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How open are pharma publications?

Steph Macdonald* and Tim Koder

Open Pharma, Oxford PharmaGenesis Ltd, Oxford, UK
*Correspondence: steph.macdonald@pharmagenesis.com

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ABSTRACT

Objective
Open access is key to improving the transparency and accessibility of research. Although the number of open access publications is increasing year on year, the overall proportion of open access publications reporting pharma-funded research remains unknown.[1] Tools such as the Good Pharma Scorecard are useful for assessing the transparency of clinical trials. However, the scorecard does not reflect the accessibility of the corresponding peer-reviewed publications.[2]

This analysis aimed to assess the proportion of pharma-funded research that is published open access, and the types of licences granted.

Research design and methods
Data were downloaded from the Good Pharma Scorecard public files for 2017 (533[a] records) and 2019 (675 records) and screened for PubMed links. Each link was accessed manually and any article that was free to read was scored as open access. Licence information was recorded when available.

Results
The proportion of open access publications increased from 61% (159/260)[a] in the 2017 data set to 63% (153/244)[a] in the 2019 data set. Licensing information was available for 35%[a] and 44%[a] of the publications from the 2017 and 2019 data sets, respectively. The proportion of manuscripts available under the most open Creative Commons (CC) licence, CC BY, doubled from 2017 to 2019. Elsevier publications were available under a single licence similar to CC Attribution-NonCommercial-NoDerivs (CC BY-NC-ND). The proportion of publications available open access varied between the 11 companies assessed, ranging from 0% to 100%.

Conclusions
Open access publishing of pharma-funded research is slowly increasing, along with the proportion of publications with a CC BY licence, with wide variation seen between companies. Licensing information is not widely available; however, this is also improving.

[a] During reanalysis of the data, these figures were adjusted to exclude duplicate PubMed links.
Keywords: *Open access, Literature search, Original research*

INTRODUCTION

- Open access is key to improving research transparency and accessibility.
- Over recent years, pharma has made substantial improvements in the disclosure of clinical trial results.[1]
- The number of open access publications is also on the rise; specifically, the proportion of pharma-funded open access publications increased from 20% in 2009 to 40% in 2016.[2,3]
- The Good Pharma Scorecard (GPS), developed by Bioethics International, is a bi-yearly ranking of pharma companies' transparency and data sharing practices.
- The GPS is a useful tool for assessing the transparency of clinical trials;[4,5] however, it does not reflect the accessibility of the corresponding peer-reviewed publications.

OBJECTIVE

- The aim of this study was to assess the proportion of pharma-funded articles published open access and to investigate the proportion and type of Creative Commons licences granted to these articles.

RESEARCH DESIGN AND METHODS

Study data
- Data were downloaded from the GPS public files for 2017 (533 records) and 2019 (675 records).[4,5]
- The 2017 data set covered clinical trials supporting 2014 US Food and Drug Administration (FDA)-approved new drug applications that were sponsored by one of the 20 largest pharma and biotechnology companies by market capitalization.[5]
- The 2019 data set comprised phase 2 and phase 3 clinical trials relating to new drug applications approved by the FDA in 2015, and was limited to the 20 largest companies in 2015.[4]
- GPS transparency scores represent an equal combination of public availability of trial results, compliance with legal transparency requirements and patient-level data sharing.

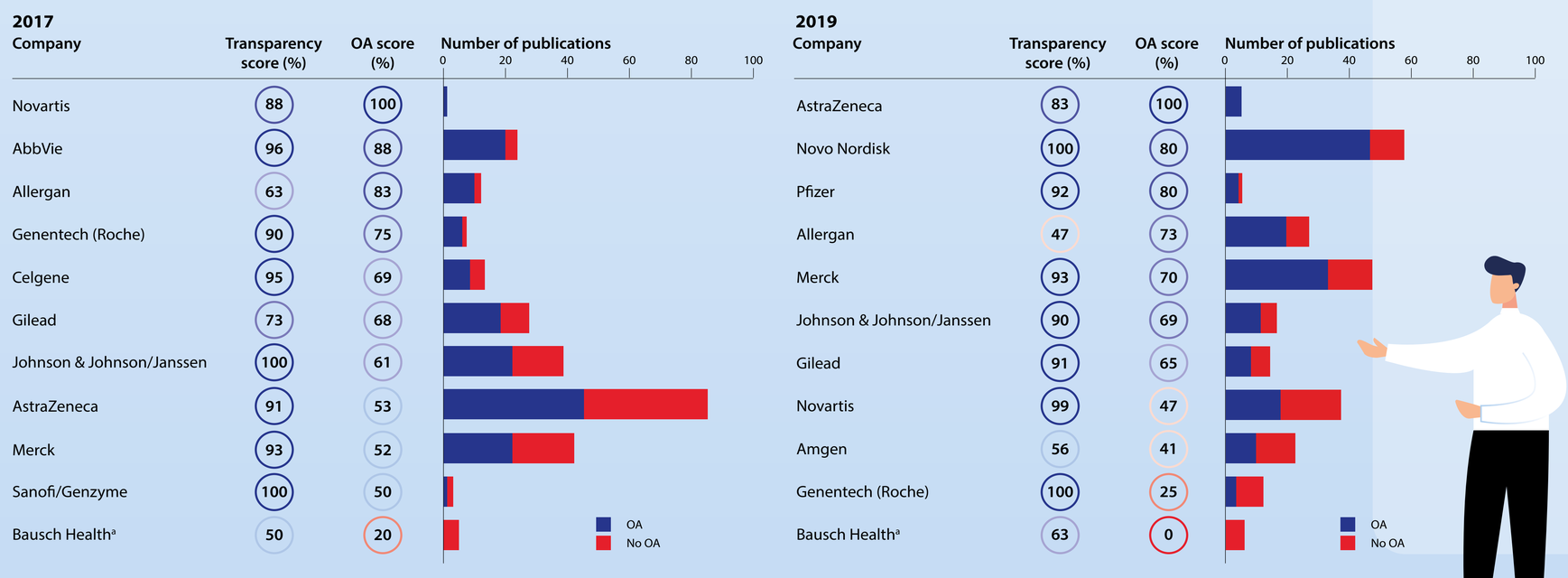
Study design
- Records from the 2017 and 2019 GPS were screened for PubMed links to full-text articles. Links to conference abstracts were excluded from the analyses.
- Articles uploaded to platforms such as ResearchGate were also excluded from the analyses.
- Each link from the 2017 (n = 260) and 2019 (n = 244) data sets was accessed manually, and any article that was free to read, either on PubMed Central or on the journal's website, was marked as open access.
- Of note, links to published Bristol-Myers Squibb trials in the 2019 data set were not available at the time of preparing this poster.
- The percentages of open access publications, overall and for each company separately, were calculated and represent the open access score.
- Creative Commons licensing information was recorded when it was available.

RESULTS

Open access rates
- Of the articles with PubMed links in the 2017 data set, 61% (159/260) were available open access.
- In the 2019 data set, 63% of articles (153/244) with PubMed links were available open access.
- Substantial variation in the proportion of publications available open access was seen between the different pharma companies included in the 2017 (20–100%) and 2019 (0–100%) GPS (Figure 1).
- The open access score for each company was not always reflective of the transparency score assigned to the company in the GPS (Figure 1).

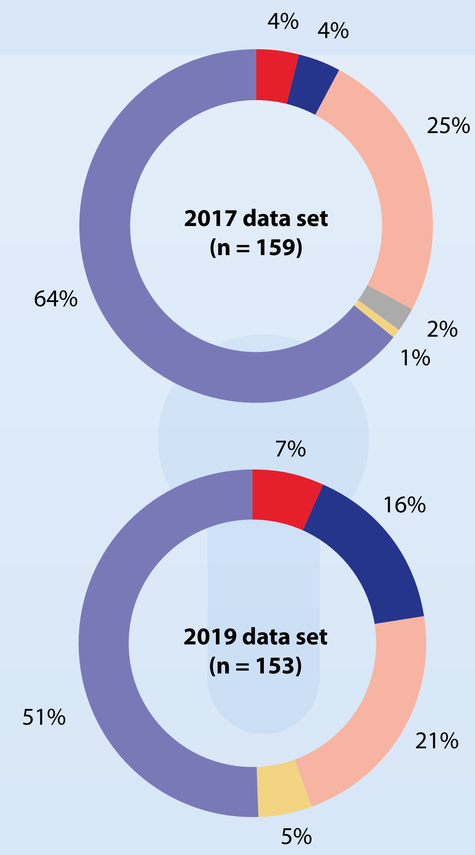
Availability of licensing information
- The proportion of open access articles with Creative Commons licensing information increased from 35% (56/159) in the 2017 data set to 44% (68/153) in the 2019 data set (Figure 2).
- The proportion of articles assigned the most open Creative Commons Attribution (CC BY) licence almost doubled between 2017 (4%) and 2019 (7%).
- The most common type of Creative Commons licence was the Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND) licence in both the 2017 (25%) and the 2019 (21%) data sets.
- A further 5% of articles, all published by Elsevier, were available under a single licensing agreement similar to CC BY-NC-ND in the 2019 data set.

FIGURE 1. Proportion of transparency scores and open access publications (open access scores) across the pharma companies included in the 2017 (left) and 2019 (right) Good Pharma Scorecard data sets.



[a]Formerly Valeant Pharmaceuticals. OA, open access.

FIGURE 2. Proportion of open access articles from the 2017 (top) and 2019 (bottom) Good Pharma Scorecard data sets with an associated Creative Commons licence.



BY, Attribution; CC, Creative Commons; NC, NonCommercial; ND, NoDerivs; SA, ShareAlike.

STRENGTHS AND LIMITATIONS

- The current analyses build on the data reported by the GPS to include accessibility as a measure of transparency.
- The high degree of variation between results in 2017 and 2019 for some companies is most likely to be because findings reflect only a minority subset of the overall publication record for each company, with publication practices varying by therapy area and product team. Therefore, the current open access scores may not be a true reflection of the overall openness of each pharma company.
- Accessibility screening was performed manually.

CONCLUSIONS

- The rate of open access pharma-funded publications is slowly increasing, which may be partly owing to the implementation of policies focusing on research accessibility.
- Substantial variation in the proportion of articles published open access was seen between the pharma companies included in both the 2017 and 2019 GPS data sets. This variation is to some extent explained by differences in journal selection criteria and the open access options offered by publishers to pharma companies.[6]
- The accessibility of clinical trial publications is not always reflected in the GPS transparency score and rankings.
- The proportion of articles with Creative Commons licensing information readily available also increased from 2017 to 2019.
- However, over half of the publications in the 2019 GPS did not provide any Creative Commons licensing information, highlighting the need for a greater focus on transparency and understanding of the different types of licences.
- Future work will expand on these analyses to include a wider range of pharma and biotechnology companies and more types of open access publishing.

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DISCLOSURES

SM (https://orcid.org/0000-0002-9691-0652) and TK (http://orcid.org/0000-0001-6152-7365) are employees of Oxford PharmaGenesis and have no relationships with proprietary entities producing healthcare goods or services.

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