

ResearchDefinition 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](#)[\[edit | edit source\]](#)

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

The scope of the ResearchDefinition resource is to describe the conditional state (population and exposures being compared within a population) that knowledge (evidence, assertion, recommendation) is about.

The PIC is a commonly bundled triad from the "PICO" specification of medical knowledge:

Population - the population within which exposures and outcomes are being considered
Intervention - the conditional state or exposure state being described for which one is expressing the risk of or effect on an outcome
Comparison - the alternative conditional state or alternative exposure state when one is comparing states for the effect on an outcome
Outcome - the result or effect of an intervention or exposure in a population

PICO (and its variants like PECO or PICOT) is a universal acronym used in evidence-based medicine communities to clearly express research questions and evidence findings.

The ResearchDefinition resource allows expression of the higher-order concept for recommendations in healthcare where multiple outcomes are considered.

[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 and recommendations), the PIC specification is the primary method for expressing what evidence assertions and recommendations are about. Standardizing the PIC specification 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

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

Description of the population for which a recommendation or evidence summary is applicable, Description of the intervention or exposure for which a recommendation or evidence summary is applicable, and Description of the comparator state or the evidence is about or what the recommendation is against.

These descriptions could be used in coded specifications of recommendations from clinical practice guidelines to facilitate searching for recommendations that match an individual patient (eg patient is in the population and meets the criteria for the comparator state but not the criteria for the recommended exposure state)

These descriptions could be used in Summary of Findings tables from systematic reviews to facilitate the representation of medical knowledge when creating recommendations.

These descriptions could be used in classification of new evidence reports to facilitate recognition of signal for updating existing evidence summaries and recommendations.

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

The ResearchDefinition resource reference the ResearchElementDefinition resource three times to clearly specify the triad relationship.

Multiple resources describing evidence findings (EffectEvidenceSynthesis, EffectEvidenceBit) may reference ResearchDefinition rather than 3 separate ResearchElementDefinition references to describe what the evidence findings are about.

Recommendation resources will reference the ResearchDefinition resource to describe the population for whom the recommendation is intended, the exposure being recommended and the exposureAlternative being recommended against.

The ResearchDefinition resource bundles a very common pattern and specification of 3 ResearchElementDefinition resources with their relationships and will be used for unique identification and searching.

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

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

A Recommendation resource may include strength of recommendation, certainty, and justification concepts. The ResearchDefinition resource would not include these concepts.

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

First STU Ballot 2019 May

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

brynrhodes (github user) KhalidShahin-EBSCO (github user)

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

When you have completed your proposal, please send an email to FMGcontact@HL7.org

FMG Notes