

COVID-19 Vaccine Clinical Trials: Where are participants from and who gains authorship?

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Very few COVID-19 vaccine trials recruited participants from low-income countries. Among multinational trials, trial publications often lacked authors from all participating countries, while HIC-affiliated authors predominantly occupied first and last authorship positions.

BACKGROUND

- The COVID-19 pandemic was met with an unparalleled research response that led to collaborative efforts among researchers and research sponsors from around the world, resulting in the rapid development and rollout of multiple vaccines.
- A large body of academic literature was also established, including many publications reporting the results of hundreds of COVID-19 vaccine trials enrolling participants from 80 countries.¹
- In order to study equitable authorship during this time, we characterized 1) the research landscape for COVID-19 vaccine trials including where participants were recruited from, and 2) whether authorship of resulting publications reflected the countries where participants tested the vaccine.

RESULTS

- Of 612 registered, randomized phase 1-3 vaccine trials, 62% (n=378) had at least one recruitment site in an upper-middle income country (UMIC) or lower-middle income country (LMIC), 41% (n=252) recruited from high-income countries (HICs), and **only 2% (n=12) recruited from low-income countries (LICs)**.
- The 35 analyzed publications reported findings from 21 trials involving 14 vaccines. These publications presented results on participants from 32 countries, of which 47% (n=15) were HICs, 40% (n=13) were UMICs, and 13 (n=4) were LMICs.
- These 35 publications included **953 authors, of which 79% (n=753) were associated with HIC institutions**, 16% (n=152) with UMIC institutions, 4.4% (n=42) with LMIC institutions and 0.6% (n=6) with multiple affiliations. Additionally, 43% (n=15) of these publications did not have at least one author with each of the countries that recruited participants.

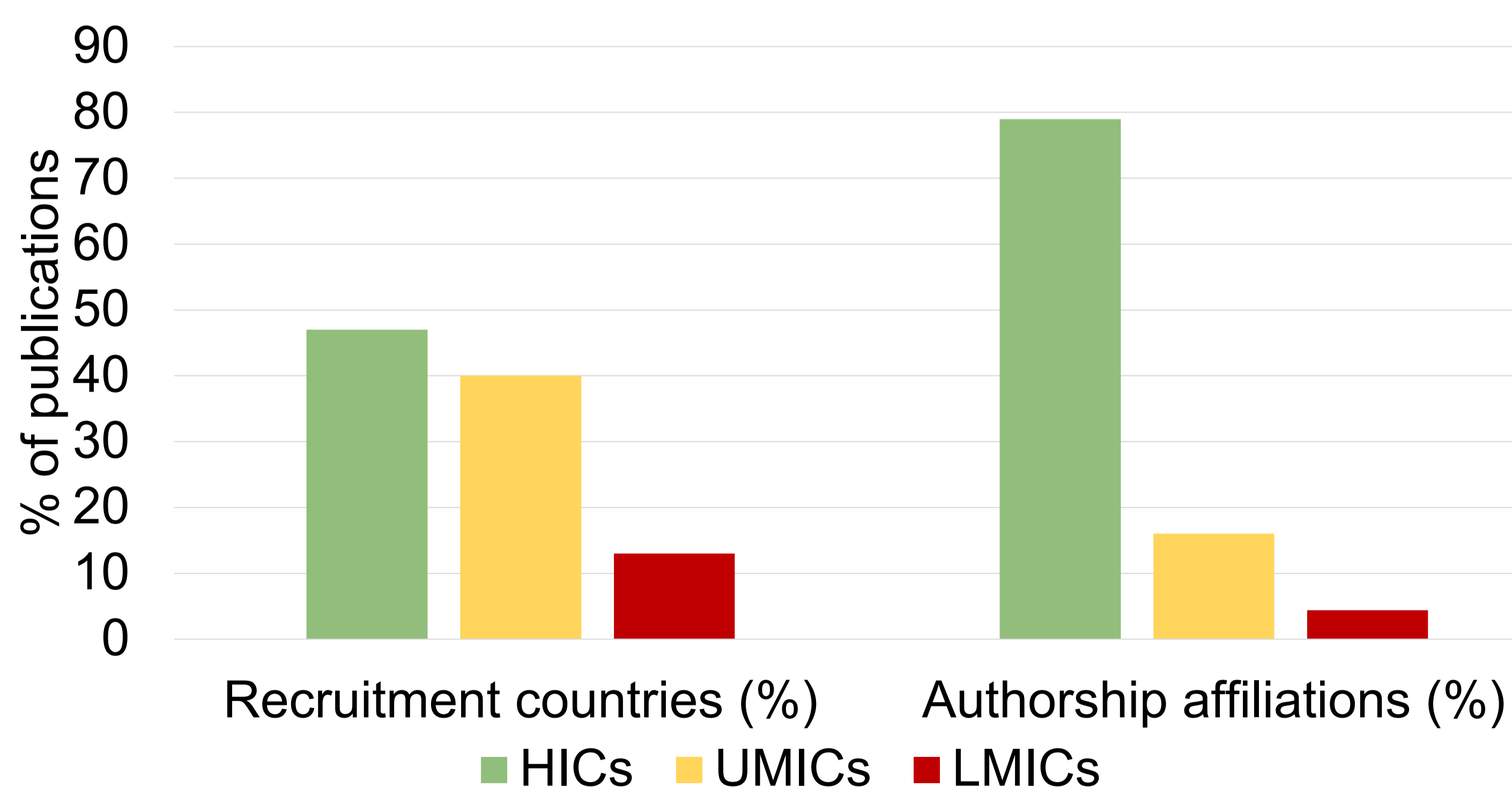


Figure 2: Recruitment countries and authorship affiliations according to World Bank country income group among 21 multinational trials published in 35 unique publications.

- Finally, in publications where participants were recruited from at least one HIC and at least once UMIC/LMIC, 42% (n=9) did not have an author affiliated with the middle-income country and **76% (n=16) had first/and or last authors from the HIC**.

METHODS

- We sought to identify all COVID-19 vaccine phase 1-3 vaccine randomized clinical trials by using the COVID-NMA platform.² We retrieved trials indexed from March 2020 until August 2, 2023 and classified them as single-country or multinational, based on the location of trial sites.
- For multinational trials, we sought to identify all publications. Two reviewers (NOS and VN) independently extracted data from the publications identified through PubMed and Google Scholar, including trial characteristics (size, phase, results, funding), the location of all trial sites, and the affiliations of each author. We then compared the concordance between author-affiliated countries and trial sites.

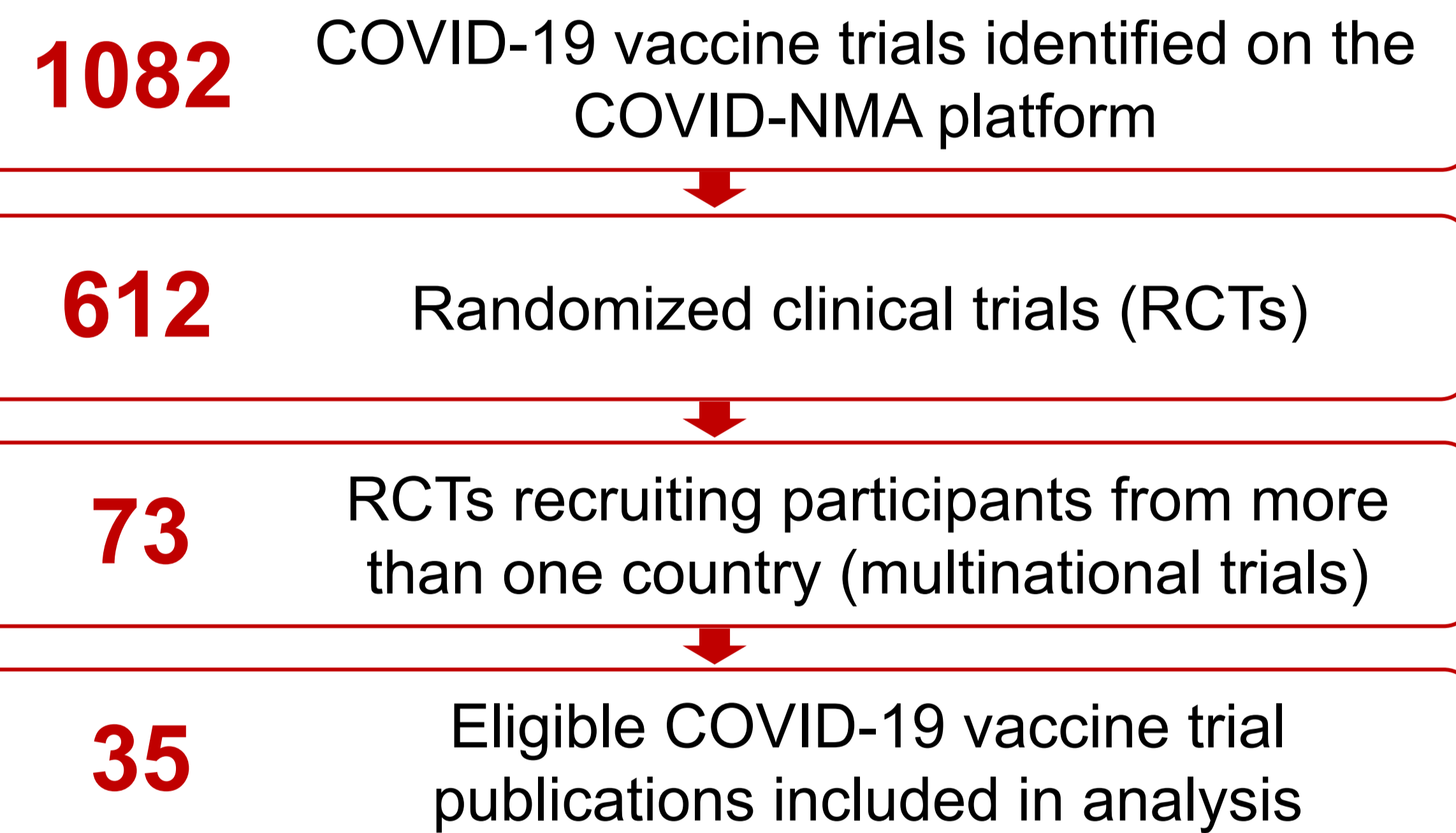


Figure 1: Identification of COVID-19 vaccine trials and publications eligible for analysis.

CONCLUSIONS

- Very few COVID-19 vaccine trials recruited participants from low-income countries.
- Multinational trial publications often lacked authors from all participant-recruiting countries.
- HIC-affiliated authors predominantly occupied first and last authorship positions.
- These results mirror trends seen in other areas of research such as global surgery.³
- Efforts are needed to increase inclusion of low-income countries in multinational RCTs, and to ensure recognition of all authors meeting international authorship guidelines.

KEY REFERENCES

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