

health-care workers, for example, might be able to protect their families from infection, but when the virus is everywhere, there will be lots of opportunities for it to enter a household, she says.

Israel aside, vaccines will not have an impact on viral spread any time soon, says Raina MacIntyre, an epidemiologist at the University of New South Wales in Sydney, Australia. “Many other countries are using much

lower-efficacy vaccines, which are unlikely to control infection,” she says.

Modelling work by Hogan shows that vaccines that are less effective at preventing infection will have a smaller impact on transmission in the population (see go.nature.com/2yf8yhe). “But even with an imperfect vaccine, that population-level impact on deaths could still be quite substantial,” she says.

family from the start of this year, could see many *Science* manuscripts shared with open licences. According to Clarivate Analytics in Philadelphia, Pennsylvania, 31% of articles published in *Science* in 2017 acknowledged a Plan S funder.

Some other journals have also adopted green OA to comply with Plan S. *The New England Journal of Medicine* told funders in October that it would permit green OA in 2021 for Plan S-funded scientists, for instance. The UK Royal Society has allowed green OA in its journals for years and permits sharing under open licences if funders require it.

PUBLISHER OF SCIENCE EXPANDS OPEN-ACCESS POLICY

Paywalled titles will let some researchers share accepted manuscripts under open licences.

By Richard Van Noorden

In a step towards open access, the publisher of *Science* will start allowing some authors publishing in its high-profile subscription journals to share their accepted manuscripts openly online under liberal terms that mean anyone could reproduce or redistribute the work.

The change ensures that scientists with grants from some funding agencies that insist on open-access (OA) publishing under the bold Plan S initiative can still publish in the Science family of subscription journals. Around two dozen funders have signed up to Plan S, which began on 1 January 2021, although individual agencies have different starting dates.

In the past few months, many selective subscription journals have introduced options for authors to pay fees to have their papers published OA, in response to Plan S. But the American Association for the Advancement of Science (AAAS) in Washington DC, which publishes *Science*, says it wants to avoid this because it is concerned about introducing OA-publication charges that could be financially out of reach for authors.

The new AAAS policy instead allows researchers funded by some Plan S agencies to post accepted versions of their articles online freely as soon as their papers appear, and under open licences that let anyone else redistribute or reproduce the manuscripts. (Some Plan S agencies, such as UK Research and Innovation, haven't yet finalized their policies on manuscript-sharing, so the AAAS policy doesn't apply to them yet.)

The AAAS already allowed this kind of immediate author-initiated sharing, sometimes called green open access, but

its terms stated that the manuscripts could be shared only on personal or institutional web pages, and couldn't be redistributed. Researchers also had to wait six months before they could post manuscripts in repositories such as PubMed Central. That did not satisfy Plan S funders, which say that if scientists can't publish OA in journals (a process sometimes called gold OA), then they must share their accepted manuscripts under fully open licences as soon as they are published.

Legal obligation

In July 2020, some Plan S funders even said that they would make it a legal condition of grants that authors retain the rights to share their accepted manuscripts openly – no matter what a journal's publishing agreement says.

The AAAS now says that scientists funded by Plan S agencies that adopt this 'rights retention scheme' (RRS) will be able to apply open licences to their shared manuscripts. No other scientists publishing in AAAS journals will be able to do this.

Plan S always enabled authors to comply with its policy through this type of green OA, says Johan Rooryck, the executive director of cOAlition S, the group of funders signed up to the initiative. “We are delighted that AAAS is updating its policy,” he said in a statement.

The new arrangement, which applies to all research submitted to journals in the Science

“It's a bold move to go for a green OA solution to meeting Plan S requirements.”

Routes to open access

Other highly selective subscription journals have adapted to Plan S in different ways. In November, publisher Springer Nature said that it would offer OA at Nature-branded journals for a charge of €9,500 (US\$11,500) per paper; it is also running trials of a programme to reduce prices at some of its journals. (*Nature* is editorially independent of its publisher.) And in December, publisher Elsevier in Amsterdam announced a suite of OA options for Cell Press journals, with an €8,500 charge to publish OA in *Cell* and €7,600 for other journals.

But many scientists worry that these prices are too high. Although Plan S funders might pay the fees for their scientists, many other researchers will not be able to afford the OA option. (Elsevier said it would waive OA fees for researchers in the lowest-income countries, and reduce them for some others.) This is why the AAAS has opted for green OA, rather than bringing in gold OA at its subscription journals, the publisher explained.

“This approach reflects AAAS's concern that facilitating open access by gold routes alone puts undue financial obligation on authors, which could freeze in place or further exacerbate longstanding inequities for authors across race, gender, geographies, disciplines, and institutions,” it said in a statement.

“It's a bold move to go for a green OA solution to meeting Plan S requirements, and notable that they are pointing to the inequities associated with the article-processing-charge business model,” says Stephen Curry, a structural biologist at Imperial College London.

The AAAS's approach does mean that most scientists publishing in its journals won't have a fully OA option, notes Lisa Hinchliffe, a librarian at the University of Illinois at Urbana-Champaign. “It is unfortunate that this perpetuates the differentials we see in the ecosystem, where some publishing pathways' privileges are extended to certain scholars but not others,” she says.

The AAAS wants to try the green OA model for its subscription journals as a “year-long experiment to see if this is sustainable”, says Bill Moran, the publisher of the Science family of journals.