

## 4.4 Interplay of local and global evidence

Decision-makers need both local evidence (i.e., what has been learned in their own country, state/province or city) and global evidence (i.e., what has been learned around the world, including how it varies by groups and contexts). By ‘local’ we mean national and sub-national, and that evidence can take many forms, including local data analytics, a local evaluation, and local implementation research. The global evidence typically takes the form of an evidence synthesis, which we return to below.

Decision-makers may benefit from recommendations that draw on both local and global evidence. Guidelines, by definition, provide recommendations. As we note in the introduction, in times of crisis we must often initially rely on emerging guidance (e.g., we don’t yet know enough but wash your hands well in the meantime) and then on replacement guidance (e.g., we now have evidence indicating that masks reduce transmission). At all times, we need to be open to what have been called ‘reversals,’ which is when accumulating evidence shows that approaches thought to have benefits turn out to not actually work, or even cause harm. Technology assessments may provide recommendations, or they may provide a type of evidence support by complementing the available evidence with an assessment of the social, ethical and legal factors that may also influence a local decision.

Modeling is most commonly a form of local evidence. However, it can provide a way of synthesizing the best evidence globally, as is done in high-stakes domains like climate action, medicines reimbursement, and macroeconomic policy. Modeling can also provide a form of local evidence support, with modelers effectively acting as a type of evidence intermediary. This was the case with many jurisdiction-specific COVID-19 models that government policymakers drew on to predict the likely future impacts (and most consequential uncertainties) of options like lockdowns. When done well, this modeling used effect estimates from evidence syntheses or, in their absence, systematically elicited expert opinion.

Local and global evidence may be informed or complemented by other forms of analysis, such as policy, systems and political analysis. We discuss these types of analysis in **section 5.4**.

Vantage point	Forms of evidence
Local (national or sub-national) evidence 	 Data analytics  Modeling  Evaluation  Behavioural/implementation research  Qualitative insights
Global evidence 	 Evidence synthesis
Local (national or sub-national) recommendations or evidence support informed by local and global evidence 	 Technology assessments  Guidelines

## Global evidence



An evidence synthesis uses a systematic and transparent process to identify, select, appraise and synthesize the findings from all studies that have addressed the same question. The objective is to come to an overall understanding of what is known, including how this may vary by groups (e.g., girls and young women) and contexts (e.g., low- and middle-income countries). For questions about options, part of what is known can be about what works for whom in what contexts.

An evidence synthesis offers four advantages over other approaches to summarizing the best evidence globally, such as an expert conducting an informal narrative review of the scientific literature:

-  Reduces the likelihood of being misled by ensuring that all relevant studies have been included and that greater weight is given to high-quality studies
-  Increases confidence about what can be expected by increasing the number of study participants included in the analysis
-  Makes it easier to assess what the global evidence means in a particular context by presenting information about the participants and contexts being studied, and ideally how the findings varied according to such factors
-  Makes it easier to contest the available evidence by ensuring that everyone has access to the same 'data' and clear reporting about how the data were synthesized.

The first of these advantages can help to address what is sometimes called the replication or reproducibility crisis in science – many findings from a single study cannot be replicated or reproduced. The crisis has been documented in many fields from medicine (e.g., hydroxychloroquine and ivermectin to treat COVID-19) to economics and psychology. More troubling is the fact that non-replicable findings are cited more than replicable ones, even after the failure to replicate has been documented.(1)

Model-based explorations of the future to address the 'complexity cubed' societal problem of climate change, using multiple types of evidence and drawing on robust intercomparison exercises, provides an alternative paradigm to the type of evidence synthesis described above. Building on the best of both approaches could be a fruitful way forward.(2)

## Local evidence



Local (national or sub-national) evidence can shed light on whether there's a local problem and its causes, on the local feasibility and acceptability of an option to address a problem, and on local factors that may get in the way or help in reaching and achieving desired impacts among the right people. What 'local' means for decision-makers will vary – for one person 'local' may be their country; for another, it may be their immediate neighbourhood. We address the issue of the local applicability of evidence in [section 4.5](#).