Title: Contributing to Evidence Synthesis as a First-Year Medical Student: My Experience with Cochrane Crowd

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ABSTRACT.

The following article describes my experience as a volunteer with Cochrane Crowd, which uses public support to identify Randomized Controlled Trials (RCTs) from records of published medical studies/protocols, which are then added to CENTRAL, the Cochrane Central Register of Controlled Trials. I completed Cochrane Crowd's student training pathway and participated in various tasks such as identifying randomized controlled trials (RCTs), which improved my understanding of evidence synthesis, and I believe this may be useful for other medical students.

Identification and correct categorization of RCTs are essential steps for synthesizing evidence in the form of high-quality systematic reviews and meta-analyses of medical interventions. Thus, public volunteers play an important role here by directly aiding in the processes of evidence-based medicine. Medical students, in my opinion, are ideal volunteers for this task due to their greater background knowledge of medicine and research methodology. There are also various potential benefits, and greater awareness of this interesting opportunity may encourage more medical students to come forward and volunteer as 'citizen scientists'.

Key Words: Systematic Review, Cochrane Review, Cochrane Crowd, Crowdsourcing, Randomized Controlled Trial, Volunteer, Evidence-based medicine, Evidence synthesis, Citizen scientist

THE EXPERIENCE.

Background

The following article describes my experience contributing to evidence synthesis in my first year of medical school, through the opportunities available via Cochrane Crowd and Engage. Evidence synthesis forms the backbone of evidence-based medicine, which is known to improve patient outcomes.[1] Systematic reviews and meta-analyses of randomized controlled clinical trials (RCTs) constitute the highest quality of medical evidence.[1] The Cochrane collaboration (established 1993), named after Archie Cochrane, a pioneer in evidence-based medicine, is the premier global organization credited with facilitating the publication of high-quality systematic reviews of medical interventions and tests, providing clinicians and patients the evidence they need to make vital healthcare decisions.[2] Cochrane Crowd is a web-based portal launched in 2016; it hosts small micro-tasks such as screening for RCTs and extracting Population-Intervention-Comparison-Outcome (PICO). Cochrane Engage, on the other hand, is a volunteer platform wherein people involved in biomedical research can offer their expertise to complete tasks posted by other members of the community. This includes acting as a patient or public reviewer for Cochrane protocols and reviews, translating plain text summaries of Cochrane reviews into vernacular languages and collaborating with other members for evidence synthesis.[3,4,5]

People from various fields and backgrounds can contribute towards furthering science by acting as 'citizen scientists'- helping in the extraction, analysis and interpretation of data.[5] Cochrane Crowd offers an opportunity to act as a citizen scientist, regardless of prior health research experience. This was a particularly appealing prospect for me, as I got a novel opportunity to gain exposure to the basics of evidence-based medicine, while contributing positively to the goal of evidence synthesis.[5]

Personal Experiences

My experience with the Cochrane ecosystem began by signing up for a Cochrane account and navigating to the Crowd website. There, I had the opportunity to learn from small and easy-to-understand visual modules on key concepts in health research, study designs, introduction to CONSORT statement, etc. I followed the student module pathway and I found it clear and quite comprehensible as it was based on daily life examples. After completing basic training, I proceeded to the volunteer tasks. Before commencing each specific role, a small learning module was provided as an introduction to the task. Upon completing the necessary training, I performed various tasks such as screening for possible RCTs/quasi-RCTs from abstracts of published medical studies, extracting PICO from published RCTs, classifying records from Clinicaltrials.gov and International Clinical Trial Registry Platform (ICTRP), among many other interesting activities. The main task-classifying a study as an RCT required me to select whether the record described an RCT/qRCT based on its methodology or else reject it. There was also an option to skip the record if I was unsure of the study type. A ready reckoner mentioning all types of studies to be accepted- RCT, quasi-randomized study, follow-up data from a randomized controlled trial, cost-benefit analysis of an intervention studied previously in an RCT, etc., has been provided as a guide for volunteers, and I found myself referring to it quite often to avoid excluding any relevant study types.

Reading abstracts belonging to a plethora of subjects like immunology, genetics, oncology, hospital medicine, etc., was a fascinating experience. I distinctly remember reviewing two records about soleus exercises in diabetes and remote ischemic limb conditioning in stroke; they encouraged me to read further about these interventions.

A special task type worth mentioning here is the 'Screen4Me' tasks- volunteers get to screen records of possible RCTs/qRCTs for a specific systematic review/protocol, and upon completing more than 250 records, there is an incentive of getting a named acknowledgement in the review. Many other periodic tasks are also posted on the Crowd portal, and each one of them provides a dedicated training exercise to first explain the involved methodology in a meticulous and comprehensible manner. Regular global record screening challenges are organized on the website wherein collaborators from all over the world simultaneously screen a large number of studies. I tried some of these special activities too.

Overall, I screened 693 records of research studies during the month of August 2025 on the Cochrane Crowd portal. Additionally, I contributed as a public reviewer for a Cochrane protocol to improve its readability from a patient perspective; I was selected for this task based on an application made on Cochrane Engage. I finally accumulated sufficient membership points to be admitted to Cochrane membership for an initial period of one year after volunteering for the above tasks. This conferred formal recognition of my efforts.

Strengths & Role of Crowdsourcing in Evidence Synthesis

The studies/records classified as RCT by at least 4 different public reviewers become a part of the Cochrane Central Register for Controlled Trials (CENTRAL).[3] CENTRAL is vital to the evidence synthesis ecosystem as it acts as an extensive database of studies appropriate for inclusion in high-quality systematic and Cochrane reviews. In a study published by Noel-Storr et al[3] evaluating crowdsourcing for RCT screening using Cochrane Crowd, the sensitivity of using public volunteers for RCT screening (based on abstracts of published studies) was found to be 99.1 %. This statistic clearly indicates that this model is successful for RCT identification. In case of any inter-reviewer disagreement, the record is referred to the Cochrane Crowd team for professional review to ensure no RCT is excluded from CENTRAL.[3]

According to the same study[3], the annual number of bibliographic records screened by Crowd volunteers was about 100,000 in 2020; Cochrane's machine learning based RCT classifier further screened 200,000 studies[3], resulting in a huge number of around 300,000 records assessed in that calendar year. These statistics clearly

point to the vital role played by Crowd volunteers in ensuring that the large number of studies published each year are correctly classified as RCTs for their inclusion in CENTRAL. For perspective, it is imperative to note that around 1.5 million articles in biomedicine are published annually[6]; it is a humongous number. The crowdsourcing model has also been found to be effective for rapid screening of studies for identifying titles relevant to COVID-19 Cochrane rapid reviews, indicating its potential role in hastening evidence synthesis during public health emergencies.[7]

Benefits for Medical Students & Conclusions

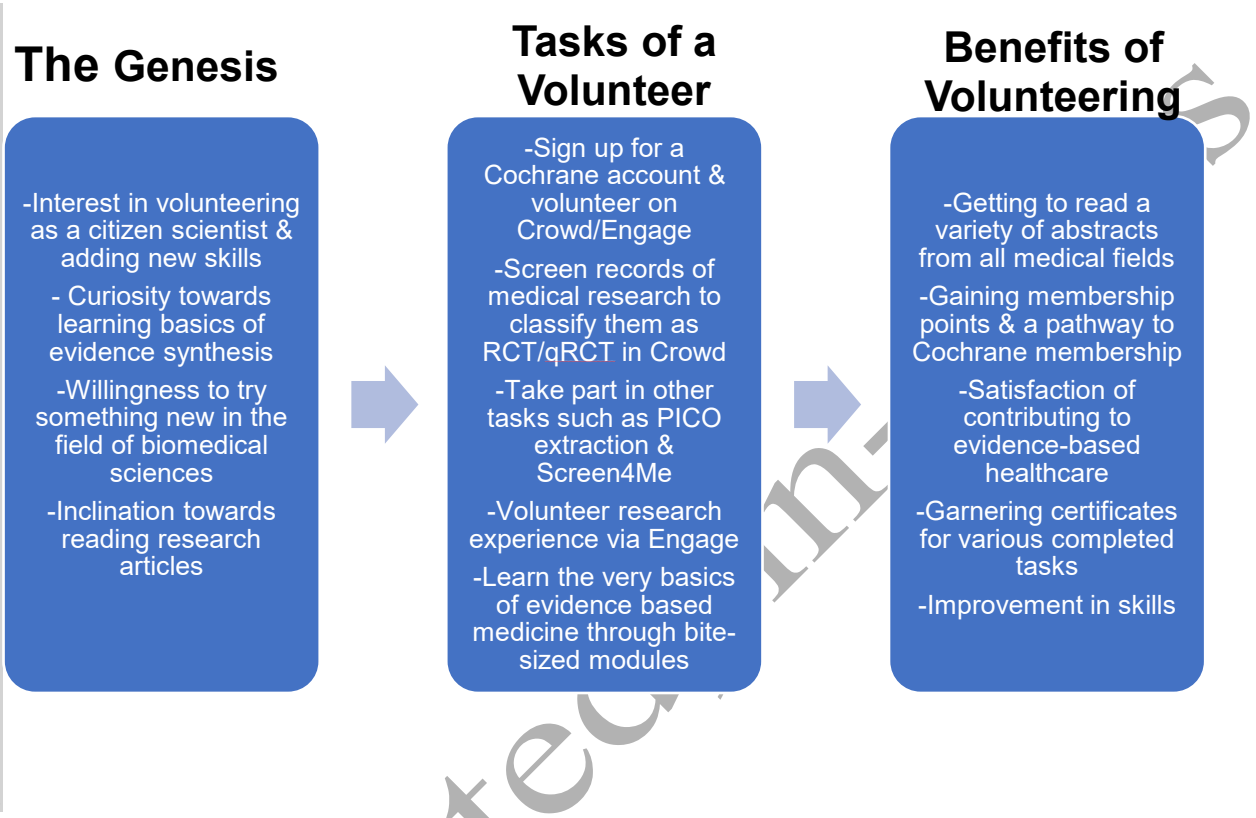
Many Cochrane Crowd volunteers are students in a health-related field, according to data published by the Cochrane Team.[3] This is probably because of their previous exposure and higher interest in reading a variety of medical studies. I myself believe from personal experience, that medical students in training are the ideal volunteers for Cochrane Crowd because of their better understanding of the medical literature and curiosity towards exploring new avenues in medicine. One can obtain nice certificates for completed tasks and collect membership points which culminate in eventual admission to a Cochrane membership. This is a big incentive for medical students as we get the dual benefit of learning something new and a pathway to prestigious Cochrane membership (upon screening >1000 records), which comes with advantages such as access to Cochrane learning materials and RevMan at a lower cost.[8] Ultimately, contributing to evidence-based medicine, along with gaining new experience, is quite satisfying. A contribution of even as little as 10 minutes daily for screening studies would help further the cause of evidence-based medicine. However, the personal experience on an individual level may vary based on time commitment and prior exposure to research. To conclude, I would urge more of my peers globally to explore this interesting opportunity and add to a cosmopolitan community of volunteers, all bound by the common goal of improving patient care through evidence synthesis.

REFERENCES.

1. Tenny S, Varacallo MA. Evidence-Based medicine [Internet]. StatPearls - NCBI Bookshelf. 2024. Available from: https://www.ncbi.nlm.nih.gov/books/NBK470182/
2. Cochrane. Our Story. Available from: https://www.cochrane.org/about-us/our-story. Last updated Jul 18, 2025. Cited Oct 03, 2025.
3. Noel-Storr A, Dooley G, Elliott J, Steele E, Shemilt I, Mavergames C, et al. An evaluation of Cochrane Crowd found that crowdsourcing produced accurate results in identifying randomized trials. Journal of Clinical Epidemiology. 2021;133:130–9.
4. Cochrane.What is Cochrane Engage?. Available from: https://help.cochrane.org/kb/article/10-what-is-cochrane-engage/.Last Updated Apr 30, 2024. Cited Oct 03, 2025.
5. Cochrane. Become a Cochrane Citizen Scientist. Available from: https://www.cochrane.org/about-us/news/become-cochrane-citizen-scientist. Last updated Oct 30, 2017, Cited Oct 03, 2025.
6. González-Márquez R, Schmidt L, Schmidt BM, Berens P, Kobak D. The landscape of biomedical research. Patterns. 2024;5(6):100968.
7. Noel-Storr A, Gartlehner G, Dooley G, Persad E, Nussbaumer-Streit B. Crowdsourcing the identification of studies for COVID-19-related Cochrane Rapid Reviews. Res Synth Methods. 2022;13(5):585-594.
8. Cochrane. Cochrane membership. Available from: https://www.cochrane.org/get-involved/cochrane-membership. Last updated Jun 17, 2025. Cited Oct 03, 2025.

FIGURES AND TABLES.

Figure 1. Volunteering for various tasks on Cochrane Crowd and Engage: My Experience



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