

Sources of Key Evidences for COVID-19 Pandemic

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ABSTRACT

Coronavirus disease -19 (COVID-19) has become a global pandemic and health emergency. Research and studies are ongoing at a rapid pace. It is challenging to keep pace with the published and ongoing research, especially considering the fact that many show conflicting results. Many organizations have produced key evidence sources focusing on scientific studies about the disease. In this article the authors describe certain important evidence sources and highlight their important features. In this article we have described thirteen high-quality evidence sources which will be useful to researchers, policy makers and others make sense of the rapidly emerging evidence related to COVID-19. As the pandemic continues for the second year some sources dependent on volunteers are facing challenges in regularly updating the evidence.

Keywords: COVID-19, coronavirus, evidence, information sources, systematic reviews

QR Code	Article Info	
Scan Me for Full Text	Received: 10 March 2021;	Accepted: 17 May 2021; Published Online: 18 May 2021
	How to cite this article in Vancouver Style?	
	Shankar PR, Jha N. Sources of Key Evidences for COVID-19 Pandemic. <i>Europasian J Med Sci.</i> 2021; 3(1):109-112. https://doi.org/10.46405/ejms.v3i1.188	
	Disclaimer	
	Conflict of Interest: None Declared;	Source of Support: Nil
	Publisher's Note	
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INTRODUCTION

The rapid spread of COVID-19 has created fear and panic. Research into epidemiology, clinical features, interventions, and other aspects of the pandemic is ongoing. The literature is still characterized by rumour, confusion and contrasting results. To ensure access to authentic information, many organizations have created COVID-19 evidence sources. The pandemic is now in the second year and there is still confusion and fear. Access to objective information sources and evidence is now more important than ever. This article provides an overview of freely accessible information sources. With the second and third waves of the pandemic in many countries this information will be of interest to a broad section of readers.

1. U.S. Veterans' Affairs (VA) Evidence Synthesis Programme (ESP):

This site¹ catalogues the work of evidence synthesis groups from the United States and globally. Evidence reviews

are subdivided into collections ranging from candidate therapeutics, clinical presentations, diagnostics, and infection control. The VA ESP also publishes their own synthesis reviews. There are reviews in progress and WHO evidence collaborative reviews. There is an icon to confirm that a review meets a minimum standard and living reviews which are kept up to date by the authors and are very useful in a rapidly developing situation like COVID-19.

2. Cochrane systematic reviews:

The Cochrane library of systematic reviews has a separate page dealing with COVID-19² subdivided into What's new, special collections, rapid reviews (published and in progress), prioritized new and updated reviews, and a COVID-19 study register of primary research studies on the topic. The resource is well organized, and easy to use.

3. Evidence aid COVID-19 evidence collection:

Evidence Aid champions evidence-based humanitarian action and has a subsection³ devoted to COVID-19. The collection includes summaries of systematic reviews in several languages dealing with various topics like clinical characterization and management, epidemiology, ethical considerations, health systems and services, infection prevention and control, public health interventions, research and development, social sciences in the response and virus natural history, transmission, and dynamics.

4. COVID-NMA:

This mainly deals with various treatments for COVID-19. Evidence synthesis on preventive measures, non-pharmacological measures and vaccines is also provided. The studies have been divided into living systematic reviews, quasi-experimental studies, observational studies, and recommendations. The database⁴ provides comparisons of different treatments with standard care. The resource contains several ways to visualize the data presented which may be useful to specialized researchers.

5. Epistemonikos:

The Epistemonikos site provides links to all systematic reviews and reports⁵ published by the COVID 19 Living Overview of Evidence (L.OVE) working group. The COVID 19 blog provides answers to some common questions about the disease using the best current available evidence. The L.OVE platform provides evidence in the form of systematic reviews and original research for various aspects of COVID-19.

6. COVID-19 critical intelligence unit:

The agency for clinical innovation is the leading agency for clinical innovation in New South Wales, Australia. They have created an important resource for information relating to COVID-19. Among the different sections are daily evidence digest (summary of new evidence and reports daily), COVID-19 monitor (snapshot of topical data and graphs), risk monitoring dashboard, living evidence (high level summaries on COVID-19 vaccines, virus variants, and COVID-19 transmission) and evidence check (a rapid review outlining the evidence available on topics related to the current pandemic).

7. *Canadian Agency for Drugs and Technologies in Health (CADTH):* CADTH maintains an evidence portal⁷ dealing with the areas of prevention, infection control, screening and testing, mental health, and ethics in relation to COVID-19. The studies are arranged according to the date they were posted on the portal. There is also a section on work in progress.

8. SPOR Evidence alliance:

The COVID evidence synthesis page⁸ of the Strategy for Patient-Oriented Research (SPOR) initiative contains systematic reviews both completed and in progress. The hyperlink to the full report is available.

9. Knowledge to Policy Center:

The Knowledge to Policy (K2P) Center of the American University of Beirut has launched the COVID 19 series

initiative⁹ to bridge the gap between research and practice and produce high quality timely evidence. The studies and reports are mainly focused on Lebanon and the Eastern Mediterranean and many are available in both English and Arabic.

10. Norwegian Institute of Public Health:

The institute in partnership with other agencies has produced a systematic and living map¹⁰ of COVID-19 evidence. The map is also available in a more detailed form for various sections like aetiology, diagnosis, infection prevention and control, interventions to treat the infected patient, system-level interventions, prognosis and experience and perception. The map includes systematic reviews, modelling studies and other original studies. The visual nature of the evidence with different categories of studies being colour coded makes it easy to use.

11. National Institute for Care and Health Excellence (NICE):

NICE has produced rapid guidelines for managing symptoms and complications, and conditions that increase risk; rapid evidence summaries on different aspects of COVID-19¹¹; and Medtech evidence briefings.

12. EPPI Centre living evidence map of COVID 19 studies:

The map is organized in a similar manner to the Norwegian evidence map. The studies are organized by different sections¹² like treatment evaluation, diagnosis, treatment development, vaccine development etc. We personally found the Norwegian map of evidence stronger and easier to use.

13. Campbell UK and Ireland:

This group has produced a geographical map of COVID-19¹³ studies classified into various types like case report, case series, clinical practice guidelines, comparative study, narrative review, systematic review, and others. The map aims to help researchers identify others working on a similar topic and establish networking and collaboration. Users can also quickly identify emerging resources on the pandemic.

In this article we have described thirteen high-quality evidence sources which will be useful to researchers, policy makers and other make sense of the rapidly emerging evidence related to COVID-19. As the pandemic continues for the second year some sources depending on volunteers are facing challenges in regularly updating the evidence. The evidence sources are created and maintained by different agencies and this is further tabulated with their weblink (Table 1).

BOTTOM LINE

In this article we have described thirteen high-quality evidence sources which will be useful to researchers, policy makers and others make sense of the rapidly emerging evidence related to COVID-19.

Table 1: Key evidence sources for COVID-19

S N	Evidence source	Responsible agency with their weblink	Further information about the evidence source
1	COVID-19 evidence reviews	Veterans Affairs, United States	Good collection of reviews; shows recently updated reviews and reviews according to categories (candidate therapeutics, clinical characteristics, diagnosis, infection control, and mental health). Quality indices for reviews are shown (white tick mark in a green square). The rapid review sources contain links to reviews produced by various other agencies. Readers can sign up for a monthly newsletter.
2	Cochrane reviews COVID-19 section	Cochrane Library	Excellent collection of reviews in multiple languages. Plain language summary is provided. The special collections series is very interesting and topical. Examples of special collections are COVID-19: infection control and prevention measures, COVID-19: evidence relevant to critical care, among others. New and updated reviews will be of interest. The Cochrane editorials address a variety of topics including the use of hydroxychloroquine and the need to act on incomplete evidence while dealing with COVID.
3	Coronavirus (COVID-19) evidence collection	Evidence Aid	Reviews well-arranged according to different topics (for ex. Diagnosis and epidemiology, treatment of affected individuals, etc.) Reviews arranged alphabetically (according to title) or according to date added and in different languages. Shows related articles and provide a link to the original review. Summaries are available in many languages. The blog and the news section may also be of interest.
4	Living mapping and living systematic review of Covid-19 studies	Multiple Cochrane national centres, universities, Epistemonikos foundation	The process is summarized well. Multiple visualization tools are available. Risk of bias is colour coded (red for high, orange for some concerns, and green for low bias). Links to full text may be available. A number of studies in different categories are mentioned. The vaccine living evidence is topical. Researchers can access the COVID-NMA mapping database by creating an account. The database material is covered under a free-to-use attribution license.
5	Living evidence repository for COVID-19	Epistemonikos foundation	Well designed and presented web interface. The graphics may be especially appealing to younger readers. The L.OVE evidence summary has 3000 systematic reviews. Well-organized and colour-coded studies (red for primary study, green for systematic reviews) and systematic reviews. The platform has a PICO question builder. The interactive summary of findings helps readers understand the benefits and harms of treatments. The other resource is the Epistemonikos database which provides a unique tool to help people making clinical care or health policy decisions.
6	Evidence check	Agency for Clinical Innovation COVID-19 critical intelligence unit (New South Wales, Australia)	Summary of studies and the full PDF can be downloaded. The studies are arranged according to topics. The daily evidence digest is useful. The digest published on 14 th May focuses on vaccine hesitancy, the complexity of COVID vaccine patents and physician resilience. The latest rapid reviews focus on different aspects of COVID vaccination.
7	CADTH COVID-19 evidence portal	Canadian Agency for Drugs and Technologies in Health	Excellent website design. Studies arranged according to categories (prevention, infection control, screening, and testing, treatment, etc.). Has a work in progress section and recently completed reports. Guidance on searching the literature is also provided. A link to the full report is available. New reports on the use of hydroxychloroquine in COVID and the use of other medicines for the condition have been added recently.
8	COVID-19 evidence synthesis	Strategy for Patient Oriented Research initiative of Canadian Institutes for Health Research	Well-designed website. Easy to navigate. The full report is accessible, and the report briefly mentions the individual studies on which the report is based. Completed reports are shown in white font on a green box. The query intake form allows researchers, clinicians, policymaker, and others to request synthesized evidence.
9	K2P COVID-19 rapid response series	Knowledge to practice institute of American University of Beirut	Well-designed interface. Very well designed and presented reports. Easy to share on social media. Recent reports focus on different aspects of COVID vaccination and on vaccine rollout across Lebanon. Information is available in English and in Arabic.
10	Live map of COVID-19 evidence	Norwegian Institute of public Health, McMaster University, others	A beautiful visual representation of studies in various categories and subcategories. The studies are colour coded according to type. The reader interface makes it easy to find study summaries. The data can be filtered and analysed in multiple ways. As of now, the map is not being updated and the last update was on 10 th February 2021.
11	Coronavirus (COVID-19)	United Kingdom National Institute for Health and Care Excellence	Effective presentation of reports. Rapid guidelines and evidence summaries available. Providing services during the pandemic and managing conditions that increase risk will be very useful. Factors involved in the decision-making are also provided. As the pandemic has progressed different resources like putting guidance into practice, news, supporting information, resources to help deliver services during the pandemic, advice, and guidance are being made available.
12	COVID-19: Living map of the evidence	UCL department of Education, EPPI-Centre (Evidence for Policy and Practice Information and Co-ordinating Centre), London School of Hygiene & Tropical Medicine, University of York (All from the United Kingdom)	Similar in presentation and uses many of the same software as the evidence map from Norway. Summaries of various studies available and links to full text maybe present. Updated weekly and results from weekly searches are also provided. No mention about recent updates is, however, provided.
13	Meta-evidence blog	Campbell Collaboration UK and Ireland	The main resource is a live map that shows studies arranged according to different types and conducted in various countries. Basic details of the study are provided. The studies are color-coded with orange for an epidemiological study, purple for a narrative review, grey for a systematic review, among others. The resource may not have been updated recently.

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