Objectives: The question of who pays for research to be conducted and published is an important one as it may result in publication bias. The traditional model of medical publishing has relied on subscriptions for funding. There has been increasing interest in making the results of scientific research freely available. One proposed mechanism is an author-pays system, which shifts cost from subscribers to authors. We investigated the impact of author page charges on the nature and type of published research, and the association of industry funding with types of published research.

Methods: Four infectious diseases journals with comparable scope were studied with and without page charges and two without. Variables included type of research study, area of research, author demographics, study setting and industry funding. The differences between a subscription model vs. a mixed model (author page charges and subscription charges) were studied. We also investigated changes within the same journal once it had moved from a subscription model to a mixed model.

Results: Authors from developing countries were significantly less likely to be published in the mixed-model journals (OR 0.25, 95% CI 0.15-0.41, P < 0.001). Clinical trials published in any type of journal were significantly more likely to be industry funded than any other type of research (OR 12.7, 95% CI 7.0-22.9, P < 0.001). Industry-funded research was significantly less likely to be about diseases affecting predominantly the developing world (OR 0.47, 95% CI 0.25-0.89, P < 0.05).

Conclusion: There is clearly a relationship between industry funding and certain types of published research. The model of funding of journal publishing can also affect the nature of published research. Shifting publishing costs to authors favours well-funded organizations, industry sponsored research and wealthy countries. Such potential for publication bias must be considered when planning for open access models.