

The Cochrane Collaboration establishes representation in Colombia

Why and for what purpose?

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Colombia is, among Latin American countries, the one with the longest track record in the effort to introduce evidence-based medicine to patient care and, subsequently, base health policy decisions on the evidence obtained from research. Several universities have contributed to this process, beginning with the creation of the first master's program in clinical epidemiology in April 1997 at the Pontificia Universidad Javeriana School of Medicine, followed by an interdepartmental master's program in clinical epidemiology at the Universidad Nacional approved in 2004, and a clinical epidemiology program affiliated with the Universidad de Antioquia School of Medicine begun in 2005, and continuing to where we are today, with more than six specialization and master's programs in clinical epidemiology offered at various universities throughout the country.

Clinical epidemiology is a discipline in which scientific observations of intact human beings can be carried out and interpreted through the application of epidemiological methods and principles to clinical practice problems. It provides clinicians with information regarding basic research methods which allows them to not only understand and assimilate the information from studies published in the literature, but also to organize their own observations to extract them from the anecdotal level and constitute them as scientifically solid, methodologically valid and clinically relevant assertions.

Thus, the clinical epidemiology training programs have contributed to a growing number of clinicians nationwide having the ability to evaluate the validity of information in the medical literature (based on which patient care decisions are made) and produce a synthesis of valid and relevant information to guide the approach to and management of clinical problems. The latter is what gives rise to systematic literature reviews, which are the being and doing of the Cochrane Collaboration, a global independent network of researchers, professionals, patients, care providers and people interested in health.

Cochrane works with collaborators in over 130 countries to produce a synthesis of health evidence for questions regarding diagnoses, prognoses, the effectiveness and safety of treatments and interventions, the cost-effectiveness of interventions and health programs, and the assessment of healthcare practices and services, among others. Its work is published in the Cochrane Library and is an international gold standard for reliable, high-quality information to support healthcare decisions.

The participation of Colombian researchers in Cochrane dates back to 1993, when Juan Manuel Lozano, at that time a professor at the Pontificia Universidad Javeriana School of Medicine, participated in the first global Cochrane collaborators' meeting: the 1st Cochrane Colloquium held at Oxford. His work at Cochrane soon led Dr. Lozano to become the editor of one of the collaboration's longest-standing review groups, the Acute Respiratory Infections (ARI) Review Group, which other epidemiologists and biostatisticians, professors in the Clinical Epidemiology and Biostatistics Departments at the Javeriana, later joined as authors and editors. In 1999, this same department organized the first training workshop on developing Cochrane reviews, sponsored by the International Clinical Epidemiology Network (INCLEN), which included Colombian and British instructors, and provided a training opportunity for researchers from Universidad Nacional de Colombia, Universidad del Valle, Universidad de Antioquia, and Universidad Industrial de Santander. Gradually, an ever-increasing number of professionals attached to various universities throughout

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the country joined as Cochrane authors. By 2005, the conditions were given for signing the first official collaboration agreements between Colombian universities and the Latin American Cochrane Center, with which the first Cochrane Collaboration Centers were established in the country. Since then, innumerable training courses on systematic literature reviews, meta-analyses and other topics related to the use and production of high-quality systematic reviews have been carried out at these centers.

By December 2019, there were 86 systematic reviews published by Colombian authors as principal or corresponding authors in the Cochrane Library, and more than 120 Colombian authors and editors among the Cochrane collaborators. Furthermore, among the associated centers, three topical groups had been registered for review and support of systematic review production: the *sexually transmitted infections group* (<https://sti.cochrane.org/>) led by Hernando Gaitán, a professor at the Instituto de Investigaciones Clínicas at the Universidad Nacional; the satellite dermatology review group (Cochrane Skin-Colombian Satellite Group <https://skin.cochrane.org/international-collaborations>) led by Gloria Sanclemente, professor at the Universidad de Antioquia; and the Javeriana GRADE center, led by María Ximena Rojas, which seeks, among other things, to support systematic review authors in evaluating the accuracy of the evidence found and generating summary tables of the review's findings.

This track record, together with the policy established by Cochrane in 2016, which sought to extend its network of collaborators throughout the world by 2020 through the creation of "Geographic Groups" to support training (formación) and the production, use and dissemination of high-quality systematic reviews that meet the local healthcare knowledge needs, gave rise to the Cochrane Colombia Group. It consists of four associated centers: the Clinical Epidemiology and Biostatistics Department of the Pontificia Universidad Javeriana School of Medicine, the Instituto de Investigaciones Clínicas at the Universidad Nacional de Colombia, the Instituto de Investigaciones Médicas at the Universidad de Antioquia and the Fundación Universitaria de Ciencias de la Salud School of Medicine. These centers have the Universidad del Cauca School of Medicine and the Universidad de Cartagena School of Medicine as affiliates. It was launched in March 2019 with the first Cochrane Colombia Symposium at the Pontificia Universidad Javeriana.

Cochrane Colombia's mission is to promote evidence-based decision making in health care in Colombia by supporting and training Cochrane review authors, and supporting the work with clinicians, professional associations, political actors, patients and the media to encourage the dissemination and use of Cochrane evidence in healthcare decisions.

Several aspects of the Colombian context will determine the reach of Cochrane Colombia's actions. Of these, one which merits special attention is the improvement of local scientific health research.

Strengthening the ability to produce reliable research and its use in health care is a national challenge, not a challenge for a single group or sector or government, but a challenge for the country as a whole. The reality is that, in general, national investment in research and development is low (in 2018, it amounted to less than 0.05% of the GDP), and this is even more true in the healthcare field (1, 2). Consequently, health research in Colombia has a set of weaknesses that include the following:

National healthcare research continues to be scant. Over the last few years, considering the variety of research-stimulating programs promoted by the national government through COLCIENCIAS, health projects represent only 39% of all the projects approved in 2018, and that much less (tanto menos) of all the resources assigned to research in that same year (1). Of a total of 9,555 articles published by Colombian researchers as of December 2018, less than 16% are related to medicine, nursing and other healthcare areas (3).

Moreover, the quality of health research produced in Colombian has not been completely satisfactory: it still has not achieved a level of productivity which responds to the most important health questions in our population, nor to the challenges for our healthcare system, despite having more than 843 medical and health sciences research groups (2). There is a weak relationship between health research and other areas of knowledge that are relevant for better understanding health phenomena. A greater connection with social sciences such as sociology, psychology, economics and anthropology is needed, as well as with other scientific and technological areas which have achieved significant international development, such as neurosciences, bioengineering, mathematical modeling and simulation, among others.

The health research carried out in Colombia has had little relevance for decision making at the various levels of the system. In general, local health research does not significantly affect the decisions of clinicians, management teams, healthcare administrators and public policy makers. This reflects a degree of disconnection between the academic work and the actual demands faced by the healthcare system actors, and is also a consequence of a deficient communication of the research results. This has a tendency to improve with new accreditation of graduate health programs offered in Colombia, which leads to a guarantee of the quality of the research processes of the nation's doctorate and master's health programs, including the final communication of the knowledge generated.

In contrast to our reality, the health research currently being carried out in other countries has a wide and varied focus. The world's leading research programs tend to be multidisciplinary and they are not defined so much by single disciplines, but rather adopt broad topical definitions such as "health improvement" or "global health", which are approached from perspectives which integrate a variety

of disciplinary specialties (especialidades disciplinarias) in academic teams with a variety of training.

These research programs are centered around contingent health problems (especially public health) at their various levels. They place a strong emphasis on the reality of the healthcare system and public policy decision making. This type of scientific work has been termed “use-inspired research” or “knowledge transmission research”, which combines the search for fundamental knowledge characteristic of basic research with the practical focus characteristic of applied research. They have also incorporated the development of scientifically-based products for the healthcare system and the provision of evidence-based consultancy and training services. Thus, they maintain a close relationship and cooperation with healthcare system institutions and actors. A significant number of these programs include formal cooperation agreements with health schools, scientific associations, and government agencies, as well as agreements with guild organizations and patient foundations.

Cochrane Colombia will doubtless contribute to overcoming some of the weaknesses that affect the production and application of scientific health knowledge in Colombia. Due to its model, based on clear management guidelines defined by high level development standards and multidisciplinary, as the Cochrane Collaboration guidelines are, it will bring us closer to desirable research processes which are characteristic of the leading international research programs. However, it is clear that to accomplish

this ambitious mission, the system actors, clinicians and patients who make up the Colombian population must support it using their areas of expertise and action so that, through joint actions, it may meet the health knowledge needs of our country, not just by incorporating the results of its own and the world’s research, but also by transcending the system barriers in order to truly inform, with the best available evidence, both the clinical and public health decisions in Colombia.

Thus, it is an opportunity for the nation’s health to have Cochrane established in Colombia, composed of academic members from highly prestigious universities who have historically contributed immensely to the development of health in the country. To strengthen its structure and representation in the country, Cochrane Colombia will soon receive the Instituto de Investigaciones at the Centro Médico Imbanaco in Cali, the Research Department at the Fundación Cardioinfantil in Bogotá and the Instituto de Evaluación Tecnológica en Salud as affiliates.

Cochrane Colombia <https://colombia.cochrane.org/>

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