

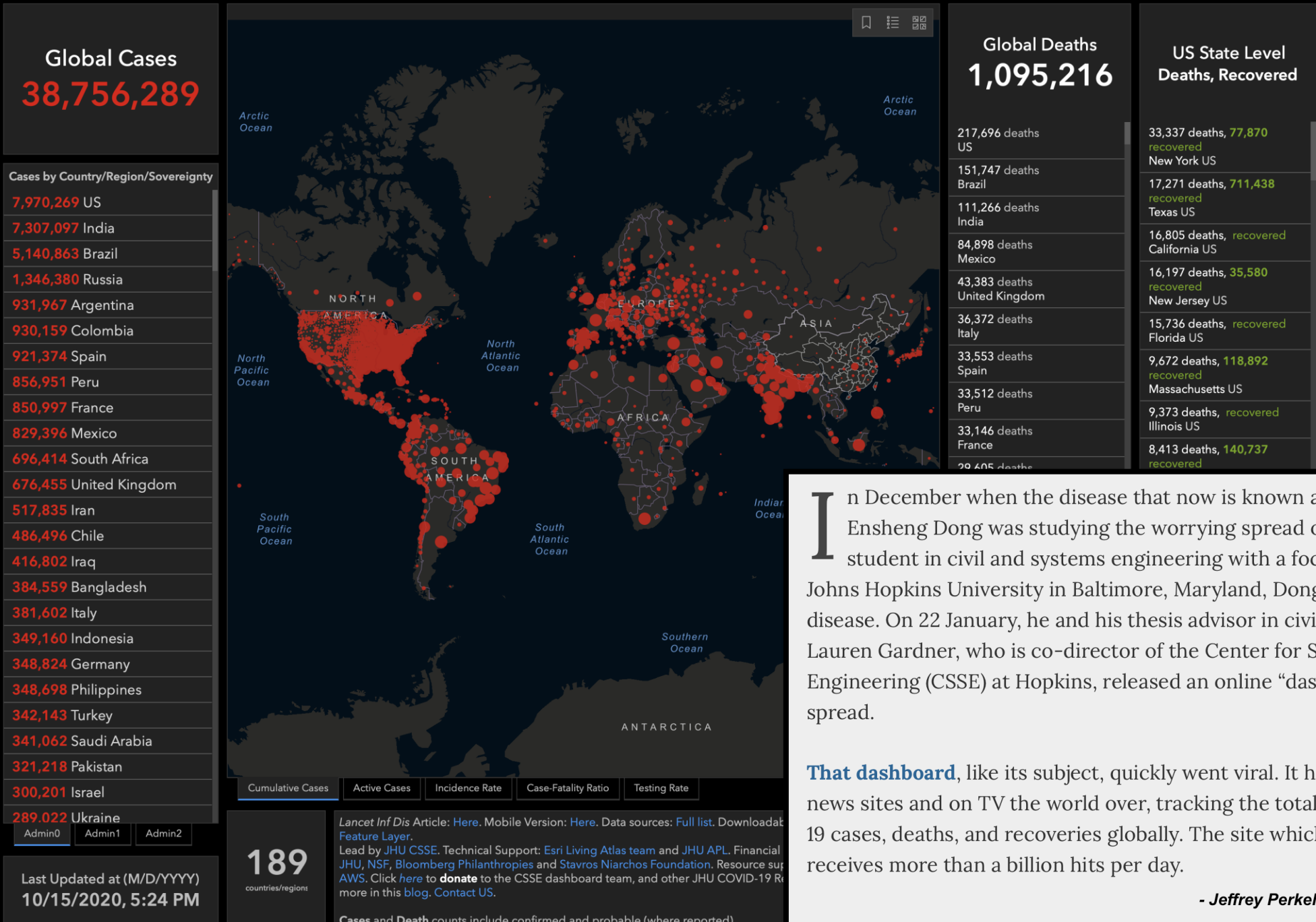


CHALLENGES IN SCIENCE COMMUNICATION DURING COVID-19

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Senior Fellow, Center for the Study of Human Health,
Emory University*

International Conference on Clinical Metagenomics 2020





Published: 28 August 2020

Publishing volumes in major databases related to Covid-19

[Jaime A. Teixeira da Silva](#) ✉, [Panagiotis Tsigaris](#) ✉ & [Mohammadamin Erfanmanesh](#) ✉

[Scientometrics](#) (2020) | [Cite this article](#)

974 Access

Abstract

The SARS-CoV-2

As of 19 May 2020, 32% of the COVID-19 papers listed on the NIH's [OPA COVID-19 portfolio](#) are preprints, by comparison, the proportion of biomedical preprints vs the published literature in PubMed stood at 3% in 2019.

- [ASAPbio.org](#)

effective cure, either in the form of a drug or vaccine, has yet to be discovered. In the few brief months that the world has known Covid-19, there has been an unprecedented volume of papers published related to this disease, either in a bid to find solutions, or to discuss applied or related aspects. Data from Clarivate Analytics' Web of Science, and Elsevier's Scopus, which do not index preprints, were assessed. Our estimates indicate that 23,634 unique documents, 9960 of which were in common to both databases, were published between January 1 and June 30, 2020. Publications include research articles, letters, editorials, notes and reviews. As



WITH **MARYN MCKENNA**
SCIENCE JOURNALIST AND AUTHOR

JOURNALISM IN A PANDEMIC: COVERING COVID-19 NOW AND IN THE FUTURE



Knight Center for

Journalism in the Americas

THE UNIVERSITY OF TEXAS AT AUSTIN

IN PARTNERSHIP WITH



World Health
Organization



United Nations
Educational, Scientific and
Cultural Organization

THANKS TO THE SUPPORT FROM

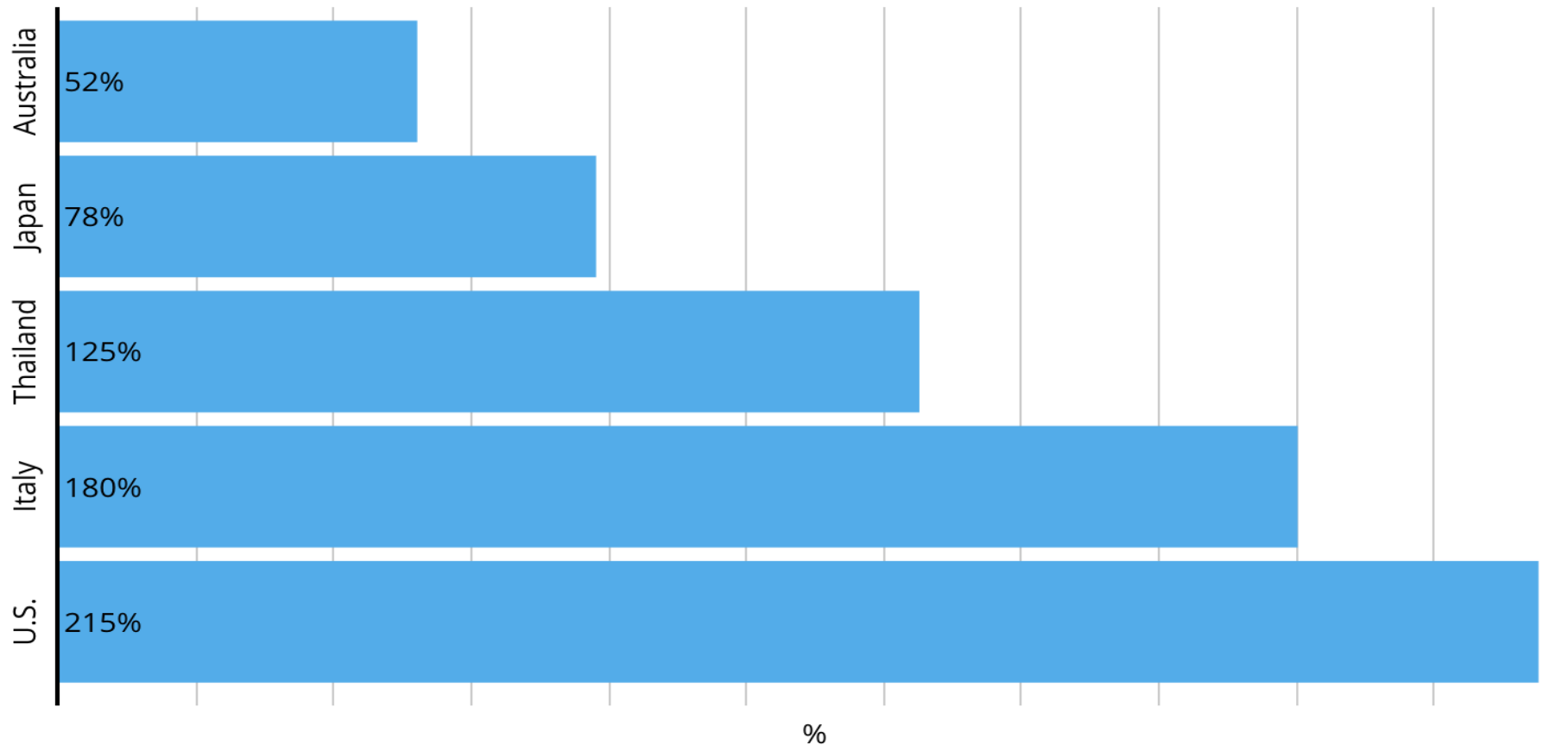


KNIGHT
FOUNDATION



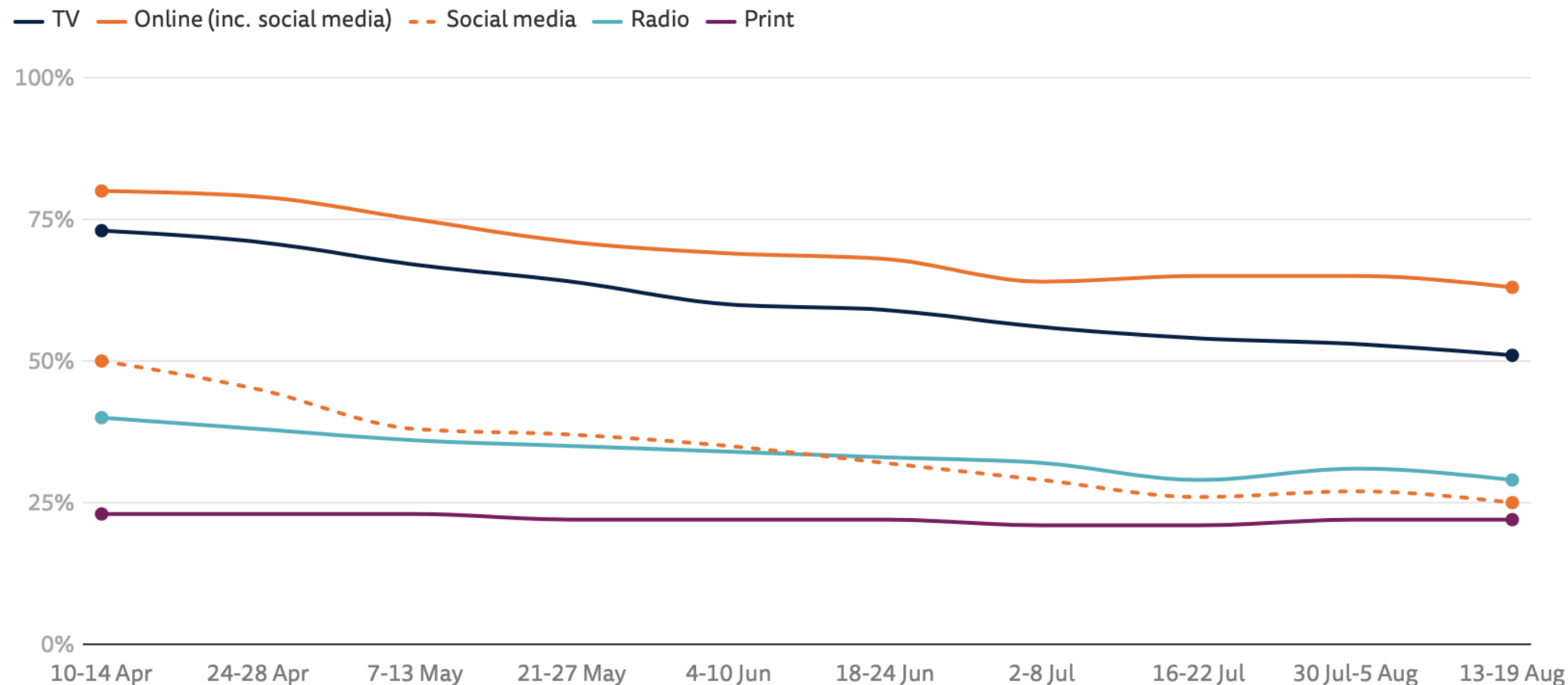
UN
DP

PERCENTAGE DIFFERENCE OF TIME SPENT ONLINE ON MOBILE DEVICES ACCESSING CURRENT EVENTS AND GLOBAL NEWS, MARCH 2019 VS MARCH 2020



- Nielsen.com, 16 June 2020

Proportion that used _____ as a source of news or information about COVID-19 in the last 7 days



Q4a. On how many of the last 7 days have you used each of the following as a source of news or information about coronavirus (COVID-19)? *Base: 10-14 Apr = 2,823, 24-28 Apr = 2,291, 7-13 May = 1,973, 21-27 May = 1,774, 4-10 Jun = 1,645, 18-24 Jun = 1,467, 2-8 Jul = 1,338, 16-22 Jul = 1,218, 30 Jul-5 Aug = 1,117, 13-19 Aug = 1,003.* **- UK COVID-19 news and information project, Reuters Institute, University of Oxford**



Dr. Eric Feigl-Ding
@DrEricDing



HOLY MOTHER OF GOD – the new coronavirus is a 3.8!!!
How bad is that reproductive R_0 value? It is
thermonuclear pandemic level bad – never seen an actual
virality coefficient outside of Twitter in my entire career.
I'm not exaggerating... [#WuhanCoronavirus](#)
[#CoronavirusOutbreak](#)

Misinformation related to the COVID-19 pandemic

From Wikipedia, the free encyclopedia



This article **may be too long** to read and navigate comfortably. Please consider **subheadings**. *(August 2020)*

The **COVID-19 pandemic** has resulted in **misinformation** and **conspiracy theories** about the scale of the pandemic.^{[1][2][3]} False information, including intentional **disinformation**, has been **spread through social media**,^[7] **conservative media**,^{[8][9]} and **state media** of countries such as China,^{[10][11]} Russia,^{[12][13]} Iran,^[14] and operations backed by states such as Saudi Arabia, Russia and China to generate panic and sow distrust in Bangladesh,^[21] and Ethiopia,^[22] journalists have been arrested for allegedly spreading **fake news** about the pandemic.^[23] Misinformation has been propagated by celebrities, politicians^{[24][25]} (including **heads of state** in countries such as the United States), and prominent public figures.^[31] Commercial **scams** have claimed to offer **at-home tests**, **supposed preventives**, and that **faith** will protect them from the virus.^{[34][35][36]} Some people have claimed the virus is a **bioweapon** accident, a **hoax**,^[37] a **conspiracy**,^[38] the result of a **spy operation**,^{[3][4][40]} or the side effect of **5G** upgrades to cellular networks.^[41]

The **World Health Organization** has declared an "infodemic" of incorrect information about the virus, which poses a significant barrier to controlling the pandemic.^[42]

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MARYN MCKENNA

SCIENCE 03.26.2020 08:00 AM

The Ibuprofen Debate Reveals the Danger of Covid-19 Rumors

An online furor over whether it's safe to use the fever reducer reveals how people are sharing incomplete—and sometimes bad—information.

The Ibuprofen Debate Reveals the Danger of Covid-19 Rumors

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3- Utilisation d'AINS chez des patients atteints Covid-19

Des événements indésirables graves liés à l'utilisation des anti-inflammatoires non stéroïdiens (AINS) ont été signalés chez des patients atteints de COVID19, cas possibles ou confirmés. Nous rappelons que le traitement d'une fièvre mal tolérée ou de douleurs dans le cadre du COVID19 ou de toute autre virose respiratoire repose sur le paracétamol, sans dépasser la dose de 60 mg/kg/jour et de 3 g/jour. Les AINS doivent être proscrits.

A l'inverse, les patients sous corticoïdes ou autres immunosuppresseurs pour une pathologie chronique ne doivent pas interrompre leur traitement, sauf avis contraire du médecin qui les suit pour cette pathologie.

Cette recommandation doit être diffusée largement auprès de l'ensemble des professionnels de santé.

MARYN MCKENNA

SCIENCE 03.26.2020 08:00 AM

The Ibuprofen Debate Reveals the Danger of Covid-19 Rumors

An online furor over whether it's safe to use the fever reducer reveals how people are sharing incomplete—and sometimes bad—information.



Olivier Véran 
@olivierveran



⚠️ **#COVID—19** | La prise d'anti-inflammatoires (ibuprofène, cortisone, ...) pourrait être un facteur d'aggravation de l'infection. En cas de fièvre, prenez du paracétamol.

Si vous êtes déjà sous anti-inflammatoires ou en cas de doute, demandez conseil à votre médecin.

[Translate Tweet](#)

6:38 AM · Mar 14, 2020 · Twitter for iPhone

téroïdiens (AINS) ont été signalés chez des patients atteints de COVID19, ée ou de douleurs dans le cadre du COVID19 ou de toute autre virose e 3 g/jour. Les AINS doivent être proscrits. athologie chronique ne doivent pas interrompre leur traitement, sauf avis sionnels de santé.

The Ibuprofen Debate Reveals the Danger of Covid-19 Rumors

An online furor over whether it's safe to use the fever reducer reveals how people are sharing incomplete—and sometimes bad—information.



Olivier Véran 
@olivierveran

⚠️ **#COVID—19** | La prise d'anti-inflammatoires (ibuprofène, cortisone, ...) pourrait être un facteur d'aggravation de l'infection. En cas de fièvre, privilégiez le paracétamol.

Si vous êtes déjà sous anti-inflammatoires, consultez votre médecin. En cas de doute, demandez conseil à votre médecin.

[Translate Tweet](#)

6:38 AM · Mar 14, 2020 · Twitter for iPhone



World Health Organization (WHO)  @WHO · Mar 18

Q: Could **#ibuprofen** worsen disease for people with **#COVID19**?

A: Based on currently available information, WHO does not recommend against the use of of ibuprofen.

At present, based on currently available information, WHO does not recommend against the use of of ibuprofen.

We are also consulting with physicians treating COVID-19 patients and are not aware of reports of any negative effects of ibuprofen, beyond the usual known side effects that limit its use in certain populations.

WHO is not aware of published clinical or population-based data on this topic.

Could ibuprofen worsen disease for people with COVID-19?



#coronavirus

18 March 2020

PAHO/WHO and 5 others

“We do not currently recommend the use of face masks for the general American public. This virus is not spreading in your communities.”

- *Dr. Nancy Messonnier, US CDC, 31 Jan 2020*

“There is no specific evidence to suggest that the wearing of masks by the mass population has any particular benefit. In fact there's some evidence to suggest the opposite in the misuse of wearing a mask properly or fitting it properly or taking it off.”

- *Dr. Mike Ryan, WHO, 30 March 2020*

“Model simulations... suggest that broad adoption of even relatively ineffective face masks may meaningfully reduce community transmission of COVID-19 and decrease peak hospitalizations and deaths.”

- Eikenberry et al., *Infectious Disease Modeling*, April 2020

“Mandating face mask use in public is associated with a decline in the daily COVID-19 growth rate by 0.9, 1.1, 1.4, 1.7, and 2.0 percentage points in 1–5, 6–10, 11–15, 16–20, and 21 or more days after state face mask orders were signed, respectively. Estimates suggest that as a result of the implementation of these mandates, more than 200,000 COVID-19 cases were averted by May 22, 2020.”

- Lyu and Wehby, *Health Affairs*, June 2020

“Societal norms and government policies supporting the wearing of masks by the public, as well as international travel controls, are independently associated with lower per-capita mortality from COVID-19.”

- Leffler et al., *MedRxiv*, August 2020



Getty Images, Business Insider

Getty Images, USA Today

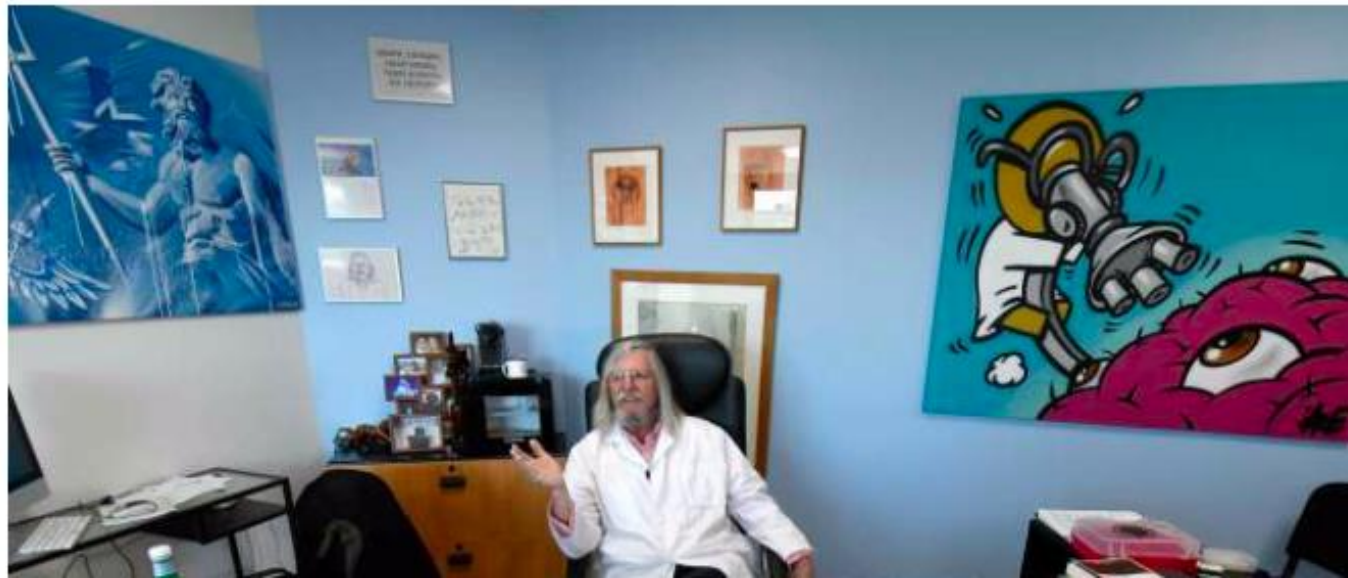


PLANÈTE • CORONAVIRUS ET PANDÉMIE DE COVID-19



Coronavirus : Didier Raoult, l'infectiologue marseillais derrière la folie planétaire autour de l'hydroxychloroquine

Le microbiologiste préconise un traitement des malades sur la base d'éléments encore ténus. Savant reconnu, il divise par ses prises de position parfois iconoclastes.





Original article

Clinical and microbiological effect of a combination of hydroxychloroquine and azithromycin in 80 COVID-19 patients with at least a six-day follow up: A pilot observational study



Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial

Philippe Gautret ^{a, b, §}, Jean-Christophe Lagier ^{a, c, §}, Philippe Parola ^{a, b}, Van Thuan Hoang ^{a, b, d}, Line Meddeb ^a, Morgane Mailhe ^a, Barbara Doudier ^a, Johan Courjon ^{e, f, g}, Valérie Giordanengo ^h, Vera Esteves Vieira ^a, Hervé Tissot Dupont ^{a, c}, Stéphane Honoré ^{i, j}, Philippe Colson ^{a, c}, Eric Chabrière ^{a, c}, Bernard La Scola ^{a, c}, Jean-Marc Rolain ^{a, c}, Philippe Brouqui ^{a, c}, Didier Raoult ^{a, c} ✉

We believe there is urgency to evaluate the effectiveness of this potentially-life saving therapeutic strategy at a larger scale, both to treat and cure patients at an early stage before irreversible severe respiratory complications take hold and to decrease duration of carriage and avoid the spread of the disease. Furthermore, the cost of treatment is negligible.

Despite its small sample size, our survey shows that hydroxychloroquine treatment is significantly associated with viral load reduction/disappearance in COVID-19 patients and its effect is reinforced by azithromycin.

Malaria Drug Chloroquine No Better Than Regular Coronavirus Care, Study Finds

By [Michelle Fay Cortez](#) and [Claire Che](#)

March 24, 2020, 10:37 PM EDT *Updated on March 24, 2020, 11:33 PM EDT*



Statement from the Chief Investigators of the Randomised Evaluation of COVID-19 thERapY (RECOVERY) Trial on hydroxychloroquine, 5 June 2020

No clinical benefit from use of hydroxychloroquine in hospitalised patients with COVID-19

FDA cautions against use of hydroxychloroquine or chloroquine for COVID-19 outside of the hospital setting or a clinical trial due to risk of heart rhythm problems

CONCLUSIONS

After high-risk or moderate-risk exposure to Covid-19, hydroxychloroquine did not prevent illness



Donald J. Trump ✓

@realDonaldTrump



HYDROXYCHLOROQUINE & AZITHROMYCIN, taken together, have a real chance to be one of the biggest game changers in the history of medicine. The FDA has moved mountains - Thank You! Hopefully they will BOTH (H works better with A, International Journal of Antimicrobial Agents).....

10:13 AM · Mar 21, 2020 · Twitter for iPhone



Donald J. Trump ✓

@realDonaldTrump

45th President of the United States of America 🇺🇸

📍 Washington, DC 🔗 [Instagram.com/realDonaldTrump](https://www.instagram.com/realDonaldTrump)

📅 Joined March 2009

50 Following

87.2M Followers

Study Finds ‘Single Largest Driver’ of Coronavirus Misinformation: Trump

Cornell University researchers analyzing 38 million English-language articles about the pandemic found that President Trump was the largest driver of the “infodemic.”

But by far the most prevalent topic of misinformation was “miracle cures,” including Mr. Trump’s promotion of anti-malarial drugs and disinfectants as potential treatments for Covid-19, the disease caused by the coronavirus. That accounted for more misinformation than the other 10 topics combined, the researchers reported.

Coronavirus misinformation: quantifying sources and themes in the COVID-19 ‘infodemic’

Sarah Evanega^{1,3}, Mark Lynas¹, Jordan Adams², Karinne Smolenyak²

¹The Cornell Alliance for Science, Department of Global Development, Cornell University, Ithaca, NY

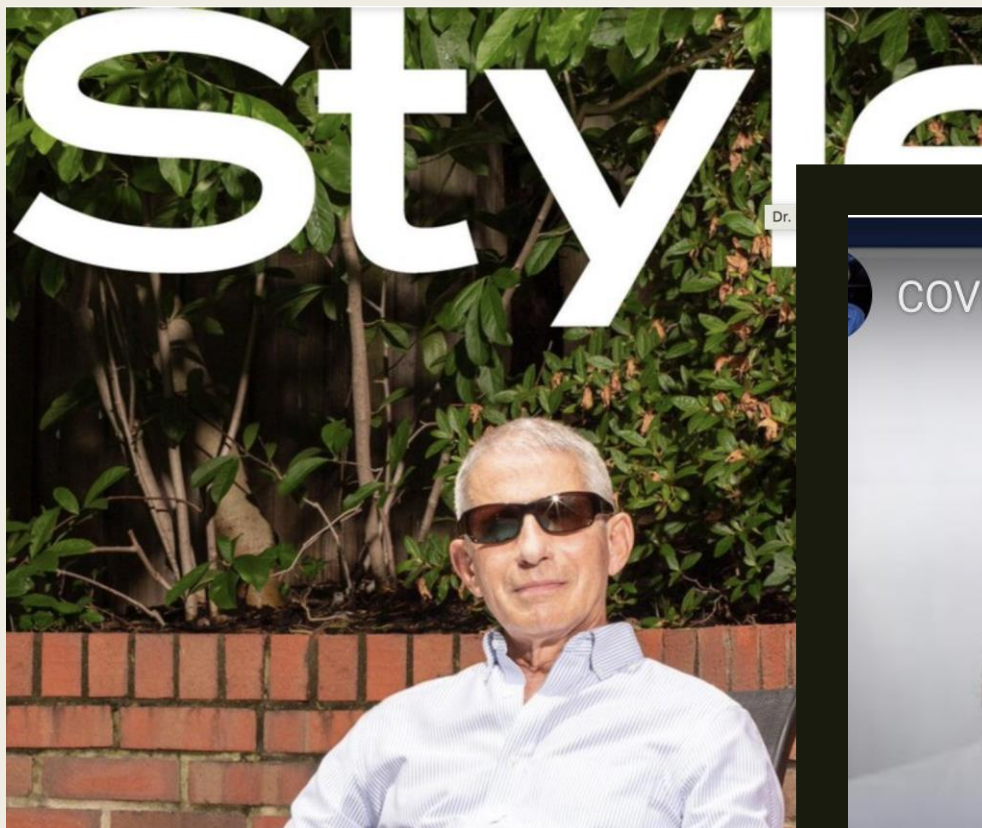
²Cision Global Insights, Ann Arbor, MI

A cartoon illustration on a light blue background. In the bottom left, a person with dark skin and a green striped shirt looks up in confusion, holding a smartphone. Above them is a large yellow question mark and a blue exclamation mark. Surrounding the person are various digital icons: a smartphone with a question mark, a tablet with a green checkmark, a document with a green checkmark and yellow squares, a speech bubble with a blue question mark, a speech bubble with a red 'X', a speech bubble with a green checkmark, and a speech bubble with a green question mark. In the top right, there's a small globe and a person pointing at a screen. In the bottom right, a large black banner with white text reads 'INFODEMIC'.

1st WHO Infodemiology Conference

30 June – 16 July 2020

INFODEMIC



Covid-19 transformed the media

1

Do not assume a journalist has any background in science

2

Do not assume a journalist knows how to read scientific literature

3

Do not assume a journalist understands scientific vocabulary

RESEARCH ARTICLE | CORONAVIRUS

Low-cost measurement of face mask efficacy for filtering expelled droplets during speech

Abstract

Mandates for mask use in public during the recent coronavirus disease 2019 (COVID-19) pandemic, worsened by global shortage of commercial supplies, have led to widespread use of homemade masks and mask alternatives. It is assumed that wearing such masks reduces the likelihood for an infected person to spread the disease, but many of these mask designs have not been tested in practice. We have demonstrated a simple optical measurement method to evaluate the efficacy of masks to reduce the transmission of respiratory droplets during regular speech. In proof-of-principle studies, we compared a variety of commonly available mask types and observed that some mask types approach the performance of standard surgical masks, while some mask alternatives, such as neck gaiters or bandanas, offer very little protection. Our measurement setup is inexpensive and can be built and operated by nonexperts, allowing for rapid evaluation of mask performance during speech, sneezing, or coughing.

“We want to note that the mask tests performed here (one speaker for all masks and four speakers for selected masks) should serve only as a demonstration.

“Inter-subject variations are to be expected, for example, because of differences in physiology, mask fit, head position, speech pattern, and such.”

- *Fischer et al., Science Advances, 02 Sep 2020 (online 07 Aug 2020)*

Wellness

Wearing a neck gaiter may be worse than no mask at all, researchers find

Duke study finds some cotton cloth masks are about as effective as surgical masks, while thin polyester spandex gaiters may be worse than going maskless.

s.com › news › neck-gaiters-worse-than-nothing-preventin... ▼

Neck Gaiters 'Worse Than Nothing' in Preventing ... - Daily Mail

2020 - Thin, stretchy **neck gaiters** are **worse** than nothing when it comes to preventing the spread of **COVID-19**, according to researchers. The Duke ...

the-sun.com › Coronavirus › comments › iaw436 › are_neck_gai... ▼

Neck Gaiters' Worse at COVID-19 Transmission Than Face Masks - The Sun

2020 - 57 votes, 33 comments. 2.3m members in the **Coronavirus** community. In early 2019, a novel **coronavirus** strain (SARS-CoV-2) emerged ...

ret.com › u-s-world › coronavirus-neck-gaiters-spread-covi... ▼

Coronavirus: Are neck gaiters worse than not wearing a mask? - Reuters

2020 - A new study suggested **neck gaiters** might spread **coronavirus** more effectively than face masks, but it may not be the case.

structiondive.com › news › neck-gaiters-bandanas-not-effect... ▼

Neck gaiters may be worse than face covering style ... - Construction Dive

2020 - 19, 2020: A study that found that **neck gaiters** and bandanas do not block respiratory droplets that can spread **COVID-19** has been ...

d.com › neck-gaiters-worse-than-nothing-in-preventing-cov... ▼

Neck Gaiters 'Worse Than Nothing' in Preventing COVID-19 Spread - MPR

Researchers find using **neck gaiter** could actually spread the virus further ...

sbreak.com › texas › houston › news › neck-gaiters-for-cov... ▼

Neck Gaiters for COVID-19 Worse Than No Face Covering - Houston Chronicle

Neck gaiters weren't the only face coverings tested: in all 14 were analyzed, from N95s to cloth masks. N95s were surprisingly judged to be the most effective in containing **COVID-19** ...

news.com › duke-mask-study-effectiveness-covid-19-neck-gaiter... ▼

Neck gaiters and bandannas may be worse than no mask at all - News & Media

10, 2020 - DURHAM, N.C. -- By now, when it comes to protection against the coronavirus, we all know that N-95 masks are better than surgical masks ...

the-sun.com › news › coronavirus-face-masks-neck-gaiters

Neck gaiters worse than face masks? - The Sun

11, 2020 - A **neck gaiter** or a neck fleece, also sometimes known as snoods, is a piece of fabric that is worn around the neck, often by runners. The user is ...

com › news › coronavirus › study-neck-gaiters-may-be-worse-th... ▼

Study: Neck gaiters may be worse than not wearing a mask - KDKA

15, 2020 - Pittsburgh, PA (KDKA) — A new study shows that **neck gaiters** are not as effective as protective masks, they could actually be **worse** than ...

businessinsider.com › News › Science ▼

Reports that neck gaiters are worse than nothing are overstated - Business Insider

21, 2020 - Popular study on **neck gaiter** had a sample size of one, and wasn't intended to measure effectiveness but to test a methodology.

studyfinds.org › worst-face-masks-bandanas-neck-gaiters-more... ▼

Worst face masks: Bandanas, neck gaiters may be MORE effective - Study Finds

15, 2020 - DURHAM, N.C. — Since the beginning of the **COVID-19** pandemic, many people have been choosing **neck gaiters** as their go-to face covering.

gbmc.org › are-neck-gaiters-effective ▼

Are Neck Gaiters Effective? - Greater Living - GBMC Health

3 days ago - A recent study from Duke University has caused questions about **neck gaiters** whether or not they serve as effective face coverings for ...

usatoday.com › in-depth › news › 2020/08/16 › face-masks-what... ▼

Face masks: What makes some better than others against COVID-19 - USA Today

16, 2020 - Cotton mask or **neck gaiter**? Check out how effective different kinds of face masks are. Researchers ranked more than a dozen masks on how well ...

v.infectioncontroltoday.com › view › neck-gaiters-for-covid-19-... ▼

Neck Gaiters for COVID-19 Worse Than No Face Covering - Infection Control Today

17, 2020 - **Neck gaiters** weren't the only face coverings tested: in all 14 were analyzed, from N95s (unsurprisingly judged to be the most effective in containing ...

lical.mit.edu › covid-19-updates › 2020/08 › neck-gaiters ▼

Are neck gaiters worse than no mask at all? | MIT Medical

25, 2020 - MIT Medical answers your **COVID-19** questions. Got a question about COVID-19? Send it to us at medical@mit.edu, and we'll do our best to ...

v.snopes.com › Fact Checks › Medical ▼

Are 'Neck Gaiters' Worse at COVID-19 Transmission Than Face Masks? - Snopes

15, 2020 - Rumors claimed that using **neck gaiters** instead of a mask may actually increase the transmission of the **coronavirus**.

v.washingtonpost.com › mask-test-duke-covid › 2020/08/10 ▼

Face mask study shows neck gaiter may be worse than no mask - Washington Post

11, 2020 - Of the 14 masks and other coverings tested, the Duke University study found that easily accessible cotton cloth masks are about as effective as ...

v.nursingcenter.com › healthdayarticle ▼

Neck Gaiters 'Worse Than Nothing' in Preventing COVID-19 Spread - Nursing Center

17, 2020 - Researchers find using **neck gaiter** could actually spread the virus further than using no face covering at all.

v.npr.org › sections › goatsandsoda › 2020/08/14 › how-should-i-c... ▼

Neck Gaiter Controversy: A Deeper Look Into Face Covering - NPR

14, 2020 - Between face shields, **neck gaiters** and goggles, the options for protecting yourself are getting more complex. What face covering setup offers the best ...

v.youtube.com › watch

Neck Gaiters May Be Worse For Coronavirus Safety Than N95s - YouTube

20, 2020 - As TODAY's Search for Solutions series continues, NBC investigative journalist and summer correspondent Vicky Nguyen breaks down which face covering is ...



SCIENCE

For All We Know, Gaiter Masks Are Fine

News stories suggesting gaiters are worse than no mask at all are relying on a study that proves no such thing.

By SUSAN MATTHEWS

AUG 11, 2020 • 4:14 PM

[Fact Checks](#) › [Medical](#)

Are 'Neck Gaiters' Worse at COVID-19 Transmission Than Foregoing Masks Altogether?

Rumors claimed that using neck gaiters instead of a mask may actually increase the transmission of the coronavirus.

MADISON DAPCEVICH

PUBLISHED 15 AUGUST 2020

Lessons from the new media landscape

- Seek out reliable journalists. (Do your homework to find them).
- Form a relationship with them in advance of any study or data release.
- Understand that extraordinary pressure means mistakes are more likely.
- Be prepared to take extra time to shape your message.
- Expect to have to contextualize (and handhold) more than you previously would.



Deborah Greenhouse
@greenhousemd



3 different well visits today.

All 3 refused [#FluVaccine](#) because of a new theory that COVID vaccine is being packaged and given as flu vaccine without consent.

I was unable to persuade them that this was simply not true.

What fresh new pediatrician hell is this? [#VaccinesWork](#)

1:30 PM · Oct 15, 2020 · Twitter Web App



beverly edwards
@beverly63801925

Replying to [@greenhousemd](#)

I have heard that as a reason to refuse the flu shot, 1st from a 7yo, **said she heard that on tv.** I'd say "no" is running neck to neck with "yes" now

7:15 AM · Oct 16, 2020 · Twitter for iPhone

marynmckenna.com/contact

marynmckenna@gmail.com

mmck@protonmail.com (encrypted)