



Daily COVID-19 Literature Surveillance

April 4-5th, 2020

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The following is a collection of publications released from the top 10 journals that are producing the greatest volume of covid19 related material. Weekend publications differ significantly from weekday publications both in volume and type. The most common publication type produced over the weekend were perspective pieces involving ethics or expert opinion on the current state of affairs and the next steps. Explicitly editorial pieces were excluded.

Publications of April 5th, 2020

Covid-19: Increased demand for steroid inhalers causes "distressing" shortages.

[PMID: 32245751](#), Apr 5, 2020

Mahase, Elisabeth

BMJ

Level of evidence: Critical data uncited

Article type: News

Summary: Steroid inhaler demand surge causes “distressing shortages”. British physicians struggle to secure beclomethasone.

Covid-19: PHE upgrades PPE advice for all patient contacts with risk of infection.

[PMID: 32245770](#), Apr 5, 2020

Sayburn, Anna

BMJ

Level of evidence: Critical data cited

Article type: News

Summary: Public Health England expands guidelines governing PPE use to include eye protection, fluid resistant surgical masks, aprons and risk of droplets.

Table

Table 1 What should you use when?				
Situation	Mask or respirator	Apron or gown	Eye protection	Gloves
Performing AGPs on patient with suspected or confirmed covid-19 OR all patients in context of sustained covid-19 transmission	FFP3 respirator	Long sleeved, disposable, fluid repellent gown	Full face shield or visor	Disposable gloves
Face-to-face assessment or direct care where risk of covid-19 cannot be established before the consultation	Fluid resistant surgical mask	Apron	Eye protection	Disposable gloves
Within higher risk acute inpatient care areas (where AGPs are regularly performed)	FFP3 respirator	Long sleeved, disposable, fluid repellent gown (with disposable plastic apron underneath if only a non-fluid resistant gown is available)	Eye protection	Disposable gloves
Inpatient area with suspected or confirmed covid-19 patients (not giving care)	Fluid resistant surgical mask	Not applicable	Not applicable	Not applicable
Inpatient area with suspected or confirmed covid-19 patients (giving direct care)	Fluid resistant surgical mask	Apron	Eye protection	Disposable gloves
Inpatient areas with no identified suspected or confirmed cases	Local risk assessment	Local risk assessment	Local risk assessment	Local risk assessment
Emergency or acute admissions, possible or confirmed cases (or all cases subject to local risk assessment)	Fluid resistant surgical mask	Apron	Eye protection	Disposable gloves
Transfer of possible or confirmed cases	Fluid resistant surgical mask	Apron	Local risk assessment	Disposable gloves
Operating theatres without AGPs, treatment of possible or confirmed cases (or all patients subject to local risk assessment)	Fluid resistant surgical mask	Local risk assessment	Eye protection	Standard IPC procedure
Labour ward (not AGPs or surgery) for possible or confirmed cases (or all patients subject to local risk assessment)	Fluid resistant surgical mask	Long sleeved, disposable, fluid repellent gown, apron	Eye protection	Disposable gloves
Primary care, direct care of possible or confirmed case (or all patients subject to local risk assessment)	Fluid resistant surgical mask	Apron	Eye protection	Disposable gloves

AGPs=aerosol generating procedures

Covid-19: the crisis of personal protective equipment in the US.

[PMID: 32245847](#), Apr 5, 2020

Kamerow, Douglas

BMJ

Level of evidence: Critical data cited

Article type: Feature

Summary: Many US states are requesting their portion of the Strategic National Stockpile. Concern that it is not going to be sufficient rising.

Covid-19: government promises 100 000 tests per day in England by end of April.

[PMID: 32245880](#), Apr 5, 2020

Iacobucci, Gareth

BMJ

Level of evidence: Critical data cited

Article Type: News

Summary: UK delivers “five pillar” plan:

- 1) scale up swab testing to 25,000 by mid-late April
- 2) Provide commercial swab kits for essential workers in NHS
- 3) Develop serological tests
- 4) Conduct literature and epidemiological research regarding transmission and treatments
- 5) Build partnerships within the industry, academia and NHS to scale up production

Managing clinical trials for covid-19: the importance of ethics committees.

[PMID: 32245769](#), Apr 5, 2020

Luo, Qiankun; Qin, Tao

BMJ

Level of evidence: 5- Expert opinion

Article type: Letter

BLUF: Despite the urgent need for clinical trials for treatments for covid-19, their safety and quality should not be compromised.

Summarizing excerpt:

“On 24 March, the Chinese Clinical Trial Register had 471 registered items related to covid-19 and ClinicalTrials.gov had 143.⁵⁶ If ethics committees cannot review such a large number of clinical trials to a high standard, many high risk and low benefit drugs will be used on patients with covid-19. Not only will patients be in danger, but more meaningful research might miss out on resources. Zhang and colleagues reported the experience of high efficiency and quality ethical review at one hospital in China and summarised the common issues.⁷ The studies of covid-19 were reviewed by emergency video conference to avoid social contact, which ensured the important research could be implemented scientifically and timely.

Ethics committees have a vital role in the review of covid-19 studies during the outbreak, especially intervention studies that might cause physical injury to patients. Ethics committees need not only to improve the review efficiency, but also to make sure the standard of ethical review is not relaxed.”

Covid-19 worldwide: we need precise data by age group and sex urgently.

[PMID: 32245830, Apr 5, 2020](#)

Bhopal, Raj

BMJ

Level of evidence: 5- expert opinion

Article type: Letter

BLUF: We need higher quality data to guide our approach to covid19 pandemic

Full text:

“Accurate and interpretable data are essential in guiding our approach to the covid-19 pandemic. Basic epidemiological principles are currently being flouted.¹ Mostly, as in your article,² case numbers are being reported. This number needs to be converted to a proportion, using the population size as the denominator. Otherwise, how can we tell which countries are being affected the most? When the rate of disease is highly variable by age, as in covid-19, we need to examine age specific mortality and morbidity and case fatality rates. Given the sex differences, these rates also need to be stratified by sex. Age adjustment, by either the direct or indirect method or statistical models, is too crude when the rates are highly variable across age groups,¹ although it is better than the overall or crude rates that we are currently seeing, invariably in the media but also in professional journals. We are being misled about the potential dangers (or not) by using overall or crude death rates. The Chinese overall mortality proportions, for example, will not apply to countries with older age structures, such as Italy or the UK, where mortality will be higher. The Italian proportions will not apply to much of Africa, where the average age of the population is low. Data should be published in 10 year age groups or, even better, 5 year age groups. The data are likely to be reassuring for parents and young people and the opposite for older people. The results are likely to be much more informative than the widely disseminated and extremely crude estimate of 1-2% mortality or even lower, which is mostly based on China’s experience. We can and must do better.”

Essential care of critical illness must not be forgotten in the COVID-19 pandemic.

[PMID: 32246914, Apr 5, 2020](#)

Baker, Tim; Schell, Carl Otto; Petersen, Dan Brun; Sawe, Hendry; Khalid, Karima; Mndolo, Samson; Rylance, Jamie; McAuley, Daniel F; Roy, Nobhojit; Marshall, John; Wallis, Lee; Molyneux, Elizabeth, Lancet

Level of Evidence: 5- Expert opinion

Article type: Correspondence

BLUF: COVID-19 pandemic will disproportionately affect low resource settings but these units will become critical when the surge of ICU patients overwhelm the system and care is shunted to lower resource settings.

Summarizing excerpt:

“Hospitals should establish effective systems for triage and essential care in emergency units and wards, including patient separation and staff safety. User-friendly, concise protocols should be developed, disseminated, and implemented for good quality and feasible clinical care, with WHO’s leadership and through national authorities. Simple physiological signs have been shown to identify critical illness, and single-parameter systems might be easier to use than compound scores. The central role of oxygen therapy should be emphasised, oxygen supplies and delivery systems secured, and guidelines for sustainable and appropriate use issued. Other essential care includes a head-up patient

position, suction, and simple chest physiotherapy. When human resources are limited, such care can be implemented by less trained health workers or vital-signs assistants through a protocolised approach and task sharing.”

Racism and discrimination in COVID-19 responses.

[PMID: 32246915](#), Apr 5, 2020

Devakumar, Delan; Shannon, Geordan; Bhopal, Sunil S; Abubakar, Ibrahim
Lancet

Level of evidence: 5- expert opinion

Article type: Correspondence

BLUF: “Outbreaks create fear, and fear is a key ingredient for racism and xenophobia to thrive. The coronavirus disease 2019 (COVID-19) pandemic has uncovered social and political fractures within communities, with racialised and discriminatory responses to fear, disproportionately affecting marginalised groups.”

Summarizing excerpt:

“Political leaders have misappropriated the COVID-19 crisis to reinforce racial discrimination, doubling down, for example, on border policies and conflating public health restrictions with antimigrant rhetoric... Current emergency powers need to be carefully considered for longerterm consequences. Policies necessary to control populations (eg, restriction of movement, or surveillance) might be misappropriated, and marginalised groups have been traditionally targeted. Systems must be put in place to prevent adverse health outcomes from such policies”

Modelling COVID-19 transmission: from data to intervention.

[PMID: 32246906](#) Apr 5, 2020

Jia, Zhongwei; Lu, Zuhong

Lancet Infect Dis

Level of Evidence: 7- predictive modeling

Article type: Comment

BLUF: Mathematical modeling to predict the trajectory of new pathogens during the early stages of a pandemic is problematic because there is insufficient evidence to build said model.

Summarizing excerpt:

“Models are usually driven by a disease’s intrinsic mechanism or fitted through sufficient data, but they are frequently expected to provide quick insights and predictive power ... [when] data are limited and unreliable... models fitted by early data probably produce results divorced from reality. “

Using observational data to quantify bias of traveller-derived COVID-19 prevalence estimates in Wuhan, China.

[PMID: 32246905](#), Apr 5, 2020

Niehus, Rene; De Salazar, Pablo M; Taylor, Aimee R; Lipsitch, Marc

Lancet Infect Dis

Level of Evidence: 3- Comparative without controls

Article type: Scientific article

BLUF: The prevalence of covid19 in travelers is probably underrepresented and likely contributed to pathogenic spread. However the model relies on the detection probability of COVID19 in Singapore to be reliably high. Without a gold standard to compare the disease prevalence to, any quality metric using the number of positive detection of COVID19 should be questioned.

Summary:

Background: The incidence of coronavirus disease 2019 (COVID-19) in Wuhan, China, has been estimated using imported case counts of international travellers, generally under the assumptions that all cases of the disease in travellers have been ascertained and that infection prevalence in travellers and residents is the same. However, findings indicate variation among locations in the capacity for detection of imported cases. Singapore has had very strong epidemiological surveillance and contact tracing capacity during previous infectious disease outbreaks and has consistently shown high sensitivity of case-detection during the COVID-19 outbreak.

Methods: We used a Bayesian modelling approach to estimate the relative capacity for detection of imported cases of COVID-19 for 194 locations (excluding China) compared with that for Singapore. We also built a simple mathematical model of the point prevalence of infection in visitors to an epicentre relative to that in residents.

Findings: The weighted global ability to detect Wuhan-to-location imported cases of COVID-19 was estimated to be 38% (95% highest posterior density interval [HPDI] 22–64) of Singapore’s capacity. This value is equivalent to 2·8 (95% HPDI 1·5–4·4) times the current number of imported and reported cases that could have been detected if all locations had had the same detection capacity as Singapore. Using the second component of the Global Health Security index to stratify likely case-detection capacities, the ability to detect imported cases relative to Singapore was 40% (95% HPDI 22–67) among locations with high surveillance capacity, 37% (18–68) among locations with medium surveillance capacity, and 11% (0–42) among locations with low surveillance capacity. Treating all travellers as if they were residents (rather than accounting for the brief stay of some of these travellers in Wuhan) contributed modestly to underestimation of prevalence.

Interpretation: Estimates of case counts in Wuhan based on assumptions of 100% detection in travellers could have been underestimated by several fold. Furthermore, severity estimates will be inflated several fold since they also rely on case count estimates. Finally, our model supports evidence that underdetected cases of COVID-19 have probably spread in most locations around the world, with greatest risk in locations of low detection capacity and high connectivity to the epicentre of the outbreak.”

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and COVID-19 infection during pregnancy.

[PMID: 32247017, Apr 5, 2020](#)

Al-Tawfiq, Jaffar A

Travel Med Infect Dis

Level of Evidence: 5- Expert opinion or review?

Article type: Letter

BLUF: COVID-19 appears to have strikingly less severe clinical outcomes expectant mothers when compared to MERS.

Full text:

“Dear Editor,

The emergence of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in 2012 was associated with variable rate of asymptomatic infection but no asymptomatic cases were reported among pregnancy [1]. The newly emerging 2019 novel coronavirus (2019-nCoV), the COVID-19, was identified initially in Wuhan, China. Since its first description in December 2019, the total number of cases as reported by the World Health Organization (WHO) had reached 191,127 confirmed cases on February 18, 2020, with 7807 deaths [2]. The clinical picture and radiographic presentations were recently described [3,4] and the clinical picture in nine pregnant women [5] were similar to non-pregnant women [3,4], and another study showed that 15 pregnant patients with COVID-19 had mild disease [6]. All of the pregnant patients in one study and 66.7% of pregnant COVID-19 patients had C-section and all newborn survived [5,6]. Of 9 pregnant women, 4 (44%) had premature delivery [5]. In a previous study of MERS-CoV, there were 11 pregnant women [7]. A comparison between MERS-CoV and COVID-19 cases in pregnancy is shown in Table 1. There was no difference in the age group of the patients, however, the gestational age was lower among MERS than COVID-19 patients. Of the MERS-CoV cases in pregnancy, 63.6% required intensive care unit admission and this is comparable to 50% of SARS pregnant women [8]. There was no mention about the death rate among pregnant women with COVID-19, however, the case fatality rate among MERS-pregnant patients was about 35% and was not statistically different when compared to the overall MERS case fatality rate [7]. In the MERS cases, 40% had C-section and this is much lower than 100% C-section rate in the case of COVID-19. This difference may reflect a variance in the practices between different countries. Another difference is the high fetal demise rate of 30% among pregnant women with MERS compared to 0% among COVID-19. The fetal demise rate among 12 pregnant women with SARS was 25% [8]. Thus, similar to the difference in the clinical presentation and course among SARS, MERS-CoV and COVID-19, there is also differences in the outcome and course of pregnant women with these coronaviruses' infection. Understanding the impact of COVID-19 on pregnancy and outcome would guide healthcare authorities and public health on further risk mitigation and advise for pregnant women around the world."

Table 1. A comparison between pregnant women with MERS-CoV and COVID-19.

	MERS-CoV [7]	COVID-19 [5]	COVID-19 [6]	P value
Number of patients	11	9	15	
Mean Age (year)	33.2	29.9	32	0.127
Mean Gestational age (weeks)	28	37.1	32	0.01
ICU admission (%)	63.6	–	0	
Maternal survival (%)	72.7	–	100	
Fetal survival (%)	70	100	100	
C-section, n (%)	40	100	66.7	

Probable aircraft transmission of Covid-19 in-flight from the Central African Republic to France.

[PMID: 32247016, Apr 5, 2020](#)

Eldin, Carole; Lagier, Jean-Christophe; Mailhe, Morgane; Gautret, Philippe
Travel Med Infect Dis

Level of evidence: 4- Case report

Article type: Letter

BLUF: Transmission of SARS-CoV2 within an aircraft appears possible.

Full text:

“Dear Editor,

We report here a case of COVID-19 most likely acquired during a flight from Bangui, Central African Republic to Paris, France.

A patient in his fifties without any past medical history consulted his general practitioner, in the Marseille area on March 6th, 2020, because of fever, headache and cough evolving since February 29th. He had been sent by his company (company X) to the Central Africa Republic (CAR) from February 13th to February 25th where he gave presentations (training in management) for 6 days, to a public of about 30 resource directors of several CAR ministries. Because of persistence of fever and cough at day 9-post onset, he was referred to the emergency unit of a local hospital on March 9th. On clinical examination he had fever (40 °C) and dyspnea with oxygen saturation at 91% in ambient air. Pulmonary auscultation revealed bilateral basal crackling sounds. Malaria was ruled-out by blood smear microscopic examination and influenza was ruled-out by PCR on nasal swab fluid. C-reactive protein was at 103 mg/L and white blood cell count was at 8.8 Giga/L. Naso-pharyngeal swab fluid was tested for SARS-CoV-2 by RT-PCR as previously described [1] and resulted positive. The patient was immediately transferred to our center (IHU Méditerranée Infection) for hospitalization in a highly contagious patient section. A Chest CT-scan showed bilateral interstitial pulmonary infiltrates (Fig. 1). Progressive aggravation led to his temporary transfer to an intensive care unit for five days, before coming back to our ward where he is still hospitalized at the time of writing. The patient reported that his partner (in her fifties) who works for company X and undertook the same business travel, had cough and fever from February 25th to February 29th that resolved thereafter. She had a negative SARS-Cov-2 RT-PCR on a nasopharyngeal sample obtained on March 3rd.

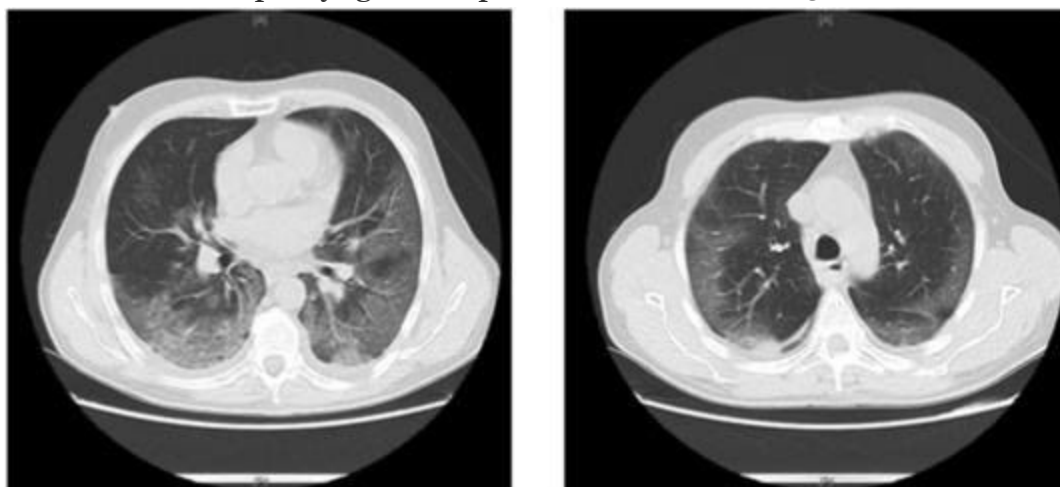


Fig. 1. Chest CT-scan showing bilateral pulmonary infiltrates.

In a recently published study, conducted in COVID-19 patients, fewer than 2.5% of infected persons showed symptoms within 2.2 days (CI, 1.8–2.9 days) of exposure, and symptom onset occurred within

11.5 days (CI, 8.2–15.6 days) for 97.5% of infected persons. The estimate of the dispersion parameter was 1.52 (CI, 1.32 to 1.72), and the estimated mean incubation period was 5.5 days [2]. Given the incubation time range of COVID-19, we excluded that our patient acquired COVID-19 in France before leaving to CAR. Furthermore, only 15 documented cases were identified in France before our patient traveled to CAR none of which was documented in Marseille area, where the patient currently lives [3]. Acquisition in France on return, between February 25th and 27th, with a short incubation time was considered possible, but unlikely given that no local circulation was documented in Marseille area during this period of time [3]. The more likely place of exposure was therefore suspected to be in CAR, in a first instance, because the patient had multiple contacts in small closed rooms with several groups of people. However, investigation conducted by telephone in collaboration with the Medical Doctor of the Pasteur Institute of Bangui, where the meeting was organized, and by contacting the three other French collaborators from the company X who participated to the meeting, revealed that none of the other French and African participants presented with respiratory symptoms during the event or soon after. This data provides no strong argument for a potential exposure of our patient during his stay in CAR. Furthermore, the first confirmed case of COVID-19 in CAR was identified on March 8th only, in an Italian patient flying from Milano, Italy to CAR, long after our patient returned to France [4]. In addition, no case of COVID-19 was reported to the GeoSentinel network (<https://www.istm.org/geosentinel>) in patients returning from CAR, so far. By contrast, the first case of COVID-19 diagnosed in Cameroun was a French national who entered in the country after flying Air France (AF775, on February, 24th) from Paris to Yaoundé with a stopover in Bangui [5]. Our patient and his partner, used the same flight from Bangui to Yaoundé and then to Paris and Marseille in economic class. Therefore, our patient likely get infected in the plane, while traveling with the patient diagnosed eleven days later with COVID-19, in Cameroun. Investigation by Air France medical service is currently ongoing. Of note, of the three other French employees from company X who participated to the meeting, one traveled back on the same flight but in business class and the other two came back in France two days later. Aircraft transmission of COVID-19 has already been reported in China which corroborates our view [6]. This report illustrates how easily SARS-CoV-2 may travel together with their human carriers and spread the virus on board. Travel restrictions clearly make sense in the current context, not only to limit the spread of the disease to still unaffected areas but also to prevent travelers from getting infected on board.”

Response to Commentary on: "The neuroinvasive potential of SARS-CoV-2 may play a role in the respiratory failure of COVID-19 patients".

[PMID: 32246783, Apr 5, 2020](#)

Li, Yanchao

Journal of Medical Virology

Level of Evidence: Level 5

Article Type: Commentary

Summary: COVID-19 may have nervous system involvement that underlies the acute respiratory failure experienced by many patients. More research needs to be done to clarify whether this is a mechanism of action for the virus and what treatments can address it.

SARS-COV-2 and infectivity.

[PMID: 32246503, Apr 5, 2020](#)

Tresoldi, Ilaria

Journal of Medical Virology

Level of Evidence: Level 5

Article Type: Preliminary Data

Summary: COVID-19 has integrin binding sequences that are more similar to bat virus than SARS. Integrin binding peptides could provide a therapeutic target for COVID-19 treatment.

An alteration of the dopamine synthetic pathway is possibly involved in the pathophysiology of COVID-19.

[PMID: 32246784, Apr 5, 2020](#)

Nataf, Serge

Journal of Medical Virology

Level of Evidence: 5

Article Type: Commentary

Summary: Dopa Decarboxylase has the most significant co-expression to ACE2. This may indicate involvement of the dopamine sympathetic pathway in respiratory failure in COVID-19.

Respiratory failure alone does not suggest central nervous system invasion by SARS-CoV-2.

[PMID: 32246782, Apr 5, 2020](#)

Turtle, Lance

Journal of Medical Virology

Level of Evidence: 5

Article Type: Commentary

Summary: However, respiratory failure caused by pneumonia is clinically distinct from that caused by brain failure. The published clinical features of COVID-19 do not suggest that involvement of the CNS is common. The possibility of CNS entry by SARS-CoV-2 remains plausible, but unproven.

Safely conducting essential research in the face of COVID-19.

[PMID: 32246121, Apr 5, 2020](#)

Gewin, Virginia, Nature

Level of Evidence: Level 6

Article Type: News

Summary: Scientists have to continue laboratory work to develop innovations to address the pandemic. Extra precautionary measures need to be taken into account to keep scientists safe. Social distancing, extra PPE, shift work, and communication are vital.

Mentoring during the COVID-19 pandemic.

[PMID: 32246119, Apr 5, 2020](#)

Gotian, Ruth, Nature

Level of Evidence: Level 6

Article Type: News

Summary: Mentors should always provide a support system for trainees and encourage them to prioritize their health above their productivity. Check-in, listen, lower expectations, focus on what's important, and find other ways to help if laboratories are closed.

How sewage could reveal true scale of coronavirus outbreak.

[PMID: 32246117, Apr 5, 2020](#)

Mallapaty, Smriti

Nature

Level of Evidence: Level 6

Article Type: News

Summary: Wastewater can be used to track COVID-19, which could enable estimates of how widespread COVID-19 is in a community without testing all individuals. Analyses of the number of viral RNA copies relevant to each infected individual need to be conducted, so that viral RNA in wastewater can be extrapolated out to the number infected in an area.

New measures for COVID-19 response: a lesson from the Wenzhou experience.

[PMID: 32246149, Apr 5, 2020](#)

Ruan, Linhui - Clinical Infectious Diseases

Level of Evidence: Level 4

Article Type: Research

Summary: Wenzhou, the most heavily affected city outside of Hubei province, implemented a policy of “25 emergency measures for Wenzhou epidemic prevention and control”, after more moderate measures of cutting off travelers to the city did not lead to a decrease in transmission locally. The increased measures focused on cutting off local transmission by shutting down the city and keeping citizens in doors and funneling them to proper treatment centers. Overall, in Wenzhou death rates from the virus were lower than national rates in China and they achieved relative rapid control of the pandemic.

Care for the psychological status of frontline medical staff fighting against COVID-19.

[PMID: 32246142, Apr 5, 2020](#)

Huang, Jing, Clinical Infectious Diseases

Level of Evidence: Level 5- Expert Opinion

Article Type: Letter

Summary: The psychological well-being of front-line medical staff needs to be maintained to enable medical staff to continue to operate at a high level to address the pandemic. Access to psychiatric care for medical staff needs to be available to maintain morale.

Publication date: April 4th, 2020

Covid-19: four fifths of cases are asymptomatic, China figures indicate.

[PMID: 32241884, Apr 4, 2020](#)

Day, Michael

BMJ

Level of Evidence: 6- critical data uncited

Article type: News

Summary: “A Total of 130 of 166 new infections (78%) identified in the 24 hours to the afternoon of Wednesday 1 April were asymptomatic”

Drugs and the renin-angiotensin system in covid-19.

[PMID: 32241880, Apr 4, 2020](#)

Aronson, Jeffrey K; Ferner, Robin E

BMJ

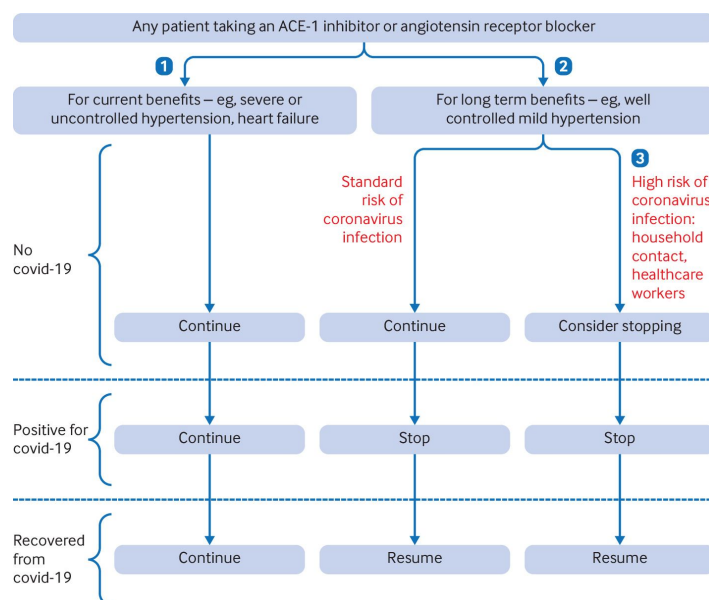
Level of evidence: 5- Expert opinion

Article type: Letter

BLUF: “Clinical effects are unpredictable, so treatment decisions must be tailored and pragmatic”

Summary: There are theoretical concerns that ACE-1 inhibitors and ARBs may increase cellular infection via SARS-CoV2 as their entry receptor is ACE-2. Alternatively, ACE-1 inhibitors may increase conversion of angiotensin II to angiotensin 1-7 with potentially anti-inflammatory properties. [It should be noted, however, that ACE-1 and ACE-2 have distinct active sites and substrates and that

ACE-1 inhibitors have been demonstrated to have minimal changes on ACE-2 levels.] The article proposes the recommendations below:



Covid-19: Patients who are improving could have treatment withdrawn if others could benefit more.

[PMID: 32241813, Apr 4, 2020](#)

Mahase, Elisabeth

BMJ

Level of Evidence: 5- Expert Opinion

Article Type: News

BLUF: The British Medical Association’s new guidelines for ethical practice and allocation of resources state that “although the decision to deny treatment to a patient who would have received it outside a pandemic will be difficult for doctors, it may become necessary, and it is ‘both lawful and ethical,’ as long as they follow the appropriate prioritisation policies.

Full text:

“Doctors could be forced to withdraw lifesaving treatment from stable or improving patients to prioritise those deemed likely to have a better prognosis if the demand on the health service during the covid-19 pandemic outstrips the capacity.

This is according to new ethics guidance from the BMA. It states that although the decision to deny treatment to a patient who would have received it outside a pandemic will be difficult for doctors, it may become necessary, and it is ‘both lawful and ethical,’ as long as they follow the appropriate prioritisation policies.

‘As we have seen in China, Italy and Spain, deaths frequently follow hospitalisation and critical care interventions . . . It is possible therefore that restrictions in the availability of mechanical ventilation may for a period become severe,’ the document said.

It warned that ‘the initial wave of illness can be extremely rapid, over a few days to a few weeks,’ and that in these circumstances, if demand outstripped capacity, ‘more strictly utilitarian considerations will have to be applied, and decisions about how to meet individual need will give way to decisions about how to maximise overall benefit.’

It advised doctors that they may need to make admission to intensive care or access to advanced life support dependent on whether the patient responded to treatment in a certain timeframe. This would mean that if there were ‘overwhelming demand’ a patient may have their admission or treatment withdrawn if their prognosis sufficiently worsened. Their place would then be offered to another patient ‘reasonably believed to have the capacity to benefit quickly.’

Discrimination

When patients are refused access to lifesaving treatments, it is likely that questions about possible discrimination may be raised. As the assessment will be based on the capacity to benefit quickly, some of the most unwell patients may be denied access to treatment such as intensive care or artificial ventilation. It was inevitable that this would be ‘indirectly discriminatory against both the elderly and those with long term health conditions,’ the BMA said. Despite this, it views this way of assessing patients as ‘lawful in the circumstances of a serious pandemic.’

However, doctors have been advised that a ‘simple cut-off policy with regard to age or disability would be unlawful as it would constitute direct discrimination.’

The guidance states, ‘A healthy 75 year old cannot lawfully be denied access to treatment on the basis of age. However, older patients with severe respiratory failure secondary to covid-19 may have a very high chance of dying despite intensive care, and consequently have a lower priority for admission to intensive care.’

Liability

During this period, doctors have also been told that it is likely that they will be exposed to ‘considerable amounts of stress, may be working well beyond their normal hours,’ and may also need to ‘provide treatment at the limits of or even beyond their competence in order to prevent serious harm.’

Additionally, in light of returning retired doctors and medical students contributing to the covid-19 response, there will inevitably be questions about professional and legal liability and indemnity. The BMA referred to General Medical Council guidance that states, ‘Whenever a concern is raised with us, we always consider it on the specific facts of the case, taking into account the factors relevant to the environment in which the doctor is working . . . The scale of the challenges to delivering safe care would be relevant to a question about the clinical care provided by a doctor. In addition, we’d consider the resources available to the doctor, the problems of working in unfamiliar areas of practice, and the stress and tiredness that may affect judgment or behaviour.’

Fighting covid-19 outbreaks in prisons.

[PMID: 32241756, Apr 4, 2020](#)

Yang, Hong; Thompson, Julian R

BMJ

Level of evidence: 5- Expert opinion

Article type: Correspondence

BLUF: “Prisoners are at much higher risk of infectious diseases than communities outside.³ Highly infectious prison environments are fuelled by overcrowding, poor health services, high risk behaviours, security versus public health concerns, and lack of empathy for prisoners.”

Summarizing excerpt:

“Over 10 million people are incarcerated worldwide. The UN Basic Principles for the Treatment of Prisoners states that prisoners ‘shall have access to the health services available in the country without discrimination on the grounds of their legal situation.’ But burgeoning prison populations and epidemics mean that healthcare services are increasingly strained.”

Covid-19: doctors' visas are automatically extended for one year.

[PMID: 32241811, Apr 4, 2020](#)

Rimmer, Abi

BMJ

Level of Evidence: Critical evidence cited

Article type: News

Summary: The visas of doctors, nurses, and paramedics in the UK that will expire before 1 October will automatically be extended for one year, free of charge, the government has announced. The extension will also apply to family members and will be exempt from the immigration health surcharge.

Covid-19: Rules on sharing confidential patient information are relaxed in England.

[PMID: 32241815, Apr 4, 2020](#)

Dyer, Clare

BMJ

Level of Evidence: Critical evidence cited

Article type: News

BLUF: “The Department of Health and Social Care for England has relaxed the rules on sharing patients’ confidential data and is requiring healthcare bodies to provide patient information to each other to help fight covid-19... NHSX is developing a smartphone app, expected to be deployed in weeks, that instantly traces close contacts of people carrying the virus and advises them to self-isolate.”

Summarizing excerpt:

“The Department of Health and Social Care for England has relaxed the rules on sharing patients’ confidential data and is requiring healthcare bodies to provide patient information to each other to help fight covid-19.

The health and social care secretary, Matt Hancock, issued a notice under the Health Service Control of Patient Information Regulations to general practices, organisations that provide health services, local authorities, and arm’s length bodies of the health department, such as its digital transformation arm, NHSX.

Separate notices have also gone out to NHS Digital and to NHS England and NHS Improvement, and the UK Biobank project is also being required to share data.

‘For patients, this means that their data may be shared with organisations involved in the response to coronavirus (covid-19), for example, enabling notification to members of the public most at risk and advising them to self-isolate,’ the department said in an explanatory note.

‘The health and care system is facing an unprecedented challenge and we want to ensure that health organisations, arm’s length bodies and local authorities are able to process and share the data they need to respond to coronavirus (covid-19), for example by treating and caring for patients and those at risk, managing the service and identifying patterns and risks.’

Hancock told general practices and other healthcare bodies in a letter dated 20 March that issued the notice, 'Action to be taken will require the processing and sharing of confidential patient information amongst health organisations and other bodies engaged in disease surveillance for the purposes of research, protecting public health, providing healthcare services to the public and monitoring and managing the covid-19 outbreak and incidents of exposure.'

Some general practices have posted privacy notices on their websites outlining the new measures. A typical notice says, 'In order to look after your healthcare needs during this difficult time, we may urgently need to share your personal information, including medical records, with clinical and non-clinical staff who belong to organisations that are permitted to use your information and need to use it to help deal with the covid-19 pandemic. This could (amongst other measures) consist of either treating you or a member of your family and enable us and other healthcare organisations to monitor the disease, assess risk and manage the spread of the disease. Please be assured that we will only share information and health data that is necessary to meet yours and public healthcare needs.'

NHSX is developing a smartphone app, expected to be deployed in weeks, that instantly traces close contacts of people carrying the virus and advises them to self-isolate.

The notice requiring the data sharing measures will expire on 30 September unless extended in writing.

Are UK doctors getting sufficient protective equipment against covid-19?

[PMID: 32241766, Apr 4, 2020](#)

Sayburn, Anna

BMJ

Level of Evidence: Sites sources

Article type: Feature

Summary: Public Health England released revised guidelines on PPE

1. When carrying out aerosol generating procedures (AGPs): FFP3 respirator, long sleeved disposable gown, gloves, full face shield or visor
2. In high risk units where AGPs are being carried out: FFP3 respirator, long sleeved disposable, gloves, disposable eye protection
3. When giving direct care: fluid resistant surgical mask, apron, eye protection, gloves.
4. When patient's covid-19 status is unknown and virus is in high circulation locally, clinicians may use PPE for all patients.

AGPs are defined as:

- Intubation, extubation, and related procedures, such as manual ventilation and open suctioning of the respiratory tract (including the upper respiratory tract)
- Tracheotomy/tracheostomy procedures (insertion, open suctioning, removal)
- Bronchoscopy and upper ear, nose, and throat airway procedures that involve suctioning
- Upper gastrointestinal endoscopy where there is open suctioning of the upper respiratory tract
- Surgery and postmortem procedures involving high speed devices
- Some dental procedures (such as high speed drilling)
- Non-invasive ventilation, such as bi-level positive airway pressure ventilation and continuous positive airway pressure ventilation
- High frequency oscillatory ventilation
- Induction of sputum
- High flow nasal oxygen

Infectious diseases in children and adolescents in China: analysis of national surveillance data from 2008 to 2017.

PMID: [32241761](#), Apr 4, 2020

Dong, Yanhui; Wang, Liping; Burgner, David P; Miller, Jessica E; Song, Yi; Ren, Xiang; Li, Zhongjie; Xing, Yi; Ma, Jun; Sawyer, Susan M; Patton, George CBMJ

Level of evidence: 3- surveillance study

Article type: Research

BLUF: The incidence of, and deaths from, infectious diseases in children and adolescents in China continues to decrease. Quarantinable diseases with high lethality have virtually disappeared, sexually transmitted diseases and bloodborne infections pose an increasing problem, and HIV is now the leading cause of death. The incidence of zoonotic infections and vectorborne diseases, despite the current pandemic has been low but with obvious potential for major outbreaks

Abstract

Objectives: To outline which infectious diseases in the pre-covid-19 era persist in children and adolescents in China and to describe recent trends and variations by age, sex, season, and province.

Design: National surveillance studies, 2008-17.

Setting: 31 provinces in mainland China.

Participants: 4,959,790 Chinese students aged 6 to 22 years with a diagnosis of any of 44 notifiable infectious diseases. The diseases were categorised into seven groups: quarantinable; vaccine preventable; gastrointestinal and enteroviral; vectorborne; zoonotic; bacterial; and sexually transmitted and bloodborne.

Main outcome measures: Diagnosis of, and deaths from, 44 notifiable infectious diseases.

Results: From 2008 to 2017, 44 notifiable infectious diseases were diagnosed in 4,959,790 participants (3,045,905 males, 1,913,885 females) and there were 2532 deaths (1663 males, 869 females). The leading causes of death among infectious diseases shifted from rabies and tuberculosis to HIV/AIDS, particularly in males. Mortality from infectious diseases decreased steadily from 0.21 per 100 000 population in 2008 to 0.07 per 100 000 in 2017. Quarantinable conditions with high mortality have effectively disappeared. The incidence of notifiable infectious diseases in children and adolescents decreased from 280 per 100 000 in 2008 to 162 per 100 000 in 2015, but rose again to 242 per 100 000 in 2017, largely related to mumps and seasonal influenza. Excluding mumps and influenza, the incidence of vaccine preventable diseases fell from 96 per 100 000 in 2008 to 7 per 100 000 in 2017. The incidence of gastrointestinal and enterovirus diseases remained constant, but typhoid, paratyphoid, and dysentery continued to decline. Vectorborne diseases all declined, with a particularly noticeable reduction in malaria. Zoonotic infections remained at low incidence, but there were still unpredictable outbreaks, such as pandemic A/H1N1 2009 influenza. Tuberculosis remained the most common bacterial infection, although cases of scarlet fever doubled between 2008 and 2017. Sexually transmitted diseases and bloodborne infections increased significantly, particularly from 2011 to 2017, among which HIV/AIDS increased fivefold, particularly in males. Difference was noticeable between regions, with children and adolescents in western China continuing to carry a disproportionate burden from infectious diseases.

Conclusions: China's success in infectious disease control in the pre-covid-19 era was notable, with deaths due to infectious diseases in children and adolescents aged 6-22 years becoming rare. Many challenges remain around reducing regional inequalities, scaling-up of vaccination, prevention of further escalation of HIV/AIDS, renewed efforts for persisting diseases, and undertaking early and

effective response to highly transmissible seasonal and unpredictable diseases such as that caused by the novel SARS-CoV-2 virus.

Covid-19: Can France's ethical support units help doctors make challenging decisions?

[PMID: 32241762, Apr 4, 2020](#)

Arie, Sophie

BMJ

Level of evidence: Critical evidence cited

Article type: Feature

Summary: “Detailed recommendations for medical professionals on how to triage patients with covid-19 in an ethically acceptable way were issued to French doctors last week...[where] patients must be assessed on a combination of factors to decide which patients have the greatest chance of survival and the most life years to gain from surviving. These factors include:

- The patient’s wishes
- The patient’s baseline condition: age, frailty score (using the French clinical frailty score or GIR frailty score, the Katz index, and the World Health Organization’s performance index score if already known), nutritional status, and cognitive status
- The severity of the virus: respiratory failure and organ failure, measured using a SOFA (sequential organ failure assessment) score
- The potential life years to be gained
- The availability of beds and ventilators.

Depending on how each patient measures against others on the above criteria combined, the patient should either be admitted to ICU, receive palliative care only, or be offered care that does not require intubation. If a patient is dying the guidance specifies that at least one relative should be allowed to be present, using suitable protective equipment. [Because covid-19 patients often seem to require] 3-4 weeks of intensive care. The guidance advises that ICU patients should be reassessed every two days and that treatment should be withdrawn if they no longer meet the criteria for treatment.”

Refugee and migrant health in the COVID-19 response.

[PMID: 32243777, Apr 4, 2020](#)

Kluge, Hans Henri P; Jakab, Zsuzsanna; Bartovic, Jozef; D'Anna, Veronika; Severoni, Santino
Lancet

Level of Evidence: 5- Expert opinion

Article type: Correspondence

BLUF: The needs of vulnerable populations such as refugees and migrants should be considered in the COVID19 preparedness plans. **“Site specific epidemiological risk assessments must be done to determine the extent of the risk of COVID-19 introduction and transmission in such settlements, together with case management protocols and rapid deployment of outbreak response teams if needed.”**

Summarizing excerpt:

Evidence shows that this vulnerable population has a low risk of transmitting communicable diseases to host populations in general. However, refugees and migrants are potentially at increased risk of

contracting diseases, including COVID-19, because they typically live in overcrowded conditions without access to basic sanitation... Basic public health measures, such as social distancing, proper hand hygiene, and self-isolation are thus not possible or extremely difficult to implement in refugee camps. If no immediate measures to improve conditions are put in place, the concern about an outbreak of COVID-19 in the camps cannot be overstated.

Ensuring global access to COVID-19 vaccines.

[PMID: 32243778, Apr 4, 2020](#)

Yamey, Gavin; Schaferhoff, Marco; Hatchett, Richard; Pate, Muhammad; Zhao, Feng; McDade, Kaci Kennedy Lancet

Level of Evidence: 5- Expert opinion

Article type: Comment

BLUF: Global collaboration towards a fair allocation system of vaccines once developed is critical

Summarizing excerpt:

“The need for COVID-19 vaccines is global, although the need is differentially distributed within populations. Vaccines would likely be prioritised for health-care workers and people at greatest risk of severe illness and death. High-income countries must not monopolise the global supply of COVID-19 vaccines. This risk is real: during the 2009 influenza A/H1N1 pandemic, rich countries negotiated large advance orders for the vaccine, crowding out poor countries.¹¹ Such an outcome would result in a suboptimal allocation of an initially scarce resource.”

SARS-CoV-2: a time for clear and immediate action.

[PMID: 32243818, Apr 4, 2020](#)

Poland, Gregory A

Lancet Infect Dis

Level of evidence: 5- expert opinion

Article type: Comment

Summary: A call to action for “a lockdown is the safest course of action. Based on our current understanding of the virus, this will probably be necessary for a minimum of several months in order to best weather this storm”. His reasons are threefold.

1. The high rates of comorbidities that have been associated with significantly higher risk for severe presentation of COVID-19
2. The current culture that emphasizes global travel
3. The concerns associated with mixing high risk patients with asymptomatic or mildly symptomatic carriers

Estimating case fatality rates of COVID-19.

[PMID: 32243813, Apr 4, 2020](#)

Lipsitch, Marc

Lancet Infect Dis

Level of evidence: 5- expert opinion

Article type: Correspondence

BLUF: Case fatality rates of COVID-19 by Baud et al. is a poor estimate and more rigorous peer review is necessary.

Summary:

“Especially in a time of great urgency, authors have a responsibility to read and understand relevant background literature and look for obvious flaws in their own analysis. This work does not appear to have met that standard. The fact that peer review did not pick up these flaws should be a caution against hastening the peer review process at the expense of due care.”

Estimating case fatality rates of COVID-19.

[PMID: 32243814](#), Apr 4, 2020

Kim, David Dongkyung; Goel, Akash
Lancet Infect Dis

BLUF: Case fatality rates of COVID-19 reported by Baud et al on 3/12 is a poor estimate.

Summarizing excerpt:

“Although underestimation of CFRs risks the population not taking the threat seriously, overestimation might lead to unnecessary additional panic and concern. During a rapidly evolving pandemic, accurate measures of disease characterisation are important.”

Estimating case fatality rates of COVID-19.

[PMID: 32243815](#), Apr 4, 2020

Spychalski, Piotr; Blazynska-Spychalska, Agata; Kobiela, Jarek
Lancet Infect Dis

BLUF: “The CFR calculated per total cases seems to remain the best tool to express the fatality of the disease, even though it might underestimate this figure in the initial phase of an outbreak... once all active cases are closed, we might expect the CFR in China to be around 3.85%”

Summarizing excerpt:

“In both trade press and newspapers, the case fatality rate (CFR) is often used to describe the situation pertaining to COVID-19, as well as to any other epidemic. The definition of the CFR in the Dictionary of Epidemiology states that it is “the proportion of cases of a specified condition that are fatal within a specified time”.² On the one hand, as accurately pointed out by Baud and colleagues, the CFR might be underestimated because of a type of time-lag bias associated with diagnosing and reporting cases. Furthermore, calculations are based on the questionable assumption that all cases are being tested. On the other hand, as Pueyo suggests,³ the CFR might be overestimated due to the definition of a case. During an epidemic, cases might be defined either as total cases (ie, every confirmed case) or as closed cases (ie, only those who have recovered or died). Hence, the denominator for the CFR might be either of these numbers. In the initial phase of the epidemic, the number of closed cases is relatively small, and so the CFR calculated per closed cases is an overestimate. By contrast, when the CFR is calculated per total cases, the numerator is underestimated, and thus the whole calculation becomes an underestimate. Baud and colleagues’ calculation, although interesting, is biased as well. As shown in the figure, it vastly overestimates the fatality of COVID-19 if one uses data from the initial phase of the outbreak. This overestimation is obviously due to undertesting and a time-lag bias, which is more pronounced in the beginning of an outbreak. As demonstrated in the figure, irrespective of the method

used, all calculations are biased, especially in the initial part of an outbreak, and converge once all cases are closed. Nevertheless, it seems that the CFR calculated per total cases is the least affected by reporting biases.”

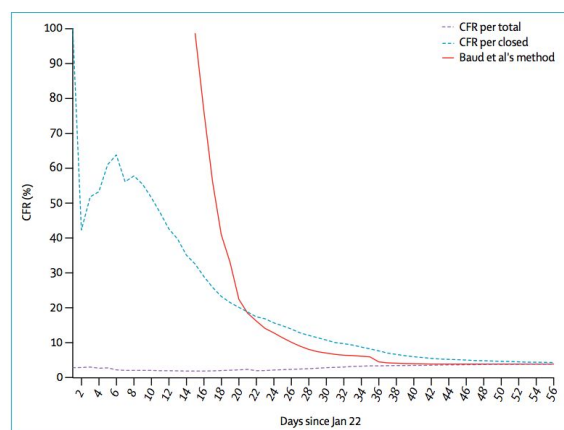


Figure: Comparison of CFR calculation methods based on data from China for the period of Jan 22–March 17, 2020
CFR=case fatality rate.

The effectiveness of the quarantine of Wuhan city against the Corona Virus Disease 2019 (COVID-19): well-mixed SEIR model analysis.

[PMID: 32243599](#), Apr 4, 2020

Hou, Can

Journal of Medical Virology

Level of Evidence: Level 7- predictive modeling

Article Type: Scientific article

Summary: A SEIR compartmental model showed that COVID-19 is highly infectious in individuals in the latency period. By reducing contacts of latent individuals, quarantine and isolation can delay peak time of infection and possibly reduce the peak number of infected to decrease the impact of the pandemic.

Detection of antibodies against SARS-CoV-2 in patients with COVID-19.

[PMID: 32243608](#), Apr 4, 2020

Du, Zhe

Journal of Medical Virology

Level of Evidence: Level 4

Article Type: Scientific Article

Summary: IgM/IgG levels differ in acutely ill versus recovering patients or recovered COVID-19 patients. They may be used to determine when an individual is no longer infectious or suspected to be immune from illness recurrence to control the spread of COVID-19.

The Presence of SARS-CoV-2 RNA in Feces of COVID-19 Patients.

[PMID: 32243607, Apr 4, 2020](#)

Chen, Yifei

Journal of Medical Virology

Level of Evidence: Level 4

Article Type: Scientific Article

Summary: Viral RNA can still be detectable in feces when no longer detected by pharyngeal swabs for up to 7 days on average. This continued presence of a viral load may indicate that COVID-19 can be transferred via a fecal-oral route.

Imaging and Clinical Features of Patients With 2019 Novel Coronavirus SARS-CoV-2: A systematic review and meta-analysis.

[PMID: 32242947, Apr 4, 2020](#)

Cao, Yinghao

Journal of Medical Virology

Level of Evidence: 4 (Cross-sectional reports and case-series)

Article Type: Meta-Analysis/Systematic Review

Summary: COVID-19 mainly causes bilateral pneumonia with ground glass opacities as an imaging finding. Often, lung function will deteriorate rapidly. Nearly a third of patients need to be admitted to the ICU, and patients are likely to cause respiratory failure or even death. The most common presenting symptoms are fever and cough.

Special report: The simulations driving the world's response to COVID-19

[PMID: 32242115, Apr 4, 2020](#)

Adam, David

Nature

Level of Evidence: Critical evidence cited

Article Type: News

Summary: Simulation models of the effects/spread of the pandemic are in flux reliant on uncovering further information about the virus and how it spreads. It may be possible to predict the impact of the virus in a short term, but likely not long term until more is known about the virus. A second wave may be possible when social distancing is lifted or no longer followed.