

Obtaining self-archiving permissions at scale to realize the potential of green Open Access: a case study

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ABSTRACT

Background. While there is evidence that open access (OA) has been growing (Hobert et al., 2021; Piwowar et al., 2018), many publications remain behind a paywall. In many cases, journal or publisher self-archiving policies allow researchers to make a version of their publication openly accessible in a repository, sometimes after an embargo period (green OA). The UNESCO Recommendation on Open Science (UNESCO, 2021) adopted in November 2021 recommends several priority areas of action, including fostering a culture of open science by ensuring diversity in scholarly communications and supporting non-commercial publishing models. In this study, we evaluated the potential of journal articles from clinical trials conducted at German university medical centres to become green OA.

Methods. We assessed a sample of clinical trials registered with ClinicalTrials.gov or DRKS completed between 2009 and 2017 (Riedel et al., 2021). The analysis was limited to their results published between 2010 and 2020 in 1907 unique journal articles with a DOI resolved in Unpaywall. We queried Unpaywall (OurResearch) via its API to identify paywalled publications in our sample. A publication was considered paywalled if it was not accessible via any OA route (gold, green, hybrid, or bronze). We then queried Shareyourpaper (OA.Works) via its API to obtain self-archiving permissions of publications in our sample. Shareyourpaper combines publication metadata and policy information to derive self-archiving permissions at the level of individual publications. Publications were considered to have the potential for green OA if a "best permission" was found for archiving the accepted or published version in an institutional repository, and if the embargo (if applicable) had elapsed by the query date. The Unpaywall API was queried on 13 May 2022 and the Shareyourpaper API on 14 May 2022.

Results. We identified 870 (46%) articles that were not openly accessible via any route (gold, green, hybrid, or bronze). Of these, 753 (87%) had a "best permission" in Shareyourpaper for archiving the accepted or published version in an institutional repository. At the time of the query, 136 (15%) of otherwise paywalled publications with a permission for self-archiving in an institutional repository had been made openly accessible via this route.

Conclusions. For clinical trials to generate useful and generalizable medical knowledge, their results should be openly accessible, in line with established guidelines (World Health Organization, 2017). We found, however, that many results from clinical trials conducted at German university medical centres remained behind a paywall, even though they could be self-archived in an institutional repository. Our findings suggest that the potential of green OA to broaden the dissemination of scientific knowledge and ensure equitable access remains relatively unfulfilled and encourage an ongoing intervention at the Charité to increase clinical trial transparency. This case study clearly illustrates how openly available tools can be used to obtain actionable information related to self-archiving at scale, and thereby empower authors and institutions to increase science discoverability.

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KEYWORDS

green open access; intervention; self-archiving; Shareyourpaper; Unpaywall

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