

Short Communication

Challenges for medical libraries in times of COVID-19: Making clinical decisions that uphold research quality

Eukene Ansuategi^{a,c,*}, Marimar Ubeda^a, Mayte Iglesias^{b,c,d},
Iratxe Urreta^{b,c,d} and Jose Ignacio Emparanza^{b,c,d}

^a*Osakidetza Basque Health Service, Donostialdea Integrated Health Organisation, Donostia University Hospital, Medical Library, San Sebastián, Spain*

^b*Osakidetza Basque Health Service, Donostialdea Integrated Health Organisation, Donostia University Hospital, Clinical Epidemiology Unit, San Sebastián, Spain*

^c*CIBERESP (CIBER of Epidemiology and Public Health), Madrid, Spain*

^d*Biodonostia Health Research Institute, San Sebastián, Spain*

Distance working in the context of the COVID-19 crisis has engendered a new model of collaborative activity for the Library of Donostialdea Integrated Health Organisation (San Sebastián, Spain). Promoted by the Clinical Epidemiology and Research Unit, this initiative has enabled Hospital Management to respond to some of the gaps in information revealed during the pandemic. Changes in editorial policies offering open access information, the lack of peer-reviewed literature, and the spread of scientific literature through social media are some of the factors that stand out in the search for the best evidence during the COVID-19 pandemic.

Keywords: Medical libraries, information retrieval, information science, evidence-based medicine, COVID-19

1. Introduction

A state of emergency in Spain was declared on March 14, 2020, and as of Monday, March 16, many workers started to work from home. From that first week of confinement, the library, together with the Clinical Epidemiology and Research Unit, began to carry out bibliographic searches to answer questions that arose from Hospital Management about COVID-19.

The COVID-19 pandemic provoked a great deal of activity in the area of information science. The number of studies skyrocketed but without necessarily improving knowledge generation. Pre-print studies without a proper peer-review was the rule,

*Corresponding author: Eukene Ansuategi, Medical Library, Donostia University Hospital, Paseo del Dr. Beguiristain s/n, 20014 San Sebastián (Gipuzkoa), Spain. Tel.: +34 943 007 256; E-mail: eukene.ansuategi@osakidetza.eus.

thus making available uncritically reported studies to doctors who were desperate and felt compelled to do anything that suggested hope, even using untested treatments. Compassionate and off-label use of drugs occurred daily.

Many publishers and societies signed the Wellcome Trust's COVID-19 Sharing Research Data statement (Carr, 2020) to ensure that research results and data relevant to this outbreak were shared quickly and openly. For better or for worse, one key element that increased exponentially was the indiscriminate publication of scientific information. Urgency, along with other important factors such as availability bias, the tendency to inappropriately favour easily accessible information (Zagury-Orly & Schwartzstein, 2020), made it difficult to differentiate between studies with scientific quality and those that offered no robust scientific evidence, thus slowing down the process of critical reading of published studies in order to make well-informed clinical decisions.

During the first weeks of the pandemic, point-of-care tools such as BMJ Best Practice, Uptodate, Dynamed began to offer continuously evaluated and updated topics on COVID-19, and other resources such as Epistemonikos answered questions as they emerged (Epistemonikos Foundation, 2020). Other more specific resources were also developed to retrieve information on COVID-19; among them, we would highlight LitCovid, developed with the support of the intramural research program of the National Institutes of Health of the United States (Chen et al., 2020), and the resources offered by the Cochrane Collaboration, particularly the web of rapid reviews and the question bank developed in collaboration with the World Health Organization (WHO) and other international organizations (Bero, 2020). In our context (Spain), new resources also emerged such as Epidemixs Coronavirus (Universal Doctor, 2020), an initiative led by the technology solutions company Universal Doctor together with several organizations in the healthcare field (hospitals, associations, etc.). This is an information hub that provides, and updates daily, proven resources and links to other valuable sources of information. Also developed was "COVID-19: Summary of evidence" prepared by professionals from the Health Information and Documentation Technology Centre (CTIDS) of the Murcia Health Service (2020).

We noted the negative aspects that this pandemic and the rush to develop research on a new disease such as COVID-19 caused, which Paul Glasziou (2020) summarizes very well: the scarcity of trials on non-drug interventions, early access to preprints that has caused the dissemination of poor studies by the media, or the duplication of studies published on the same topic.

2. New opportunities arising from the COVID-19 pandemic

The COVID-19 pandemic has highlighted the need to share information from different countries to provide a global response to various aspects of COVID-19. Thanks to collaboration with other researchers, the medical librarians of the Donostialdea Integrated Health Organisation have provided the data related to potentially avoidable

hospitalizations in Spain that have been used to complete the rapid review of the COVID-19 Evidence Service team in Oxford (Stavropoulou et al., 2020).

Social isolation and remote working has given rise to other collaborative projects, such as an initiative of health science library professionals in Spain that emerged at the end of March. Initially, a WhatsApp group was created to aid communication, and from there the idea arose to work together to provide a website classified by specialties and topics that would offer the full text of articles for free access (COVID-19 por especialidades y temas, 2020). Through this group we shared information, learned from each other and offered help through email and Twitter through the hashtag #AyudaBiblioteca.

3. Teamwork to respond to COVID-19

The Library of Donostialdea Integrated Health Organisation has been working as a team with the Clinical Epidemiology and Research Unit for twenty years. Together we have successfully developed training on Evidence-Based Medicine (EBM) through the Caspe programme, collaborated in international projects (Testing Treatments, Informed Health Choices) and maintained close contact on a daily basis working as a team on many other research projects.

Therefore, as soon as remote working began, we quickly organized ourselves to respond to the questions raised in clinical care during the COVID-19 pandemic. The clinical staff of our hospital had to face, as a matter of urgency, the problems arising from an unknown disease. This resulted in clinical questions that this team, composed of two clinical epidemiologists, a statistician and two medical librarians, tried to answer as quickly as possible and based on the best available evidence.

The COVID-19 pandemic has created a lot of uncertainty. Dealing with unknown aspects of the disease, particularly its lethality, required a rapid and robust response. This uncertainty included both diagnostic questions and symptomology (e.g., in the first few weeks anosmia was seen as an identifying symptom of COVID-19), as well as prognostic issues. This made it necessary to analyse data from China and Italy on the clinical characteristics of patients. It was necessary to obtain "clues" to predict how the disease would evolve and what would be needed in intensive care.

Furthermore, we should not forget all the information and controversy that arose about possible treatments for COVID-19. Our team had to search and analyse information to answer several treatment questions (hydroxychloroquine, antivirals, vitamins and trace elements) and many of them were published as COVID-19 Answers in the Cochrane Evidence resource (Cochrane Iberoamerica, 2020), where rapid reviews of the literature answering priority questions can be consulted, locally or globally, from other existing knowledge transfer products or, when necessary, from primary studies.

The methodology for addressing clinical questions is as follows:

- The medical management of the hospital is the nucleus where the questions, doubts and problems faced by clinicians are collected.

- These questions are immediately transferred to the clinical epidemiologist.
- In daily morning video meetings, the epidemiologist communicates the questions to the rest of the team with the necessary explanations to increase their understanding. The number of questions is taken into account in the distribution of tasks, and the information is expanded by detailing what additional resources will be needed to interrogate the relevant sources (databases, datasets, etc.).
- During the day, the information that is being retrieved is shared through WhatsApp, email and Zotero.
- At the next daily meeting, a summary of what was found is made and a decision made as to whether it is relevant or not, and if it is possible to use the information to produce a report. If so, the staff of the Clinical Epidemiology and Research Unit prepares a draft report that is ratified or rectified by the rest of the team and delivered to medical management.

The need for an IT infrastructure that allows the workflow of this team activity to be carried out is crucial:

- VPN connection that allows remote access to the work computer.
- Meetings via WhatsApp and Skype: Every day a team meeting held first thing in the morning.
- Zotero reference manager: through Zotero's option to make groups, medical librarians upload the references found in the various searches to the group so that the rest of the team can consult them.
- Google Drive: we share the main Excel documents and extract the data we want to highlight.

4. Conclusions

4.1. Research in times of pandemic. Rapid response and its dangers

The theory of “less is more” works when we address the issue of quality in the scientific literature. The “infoxication” of social networks and the immediacy of being able to publish science without going through peer review have the opposite effect to what is intended and do not help. The few well-designed studies are camouflaged among the mass of low-quality studies.

The democratization of information is not at odds with the quality, compliance and oversight of information (London & Kimmelman, 2020). Open access cannot be something that turns against us by creating a new paradigm of chaos in the search for scientific evidence.

4.2. The art of knowing how to choose which question to answer first

The EBM stream also includes this theme in its teaching model. It is fundamental to identify the question that is most important to answer and most urgent for the patient.

In this sense, the duplication of effort in conducting studies with identical clinical hypotheses has been visible, for example, the large number of trials registered to test the efficacy of hydroxychloroquine (Glasziou et al., 2020). Therefore, it is important to consult resources, such as Cochrane's question bank, which allow us to use our time and effort effectively by giving us the opportunity to identify study hypotheses that are not yet tested.

4.3. Distance working vs. direct day-to-day contact

It has been necessary to learn to communicate virtually by default, without the facilities provided by direct day-to-day contact. This has caused additional effort and has not always been as productive as expected. It is worth mentioning that in our professional efforts to give optimal answers to emerging questions, we have created a unique space where teamwork and the transmission of knowledge and confidence of the epidemiology staff resulted in the development of new skills and abilities in our library service.

Acknowledgments

We would like to thank Anne Brice for advice and review of the content.

References

- Bero, L. A. (2020). Producing Independent, Systematic Review Evidence: Cochrane's Response to COVID-19. *American Journal of Public Health*, e1-e2. doi: 10.2105/AJPH.2020.305734.
- Carr, D. (2020, January 31). *Sharing research data and findings relevant to the novel coronavirus (COVID-19) outbreak*. <https://wellcome.ac.uk/coronavirus-covid-19/open-data>.
- Chen, Q., Allot, A., & Lu, Z. (2020). Keep up with the latest coronavirus research. *Nature*, 579(7798), 193-193. doi: 10.1038/d41586-020-00694-1.
- Cochrane Iberoamerica. (2020). *Evidencias COVID-19* <https://es.cochrane.org/es/recursos/evidencias-covid-19>.
- COVID-19 por especialidades y temas*. (2020, March 26). <https://sites.google.com/view/covid19-por-especialidades/p%C3%A1gina-principal>.
- Epistemonikos Foundation. (2020). *COVID-19 Blog: Evidence-based answers for the most frequent questions regarding the emergency*. <https://www.epistemonikos.cl/all-about-covid-19/>.
- Glasziou P., Sanders S., & Hoffmann T. (2020). Waste in covid-19 research. *BMJ*, 369, m1847.
- London, A. J., & Kimmelman, J. (2020). Against pandemic research exceptionalism. *Science*, 368(6490), 476-477. doi: 10.1126/science.abc1731.
- Murcia Health Service. (2020). *Covid-19: Sumario de evidencia*. <http://www.murciasalud.es/covid19>.
- Stavropoulou C., Palmer V. J., Burls A., Ansuategi E., Ubeda M., & Purdy S. (2020, April 21). *What conditions could we prioritise in the primary care setting to reduce non-COVID-related admissions to hospital?* CEBM. <https://www.cebm.net/covid-19/what-conditions-could-we-prioritise-in-the-primary-care-setting-to-reduce-non-covid-related-admissions-to-hospital/>.
- Universal Doctor. (2020). *EpidemiXs: Coronavirus*. <https://coronavirus.epidemiXs.org/#/opening>.
- Zagury-Orly, I., & Schwartzstein, R. M. (2020). COVID-19 – A Reminder to Reason. *New England Journal of Medicine*, 383, e12. doi: 10.1056/NEJMp2009405.