

# EffectEvidenceSynthesis FHIR Resource Proposal

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[Clinical\\_Decision\\_Support](#)

[Committee Approval Date:\[edit | edit source\]](#)

- Initial PSS: June 22, 2018
- CDS WG: September 12, 2018

[Contributing or Reviewing Work Groups\[edit | edit source\]](#)

- Clinical Decision Support
- Clinical Quality Information
- Biomedical Research and Regulation

[FHIR Resource Development Project Insight ID\[edit | edit source\]](#)

1422

[Scope of coverage\[edit | edit source\]](#)

The scope of the EffectEvidenceSynthesis resource is to describe the estimates of an effect of an exposure on an outcome where the effect estimates are derived from the combination of research studies. Effect estimates are a measure of difference between the exposure state and an alternative exposure state (often called the control or comparator state)

Expressing effect estimates is done throughout reporting of biomedical research, systematic reviews, and clinical reference across all disciplines.

[RIM scope\[edit | edit source\]](#)

[Resource appropriateness\[edit | edit source\]](#)

Across the evidence-based medicine community (hundreds of thousands of people communicating the results of healthcare research through systematic reviews and expressing the findings from a body of evidence), the effect estimate synthesized from a body of evidence is the primary method of expressing quantitative results. Standardization is necessary to support interoperability across the evidence-based medicine domain.

## Expected implementations[[edit](#) | [edit source](#)]

Many knowledge producers who express the biomedical research community knowledge will be the implementers using this resources. Examples of these knowledge producers include Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), Cochrane, Duodecim Medical Publications Ltd (from the Finnish Medical Society), EBSCO Health, MAGIC (stands for Making GRADE the Irresistible Choice), and numerous guideline development organizations.

## Content sources[[edit](#) | [edit source](#)]

None expected beyond the standard source specifications. However, the method for expressing citations (eg referring to a publication) is not yet defined and may require additional source specifications.

## Example Scenarios[[edit](#) | [edit source](#)]

A systematic review and meta-analysis combines 17 trials comparing Superdrug against Placebo in 12,356 study participants with Stressitis and finds that Superdrug reduces the Stressiness Score by a mean of 4.6 points but increases headache by 50% (ie 4% of people taking Placebo and 6% of people taking Superdrug had a headache).

The effect estimates that may be reported from this example include:

- Mean reduction of 4.6 points in a score
- Relative risk increase of 50% (or risk ratio 1.5) for the risk of headache
- Absolute risk increase of 2% (or risk difference 0.02) for the risk of headache

The EffectEvidenceSynthesis resource describes:

- the point estimate for this effect estimate
- classification of the estimate type (relative risk, odds ratio, absolute risk difference, etc)
- a precision estimate (such as 95% confidence intervals)
- rating of certainty of the effect estimate
- descriptions of the population (eg Stressitis), exposure (eg Superdrug), alternative exposure (eg Placebo), and outcome (eg. Stressiness Score, or risk of headache) that the effect estimate is about
- descriptions of the source of the effect estimate (eg author, citation, type of research, sample size)

## Resource Relationships[[edit](#) | [edit source](#)]

The EffectEvidenceSynthesis resource will reference:

- RiskEvidenceSynthesis
- PicoElementDefinition
- PicDefinition
- citation (an expected resource for future proposal)

## Resource Boundaries[[edit](#) | [edit source](#)]

To be determined if implementers have questions that need explanations to support distinction and clarification.

EffectEvidenceSynthesis is about the difference (or "effect") between an exposure and alternative exposure state on an outcome in a population. RiskEvidenceSynthesis is about the "risk" of an outcome with an exposure state in a population. RiskEvidenceSynthesis does not include an alternative exposure state of difference between states.

## Timelines[[edit](#) | [edit source](#)]

First STU Ballot 2019 May

## gForge Users[[edit](#) | [edit source](#)]

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## When Resource Proposal Is Complete[[edit](#) | [edit source](#)]

**When you have completed your proposal, please send an email to [FMGcontact@HL7.org](mailto:FMGcontact@HL7.org)**

## FMG Notes