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Systematic Review of Methodological Quality of Infant Formula Trials

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VIEWPOINT

Marketing Claims for Infant Formula
The Need for Evidence

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The market for infant formulas has become increasingly competitive over the past decade. Ingredients that manufacturers once included only in specialized formulas are now added to nearly all formulas. These ingredients come with marketing claims, such as "fosters cognitive development" and "supports digestive health."

It is time to ask whether there are data to support these claims. On September 9, 2016, the US Food and Drug Administration (FDA) issued its first draft guidance on this topic, which outlines the quality of evidence that formula manufacturers should have to substantiate these claims, including randomized trials.[1] The evidence currently available to the public does not meet these standards. For many claims there is no evidence available to the public, and when the results of randomized trials are made public, we learn that they are limited by small sample sizes, poor follow-up, and provide unpersuasive results.[2] It is also important to understand how these claims may affect breastfeeding and public health budgets, and to consider regulatory ap-

structure/function of the body without referencing disease, eg, probiotics support digestive health) as opposed to health claims (describing the relationship of an ingredient to a disease, eg, adequate calcium reduces the risk of osteoporosis).[1] Under the Federal Food, Drug, and Cosmetic Act, structure/function claims do not require prior authorization by the FDA and are subject to a lower standard of evidence than health claims. Companies are required to have on hand data to substantiate structure/function claims, but there is no obligation to share the data with the FDA or the public.

There are several consequences to the inadequately supported claims used in infant formula marketing.

First, the claims may confuse parents into thinking these formulas are equivalent or superior to breastfeeding. In an effort to promote breastfeeding, the World Health Organization's International Code of Marketing of Breast-Milk Substitutes prohibits direct-to-consumer advertising of infant formula and discour-

Hydrolysed formula and risk of allergic or autoimmune disease: systematic review and meta-analysis

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ABSTRACT

OBJECTIVE

To determine whether feeding infants with hydrolysed formula reduces their risk of allergic or autoimmune disease.

DESIGN

Systematic review and meta-analysis, as part of a series of systematic reviews commissioned by the UK Food Standards Agency to inform guidelines on infant feeding. Two authors selected studies by consensus, independently extracted data, and assessed the

hydrolysed whey based formula. There was no evidence to support the health claim approved by the US Food and Drug Administration that a partially hydrolysed formula could reduce the risk of eczema nor the conclusion of the Cochrane review that hydrolysed formula could allergy to cows' milk.

CONCLUSION

These findings do not support current guidelines that recommend the use of hydrolysed formula to prevent allergic disease in high risk infants.

Delphi Consensus Guidance on BMS Trial Methodology

- Trial Ethics – Compliance BMS International Code of Marketing and WHO Resolutions
- Conflicts of Interest
- Trial Outcome Reporting – Including Statistical Considerations
- Composition of Experimental and Control BMS
- Recruitment Procedures and Participant Characteristics

Quantifying Bias

Primary outcomes

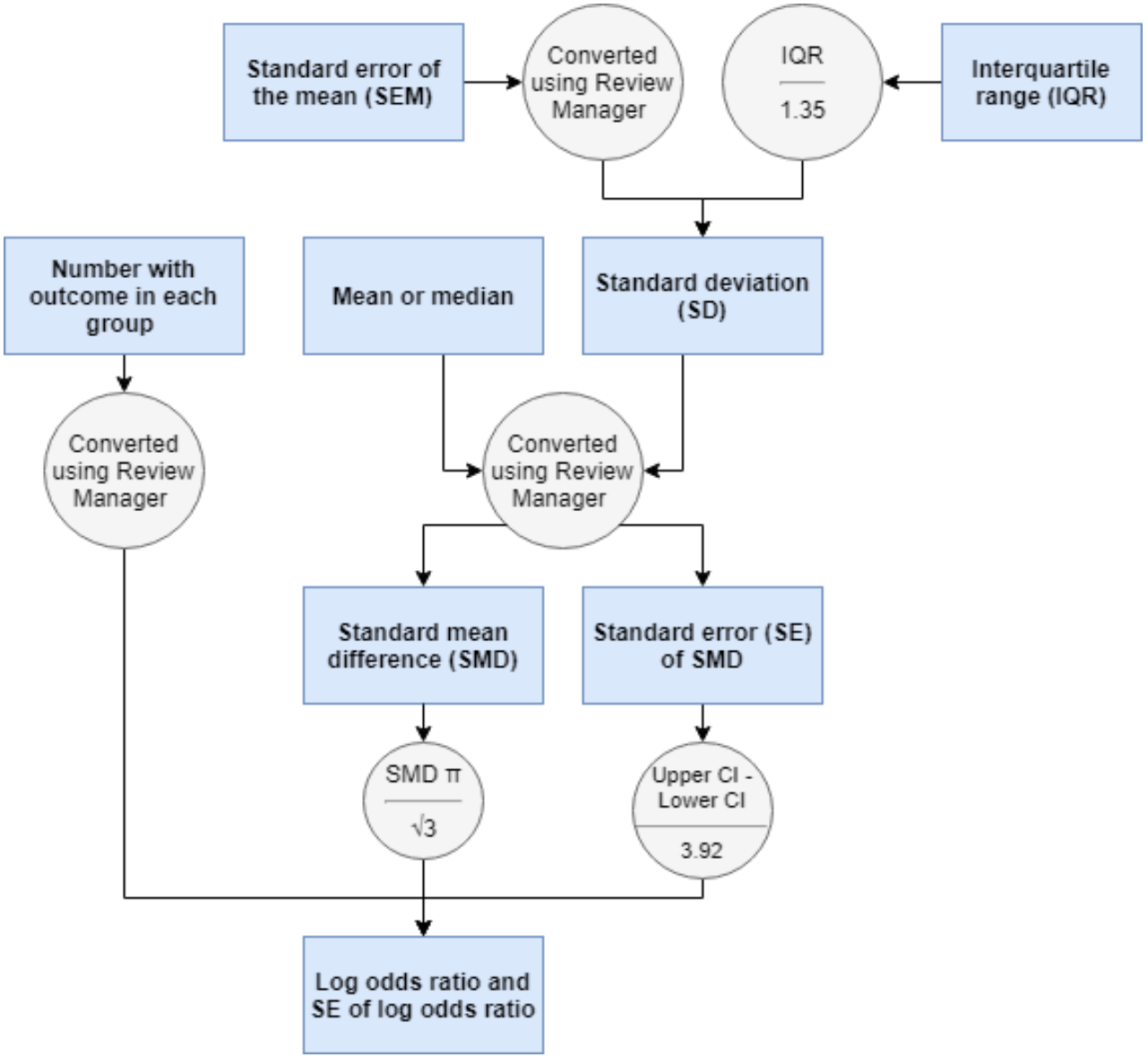
Found in the trial registry

VS

Key outcomes

Found in the abstract conclusion of paper

Calculating Effect Size



Chinn S. A simple method for converting an odds ratio to effect size for use in meta-analysis. Stat Med. 2000;19:3127–31

PILOT STUDY

- **Intervention** formula contains a prebiotic, probiotic or symbiotic (~60 trials)

1

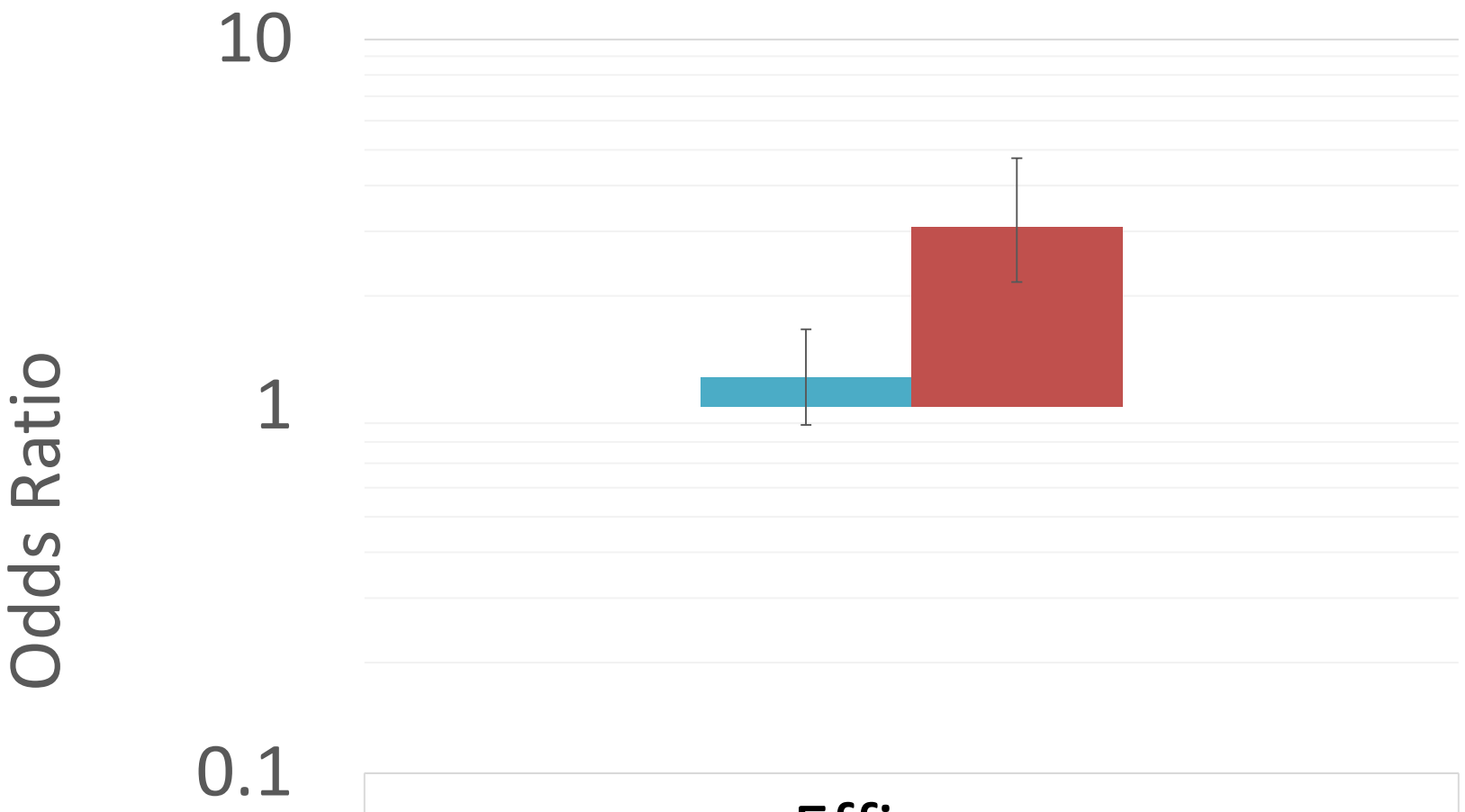
Inclusion of *post hoc* outcomes as **key outcomes**

2

Key outcomes – strongly favourable

3

Higher RoB = more favourable **key outcomes**



	Efficacy
Primary	1.2
Key	3.08

Full Systematic Review

- All trials of BMS: ~1000

- New and updated tools for analysis at outcome level:
    - **RoB 2.0**
    - **TACIT**: Tool for Addressing Conflicts of Interest in Trials
    - **ROB-ME**: Tool to evaluate selective outcome reporting

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Thank You

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