

Wellcome and COAF open access spend 2018/19

This is our analysis of the spending by 38 organisations that received a grant from the Charity Open Access Fund (COAF) or a block grant from Wellcome between October 2018 and September 2019.

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Overview

Every year, we ask all [organisations](#) in receipt of a grant from COAF to provide details about their open access (OA) publications and their associated article processing charges (APCs). The analysis covers research funded by:

Blood Cancer UK

British Heart Foundation

Cancer Research UK

Parkinson's UK

Versus Arthritis

Wellcome.

It provides details of the costs of OA publishing incurred by COAF and the extent to which the published articles comply with the common OA policy of COAF partners (referred hereafter as the COAF OA policy).

Overall, full compliance with the COAF OA policy – articles freely accessible through Europe PMC and made available under a CC-BY licence – was 95%, an increase on last year's figure of 90%.

Cost analysis

In 2018/19, COAF funded the APCs of 3,410 articles at a cost of £7.1 million (see table 1).

This analysis excluded 244 articles that were either:

- published ahead of print, and thus not yet the final, published version
- in publisher deals with a reported APC of £0 – we aren't able to calculate the real cost of these articles.

This year, the average APC was £2,410 and the median was £2,300. Compared with the previous year (2017/18) we can report that the average APC fell by 0.5%, whilst the median rose by 2%.

Table 1: APC spend for the years 2015-19

Item	2015/16	2016/17	2017/18	2018/19
Number of articles for which an APC was paid	3,552	3,474	3,601	3,410
Total cost of APCs	£7,252,915	£7,881,899	£8,729,201	£8,218,283
Total Wellcome/COAF spend on APCs (some APCs' costs were split between COAF and another funder)	£6,600,690	£7,166,874	£7,458,045	£7,052,837
Average APC for the total spend	£2,044	£2,269	£2,424	£2,410
Median APC for the total spend	£1,944	£2,081	£2,250	£2,300

Our analysis splits journals into fully OA journals (in which every article is made OA – for example PLOS One or Nature Communications) and hybrid journals (which are published under a subscription model, but where individual articles can be made OA).

Table 2 provides a breakdown of the number of publications and average and median prices by publication type.

Table 2: APC spend by publication type, 2016-19

Year	Fully OA journals			Hybrid journals		
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
Article count	1,037	1,154	1,207	2,437	2,447	2,203
Average APC	£1,943	£2,090	£2,082	£2,401	£2,581	£2,591
Median APC	£1,564	£1,656	£1,758	£2,304	£2,400	£2,464

Publication in hybrid journals remains the predominant publication route for COAF-funded researchers, with 65% of articles for which an APC was levied published this way. Hybrid journals continue to be more expensive, with an average APC of £2,591 compared with £2,082 for fully OA journals.

The average APC for fully OA journals reduced slightly (0.5%) this year in contrast to the average APC of hybrid journals, which increased (0.5%). We saw median APC increases of 6% for fully OA journals and 3% for hybrid journals.

As seen in previous years, a small number of highly-priced, fully OA journals continue to have a large impact on our data. This year we saw a drop in the number of articles published in the more expensive fully OA journals, Nature Communications (95) and Cell Reports (30) relative to the previous year (2017/18) and this accounts for the drop in the average APC of fully OA journals we have seen. The increase in the median APC of fully OA journals is a combination of these more expensive fully OA journals but also a gradual shift upwards of APCs at the lower end of the APC range. If we remove the 4% of articles published in the more expensive OA journals from our cost analysis of fully OA APCs, we observe the average and median to be £1,845 and £1,680 respectively.

We have also analysed the APCs associated with publisher schemes – including read and publish, offsetting, prepayment, discount and membership schemes (see table 3). These will become more common as organisations make their content OA in future. This year, 26 organisations gave us data about their publisher schemes. 695 articles (27% of the total reported by these organisations) benefitted from some form of publisher scheme – for these articles the average APC was £1,457.

Table 3: articles benefitting from read and publish, offsetting, prepayment, discount and membership schemes, 2017-19

	2017/18			2018/19		
	Number of articles	Average APC	Total spend	Number of articles	Average APC	Total spend
Fully OA journals	205	£1,518	£350,424	265	£1,392	£359,167
Hybrid journals	478	£1,935	£1,079,349	430	£1,496	£635,857
Total	683	£1,810	£1,429,773	695	£1,457	£995,024

The average APC total of £1,457 (see table 3) is significantly lower than the average APC total for all articles which is £2,410 (see table 1). The reductions provided through publisher schemes are greater for hybrid journals than fully OA journals. This year we have seen a significant drop in the cost of APCs charged to us for hybrid journals included within these publisher schemes.

Table 4 breaks down the publication costs reported to us for the top five publishers (by volume) of COAF-funded articles published in 2018/19.

Table 4: top five publishers (by volume) of COAF-supported research and APC spend, 2018/19

Publisher	Journal type	Number of articles	Average APC	Total spend
Elsevier	Fully OA	100	£2,975	£297,519
	Hybrid	652	£2,990	£1,949,465
Totals		752		£2,246,984
Springer Nature	Fully OA	436	£2,233	£973,564
	Hybrid	124	£2,457	£302,246
Totals		560		£1,275,811
Wiley	Fully OA	19	£1,642	£31,199
	Hybrid	326	£2,324	£757,599
Totals		345		£788,799
Oxford University Press	Fully OA	35	£1,541	£53,930
	Hybrid	216	£2,412	£520,964
Totals		251		£574,894
Wolters Kluwer	Fully OA	14	£1,934	£27,072
	Hybrid	90	£3,757	£338,136
Totals		104		£365,208

Elsevier again has the most expensive APCs, associated with fully OA journals, with average APCs over £2,900 – far higher than the other publishers in the top five. This year Wolters Kluwer had the most expensive APCs, associated with hybrid journals, with an average over £3,700.

Springer Nature is the only publisher that has published more fully OA articles than hybrid ones.

Compliance data

In addition to understanding how much OA is costing us, we look at whether publishers are delivering a service that helps our researchers to comply with the COAF OA policy.

In brief, the policy requires that when COAF funds are used to pay for an APC the publisher must:

- deposit the final version of the article in PubMed Central (PMC)/Europe PMC

- make sure that the article is clearly licenced CC-BY on their own site and in PMC/Europe PMC.

As in previous years, we used the Cottage Labs compliance checking tool ([opens in a new tab](#)) to programmatically determine if a paper is in the Europe PMC repository and, if so, what licence is attached to it.

Overall compliance is 95%, up from last year's 90% (see table 5). If we look at the two elements of the Open Access policy separately, the percentage of articles freely available via Europe PMC at the time of publication was 98%, while the number of articles with a correct and programmatically identifiable licence (either in Europe PMC or on the publisher's website) was 96%.

Table 5: compliance with COAF OA policy, 2015-18

	Numbers			Percentage		
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19
Published articles for which an APC has been paid	3,382	3,601	3,410	100%	100%	100%
Number of these articles available in Europe PMC as full text	3,070	3,386	3,343	91%	94%	98%
Number of articles with a CC-BY (or CC-0) licence either in Europe PMC or on the publisher's website	3,090	3,300	3,291	91%	92%	96%
Number of articles with other licence (or no programmatically identifiable licence)	292	301	121	9%	8%	4%
Number of articles for which full text was available via Europe PMC with a CC-BY or CC-0 licence	2,931	3,251	3,226	87%	90%	95%

In aggregate, there are 184 articles for which COAF has paid an APC and which are not compliant with our requirements – this is 5% of the total number of all APC articles (see table 6).

As in previous years, hybrid journals remain the overwhelming source of non-compliance (89%). The total spend on these non-compliant articles is £417,212. Since some of these articles were split between Research Councils UK and COAF, the total amount charged to COAF for these non-

compliant articles is £365,444. If payments are made, we fully expect services to be delivered in line with our policy.

Looking at the 184 non-compliant articles, 35% are missing from Europe PMC and the remainder are available as free, full-text articles, but under an incorrect or unknown licence.

We continue to urge subscription publishers to develop better workflows to make sure that COAF-attributed articles, for which an APC has been levied, are deposited in PMC in line with our requirements. The issue of continuing non-compliance has contributed to the decision that, from 1 January 2021, we will no longer fund APCs in subscription journals unless they are covered by a transformative arrangement([opens in a new tab](#)).

Table 6: non-compliance - fully OA journals vs hybrid journals, 2017/18

	Published articles for 2018/19	Non-compliant articles	Percentage of non-compliant articles
Fully OA journals	1207	21	2%
Hybrid journals	2203	163	7%
Total	3410	184	5%

Of the top five publishers Springer Nature has the lowest rate of non-compliance (1% - see Table 7). Elsevier and Wiley both have significantly lower rates of non-compliance than last year. Although this is a welcome development, some 15 years after making our first APC payments to these publishers it is disappointing that compliance is not 100% (or thereabouts).

Table 7: non-compliance – top five publishers by volume

Publisher	Journal type	Number of articles	Non-compliant	Non-compliant (%)
Elsevier	Fully OA	100	5	5%
	Hybrid	652	36	6%
Totals		752	41	5%
Springer Nature	Fully OA	436	0	0%
	Hybrid	124	7	6%
Totals		560	7	1%
Wiley	Fully OA	19	2	11%

Publisher	Journal type	Number of articles	Non-compliant	Non-compliant (%)
	Hybrid	326	18	6%
Totals		345	20	6%
Oxford University Press	Fully OA	35	1	3%
	Hybrid	216	14	6%
Totals		251	15	6%
Wolters Kluwer	Fully OA	1	1	7%
	Hybrid	90	3	3%
Totals		104	4	4%

Conclusions and actions

Overall compliance with the COAF OA policy is 95%. As in previous years, we will be working with publishers and organisations to make sure that non-compliant articles are made compliant as soon as possible.

Analysis of the impact of publisher schemes on the costs of APCs demonstrates that they continue to contribute to significantly lower costs for COAF members.

COAF has been in operation since October 2014 and over the past 6 years has spent £46 million in OA fees. COAF however, depends on all funders sharing a common OA policy, which will no longer be the case from January 2021 when Wellcome implements its Plan S-aligned OA policy. Consequently, COAF will be terminated at the end of September 2020. Once COAF is terminated, the individual funders will continue to support OA costs in line with their policies, but these funds will not be centralised through COAF.

Notes

The data used for this analysis was provided by organisations in November and December 2019. The analysis was carried out using Wellcome's Cottage Labs compliance checking tool (opens in a new tab) on 14 March 2020. The analysis was conducted using the raw data provided by organisations. While every effort has been made to provide accurate information, there may be errors within the analysed data. Where errors are identified, we will endeavour to make corrected versions of the data available.

The raw data used for this article is freely available on Figshare (opens in a new tab).