The REIGN Toolkit

Dr. hum. biol. Corinna Klingler, MSc (Faculty of Health Sciences Brandenburg, University of Potsdam)

Dr. phil. Marcel Mertz (Institute of Ethics, History & Philosophy of Medicine, Hannover Medical School)

About the Toolkit

The **REIGN framework** (Use of **R**esearch **E**vidence to **I**nform **G**uidance regarding **N**ormative-ethical Topics) is a first attempt at structuring how **evidence** can and should be incorporated in **ethics guideline development**. The framework applies predominantly to guidelines developed for the (inter)national level (e.g., the WHO ethics guidelines).

This document summarizes the **central tenets of the framework** and provides **conceptual tools** to guide ethics guideline development. This document is part of the **full REIGN report**, which also includes further theoretical background information. Much of the information presented here only briefly is elaborated in the report, and the elaborated information should be consulted when questions arise.

While the framework will help ethics guideline developers think carefully about evidence integration, the methodological discussion in this field is still in its infancy. Accordingly, this document provides not a set of recipes but, rather, **tools to carefully consider the essential questions of the development process**. All flow charts, tables and further content are to be considered **preliminary**.

Target Group

- The toolkit targets primarily the **guideline development group (GDG)** and not those collecting evidence – the **review group (RG)** in WHO terminology. The REIGN framework emphasizes that it is the GDG's responsibility to decide on further evidence collection.
- For evidence collection, (additionally) the **WHO Handbook**[*] for guidance on empirical evidence or the **REIGN report** for guidance on normative evidence must be consulted.

[*] World Health Organization (2014) *WHO Handbook for Guideline Development*. 2nd Edition. Geneva

Content

- Theoretical background to REIGN (pp. **1, 2, 5**)
- A focused flow chart of ethics guideline development using an evidence-based approach (pp. **2**)
- Descriptions of the process (pp. **2, 4, 5**)
- A checklist to assist decision-making with regard to evidence collection (p. **3**)
- An overview of the different sources and methods for collecting so-called normative evidence (p. **4**)
- A summarizing/overall flow chart (p. **6**)
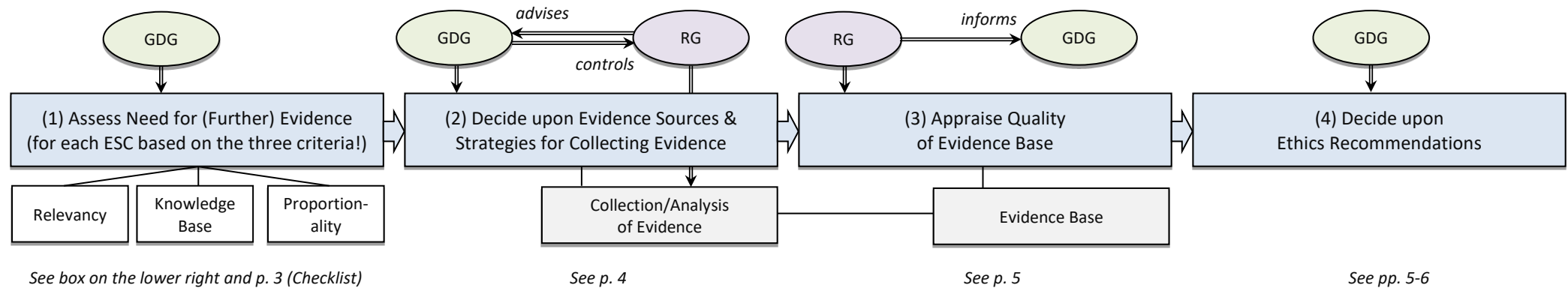
Basic Premises of REIGN

Definition of evidence: Evidence is understood broadly and incorporates various types of information, not just aggregated quantified data. Evidence is assumed to describe **(a body of) information that is more or less qualified to support holding a specific statement true, plausible or right** (or false, implausible, or wrong) in the context of decision-making or of directing actions.

Normative vs. empirical evidence: Empirical evidence consists of empirical information (e.g., whether a phenomenon exists or in what way it is perceived) based on qualitative or quantitative analysis. Normative evidence describes normative phenomena (such as ethical principles, challenges or arguments) and addresses what should be done or what is valuable. Mostly, empirical evidence will be collected from empirical literature (e.g., social science studies), and normative evidence from normative literature (e.g., philosophical papers). Value judgments or arguments might also be found in empirical literature, although normative literature might be most appropriate for providing normative evidence.

Role of evidence: Evidence in ethics guideline development **can only inform—but never determine—**ethics recommendations. Arriving at recommendations involves weighing and balancing different ethical requirements or arguments. This task is assigned to the GDG and cannot be substituted by evidence collection, collation and analysis.

Evidence → *informs* → (Deliberation among) GDG → *decides* → Ethics Recommendation
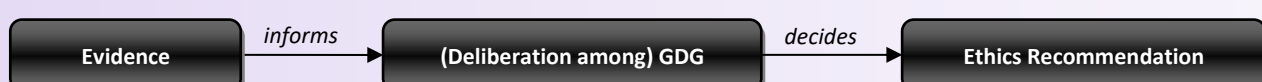
(0) Flow Chart Depicting Ethics Guideline Development as envisioned by the REIGN framework

GDG → (1) Assess Need for (Further) Evidence (for each ESC based on the three criteria!)
— Relevancy — Knowledge Base — Proportionality

See box on the lower right and p. 3 (Checklist)

GDG *advises* / *controls* RG → (2) Decide upon Evidence Sources & Strategies for Collecting Evidence → Collection/Analysis of Evidence

See p. 4

RG *informs* GDG → (3) Appraise Quality of Evidence Base → Evidence Base

See p. 5

GDG → (4) Decide upon Ethics Recommendations

See pp. 5-6

Evidential Support Components (ESC)

- ESCs are **five complexes of questions related to evidence** for distinctive **justificatory aspects** that underlie ethics recommendations; these components have to be **addressed by the GDG** to arrive at recommendations.

- For each ESC, a **main normative question** is identified that has to be answered by the GDG (see also checklist on p. 3):
  - ESC 1 – Value Base: *What basic normative principles should guide action and serve as orientation points for the topic of the guideline?*
  - ESC 2 – Conceptual Disambiguation*: What terms (e.g., abortion or foeticide) should be used for the main topics discussed in the guideline, and how should they be defined?*
  - ESC 3 – Need for Action: *What ethical issues should be addressed by the guideline?*
  - ESC 4 – Strategies for Addressing Needs: *Which strategies for addressing ("solving") the identified ethical issues should be considered by the guideline?*
  - ESC 5 – (Hypothetical) Arguments for Action: *Why should specific strategies be recommended by the guideline, and what further aspects have to be considered when following this strategy?*

- The checklist (p. 3) indicates what kind of **normative [NE] and empirical [EE] evidence** may support the GDG in addressing these questions.

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(1) Assess Need for (Further) Evidence

- To assess whether there is a need to collect and analyse (further) evidence, three questions need to be posed **to each ESC** (in this order!):

  Relevancy of posing the question:
  - *Is the main normative question of the ESC* (see box on the left) *relevant to the work (meaning NOT externally answered or clearly answered for other reasons)?*

  Existence of a **Knowledge Base**:
  - *Can the GDG answer this question by itself because relevant expertise is available or can the GDG access existing evidence bodies (e.g., published systematic reviews)?*

  Proportionality of evidence collection:
  - *Are the financial and time costs associated with evidence collection justified considering the expected benefits?*

    The answer to this question should consider the different available evidence collection strategies (see p. 4) and associated costs!

- If the question on relevancy or proportionality is answered negatively or the knowledge base question answered positively, no further evidence collection is necessary. Otherwise, further evidence should be collected and considered.

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(1) Assess Need for (Further) Evidence: Checklist for the GDG

ESC 1 – Value Base	Relevant	Knowledge Base	Proportional
Main Question: What basic normative principles should guide action and serve as orientation points for the topic of the guideline?	☐ Yes ☐ No	☐ Yes ☐ No	Not applicable
Evidence to support decision-making: ▪ Overview of normative principles commonly used in the context [**NE**]	Not applicable		☐ Yes ☐ No

ESC 2 – Conceptual Disambiguation	Relevant	Knowledge Base	Proportional
Main Question: What terms (e.g., abortion or foeticide) should be used for the main topics discussed in the guideline, and how should they be defined?	☐ Yes ☐ No	☐ Yes ☐ No	Not applicable
Evidence to support decision-making: ▪ Overview of terms in use for the main topics discussed [**NE/EE**] ▪ Overview of the definitions provided for the main topics [**NE/EE**] ▪ Overview of ethical implications of/reasons for choosing particular terms/definitions [**NE**]	Not applicable		☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No

ESC 3 – Need for Action	Relevant	Knowledge Base	Proportional
Main Question: What ethical issues should be addressed by the guideline?	☐ Yes ☐ No	☐ Yes ☐ No	Not applicable
Evidence to support decision-making: ▪ Overview of the ethical issues associated with the topic of the guideline [**NE**] ▪ Overview of data on the urgency of ethical issues (prevalence, consequences, etc.) [**EE**] ▪ Overview of (further) reasons for prioritizing ethical issues [**NE**] ▪ Overview of regulatory documents addressing (certain) ethical issues to see whether additional guidance is needed [**EE/NE**]	Not applicable		☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No

ESC 4 – Strategies for Addressing Need	Relevant	Knowledge Base	Proportional
Main Question: Which strategies for addressing ("solving") the identified ethical issues should be considered by the guideline?	☐ Yes ☐ No	☐ Yes ☐ No	Not applicable
Evidence to support decision-making: ▪ Overview of the strategies for addressing prioritized ethical issues [**EE**]	Not applicable		☐ Yes ☐ No

ESC 5 – (Hypothetical) Arguments for Action	Relevant	Knowledge Base	Proportional
Main Question: Why should specific strategies be recommended by the guideline, and what further aspects have to be considered when following this strategy?	☐ Yes ☐ No	☐ Yes ☐ No	Not applicable
Evidence to support decision-making: ▪ Overview of the (hypothetical) arguments given for choosing a particular strategy [**NE**] ▪ Overview of data on the (probable) consequences of choosing a particular strategy (to substantiate hypothetical (consequentialist) arguments) [**EE**]	Not applicable		☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No

(2) Decide upon Evidence Sources & Strategies for Collecting Evidence

- Concerning collecting, analysing and reporting **empirical evidence**, the *WHO Handbook* provides advice that should also be used by guideline developers in the context of ethics guidelines.

- No guidance, on the other hand, has been developed for **normative evidence**.

- Normative evidence can and possibly should be collected **from various sources**: not just from the academic debates but also through further stakeholder involvement.

- There exist **different strategies for collecting normative evidence** (see box to the right).

- When choosing an approach to evidence collection, the goal of **thematic or argumentative saturation** should be considered (ideally, evidence collection should result in a comprehensive overview of the topic of interest, for example, *all* ethical issues).

- **How the strategy is implemented** (e.g., how many databases are searched) will also impact how far thematic or argumentative saturation can be reached. However, this issue will have to be addressed by those responsible for evidence collection and analysis (**the RG**).

- The GDG has to decide which strategy should be implemented while also considering associated resource investments; **however, the GDG should take advice from the RG** regarding value, feasibility and limitations of the different possible strategies.

- In the box to the right, a list of strategies for collecting evidence is provided; short descriptions are also included.

- **No hierarchy of strategies is intended**, with the possible exception of the strategies for reviewing academic literature. One reason is that the context of interest/the topic of the guideline will also impact the fitness of the strategy to reach thematic or argumentative saturation (e.g., for an under-researched topic, it might be more important to involve additional stakeholders).

Sources	Evidence collection strategy	Explanation
External Research Evidence (Academic Literature*)	**Systematic Review**	A literature review that methodically follows ex ante defined steps to identify, synthesize and present relevant research (see also Appendix C, REIGN report).
	Unsystematic or Narrative Literature Review	A literature review that identifies, synthesizes and presents relevant research without following a clearly explicated process.
	Several Single Papers	A convenience sample of papers that supplies the evidence base.
	Single Paper (n=1)	A single paper that supplies the evidence base.
External Research Evidence (Academic Experts)	**Consensus Process**	Consensus among academic experts is built regarding the topic of interest by using, for example, Delphi methods.
	Workshop	A face-to-face meeting allowing various experts to present their research and discuss findings among themselves (and with the GDG).
	Commissioned Theory Application	A researcher is asked to analyse the question of interest (e.g., ethical issues in a given context) using specific theoretical lenses (principlism, consequentialism, etc.).
	Consultation (written or verbal)	Academic experts are asked to present their positions on a specific topic or question in writing or verbally during a meeting.
External Evidence from Additional Stakeholders	**Interviews/Focus Groups**	Stakeholders share their views in interviews or groups discussion.
	Opinion Survey	Stakeholders are asked to share their views in a (postal or online) survey. Compared with interviews/focus groups, a survey allows more people to be approached; however, no deeper engagement with their positions is possible.
	Consensus Process	Consensus among stakeholder representatives is built regarding the topic of interest by using, for example, Delphi methods.
	Workshop	A face-to-face meeting allowing various stakeholder representatives to present their positions and discuss findings among themselves (and with the GDG).
	Consultation (written or verbal)	Stakeholder representatives or the public are asked to present their positions on a specific topic or question in writing or verbally during a meeting.

* Similar strategies for evidence collection can be used for accessing written sources (e.g., policy documents) from additional stakeholder groups.

(3) Appraise Quality of Evidence Base

- Quality appraisal is an important part of evidence collection. Standards have been developed for **empirical evidence** (see *WHO Handbook*). **For normative evidence, no standards have been established yet**, though one may rely on criteria stemming from informal and formal logic, critical thinking and philosophy in general.

- For normative evidence, REIGN stipulates that both the **quality of individual information units** (e.g., arguments or ethical issues) and the **quality of the body of evidence** (in each ESC) have to be assessed.

- Below, exemplary questions and orientation points are provided:

- **Quality of individual information units:**

  - *Are the arguments valid and sound (deductive arguments), are they very strong (inductive arguments) or do they have considerable explanatory power (abductive arguments)? Are ethical issues relevant to the topic, well-described and justified (e.g., by referring to normative frameworks/moral theories)?*

  - *General information-critical approach: reflecting upon the trustworthiness, relevance and completeness of the information (and its sources!) that is used to inform decisions – why should the information be used, and what legitimates the information unit as being used for informing ethics recommendations?*

- **Quality of the body of evidence (in each ESC):**

  - *The academic (or public) discourse might be biased in various ways, and therefore, certain perspectives (and accordingly relevant principles, issues or arguments) might be missing; the discourse might also be incomplete for other reason; how well does the body of evidence fulfil the criterion of argumentative/thematic saturation?*

  - *How do the following impact saturation?*

    (a) the attributes of the chosen evidence collection strategy (e.g., systematic review vs. single paper or focus group vs. workshop);

    (b) contextual factors (e.g., new technology, scarcely any related research, "perspective bias" from specific disciplines); and

    (c) the actual implementation of the strategy (e.g., how many databases are used in a systematic review, how diverse regarding background and interests are members of a consensus process)?

(4) Decide upon Ethics Recommendations

- The **task of the GDG is to prioritize issues/balance arguments** and thereby arrive at final ethics recommendations.

- A good **choice of participants and fair moderation** of the process should ensure that the discussion is not dominated by certain strong opinions but stays oriented to finding and acknowledging the "best" rational argument(s).

Working with a Review Group (RG)

- **The RG should be involved in the development process as soon as possible** to advise the GDG and align expectations.

- While the necessary skill set to be represented among the RG will depend on which strategies are chosen, experience with ethical discourses are indispensable.

- The RG should work independently from the GDG to allow unbiased assessments.

- The RG may want to consult **Appendix C** when systematic reviews for normative evidence (SRNEs) prove to be the methods of choice for evidence collection.

Open Questions

The discussion of how to develop ethics guidelines is still in its infancy. Accordingly, in advancing REIGN, the authors had to make many conceptual decisions that could not be based on a widespread methodological consensus in the academic community. The authors therefore **strongly encourage those involved in ethics guideline development to advance the development of actual methodological guidance manuals**. The REIGN framework will be a useful information base for building consensus among experts in the field.

Furthermore, while explicitly considering evidence might improve decision-making in guideline development, other aspects might be equally important, namely: (a) **Who participates in the process?** (b) **How is the process structured?** or **(c) What resources are available?**

It is still open to debate how decision-making in ethics guideline development should best be structured. It is therefore particularly important for the GDG to transparently **report on methods employed** not just in terms of evidence collection, but also regarding consensus building to learn from experience and to be able to constantly improve the underlying methods and procedures.

Tasks of the Guideline Development Group (GDG)	Tasks of the Review Group (RG)

controls

ESC 1: Value Base

If required: Evidence collection for ESC 1

Definition of basic **principles**

ESC 2: Conceptual Disambiguation

If required: Evidence collection for ESC 2

Definition/use of basic **concepts**

ESC 3: Need for Action for…

...Concept #1 *...Concept #2* *...Concept #3*

decides whether and how

If required: Evidence collection for ESC 3

Definition of relevant **problems**

feeds back to GDG

ESC 4: Strategies for addressing…

...Problem #1 *...Problem #2* *...Problem #3*

If required: Evidence collection for ESC 4

Definition of relevant **solutions**

ESC 5: (Hypothetical) Arguments for…

...Solution #1 *...Solution #2* *...Solution #3*

If required: Evidence collection for ESC 5

Definition of relevant **arguments**

Final Ethics Recommendation

In its work, the group adheres to

✓ **Methodological standards** of the chosen method
✓ **Quality criteria in reporting** the group's work

As part of its work, the group

✓ Identifies relevant information sources
✓ Collects relevant information
✓ Analyses/Synthesizes relevant information
✓ Appraises the quality of the evidence base

If applicable: Please also consult **Appendix C** of the REIGN report for practical tips on conducting systematic reviews for normative evidence.