Debunking vaccine-related misinformation: rapid evidence review

Question

When is ***debunking*** misinformation about vaccines likely to be a better option than either providing ***accurate information only***, or ***not responding***, for:

- Reducing people's vaccine-related ***misinformation beliefs,*** or ***vaccine hesitancy***;
- Changing people's ***attitudes to vaccines***; and/or
- Increasing people's ***intentions to be vaccinated***, or ***vaccine uptake***?

Populations

- Children and young people, parents, adults, or older adults

Intervention

- Communications aimed at debunking vaccine-related misinformation

Comparators

- Communications aimed at responding by providing information only
- No communications response

Outcomes

- Vaccine uptake
- Vaccine hesitancy, resistance, intentions, or attitudes
- Vaccine-related misinformation belief(s)

Study Designs

- Randomised controlled trials (2010-)

Contact Person

Ian Shemilt
EPPI Centre
University College London
i.shemilt@ucl.ac.uk

Further Information

Full Title

Debunking vaccine-related misinformation versus providing accurate or vaccine-promoting information only, or not responding, for reducing vaccine hesitancy and increasing uptake: a rapid evidence review

Research Question

What is currently known (and what are the current gaps and uncertainties in knowledge) from published research evidence about:

When, under what circumstances, and/or for whom is (1) debunking (or any other form of direct communication aimed at correcting) misinformation (or related phenomena) about human vaccines likely to be more effective than (2) responding by providing accurate and/or vaccine promoting information only, or (3) not responding, for reducing (a) misinformation beliefs and/or (b) vaccine hesitancy/ resistance, and/or (c) changing attitudes to vaccines/ vaccination, and/or increasing (d) intentions to be vaccinated and/or (e) vaccine uptake, among children and young people, parents, adults, and older adults?

Eligibility Criteria

Health Domains (Topics)

- Vaccine-related misinformation (and/or closely related phenomena)
- Human viral infections, e.g. COVID-19, HPV, Influenza, MMR, Monkeypox, Polio
- Vaccine hesitancy/ resistance and uptake
- Vaccination programs
- Health communication
- Health promotion
- Public health

Inclusion: Studies with a sole or primary focus on human vaccine-related (putative) misinformation and/or closely related phenomena, including disinformation, malinformation, false, untrue, misleading or fabricated information/ claims, fake or junk news, pseudoscientific information, and/or hoaxes.

Exclusion: Studies with only a minor focus on human vaccine-related (putative) misinformation. Studies of (putative) rumours, or (putatively) unverifiable information.

Populations/ Participants

Inclusion: Any general population and/or specific population subgroup(s); encompassing all age groups:

- Children (and/or their parents) aged up to 18 years;
- Adults aged 19 to 64 years; and/or
- Older adults aged 65 years and above.

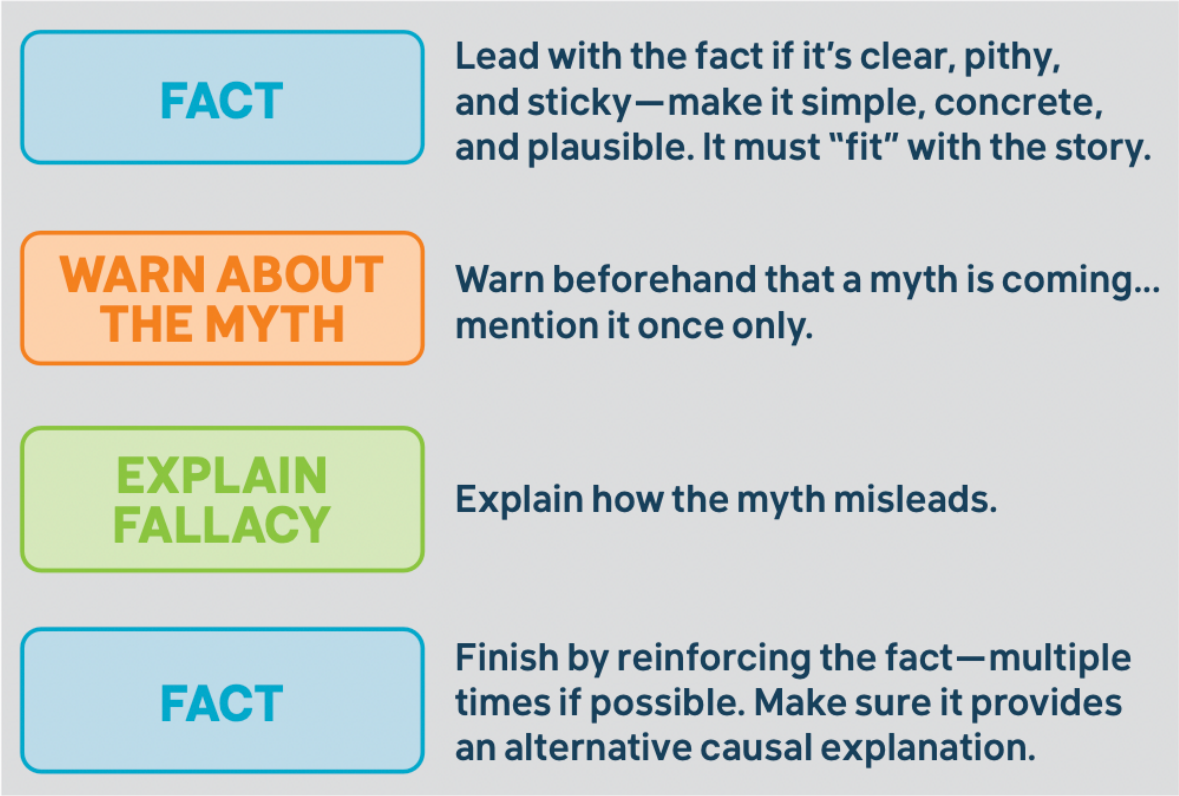
Exclusion: None.

Interventions

Inclusion: Debunking and/or any [other] form of direct communication aimed at correcting (putative) misinformation (and/or related phenomena) relating to one or more human vaccines.

Elaboration

Debunking invariably incorporates messaging intended to correct one or more misinformation narratives *after such narratives have already become established*. However, this correction may or may not be accompanied by messaging intended to convey accurate and/or vaccine promoting information.



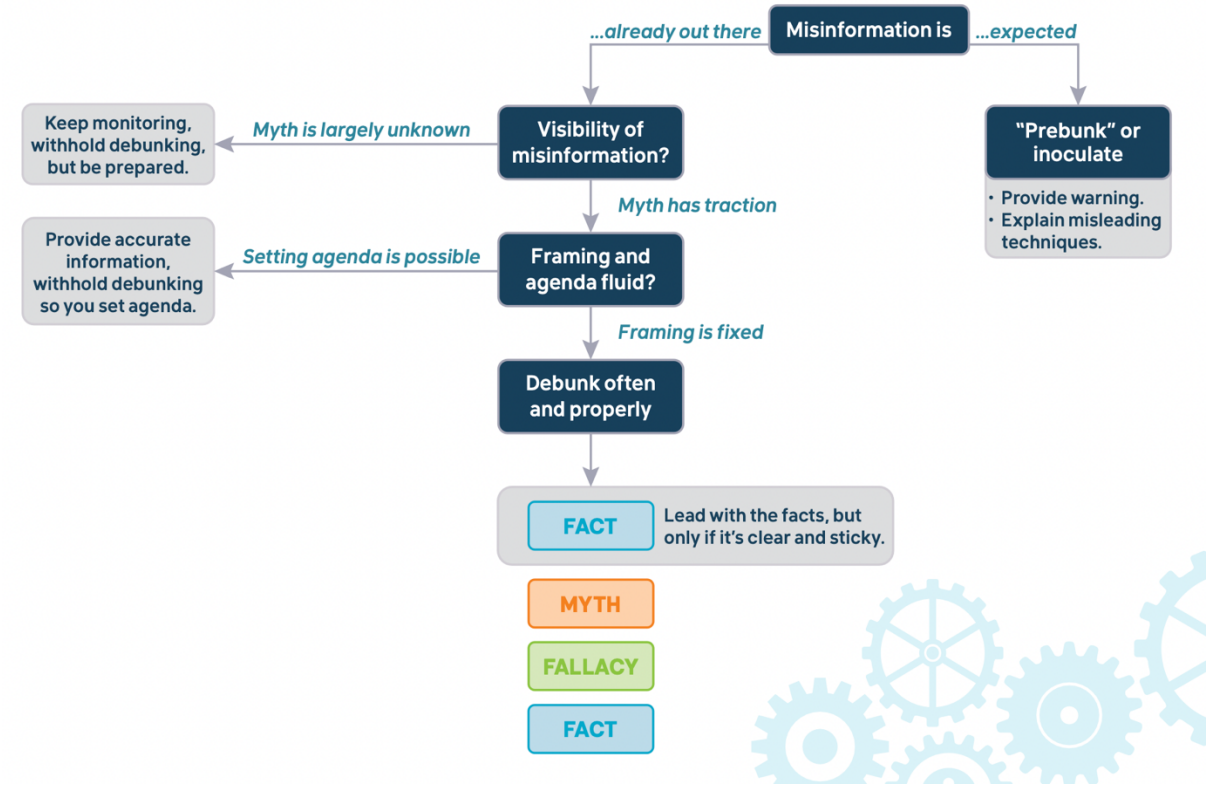
Source: Lewandowsky *et al*. (2020). *The Debunking Handbook 2020* (pp.12). DOI:10.17910/b7.1182

We will include studies investigating any form of direct communication (intervention) that incorporates messaging intended to correct (debunk, counter, rebut, refute, dispute, contradict etc.) one or more established (putative) vaccine-related misinformation narrative(s). We will therefore include studies of 'fact checking' and/or 'myth-busting' communications (interventions) if they incorporate messaging of this kind.

Any form of direct communication, encompassing text, visual and/or audio, that is sent to/ received by participants using any media channel, encompassing the internet, social media platforms, other digital media, broadcast (e.g. television, radio) or print media (e.g. newspapers, posters, pamphlets), or face-to-face interactions (e.g. 'vaccine champions').

Exclusion:

- Studies investigating pre-bunking messages – which aim to 'inoculate people against' one or more *potential* misinformation narratives *before* such narratives become established– will be excluded (unless the study also compares debunking [correction] with providing accurate or vaccine promoting information only, with or without a 'treatment as usual' ('do nothing') control group – see 'Comparator(s)/ Control')).
- Studies investigating fictitious human vaccines and/or fictitious human viruses.
- Studies in which the effect(s) of (exposure to) debunking messages are inherently confounded by other differences between study groups/arms with respect to (exposure to) interventions or other factors that could influence the outcome.



Source: Lewandowsky *et al*. (2020). *The Debunking Handbook 2020* (pp.8). DOI:10.17910/b7.1182

Comparator(s)/control

Inclusion:

1. Any form of direct communication aimed at responding to (mitigating) (putative) misinformation relating to one or more human vaccines by providing (putatively) accurate and/or vaccine promoting information only.
2. No response to (putative) misinformation relating to one or more human vaccines (doing nothing – treatment as usual – control).

Elaboration

We will include studies that have compared [one or more groups of] participants exposed to debunking messages [Intervention] with those [one or more groups] exposed to one or both of: accurate and/or vaccine promoting information only [Comparator 1]; and/or treatment as usual (control group) [Comparator 2].

Exclusion: We will exclude studies that have only compared group(s) exposed to accurate and/or vaccine promoting information only [Comparator 1] with a group exposed to treatment as usual (control) [Comparator 2].

Study Designs

Inclusion:

- Parallel group randomised controlled trials (individually- or cluster-randomised).

Exclusion:

- Crossover randomised controlled trials.
- Non-randomised studies (unless an eligible qualitative research study).

Context/ Setting

Ecological validity

Inclusion: All eligible randomised controlled trials, encompassing studies that have adopted (to varying degrees, across multiple dimensions related to ecological validity[1]) a (primarily) controlled laboratory research, partially naturalistic, and/or naturalistic real-world research approach.

Exclusion: None.

Publication types

Inclusion: Journal articles.

Exclusion: Pre-prints, working papers, dissertations/ theses, conference abstracts, books, book chapters, items in online data repositories.

Main Outcome(s)

Inclusion:

- Vaccine/ vaccination uptake
- Vaccine/ vaccination hesitancy / resistance / intentions/ attitudes
- Vaccine-related misinformation belief(s)*

* Encompasses belief(s) in closely related phenomena, e.g. conspiracy beliefs (see also 'Health Domains').

Other Criteria

Publication language

Inclusion: Studies (study reports) published in English language articles.

Exclusion: Studies (study reports) published in non-English language articles.

[1] External validity examines whether study findings can be generalized to other settings or contexts. Ecological validity examines, specifically, whether study findings can be generalized to real-life settings. Ecological validity is therefore a subtype of external validity.

Publication date
Inclusion: Studies reported in articles published since 1st January 2010.

Exclusion: Studies reported in articles published on or before 31st December 2009.

Publication type
Inclusion: Journal articles.

Exclusion: Pre-prints, working papers, dissertations and theses, conference abstracts, books, book chapters, or items in online data repositories.

If you would like further information about the methods, tools or procedures being used to produce this rapid evidence review, please contact Ian Shemilt at the EPPI Centre - see 'Contact Person.