding how to group:
 - Populations, interventions, comparisons, outcomes (PICO)
 - Study designs
 - Risk of bias
- What will be useful to decision makers
- Important to clearly explain:
 - how studies are grouped
 - justify the grouping

Hoffmann et al (2014) TIDieR (Template for intervention description and replication)

Campbell et al (2018) TIDieR-PHP (TIDieR for population health and policy interventions)

Item 1: Grouping studies for synthesis

1b: Detail and provide rationale for any changes made subsequent to the protocol in the groups used in the synthesis

Item 1: Grouping studies for synthesis

1b Reporting changes to how studies have been grouped

- Changes since protocol
- What will be useful to decision makers
- Available evidence
 - search and screening results
- What is practical if managing multiple aspects of diversity
 - resources and timescale



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Item 2: Standardised metric

Describe the standardised metric for each outcome. Explain why the metric(s) was chosen, and describe any methods used to transform the intervention effects as reported in the study to the standardised metric, citing any methodological guidance used

Item 2: Standardised metric

Synthesising:

- at some level something common to the studies/data
- in meta-analysis synthesising standardised effect sizes

Standardised metric

- effect sizes (unable to meta-analyse)
- direction of effect
- p values

Item 2: Standardised metric

Effect sizes

- Examples: risk ratios, odds ratios, risk differences, mean differences, standardised mean differences, ratio of means

Item 2: Standardised metric

Effect sizes

- Examples: risk ratios, odds ratios, risk differences, mean differences, standardised mean differences, ratio of means

Direction of effect

- Favour intervention / treatment
- Favour control
- No effect

Item 2: Standardised metric

Effect sizes

- Examples: risk ratios, odds ratios, risk differences, mean differences, standardised mean differences, ratio of means

Direction of effect

- Favour intervention / treatment
- Favour control
- No effect

P values

- One-sided P values
- P values must all reflect same directional hypothesis

SWiM reporting items

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Item 3: Describe the synthesis methods

Describe and justify the methods used to synthesise the effects for each outcome when it was not possible to undertake a meta-analysis of effect estimates

Alternative methods of synthesis

Alternatives to meta-analysis of effect estimates

- Summarise effect estimates
- Vote counting based on direction of effect
- Combine p values

*McKenzie and Brennan (2019) Chapter 12: Synthesizing and presenting findings using other methods.
Cochrane Handbook*

Item 2: Standardised metric

Item 3: Synthesis method

Standardised metric

- effect sizes
(unable to meta-analyse)
- direction of effect
- p values

Synthesis method

- summarise effect estimates
- vote counting of studies
- combine p values

Alternative methods of synthesis

- **Summarise effect estimates**
 - Use when have estimates of intervention effect (but can't meta-analyse)
 - Descriptive statistics such as median, interquartile range, range
- **Vote counting based on direction of effect**
 - Use when have only direction of effect of studies, or no consistent effect measure or data reported across studies
 - Benefit or harm based on direction of effect (not statistical significance)
- **Combine p values**
 - Use when have p values and direction of effect of studies, outcomes and statistical tests differ across studies, or studies report non-parametric test results
 - Use (or convert to) 1-sided p values (methods by Loughin 2004)

McKenzie and Brennan (2019) Chapter 12: Synthesizing and presenting findings using other methods. Cochrane Handbook

Questions different synthesis methods answer

- **Meta-analysis:** What is the average effect size?

Other methods

- **Summarising effect estimates:** What is the range and distribution of effects?
- **Vote counting based on direction of effect:** Is there any evidence of an effect?
- **Combining p values:** Is there evidence that there is an effect in at least one study?

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Item 9: Limitations of the synthesis

Report the limitations of the synthesis methods used and/or the groupings used in the synthesis, and how these affect the conclusions that can be drawn in relation to the original review question

Item 9: Limitations of the synthesis

- Standardised metric used
- Synthesis method used
- Changes to groups used in synthesis



Implications for what questions can be answered and how synthesis can be interpreted

For example

- if the standardised metric used is **direction of effect**:
Review question is about ‘is there any evidence of an effect?’
rather than ‘what is the average intervention effect size?’
- lack of studies or reported outcomes in studies may change how the synthesis is structured - how the studies are grouped

Poll 2

In reviews without meta-analysis, groupings of interventions/outcomes are often adapted after the protocol is published.

Do you:

- a. agree
- b. disagree
- c. not sure

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Item 4: Criteria used to prioritise results for summary and synthesis

Where applicable, provide the criteria used, with supporting justification, to select particular studies, or a particular study, for the main synthesis or to draw conclusions of the synthesis, (e.g. based on study design, risk of bias assessments, directness in relation to the review question)

Item 4: Criteria used to prioritise results for summary and synthesis

Some studies *may* have more weight or relevance for your review question and may be prioritised over others in the synthesis and conclusions

The criteria for this should be reported, for example

- study design (e.g. only randomised trials)
- risk of bias assessment (e.g. only studies at a low risk of bias)
- sample size
- relevance of the evidence addressing the review question (e.g. outcome, population/context or intervention)

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Item 5: Investigation of heterogeneity in reported effects

State the method(s) used to examine heterogeneity in reported effects when it is not possible to undertake a meta-analysis of effect estimates and its extensions to investigate heterogeneity

Item 5: Investigation of heterogeneity in reported effects

Methods to examine differences in results – when statistical methods such as meta-regression are not possible

Visual examination of tables ordered by modifiers, e.g.:

- study design
- subpopulations (e.g. sex, age)
- intervention components
- context/setting

Table 2: Characteristics of included studies

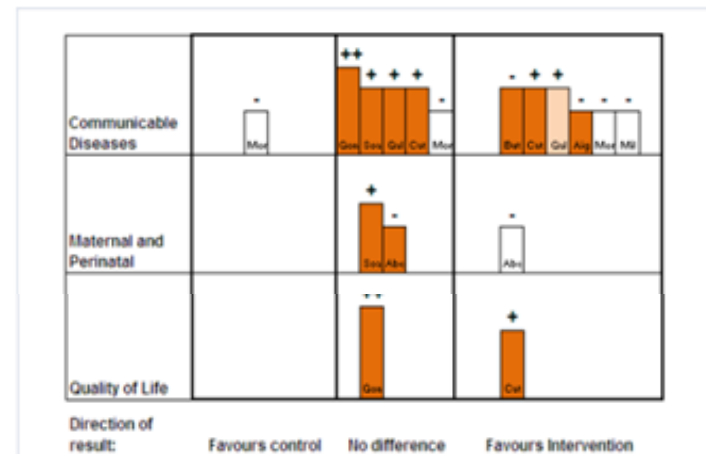
Reference	Intervention	Participants	Setting/context	Outcomes	Results	Methods/quality	Other notes
Barone (1988) USA	<p><i>Content:</i> I: Usual safety education, plus slides and handouts on burn prevention, motor vehicle safety education and video; bath water thermometer; hot water gauge. (n=41) C: Usual safety education (n=38)</p> <p><i>Duration:</i> 4 x 2h weekly meetings.</p> <p><i>Delivered by:</i> Unclear</p>	Couples or individuals attending "Parenting the toddler" classes	Classes conducted at suburban hospital, family homes	Home inspection 6 months after class 1) Final smoke alarm ownership 2) Final functioning smoke alarms	<p>1) Final smoke alarm ownership I = 32/34 C = 26/29</p> <p>2) Final functioning smoke alarms: I = 39/41 C = 34/38</p> <p>I = 32/34 C = 26/29</p> <p>No significant difference between groups</p>	<p>Allocation by coin toss within paired classes</p> <p>Outcome assessment not blinded</p> <p>Withdrawals: 27% of parents attending randomised classes did not enrol in trial</p>	
Clamp (1998) UK	<p><i>Content:</i> I: Safety advice, leaflets, discount safety devices for low income families (n=83 families) C: Routine child health surveillance and routine consultations without intervention (n=82 families)</p> <p><i>Duration:</i> Unclear</p> <p><i>Delivered by:</i> Health visitors/practice nurses</p>	Families of children <5 yrs on GP list	Delivered during child health surveillance consultations, opportunistically during other consultations, or the family was asked to make an appointment specifically for the intervention	Telephone/mail survey 6 weeks after visit: 1) Smoke alarms acquired 2) Functioning smoke alarms acquired 3) Final smoke alarm ownership 4) Final functioning smoke alarms	<p>1) Smoke alarms acquired: I = 8/83 C = 0/82</p> <p>2) Functioning smoke alarms acquired I = 7/83 C = 4/82</p> <p>3) Final smoke alarm ownership: I: 82/83 C: 71/82</p> <p>4) Final functioning smoke alarms: I: 80/83, C: 71/82</p>	<p>Allocation by random numbers table numbered 1-165, the first 83 numbers on the list were allocated to the intervention group. Allocation was done by a researcher blinded to the number given to each family at the time of allocation</p> <p>Outcome assessment not blinded</p> <p>Withdrawals: None</p>	

Graphs such as effect direction plots or harvest plots

Effect direction plot

Author Year	Study design	Study quality	Housing condition	Interv'n integrity	Final Sample Int/Cont	Time since interv'n	General health	Respiratory	Mental health
Heyman et al (<i>subm</i>) (21)*	RCT	A	▲	C	~96/82	2 years	<> ₂		
Howden-Chapman et al 2008 (22) ***	RCT	A	▲	C	175/174	4-5 months	▲	▲ ₁₁	
Barton et al 2007 (23) **	RCT	A	◀▶	C	14/13	<2 years		▲ ₇ ^a	
Howden-Chapman et al 2007 (24)**	RCT	A	▲	C	1689/1623	<1 year	▲ ₃	▲ ₅	▲ ₃
Braubach et al 2008 (25)	PC	A	∧	C	~210/165	5-8 months	∧	∧	▲ ₄
Platt et al 2007(26)	PC	A	▲	B	1281/1084	1-2 years	▲ ₂	◀▶ ₂	
Lloyd et al 2008 (27)	PC	B		C	9/27	1-2.5 years			
Shortt et al 2007 (28)	PC	B	▲	C	46/54	1-3.5 years		◀▶ ₃ ^b	▲ ^b
Somerville et al 2000 (29) ***	P	B	▲	B	72	3 months		▲ ₇	
Hopton et al 1996 (30) ***	PC	B	▲	C	55/77	5-11 months			◀▶ ₂ ^b

Figure 5. Harvest plot to show health and QoL findings across main and supporting studies.



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Item 6: Certainty of evidence

Describe the methods used to assess certainty of the synthesis findings

Item 6: Certainty of evidence

Assess certainty of the evidence, considering:

- risk of bias
- precision (confidence intervals, or number of studies and participants)
- consistency of effects across studies
- how directly studies address review question
- publication bias

GRADE (Grading of Recommendations, Assessment, Development and Evaluations)

- Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Alonso-Coello P, Schünemann HJ, GRADE Working Group. (2008) GRADE: an emerging consensus on rating quality of evidence and strength of recommendations.
- Guyatt G, Oxman AD, Akl EA, Kunz R, Vist G, Brozek J, et al. (2011) GRADE guidelines: 1. Introduction - GRADE evidence profiles and summary of findings tables.

Poll 3

Examining differences in effects across included studies is only useful when there is a formal sensitivity analysis based on effect sizes

Options:

- a. agree
- b. disagree
- c. not sure

Webinar outline

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- **Data presentation, reporting results**

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Item 7: Data presentation

Describe the graphical and tabular methods used to present the effects (eg, tables, forest plots, harvest plots)

Specify key study characteristics (eg, study design, risk of bias) used to order the studies, in the text and any tables or graphs, clearly referencing the studies included

Example: “An effect direction plot provides a visual display of the results across all outcome domains, ordered by risk of bias and the intensity of the intervention (table 4).”

Hurt et al 2018, BMJ Open

Item 7: Data presentation

Present key study characteristics and data in tables or graphs that reflect groupings in the synthesis

- **Designing data tables**
 - Allow comparison across studies in relevant groupings
 - Reflect the order/grouping of the synthesis to promote transparency (more helpful than alphabetical lists of studies)

- **Data should be tabulated along with key study characteristics**
 - Study design
 - Study quality/Risk of Bias
 - Study size, location etc.as relevant and as space allows

Table 2: Characteristics of included studies

Reference	Intervention	Participants	Setting/context	Outcomes	Results	Methods/quality	Other notes
Barone (1988) USA	<p><i>Content:</i> I: Usual safety education, plus slides and handouts on burn prevention, motor vehicle safety education and video; bath water thermometer; hot water gauge. (n=41) C: Usual safety education (n=38)</p> <p><i>Duration:</i> 4 x 2h weekly meetings.</p> <p><i>Delivered by:</i> Unclear</p>	Couples or individuals attending "Parenting the toddler" classes	Classes conducted at suburban hospital, family homes	Home inspection 6 months after class 1) Final smoke alarm ownership 2) Final functioning smoke alarms	<p>1) Final smoke alarm ownership I = 32/34 C = 26/29</p> <p>2) Final functioning smoke alarms: I = 39/41 C = 34/38</p> <p>I = 32/34 C = 26/29</p> <p>No significant difference between groups</p>	<p>Allocation by coin toss within paired classes</p> <p>Outcome assessment not blinded</p> <p>Withdrawals: 27% of parents attending randomised classes did not enrol in trial</p>	
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Effect direction plot

- Presents findings for multiple outcomes and various intervention groupings
- Ordered by intervention type then study quality and study design

Summary of reported health impacts following warmth & energy efficiency improvements

Author Year	Study design	Risk of Bias	Final Sample Int/Cont	Time since intervention	General health	Respiratory health	Mental health	Illness/symptoms
Intervention: Warmth & Energy Efficiency improvements (post 1980) n=14								
Osman et al 2010	RCT	Low	45/51	5 months	▼	▼		
Howden-Chapman et al 2008 **	RCT	Low	175/174	4-5 months	▲	▲		◀▶
Braubach et al 2008	CBA	Low	~210/165	5-8 months	∧	∧	▼	
Barton et al 2007 *, ****	RCT	Low	193/254	3-10 months	<>	◀▶	<>	▼
Howden-Chapman et al 2007 *	RCT	Low	1689/1623	<1 year	▲	▲	▲	
Platt et al 2007	CBA	Low	1281/1084	1-2 years	▲	◀▶	◀▶	◀▶
Lloyd et al 2008	CBA	Moderate	9/27	1-2.5 years				▲
Shortt et al 2007	CBA	Moderate	46/54	1-3.5 years		◀▶	▲	▲
Somerville et al 2000 **	UBA	Moderate	72	3 months		▲		
Hopton et al 1996 **	CBA	Moderate	55/77	5-11 months		◀▶	◀▶	◀▶
Allen 2005	UBA	High	16	<1 year			▲	
Allen 2005 a	UBA	High	24	<3 years	▼		▲	
Health Action Kirklees 2005	R	High	102	2-8 months				∧
Iversen et al 1986	CBA	High	106/535	3-6 months		▲		◀▶
Intervention: Rehousing from slums (pre 1965) n=3								
Wilner et al 1960	CBA	Low	1891/2893	<1 year			▲	◀▶
Chapin 1938	UBA	High	171	8-19 months			∧	
McGonigle et al 1936 *, ***	XCBA	High	<152/289	5 years				▼

Data presentation options



Forest plot



Effect direct plot



Harvest plot



Box and whisker plot



Albatross plot



Bubble plot

SWiM reporting items

1. Management of diversity in study characteristics
2. Describe standardised metric and transformation methods used
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7. Data presentation methods
- 8. Reporting results**
9. Limitations of the synthesis methods

Item 8: Reporting results

For each comparison and outcome, provide a description of the synthesised findings and the certainty of the findings. Describe the result in language that is consistent with the question the synthesis addresses, and indicate which studies contribute to the synthesis

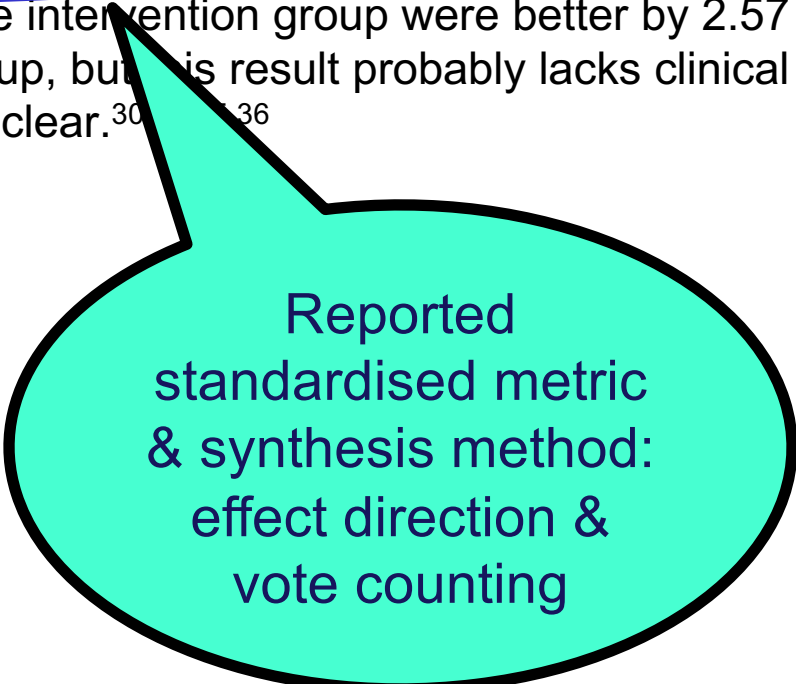
Item 8: Reporting results

- **Report findings with respect to the question addressed**
For example, based on effect direction rather than effect size
- **Standardised metric(s) and synthesis method(s) used**
- **Reference the studies used in the synthesis**
For each outcome/comparison, state/cite the studies included
- **Certainty of the synthesis findings included data**
- **Findings of investigation of heterogeneity in reported effects**
 - Why effects vary across studies

Example of narrative presenting synthesis

Nine studies assessed the impacts of warmth and energy efficiency housing interventions reported general health impacts.^{21,23-25,29-30,33,35,36}

In four well-conducted studies,^{21,23-25} where the **direction of effect** could be determined, general health was better in the intervention group than in the control group after the housing improvement measures (moderate certainty evidence). **The synthesis method used, vote counting of direction of effect**, does not provide information about the size of the effect. In two New Zealand randomized controlled trials,^{21,23} general health was better after the intervention (OR 0.48, 95% CI 0.31 to 0.74)²¹; and (OR 0.59, 95% CI 0.47 to 0.74).²³ In one UK study,²⁵ Short Form-36 scores (100-point scale) for general health in the intervention group were better by 2.57 points (95% CI 0.87, 7.59) compared with the control group, but this result probably lacks clinical significance. Impacts in the less rigorous studies were unclear.^{30, 36}



Reported
standardised metric
& synthesis method:
effect direction &
vote counting

Example of narrative presenting synthesis

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In four well-conducted studies,^{21,23-25} where the direction of effect could be determined, **general health was better in the intervention group than in the control group after the housing improvement measures** (moderate certainty evidence). The synthesis method used, vote counting of direction of effect, does not provide information about the size of the effect. In two New Zealand randomized controlled trials,^{21,23} general health was better after the intervention (OR 0.48, 95% CI 0.31 to 0.74)²¹ and (OR 0.59, 95% CI 0.47 to 0.74).²³ In one UK study,²⁵ Short Form-36 general health in the intervention group were better by 2.57 points compared with the control group, but this result probably lacks clinical significance. The other three studies were unclear.^{30,33,35,36}

Results reported with respect to synthesis of direction of effect- overall benefit or not

Example of narrative presenting synthesis

Nine studies assessed the impacts of warmth and energy efficiency housing interventions reported general health impacts. ^{21,23-25,29-30,33,35,36}

In four well-conducted studies, ^{21,23-25} where the direction of effect could be determined, general health was better in the intervention group than in the control group after the housing improvement measures (moderate certainty evidence). The synthesis method used, vote counting of direction of effect, does not provide information about the size of the effect. In two New Zealand randomized controlled trials, ^{21,23} general health was better after the intervention (OR 0.48, 95% CI 0.31 to 0.74)²¹; and (OR 0.59, 95% CI 0.47 to 0.74).²³ In one UK study, ²⁵ Short Form-36 scores (100-point scale) for general health in the intervention group were better by 2.57 points (95% CI 0.87, 7.59) compared with the control group, but this result probably lacks clinical significance. Impacts in the less rigorous studies were unclear.^{30,33,35,36}

**Studies
referenced
clearly**

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Indication of certainty of body of evidence used to draw synthesis conclusions- methods of assessing certainty reported elsewhere

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Indication of certainty of body of evidence used to draw synthesis conclusions- methods of assessing certainty reported elsewhere

Highlights variation in reported results- speculative explanation is key study differences

Two studies which targeted those with poor health were well conducted RCTs from New Zealand.^{21,23} In both these New Zealand studies, all the respiratory health measures were improved among the intervention group compared to the control group following the warmth improvements. This compares with five of the better quality European studies where those with poor health were not targeted and where there were conflicting or unclear impacts on respiratory health.^{24-27,29}

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Reporting items

1. Grouping of studies
2. Describe standardised methods used
3. Describe synthesis method
4. Criteria used to prioritise results
5. Investigation of heterogeneity
6. Certainty of evidence
7. Data presentation methods
8. Reporting results
9. Limitations of the synthesis



For numbered affiliations see end of the article.

Correspondence to: M Campbell
Mhairi.Campbell@glasgow.ac.uk
(ORCID 0000-0002-4416-7270)

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Synthesis without meta-analysis (SWiM) in systematic reviews: reporting guideline

Mhairi Campbell,¹ Joanne E McKenzie,² Amanda Sowden,³ Srinivasa Vittal Katikireddi,¹ Sue E Brennan,² Simon Ellis,⁴ Jamie Hartmann-Boyce,⁵ Rebecca Ryan,⁶ Sasha Shepperd,⁷ James Thomas,⁸ Vivian Welch,⁹ Hilary Thomson¹

In systematic reviews that lack data amenable to meta-analysis, alternative synthesis methods are commonly used, but these methods are rarely reported. This lack of transparency in the methods can cast doubt on the validity of the review findings. The Synthesis Without Meta-analysis (SWiM) guideline has been developed to guide clear reporting in reviews of interventions in which alternative synthesis methods to meta-analysis of effect estimates are used. This article describes the development of the SWiM guideline for the synthesis of quantitative data of intervention effects and presents the nine SWiM reporting items with accompanying explanations and examples.

Decision makers consider systematic reviews to be an essential source of evidence.¹ Complete and transparent reporting of the methods and results of reviews allows users to assess the validity of review findings. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; <http://www.prisma-statement.org/>)

item checklist, was developed to facilitate improved reporting of systematic reviews.² Extensions are available for different approaches to conducting reviews (for example, scoping reviews³), reviews with a particular focus (for example, harms⁴), and reviews that use specific methods (for example, network meta-analysis.⁵) However, PRISMA provides limited guidance on reporting certain aspects of the review, such as the methods for presentation and synthesis, and no reporting guideline exists for synthesis without meta-analysis of effect estimates. We estimate that 32% of health related systematic reviews of interventions do not do meta-analysis,⁶⁻⁸ instead using alternative approaches to synthesis that typically rely on textual description of effects and are often referred to as narrative synthesis.⁹ Recent work highlights serious shortcomings in the reporting of narrative synthesis, including a lack of description of the methods used, lack of transparent links between study level data and the text reporting the synthesis and its conclusions, and inadequate reporting of the limitations of the synthesis.⁷ This suggests widespread lack of familiarity and misunderstanding around the requirements for transparent reporting of synthesis when meta-analysis is not used and indicates the need for a reporting guideline.

Scope of SWiM reporting guideline

This paper presents the Synthesis Without Meta-analysis (SWiM) reporting guideline. The SWiM guideline is intended for use in systematic reviews examining the quantitative effects of interventions for which meta-analysis is not used.

SWiM links to Cochrane Handbook

- Links to six new Cochrane handbook chapters
 - **Chapter 12: Synthesis using other methods**
 - Chapter 2: Determining the scope and questions
 - Chapter 3: Inclusion criteria and grouping for the synthesis
 - Chapter 6: Effect measures
 - Chapter 9: Preparing for synthesis
 - Chapter 14: 'Summary of findings' tables and GRADE

Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). Cochrane Handbook for Systematic Reviews of Interventions version 6.0 (updated July 2019). Cochrane, 2019.

Available from www.training.cochrane.org/handbook

Further information

- **Visit the SWiM webpage: <https://swim.sphsu.gla.ac.uk/>**
 - Webinars 1 & 2 available online with FAQs
 - SYNTHESIS-SWIM@JISCMail.ac.uk
Virtual network for discussion and learning
 - Online training module Cochrane Training
-
- **Contact:**
 - Hilary.Thomson@Glasgow.ac.uk
 - Mhairi.Campbell@Glasgow.ac.uk

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Questions? Comments?

