

Preprints in the time of COVID-19

Meagan Phelan, Science Press Package Executive Director

What you'll learn today

- What Science is seeing in terms of COVID submissions by authors
- How the Science Press Package is working to support contextualized communications of COVID content (all on “immediate release” / no embargo)
 - -Wellcome Trust rapid data-sharing agreement
- What authors are saying about visibility at the preprint versus journal stage
- What reporters covering this fast-moving content are saying about challenges/limitations of covering non-embargoed studies
- NOTE: We still need to do more data gathering from PIOs



AAAS

Mission:

Advance science,
engineering, and
innovation throughout the
world for the benefit of all
people.

AAAS Goal:

Enhance communication
among scientists,
engineers, and the public

What's at stake?

“When I was in Congress, Congressmen told me they **read news pieces** on new research, not the research itself.”

- **Former AAAS CEO Rush Holt, Former Congressman**



**First pandemic with
preprints
used at such scale**



Covid-19

Scientific research on the coronavirus is being released in a torrent

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Reported Features

Problems with Preprints: Covering Rough-Draft Manuscripts Responsibly

June 1, 2020 [Rosanne Krauss](#)



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bioRxiv is receiving many new papers on coronavirus SARS-CoV-2. A reminder: these are preliminary reports that have not been peer-reviewed. They should not be regarded as conclusive, guide clinical practice/health-related behavior, or be reported in news media as established information.

COVID-19 SARS-CoV-2 preprints from [medRxiv](#) and [bioRxiv](#)

What are we seeing at the *Science* journals?

Journal	Submissions	Accepts	Accept Rate	% w/ preprints
Science	777	28	4%	42%
Science Advances	343	5	1%	18%
Science Immunology	69	1	1%	4%
Science Robotics	3	0	0%	0%
Science Signaling	8	0	0%	1%
Science Translational Medicine	156	3	2%	9%
	1356	37	3%	42%

How is *Science* operating in COVID times?

- Faster review
- Expert editor-guided peer review, including for statistical rigor
- Edits that
 - remove claims;
 - firm up conclusions by asking for more data;
 - improve reproducibility by asking for more methods
- Focus on communicating context and limitations
- Focus on broad, accurate dissemination

Communicating COVID-19 at *Science* Press Package

- Issue lay summaries to press under embargo
 - Convey advances and limitations
- Hold teleconferences (the same day)
- Hold Facebook Lives
- Highlight new research on social media
- Share lay summaries w/ policymakers

Health

Coronavirus immunity remains big question mark for a country eager to reopen



A man's blood is collected for testing of coronavirus antibodies at a drive-through site on Long Island. (Geth Wang/AP)

By Joel Achenbach, Carolyn Y. Johnson and Paige Winfield Cunningham

Altmetric



- Picked up by 548 news outlets
- Blogged by 47
- Referenced in 1 policy sources
- Tweeted by 27711
- On 23 Facebook pages
- Referenced in 1 Wikipedia pages
- Reddited by 27
- Highlighted by 1 platforms

Author feedback: preprint v journal visibility

“We had an **associated preprint** and received some press interest from that, but the **visibility expanded massively** with publication in *Science*.”

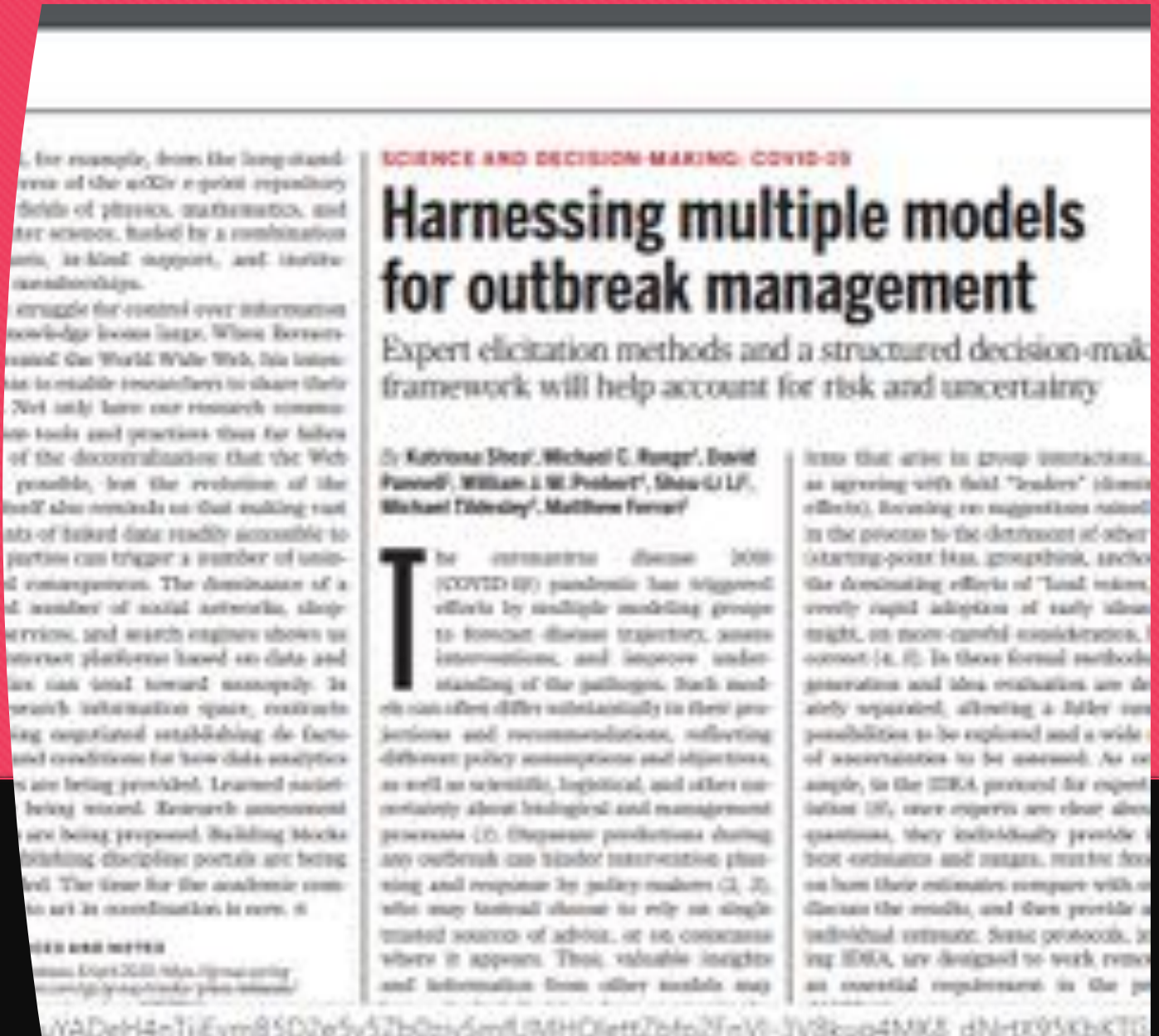
“Publishing in *Science* helped our article gain visibility **within the field** and gave it a **stamp of approval** that increased its profile substantially over the preprint. Publishing in *Science* also helped our work **enter into policy and mainstream conversation** almost immediately.”



More author feedback from a COVID-19 author:

“Since publication of my Policy Forum in *Science*, I have been contacted by and met with representatives of **Gates Foundation, Pew Charitable Trusts, and WHO** to discuss various aspects of the paper.”

“**Pick-up among policy people** seems to be much stronger than I had even hoped.”



Latest data from our reporter embargo survey

We ask reporters: How do you value embargoes?

- Very: 248 (45.8%)**
- Moderately: 221 (40.8%)**
- Not Very: 25 (4.6%)**
- No answer: 48 (8.9%)**

N = 540+ reporters

What do reporters say?

- We don't have the time to do the author + outside expert interviews that we do when we have studies under embargo. – **Helen Branswell, STAT**
- We have less time, so we may not be able to contact as many outside **sources** (they are also very busy) – **Carl Zimmer, New York Times**
- It's harder than ever to get timely outside comment given that the infectious disease experts are all swamped. – **Lauran Neergaard, AP**
- ...we inevitably rely on **fewer sources** to evaluate them because of time pressure, with **simpler sanity checks** of the material rather than deeper parsing of methods (which is not good, to be clear, especially with some of the terrible preprints out there). – **Dan Vergano, BuzzFeed News**



Christie Aschwanden

(journalist, author, editor)

“Where I’ve seen reporters go wrong on this is when they sort of grab these [preprints] because they want to be first,” Aschwanden says. “We do have pressure to be first and to break news, and I think preprints seem to offer this shiny opportunity to do that.”

“If a study is so weak that it warrants only critical coverage, then it might be a good decision not to give it more attention with a story,”

- The Open Notebook

How do we help authors with preprint counterparts who are contacted by press?

- Encourage author to engage
- Author should convey to reporter, “my paper is under peer review but I’d like to take your questions now, to begin to answer them in-depth, so I can have answers ready when the peer-reviewed version is available”
- Author should return in-depth responses to reporter Sunday before publication, w/ peer-reviewed version as it rolls out in SciPak

○ “I use preprints to reduce the pressure on my work as it goes into journal peer review.” – Yaniv Erlich



Question for
reporters to
consider:

**What fraction of
preprints on COVID-
19 are not being
published in
journals?**



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New Results

This article has been withdrawn. Click here to learn more.

Uncanny similarity of unique inserts in the 2019-nCoV spike protein to HIV-1 gp120 and Gag

Preprint Pradip, Khatwani Kumar Pandey, Akshay Mishra, Parul Gupta, Praveen Kumar Tripathi, Manoj Bhatnagar, Manoj, James Gomes, Perumal Vivekanandan, Bodhraj Kaur

doi: <https://doi.org/10.1101/2020.04.30.927871>

This article is a preprint and has not been certified by peer review [what does this mean?]

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New Results

View current version of this article

Spike mutation pipeline reveals the emergence of a more transmissible form of SARS-CoV-2

Comments (34)

B Kurbat, V P Fuchet, S Gopalakrishnan, H Yoon, Theodor V Abmayor, B Foley, EE Georg, T Bhattacharya, MD Parker, DG Partridge, CM Evans, Ti de Siles

COVID-19 Antibody Seroprevalence in Santa Clara County, California

Eyal Bendavid, Bianca Phelan, Nivoni Sood, Sejal Shah, Emily Ling, Rebecca Brunkey-Duffano, Cara Lai, Zoe Wiksberg, Rodrigo Saeedra-Walker, James Tedrow, Dora Twenig, Andrew Bogan, Thomas Kupiec, Daniel E Ribler, Gupta, John Inanidis, Jay Bhattacharya

doi: <https://doi.org/10.1101/2020.04.14.20082463>