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Developing Guidelines Before, During, and After the COVID-19 Pandemic

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The coronavirus disease 2019 (COVID-19) pandemic has resulted in unprecedented human, social, and economic impacts across the globe. It has prompted decision makers to demand evidence-based solutions to reduce the risk for transmission and the associated morbidity and mortality. Such demands have resulted in substantial challenges for all involved in the generation and translation of knowledge, including guideline developers.

Guideline Development Before COVID-19

Producing and updating trustworthy guidance is a deliberative process that requires substantial investment of time and resources and often takes years to complete. Well-accepted guidance and standards for creating and assessing the methodology used to develop trustworthy guidelines, including rapid guidelines (1–3), exist and are widely used.

Despite this, the process of developing trustworthy recommendations has often been plagued with inefficiencies, redundancies, duplication, and a lack of collaboration and sharing (**Figure**, *top*) (4). Members of the guideline and evidence-based health care communities have been working for years to improve this poorly functioning evidence ecosystem, yet the underlying collaborations, tools, and processes for wholescale efficiencies in the translation of evidence into practice were not widely established when the COVID-19 pandemic began (4).

Challenges COVID-19 Has Provided

The sudden emergence and scale of the COVID-19 pandemic have led to substantial pressure and heightened expectations for accelerated systematic reviews and rapid guidelines. Researchers, systematic reviewers, and guideline developers have been tasked with resolving uncertainty in much shorter time frames, in an emerging field, and with types of evidence that they may not have used previously. The evidence base for COVID-19 is characterized by many studies and systematic reviews that are poorly designed and conducted (5), presenting numerous complications for guideline developers. Only a few high-quality studies exist that directly address the problem and could be used as the basis of guideline development work, and many recommendations have to rely on lower-quality evidence. The use of indirect evidence from other viral infections is controversial, and experts often disagree on its use, which exacerbates the problems further.

There has been duplication of effort, some of which is entirely wasteful (6); a proliferation of poorer-quality guidance; and omissions in focusing on structured processes for evidence assessment and guidance development (7, 8).

Restrictions on the movement of individuals and pressure faced by those delivering health services have changed the way guidance is produced. Face-to-face meetings where evidence can be discussed and challenged and judgments made explicit are no longer possible, and many stakeholders are facing overwhelming demands on their time and attention. As a result, many guideline development processes have become remote, less diverse, and less rigorous (7).

Solutions and Changes for the Future

Despite the enormous challenges that COVID-19 presents, the research, evidence, and guidance communities have reacted swiftly. Emerging work offers the potential to provide sustainable solutions to increasing efficiency and reducing duplication in guideline development, subject to ongoing rigorous evaluation. These innovations fall within a more trustworthy, efficient, and well-integrated evidence ecosystem (**Figure**, *bottom*) (4).

The pandemic has resulted in a breakthrough in a long-standing quest for living evidence and guidance: the dynamic updating of systematic reviews and guideline recommendations in the face of new evidence (9) through the application of systematic and trustworthy methods. The Australian COVID-19 Clinical Evidence Taskforce (https://covid19evidence.net.au/#living-guidelines) revises and adds recommendations each week as priority clinical questions are identified and new research is synthesized. Where research is available to address priority questions, living systematic reviews are done as the basis of evidence summaries, and evidence-based recommendations are updated following GRADE (Grading of Recommendations Assessment, Development and Evaluation) methods using an electronic platform for authoring and publication. Similarly, the living World Health Organization guideline on drugs for COVID-19 demonstrates how global guidance is developed in a trusted collaboration, including trialists sharing their data early (10).

Repositories and registries of guidelines are available, and many provide tailored resources for COVID-19. The ECRI Guidelines Trust (www.ecri.org/covid-19

See also:

Related article 1

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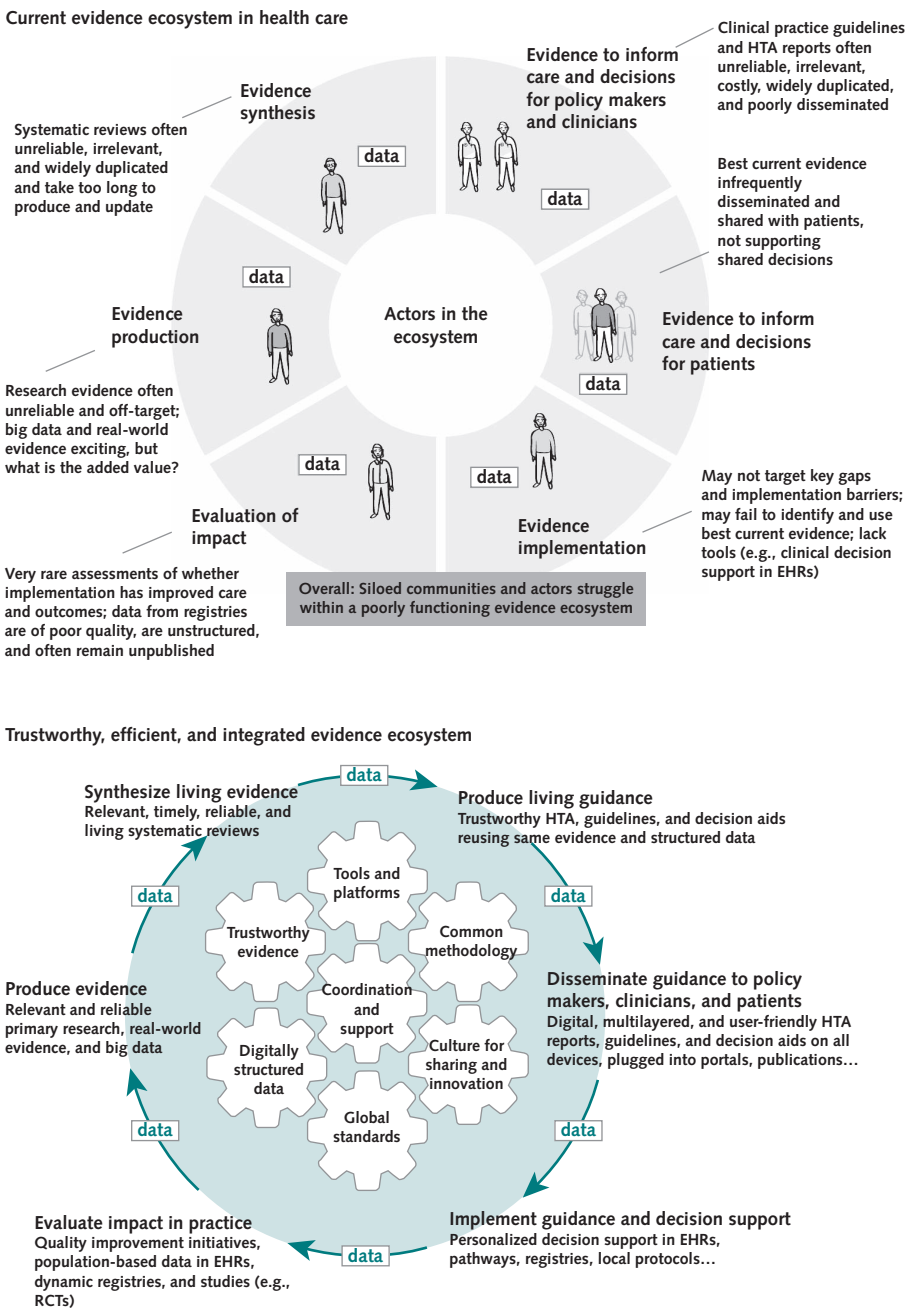
Figure. The current poorly functioning evidence ecosystem.



This figure shows the current inefficiencies at the various stages of the evidence ecosystem and the enhanced evidence ecosystem through coronavirus disease 2019 initiatives. EHR = electronic health record; HTA = health technology assessment; RCT = randomized controlled trial. (Reproduced with permission from MAGIC Evidence Ecosystem Foundation [www.magicevidence.org].)

-clinical-guidelines) provides a centralized repository of evidence-based guidance developed by nationally and internationally recognized medical organizations and medical specialty societies; it includes quality assessment of guidelines using TRUST (Transparency and Rigor Using Standards of Trustworthiness) Scorecards. The Pan American Health Organization (https://covid19-evidence.paho.org) provides a searchable database of guidelines in English, Spanish, Portuguese, and French. The International Practice Guideline Registry (www.guidelines-registry.org) is available for developers to register prospective guidelines, and the Guidelines International Network library is being developed into both a registry and a repository.

A new concept is recommendation mapping (RecMap); this will include a listing of quality-appraised individual recommendations on COVID-19 and tools to adapt recommendations to various contexts, which is

required to ensure trustworthiness (https://covid19.evidenceprime.com).

Although willingness to collaborate has increased, vested interests, bureaucracy, and inability to change remain limiting factors. Around the globe, organizations have set up networks, task forces, and working groups to coordinate efforts and overcome some of these challenges. The COVID-19 Evidence Network to support Decision-making (www.mcmasterforum.org/networks/covid-end) is a group of representatives from the communities of evidence synthesis, guideline development, and health technology assessment. They work together to support researchers, policymakers, and decision makers to find and use evidence to support decision making while improving coordination and reducing duplication in the development of evidence resources. The Guidelines International Network also fosters communications and advocates collaboration in guideline development.

Conclusion

Much more work is still required to support the guideline development communities during COVID-19. Although the evidence maps, repositories, and collections of systematic reviews and guidelines are welcomed, some critical features are missing that would greatly assist with addressing challenges. Many of the entries in these repositories and maps have not been assessed for their risk of bias or trustworthiness, and it is difficult to identify the trustworthy information and guidance. To better foster reuse, adoption, adaptation, and development of recommendations, we need the ability and commitment to share the output of systematic reviews and guidelines in formats that will enable reuse and reproduction.

The recent advances in collaboration, efficiencies in guideline development, and increased focus on and commitment to sharing and coordination must be maintained after the pandemic. These efforts should include representatives from across the globe—particularly low- and middle-income countries, which have both ongoing risk for new pandemics and wide experience dealing with past pandemics. Lessons must be learned, and solutions initiated must be sustained and usable in diverse settings; this will create preparedness for subsequent pandemics while also improving the inefficiencies in the evidence ecosystem into the future.

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