

4.7 Living evidence products

Four of the forms of evidence that decision-makers typically encounter are now available as ‘living’ evidence products, meaning they are regularly updated as new data are added or new studies are published. Many such living evidence products began as part of the COVID-19 evidence response. Fewer exist in sectors other than health. We provide examples below.

Many government policymakers and other decision-makers have come to expect such regular updating for COVID-19 and will likely start to ask why such products can’t be maintained for other high-priority societal challenges where there is significant uncertainty and a high likelihood of evidence emerging to address that uncertainty. The growing use of artificial intelligence, among other innovations, will likely make it easier in the future for evidence producers to meet these greater expectations. However, evidence producers will need to take steps to ensure that these innovations do not inadvertently perpetuate or increase the risk of discrimination (e.g., using race or variables associated with race in ways that disadvantage certain groups). They will also need to support decision-makers to interpret and use the findings appropriately, especially when causal inferences are being made.

Forms of evidence	Examples of living evidence products
 <p>Data analytics</p>	<ul style="list-style-type: none"> The WHO COVID-19 Dashboard provides a set of data analytics about the stringency of public-health measures being taken to address COVID-19, the UK Health Security Agency surveillance reports (bit.ly/3DeaSlc) provide a set of data analytics about COVID-19 in the UK, and Opportunity Insights’ Economic Tracker provides a set of data analytics about COVID-19 impacts on the economic prospects of people, businesses and communities in the US The Organisation for Economic Co-operation and Development (OECD) Weekly Tracker of Economic Activity provides a set of data analytics about economic activity for most OECD and G20 countries
 <p>Modeling</p>	<ul style="list-style-type: none"> The European COVID-19 Forecast Hub presents every week a forecast of cases and deaths per week per 100,000 people – both overall and by country – based on an ensemble of models, while the Institute for Health Metrics and Evaluation COVID-19 Projections updates every two weeks a model of projected deaths from COVID-19, both those reported as COVID-19 and those attributed to COVID-19, that could be used to explore a range of scenarios (e.g., about mask use and vaccine uptake) in specific countries The Intergovernmental Panel on Climate Change presents every five-to-seven years an assessment report that draws on modeling of human-induced climate change, its impacts, and possible response options, although strictly speaking this is a synthesis of findings from models (which may or may not be living) informed by a robust process of inter-model comparisons (which is undertaken by different scientists for each assessment report – see bit.ly/3wKQy8D for an example)
 <p>Evidence syntheses</p>	<ul style="list-style-type: none"> COVID-END living evidence synthesis #6 provides updates every two weeks about COVID-19 vaccine effectiveness against variants, and COVID-NMA updates weekly evidence syntheses about all drug treatments for COVID-19 (and later added preventive therapies and vaccines) The Global Carbon Project updates annually, based on modeling and empirical studies, estimates of the five major components of the global carbon budget (anthropogenic carbon-dioxide emissions and their redistribution among the atmosphere, ocean and terrestrial biosphere in a changing climate) and their associated uncertainties
 <p>Guidelines</p>	<ul style="list-style-type: none"> The Living WHO Guideline on Drugs for COVID-19 provides updates every one-to-four months about COVID-19 drug treatments, and the National COVID-19 Clinical Evidence Task Force updates weekly evidence-based COVID-19 guidelines for Australian health professionals The Education Endowment Foundation maintains living guidance for schools as part of their Teaching and Learning Toolkit, such as the one addressing teaching-assistant interventions

A thematic analysis of a listserv discussion among the COVID-END Community identified differing views about:

- What is understood by the term 'living' evidence synthesis (e.g., can the spectrum of 'living' status be better captured using a scale than a yes/no designation, and should a minimum threshold be set for frequency of updates)
- When one should be started or when an existing synthesis should become 'living' (e.g., new evidence is rapidly becoming available, and that evidence is likely to address key areas of uncertainty among decision-makers about a topic of high priority to them)
- When updates can be stopped (e.g., evidence is unlikely to change interpretations about what we know, and the priority accorded to the topic is downgraded)
- Where and how one can best be disseminated (e.g., can journals accommodate a process where an initially peer-reviewed synthesis is updated regularly without the delay of additional peer review, and can decision-makers rely on commitments to provide updates at defined times)

Such issues will likely be the focus of intense debate in the coming years. Additional details about the rationale for living evidence syntheses and the issues involved in maintaining them can be found in a brief note co-authored by one of our commissioners.(9)

In [section 4.13](#), we describe some of the key characteristics of the living evidence syntheses maintained as part of the COVID-19 evidence response.



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I am working at the interface between two forms of evidence: 1) evidence syntheses, which seek to learn from the past and are widely used in the health sector; and 2) modeling, which seeks to predict the future and is widely used in the field of climate change. I strongly support **recommendation 19** – we need to learn from evidence groups in other sectors. As we note in that recommendation, Cochrane has pioneered many approaches to synthesizing studies about what works in health, including living evidence syntheses, and the Intergovernmental Panel on Climate Change (IPCC) has pioneered many approaches to modeling human-induced climate change over long time horizons. Cochrane and the IPCC can learn from each other and from others, and others can learn from them.

