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DOCUMENTS GOUVERNEMENTAUX

Avis relatif à l'opportunité d'un nettoyage spécifique ou d'une désinfection de l'espace public

Dans le cadre de la lutte contre la pandémie à Covid-19, des pays ou des villes procèdent à un nettoyage avec utilisation de produit désinfectant dans l'espace public.

Pour répondre à la question sur l'opportunité de telles mesures, le HCSP a étudié les expériences internationales et la littérature scientifique et réalisé une analyse relative au risque de contamination de la population par les espaces publics (voirie et mobilier urbain) ainsi qu'au risque lié à l'utilisation de produits détergents et désinfectants sur l'écosystème et l'environnement urbain. (...)

HCSP (e-date: 07/04/2020)

[Lien original](#)

COVID-19 : Procédures de nettoyage et de désinfection de l'environnement et des équipements de soins pour les cliniques médicales

Quels sont les éléments à considérer pour un nettoyage et une désinfection efficaces et sécuritaires dans le cadre de la COVID-19 pour une clinique médicale ?

INSPQ (e-date: 06/04/2020)

[Lien original](#)

COVID-19 : Évaluation des options de désinfection des protections respiratoires N95 dans le contexte de la pandémie de COVID-19

Considérant la pandémie de la COVID-19 et la pénurie de protections respiratoires N95, le Centre d'expertise en retraitement des dispositifs médicaux (CERDM) a évalué les options disponibles de désinfection de ces dernières. En date du 2 avril 2020, au Canada, les procédés de désinfection n'ont pas encore été approuvés par une autorité réglementaire et ne répondent pas aux bonnes pratiques reconnues. Cependant, cette démarche s'inscrit dans la volonté d'identifier des stratégies alternatives et supplémentaires aux mesures déjà disponibles afin d'apporter la meilleure protection possible aux travailleurs en cas de pénurie. (...)

INSPQ (e-date: 06/04/2020)

[Lien original](#)

Interim Additional Guidance for Outpatient and Ambulatory Care Settings: Responding to Community Transmission of COVID-19 in the United States

This interim guidance outlines goals and strategies suggested for U.S. ambulatory care settings in response to community spread of coronavirus disease-2019 (COVID-19). Ambulatory care settings are where health services or acute care services are provided on an outpatient basis and can include community health centers, urgent care centers, retail clinics co-located in pharmacies, grocery stores, or mass merchants, hospital-based outpatient clinics, non-hospital-based clinics and physician offices, and public health clinics. These settings, particularly those which offer primary care services, play an important role in the healthcare system's response to the COVID-19 outbreak. (...)

CDC (e-date: 07/04/2020)

[Lien original](#)

Healthcare Provider and Facility Operational Considerations for Non-US Settings

CDC (e-date: 06/04/2020)

[Lien original](#)

COVID-19 and Food Safety: Guidance for Food Businesses

WHO (e-date: 07/04/2020)

[Lien original](#)

Characteristics of COVID-19 patients dying in Italy Report based on available data on April 6th , 2020

Instituto superiore di sanita (e-date: 07/04/2020)

[Lien original](#)

Survey tool and guidance: behavioural insights on COVID-19

This document provides guidance to Member States in the WHO European Region that wish to conduct behavioural insights studies related to COVID-19. Studies can be used to monitor public knowledge, risk perceptions, behaviours and trust with the overall aim to inform national COVID-19 outbreak response measures, including policies, interventions and communications. (...)

WHO Europe (e-date: 08/04/2020)

[Lien original](#)

WHO tool for behavioural insights on COVID-19

WHO Europe (e-date: 08/04/2020)

[Lien original](#)

Case fatality rate for serious COVID-19 – a rapid review

The findings in this memo are based on rapid searches in PubMed and LitCovid, as well as manual searches on websites. Two researchers shared tasks related to study selection and synthesis of results. In the current situation, there is an urgent need for identifying the most important evidence quickly. Hence, we opted for this rapid approach despite an inherent risk of overlooking key evidence or making misguided judgements.

Norwegian Institute of Public Health (e-date: 07/04/2020)

[Lien original](#)

Communiqué de l'Académie : Covid-19, confinement et accidents de la vie domestique chez l'enfant

Les accidents de la vie domestique de l'enfant se produisent à la maison ou dans ses abords immédiats (jardin, cour, garage). Ils surviennent dans 84 % des cas chez des enfants avant un an, 75 % entre un et deux ans, encore très fréquents (plus de 50 %) jusqu'à 5 ans et diminuent chez les plus grands au profit des accidents extérieurs (école, sport). Il s'agit d'intoxications, de brûlures, d'étouffements par corps étrangers, de chutes, de noyades et de défenestrations. Ils sont fréquents et parfois très graves. Depuis la mise en place des mesures de confinement en raison de l'épidémie de Covid-19, les services d'urgences, les pompiers, les médias signalent une augmentation de ces accidents. (...)

Académie de médecine (e-date: 08/04/2020)

[Lien original](#)

Communiqué de l'Académie : Covid-19, accidents domestiques des adultes âgés

Les accidents domestiques sont responsables de 20 000 décès par an en France, dont 2/3 concernent les plus de 75 ans. En cette période de confinement, une attention accrue est indispensable pour en limiter le nombre et les conséquences. Le confinement majore les risques d'accidents chez les personnes âgées surtout si elles ont une limitation de la mobilité, un déclin cognitif ou une atteinte sensorielle, vivant parfois seules dans des logements inadaptés à leur condition physique.

Eviter les deux causes majeures d'accidents domestiques (chutes et intoxications) est de la responsabilité des malades, de leurs familles et des auxiliaires de vie à domicile ou en institution. (...)

Académie de médecine (e-date: 08/04/2020)

[Lien original](#)

Simple Guide to Developing HSE COVID-19 Interim Clinical Guidance . Version 1.0

Ireland's Health Services (e-date: 08/04/2020)

[Lien original](#)

Ethical considerations relating to critical care in the context of COVID-19

This guidance is directed at clinical staff who may be involved in making decisions regarding the prioritisation of critical care resources in the context of COVID-19.

Ireland's Health Services (e-date: 08/04/2020)

[Lien original](#)

Covid19 Evidence Summaries & Rapid Reviews

Ireland's Health Services. (e-date: 08/04/2020)

[Lien original](#)

COVID-19 : Mesures pour les travailleurs de la santé lors de la prestation de soins à domicile

Cette fiche présente les mesures à appliquer lors de soins à domicile (SAD). Ces mesures s'inscrivent dans la continuité des mesures. Elles sont basées sur les connaissances actuelles de la COVID-19 et actualisées en fonction des documents produits par de nombreuses organisations, dont l'Organisation mondiale de la santé (OMS), les Centers for Disease Control and Prevention (CDC), l'Agence de la santé publique du Canada (ASPC) et d'autres organismes. Certaines recommandations découlent d'un consensus des experts du Comité sur les infections nosocomiales du Québec (CINQ). (...)

INSPQ (e-date: 07/04/2020)

[Lien original](#)

COVID-19 : Port d'un couvre-visage par la population générale

Plusieurs mesures ont été mises en place dans les dernières semaines pour limiter la propagation du virus SARS-CoV-2 (COVID-19) dans la population, dont la fermeture des écoles et des garderies, la fermeture des lieux de travail sauf pour les services essentiels, la recommandation de rester à la maison ainsi que d'autres mesures de distanciation physique. De plus, plusieurs messages visant à renforcer les mesures d'hygiène et d'étiquette respiratoire ont été exprimés. Au Québec et ailleurs, le rôle du port du masque pour limiter la transmission du virus est présentement évalué¹. Cette question s'inscrit dans le contexte où les scientifiques s'interrogent aussi sur la proportion de personnes infectées, mais asymptomatiques et leur rôle dans la transmission du virus. Cet avis comprend les recommandations de l'Institut national de santé publique du Québec concernant le port du masque non médical (couvre-visage) dans la population générale pour prévenir la transmission du virus. Elles sont formulées à la lumière des données disponibles à ce jour. (...)

INSPQ (e-date: 08/04/2020)

[Lien original](#)

[Sommaire](#)

ARTICLES PUBLIES OU IN PRESS

Invisible spread of SARS-CoV-2 – Authors' reply

The Lancet Infectious Diseases (e-date: 08/04/2020)

Kucharski AJ, Eggo RM

[Lien original](#)

Invisible spread of SARS-CoV-2

We read with interest Adam Kucharski and colleagues' mathematical modelling study of the early dynamics of coronavirus disease 2019 (COVID-19):

We agree that a stochastic transmission model might best fit with the reality around the Huanan Seafood Wholesale Market, which was the origin of the COVID-19 outbreak and 1 mile away from our hospitals in Wuhan. We appreciate the work making use of different datasets and considering travel. However, we have concerns about the clinical and strategic values of this work. (...)

The Lancet Infectious Diseases (e-date: 08/04/2020)

Xiong N, Wang T, Lin Z

[Lien original](#)

The French response to COVID-19: intrinsic difficulties at the interface of science, public health, and policy

Faced with criticisms, French authorities claim that their policy towards the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has been evidence-based—they appointed an advisory board of 11 scientists to help manage the crisis. However, in situations where decision makers face radical uncertainty, sticking to conventional approaches might jeopardise the science-policy interface. (...)

The Lancet Public Health (e-date: 08/04/2020)

Moatti J-P

[Lien original](#)

Economic sanctions and Iran's capacity to respond to COVID-19

Iran was one of the first countries outside China to have a rapid increase in the number of cases of coronavirus disease 2019 (COVID-19). The country's capacity to respond to the virus is substantially impeded by unilateral economic sanctions re-imposed after the US Administration withdrew from the nuclear deal in May, 2018, and further US sanctions imposed as recently as March 18, 2020.

As of March 31, 2020, the recorded number of people infected from COVID-19 in Iran was 41 495, with 2757 deaths, but these numbers are likely a substantial underestimation. (...)

The Lancet Public Health (e-date: 08/04/2020)

Murphy A, Abdi Z, Harirchi I, McKee M, Ahmadnezhad E

[Lien original](#)

Making decisions to mitigate COVID-19 with limited knowledge

On March 11, 2020, WHO declared the coronavirus disease 2019 (COVID-19) outbreak a global pandemic. Aggressive actions should be taken immediately to mitigate the spread of severe acute respiratory syndrome coronavirus 2. In their Comment, Yonghong Xiao and Mili Estee Torok rightly stated that infection prevention and control measures should be based on sound scientific principles. However, we disagree with the authors' views on certain measures that they consider to have “no scientific basis and have proven to be ineffective”. (...)

The Lancet Infectious Diseases (e-date: 07/04/2020)

Zhang W, Qian BY

[Lien original](#)

Love in the time of COVID-19: negligence in the Nicaraguan response

The response of the Nicaraguan government to the coronavirus disease 2019 (COVID-19) pandemic has been perhaps the most erratic of any country in the world to date. Directly contradicting mitigation strategies recommended by WHO, President Daniel Ortega has refused to encourage any physical distancing measures. Vice President Rosario Murillo (Daniel Ortega's wife) instead called on thousands of sympathisers to congregate in street marches under the slogan “love in the time of COVID-19”. (...)

The Lancet Global Health (e-date: 08/04/2020)

Mather TPS, Marin BG, Perez GM, Christophers B, Paiva ML, Oliva R, et al

[Lien original](#)

POCUS in COVID-19: pearls and pitfalls

Danilo Buonsenso and colleagues described in their Correspondence how lung ultrasound could replace stethoscopes in the ongoing coronavirus disease 2019 (COVID-19) pandemic, which could possibly reduce the risk of exposure.

Indeed, point-of-care ultrasound (POCUS) has an exemplary role in many specialties,

especially emergency and critical care medicine. Nevertheless, this technology is still relatively new so we would like to highlight the pearls and pitfalls for POCUS users to use this tool to its full potential and ensure optimal patient care and safety. (...)

The Lancet Respiratory Medicine (e-date: 08/04/2020)

Cheung JC-H, Lam KN.

[Lien original](#)

COVID-19, school closures, and child poverty: a social crisis in the making

While coronavirus disease 2019 (COVID-19) continues to spread across the globe, many countries have decided to close schools as part of a physical distancing policy to slow transmission and ease the burden on health systems. The [UN Educational, Scientific and Cultural Organization](#) estimates that 138 countries have closed schools nationwide, and several other countries have implemented regional or local closures.(...)

The Lancet Public Health (e-date: 08/04/2020)

Van Lancker W, Parolin Z

[Lien original](#)

High Contagiousness and Rapid Spread of Severe Acute Respiratory Syndrome Coronavirus 2

Severe acute respiratory syndrome coronavirus 2 is the causative agent of the 2019 novel coronavirus disease pandemic. Initial estimates of the early dynamics of the outbreak in Wuhan, China, suggested a doubling time of the number of infected persons of 6–7 days and a basic reproductive number (R_0) of 2.2–2.7. We collected extensive individual case reports across China and estimated key epidemiologic parameters, including the incubation period. We then designed 2 mathematical modeling approaches to infer the outbreak dynamics in Wuhan by using high-resolution domestic travel and infection data. Results show that the doubling time early in the epidemic in Wuhan was 2.3–3.3 days. Assuming a serial interval of 6–9 days, we calculated a median R_0 value of 5.7 (95% CI 3.8–8.9). We further show that active surveillance, contact tracing, quarantine, and early strong social distancing efforts are needed to stop transmission of the virus. (...)

Emerging Infectious Disease journal (e-date: 07/04/2020)

Steven S, Yen Ting L, Chonggang X, Ethan R-S, Nick H, Ruian K

[Lien original](#)

Between Scylla and Charybdis — Oncologic Decision Making in the Time of Covid-19

Doctor, should we activate the sepsis protocol?” my medical assistant asked with obvious concern. I triaged the patient in question. The metrics that had caused alarm at intake were tachycardia and tachypnea, but there was no fever or hypotension in this middle-aged woman. On exam, she was indeed breathing quickly and had a rapid, regular pulse, but there were clues beyond the vital signs as to the cause of her distress. Her eyes were as wide as her dilated pupils. Her skin was diaphoretic, and her feet tapped percussively on the tile floor. After some questioning, all evidence pointed to a hyperadrenergic response to extreme anxiety. (...)

New England Journal of Medicine (e-date: 07/04/2020)

Lewis MA.

[Lien original](#)

Age, Complexity, and Crisis — A Prescription for Progress in Pandemic

It's a sunny Sunday in San Francisco as I tackle overdue clinic notes and Covid-19 sweeps the planet. I am scheduled to speak in 10 other states over the coming weeks, and as a healthy, middle-aged physician from a region with growing numbers of infections, I'm as likely to be a vector as a victim. Over the next 48 hours, I or my hosts will cancel all my long-planned trips. Meanwhile, I obsessively check the news, trying to decide the safest

course of action for me, my family, my patients, and my fellow human beings around the globe. (...)

New England Journal of Medicine (e-date: 07/04/2020)

Aronson L

[Lien original](#)

Intensive care management of coronavirus disease 2019 (COVID-19): challenges and recommendations

As coronavirus disease 2019 (COVID-19) spreads across the world, the intensive care unit (ICU) community must prepare for the challenges associated with this pandemic.

Streamlining of workflows for rapid diagnosis and isolation, clinical management, and infection prevention will matter not only to patients with COVID-19, but also to health-care workers and other patients who are at risk from nosocomial transmission.

Management of acute respiratory failure and haemodynamics is key. (...)

The Lancet Respiratory Medicine (e-date: 07/04/2020)

Phua J, Weng L, Ling L, Egi M, Lim C-M, Divatia JV, et al

[Lien original](#)

Understanding pathways to death in patients with COVID-19

Since the first cases of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), were identified in China in December, 2019, we have witnessed increasing numbers of infections and associated deaths worldwide. Although the case fatality rate for SARS-CoV-2 infection (ie, the total number of deaths in patients positive for SARS-CoV-2 divided by the total number of people with a positive test) is not high, given the huge scale of the pandemic, the actual numbers of deaths are considerable. (...)

The Lancet Respiratory Medicine (e-date: 07/04/2020)

Vincent J-L, Taccone FS

[Lien original](#)

Global rheumatology in the time of COVID-19

At the 2019 American College of Rheumatology (ACR) annual meeting, we chaired a session entitled “Frontiers and Opportunities in Global Rheumatology Research”, which was a call to action for the rheumatology community to think globally about the burden of rheumatic and musculoskeletal diseases. The current outbreak of a novel coronavirus has caught the attention of the medical community and the world at large. A local outbreak of a respiratory illness was first reported to WHO on Dec 31, 2019, in Wuhan, China. (...)

The Lancet Rheumatology. (e-date: 07/04/2020)

Lewandowski LB, Hsieh E.

[Lien original](#)

Preventing COVID-19-induced pneumonia with anticytokine therapy

Immune-mediated disorders are a group of disabling conditions that affect millions of individuals worldwide.

These pathologies include, but are not limited to, rheumatoid arthritis, psoriasis, psoriatic arthritis, ankylosing spondylitis, and inflammatory bowel diseases. Each of these diseases has a unique epidemiology and pathophysiology, despite sharing several pathways of tissue damage, which rely on an excessive cytokine response. (...)

The Lancet Rheumatology (e-date: 07/04/2020)

Monteleone G, Sarzi-Puttini PC, Ardizzone S

[Lien original](#)

Preparing African anticancer centres in the COVID-19 outbreak

We congratulate Wenhua Liang and colleagues for their Comment laying out the strategic policies against cancer during the COVID-19 outbreak.

The disease is now spreading rapidly to and within Africa. Like other countries, Morocco had the opportunity to analyse early COVID-19 data and acknowledge that individual-scale policies such as isolation would not stop the pandemic. (...)

The Lancet Oncology (e-date: 07/04/2020)

Souadka A, Benkabbou A, Al Ahmadi B, Boutayeb S, Majbar MA

[Lien original](#)

Maintaining HIV care during the COVID-19 pandemic

Coronavirus disease 2019 (COVID-19) has spread rapidly around the world since the first reports from Wuhan in China in December, 2019, and the outbreak was characterised as a pandemic by WHO on March 12, 2020.

Approximately 37.9 million people living with HIV are at risk of infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes COVID-19. (...)

The Lancet HIV (e-date: 07/04/2020)

Jiang H, Zhou Y, Tang W

[Lien original](#)

Correction to Lancet Infect Dis 2020; published online March 30.

[https://doi.org/10.1016/S1473-3099\(20\)30257-7](https://doi.org/10.1016/S1473-3099(20)30257-7)

The Lancet Infectious Diseases (e-date: 07/04/2020)

[Lien original](#)

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Sommaire

PREPRINTS

COVID-19 Vaccine Candidates: Prediction and Validation of 174 SARS-CoV-2 Epitopes

The recent outbreak of SARS-CoV-2 (2019-nCoV) virus has highlighted the need for fast and efficacious vaccine development. Stimulation of a proper immune response that leads to protection is highly dependent on presentation of epitopes to circulating T-cells via the HLA complex. SARS-CoV-2 is a large RNA virus and testing of all overlapping peptides in vitro to deconvolute an immune response is not feasible. Therefore HLA-binding prediction tools are often used to narrow down the number of peptides to test. (...)

bioRxiv (e-date: 06/04/2020)

Prachar M, Justesen S, Steen-Jensen DB, Thorgrimsen SP, Jurgons E, Winther O, et al. [Lien original](#)

Atazanavir inhibits SARS-CoV-2 replication and pro-inflammatory cytokine production

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the etiological agent of the ongoing pandemic of 2019 CoV disease (COVID-19), which is leading to 10-times more deaths than other public health emergencies of international concern provoked by highly pathogenic CoV from the years 2002 and 2012. Besides social isolation, identification of the suitable clinically approved drugs to be repurposed could lead to short-term action to reduce mortality. The SARS-CoV-2 major protease (Mpro) is validated target over highly pathogenic CoV. HIV protease inhibitors, like lopinavir (LPV), also inhibit the 2002 SARS-CoV Mpro. (...)

bioRxiv (e-date: 07/04/2020)

Fintelman-Rodrigues N, Sacramento CQ, Ribeiro Lima C, Souza da Silva F, Ferreira A, Mattos M, et al.

[Lien original](#)

The potential genetic network of human brain SARS-CoV-2 infection

The literature reports several symptoms of SARS-CoV-2 in humans such as fever, cough, fatigue, pneumonia, and headache. Furthermore, patients infected with similar strains (SARS-CoV and MERS-CoV) suffered testis, liver, or thyroid damage. Angiotensin-converting enzyme 2 (ACE2) serves as an entry point into cells for some strains of coronavirus (SARS-CoV, MERS-CoV, SARS-CoV-2). Our hypothesis was that as ACE2 is essential to the SARS-CoV-2 virus invasion, then brain regions where ACE2 is the most expressed are more likely to be disturbed by the infection. (...)

bioRxiv (e-date: 07/04/2020)

Lapina C, Rodic M, Peschanski D, MESMOUDI S

[Lien original](#)

DIRECT RT-qPCR DETECTION OF SARS-CoV-2 RNA FROM PATIENT NASOPHARYNGEAL SWABS WITHOUT AN RNA EXTRACTION STEP

The ongoing COVID-19 pandemic has caused an unprecedented need for rapid diagnostic testing. The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) recommend a standard assay that includes an RNA extraction step from a nasopharyngeal (NP) swab followed by reverse transcription-quantitative polymerase chain reaction (RT-qPCR) to detect the purified SARS-CoV-2 RNA. The current global shortage of RNA extraction kits has caused a severe bottleneck to COVID-19 testing. We hypothesized that SARS-CoV-2 RNA could be detected from NP samples via a direct RT-qPCR assay that omits the RNA extraction step altogether, and tested this hypothesis on a series of blinded clinical samples. (...)

bioRxiv (e-date: 07/04/2020)

Bruce EA, Huang M-L, Perchetti GA, Tighe S, Hoffman JJ, Laaguiby P, et al.

[Lien original](#)

A protocol for adding knowledge to Wikidata, a case report

Pandemics, even more than other scientific questions, require swift integration of knowledge and identifiers. In a setting where there is a large number of loosely connected projects and initiatives, we need a common ground, also known as a "commons".

Wikidata, a public knowledge graph aligned with Wikipedia, is such a commons, but Wikidata may not always have the right schema for the urgent questions. In this paper, we address this problem by showing how a data schema required for the integration can be modelled with entity schemas represented by shape expressions. (...)

bioRxiv (e-date: 07/04/2020)

Waagmeester A, Willighagen EL, Su AI, Kutmon M, Gayo JEL, Fernández-Álvarez D, et al

[Lien original](#)

Translational adaptation of human viruses to the tissues they infect

Viruses need to hijack the translational machinery of the host cell for a productive infection to happen. However, given the dynamic landscape of tRNA pools among tissues, it is unclear whether different viruses infecting different tissues have adapted their codon usage toward their tropism. Here, we collect the coding sequences of over 500 human-infecting viruses and determine that tropism explains changes in codon usage. Using an in silico model of translational efficiency, we validate the correspondence of the viral codon usage with the translational machinery of their tropism. (...)

bioRxiv (e-date: 07/04/2020)

Hernandez-Alias X, Schaefer M, Serrano L.

[Lien original](#)

PriSeT: Efficient De Novo Primer Discovery

Motivation: DNA metabarcoding is a commonly applied technique used to infer the species composition of environmental samples. These samples can comprise hundreds of organisms that can be closely or very distantly related in the taxonomic tree of life. DNA metabarcoding combines polymerase chain reaction (PCR) and next-generation sequencing (NGS), whereby a short, homologous sequence of DNA is amplified and sequenced from all members of the community. Sequences are then taxonomically identified based on their match to a reference database. Ideally, each species of interest would have a unique DNA barcode. (...)

bioRxiv (e-date: 07/04/2020)

Hoffmann M, Monaghan MT, Reinert K

[Lien original](#)

The phenotypic changes of $\gamma\delta$ T cells in COVID-19 patients

A novel pneumonia-associated respiratory syndrome named coronavirus disease-2019 (COVID-19), which caused by SARS-CoV-2 and broken in Wuhan, China in the end of 2019. Unfortunately, there is no specific antiviral agent or vaccine available to treat SARS-CoV-2 infections. (...)

medRxiv (e-date: 07/04/2020)

Lei L, Qian H, Yang X, Zhou X, Zhang X, Zhang D, et al

[Lien original](#)

Timing of antiviral treatment initiation is critical to reduce SARS-Cov-2 viral load

We modeled the viral dynamics of 13 untreated patients infected with SARS-CoV-2 to infer viral growth parameters and predict the effects of antiviral treatments. In order to reduce peak viral load by more than 2 logs, drug efficacy needs to be greater than 80% if treatment is administered after symptom onset; an efficacy of 50% could be sufficient if treatment is initiated before symptom onset. (...)

medRxiv (e-date: 07/04/2020)

Gonçalves A, Bertrand J, Ke R, Comets E, de Lamballerie X, Malvy D, et al

[Lien original](#)

Sudden hyposmia as a prevalent symptom of COVID-19 infection.

Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) has recently caused a pandemic that has involved Italy as the second worldwide nation in terms of infected patients and deaths. The clinical manifestation of Covid-19 ranges from asymptomatic carrier status to severe pneumonia. Asymptomatic individuals in Covid-19 are those who are carriers of the virus but do not show clinical symptoms and are able to transmit the disease in the same degree as symptomatic carriers. (...)

medRxiv (e-date: 07/04/2020)

Marchese-Ragona R, Ottaviano G, Nicolai P, Vianello A, Carecchio M

[Lien original](#)

Clinical and epidemiological characteristics of Coronavirus Disease 2019 (COVID-19) patients

Background: Numerous groups have reported the clinical and epidemiological characteristics of Coronavirus Disease 2019 (COVID-19) cases; however, the data remained inconsistent. This paper aimed to pool the available data to provide a more complete picture of the characteristics of COVID-19 patients. Methods: A systematic review and pooled analysis was performed. Eligible studies were identified from database and hand searches up to March 2, 2020. (...)

medRxiv (e-date: 07/04/2020)

Tan SC

[Lien original](#)

Management of rheumatic diseases in the times of COVID-19 pandemic- perspectives of rheumatology practitioners from India

Background. The Coronavirus disease 19 (COVID-19) pandemic has led to widespread concerns about the risk of infection in patients with rheumatic diseases (RD) receiving disease modifying ant-rheumatic drugs (DMARDs) and other immunosuppressants (IS). Methods. A SurveyMonkey based electronic survey was conducted amongst members of the Indian Rheumatology Association to understand the need for changes in prevailing practices. (...)

medRxiv (e-date: 07/04/2020)

Gupta L, Misra D, Agarwal V, Balan S, Agarwal V

[Lien original](#)

Can N95 respirators be reused after disinfection? And for how many times?

The Coronavirus Disease 2019 (COVID-19) pandemic has led to a major shortage of N95 respirators, which protect healthcare professionals and the public who may come into contact with the virus. It is necessary to determine the conditions that would allow the safe reuse respirators and personal protection in this crisis. We found that heating (<100 °C) under various humidities (up to 100% RH at 75 °C) and ultraviolet (UV) irradiation were the most promising candidates for mask reuse in the modern hospital infrastructure (up to 20 cycles), when tested on a fabric with particle filtration efficiency $\geq 95\%$. (...)

medRxiv (e-date: 07/04/2020)

Liao L, Xiao W, Zhao M, Yu X, Wang H, Wang Q, et al

[Lien original](#)

Corona Epidemic in Indian context: Predictive Mathematical Modelling

The novel Coronavirus pathogen Covid-19 is a cause of concern across the world as the human-to-human infection caused by it is spreading at a fast pace. The virus that first manifested in Wuhan, China has travelled across continents. The increase in number of deaths in Italy, Iran, USA, and other countries has alarmed both the developed and developing countries. (...)

medRxiv (e-date: 07/04/2020)

Bhola J, Revathi Venkateswaran V, Koul M

[Lien original](#)

Loss of smell and taste in combination with other symptoms is a strong predictor of COVID-19 infection

Importance: A strategy for preventing further spread of the ongoing COVID-19 epidemic is to detect infections and isolate infected individuals without the need of extensive bio-specimen testing. Objectives: Here we investigate the prevalence of loss of smell and taste among COVID-19 diagnosed individuals and we identify the combination of symptoms, besides loss of smell and taste, most likely to correspond to a positive COVID-19 diagnosis in non-severe cases. (...)

medRxiv (e-date: 07/04/2020)

Menni C, Valdes A, Freydin MB, Ganesh S, El-Sayed Moustafa J, Visconti A, et al

[Lien original](#)

A globally available COVID-19 - Template for clinical imaging studies

Background The pandemic spread of COVID-19 has caused worldwide implications on societies and economies. Chest computed tomography (CT) has been found to support both, current diagnostic and disease monitoring. A joint approach to collect, analyze and share clinical and imaging information about COVID-19 in the highest quality possible is

urgently needed. Methods An evidence-based reporting template was developed for assessing COVID-19 pneumonia using an FDA-approved medical software. (...)

medRxiv (e-date: 07/04/2020)

Salg GA, Ganten MK, Baumhauer M, Heussel CP, Kleesiek J

[Lien original](#)

Dynamics of COVID-19 epidemics: SEIR models underestimate peak infection rates and overestimate epidemic duration

Compartment models of infectious diseases, such as SEIR, are being used extensively to model the COVID-19 epidemic. Transitions between compartments are modelled either as instantaneous rates in differential equations, or as transition probabilities in discrete time difference or matrix equations. These models give accurate estimates of the position of equilibrium points, when the rate at which individuals enter each stage is equal to the rate at which they exit from it. (...)

medRxiv (e-date: 07/04/2020)

Grant A

[Lien original](#)

Longitudinal analysis of laboratory findings during the process of recovery for patients with COVID-19

Objective To explore longitudinal change patterns of key laboratory tests in patients with COVID-19, and to identify independent prognostic factors by examining the associations between laboratory findings and outcomes of patients. Methods The multicenter study prospectively included 59 patients with COVID-19 treated at Jilin province from January 21, 2020 to May 5, 2020. Laboratory tests were included haematological, biochemical, and immunological tests. Results Laboratory findings, the characteristics of epidemiological and demographic data were extracted from electronic medical records. (...)

medRxiv (e-date: 07/04/2020)

Tian S, Zhu X, Sun X, Wang J, Zhou Q, Wang C, et al

[Lien original](#)

Portable and accurate diagnostics for COVID-19: Combined use of the miniPCR thermocycler and a well-plate reader for SARS-Co2 virus detection

The COVID-19 pandemic has crudely demonstrated the value of massive and rapid diagnostics. By the first week of April, more than 900,000 positive cases of COVID-19 have been reported worldwide, although this number could be greatly underestimated. In the case of an epidemic emergency, the first line of response should be based on commercially available and validated resources. (...)

medRxiv (e-date: 07/04/2020)

Gonzalez-Gonzalez E, Trujillo-de Santiago G, Lara-Mayorga IM, Martinez-Chapa SO,

Alvarez MM

[Lien original](#)

Proteomic and Metabolomic Characterization of COVID-19 Patient Sera

Severe COVID-19 patients account for most of the mortality of this disease. Early detection and effective treatment of severe patients remain major challenges. Here, we performed proteomic and metabolomic profiling of sera from 46 COVID-19 and 53 control individuals. We then trained a machine learning model using proteomic and metabolomic measurements from a training cohort of 18 non-severe and 13 severe patients. (...)

medRxiv (e-date: 07/04/2020)

Shen B, Yi X, Sun Y, Bi X, Du J, Zhang C, et al

[Lien original](#)

Explaining the Bomb-Like Dynamics of COVID-19 with Modeling and the Implications for Policy

Using a Bayesian approach to epidemiological compartmental modeling, we demonstrate the bomb-like behavior of exponential growth in COVID-19 cases can be explained by transmission of asymptomatic and mild cases that are typically unreported at the beginning of pandemic events due to lower prevalence of testing. (...)

medRxiv (e-date: 07/04/2020)

Lin G, Strauss AT, Pinz M, Martinez DA, Tseng KK, Schueller E, et al

[Lien original](#)

Analysis and Applications of Non-Adaptive and Adaptive Group Testing Methods for COVID-19

Abstract Testing strategies for Covid-19 to maximize number of people tested is urgently needed. Recently, it has been demonstrated that RT-PCR has the sensitivity to detect one positive case in a mixed sample 32 cases [9]. In this paper we propose non-adaptive and adaptive group testing strategies based on generalized binary splitting (GBS) [2] where we restrict the group test to the largest group that can be used. The method starts by choosing a group from the population to be tested, performing a test on the combined sample from the entire group and progressively splitting the group further into subgroups. (...)

medRxiv (e-date: 07/04/2020)

Mentus C, Romeo M, DiPaola C

[Lien original](#)

Face mask use in the general population and optimal resource allocation during the COVID-19 pandemic

The ongoing novel coronavirus disease (COVID-19) pandemic has rapidly spread in early 2020, causing tens of thousands of deaths, over a million cases and widespread socioeconomic disruption. With no vaccine available and numerous national healthcare systems reaching or exceeding capacity, interventions to limit transmission are urgently needed. (...)

medRxiv (e-date: 07/04/2020)

Worby CJ, Chang H-H

[Lien original](#)

COVID-19 pandemic: Impact of lockdown, contact and non-contact transmissions on infection dynamics

COVID-19 coronavirus pandemic has virtually locked down the entire world of human population, and through its rapid and unstoppable spread COVID-19 has essentially compartmentalised the population merely into susceptible, exposed, infected and recovered classes. Adapting the classical epidemic modelling framework, two distinct routes of COVID-19 transmission are incorporated into a model: (a) direct person-to-person contact transmission, and (b) indirect airborne and fomites-driven transmission. (...)

medRxiv (e-date: 07/04/2020)

Roy S

[Lien original](#)

Plasma Metabolomic and Lipidomic Alterations Associated with COVID-19

The pandemic of the coronavirus disease 2019 (COVID-19) has become a global public health crisis. COVID-19 is marked by its rapid progression from mild to severe conditions, particularly in the absence of adequate medical care. However, the physiological changes associated with COVID-19 are barely understood. In this study, we

performed untargeted metabolomic and lipidomic analyses of plasma from a cohort of COVID-19 patients who had experienced different symptoms. (...)

medRxiv (e-date: 07/04/2020)

Wu D, Shu T, Yang X, Song J-X, Zhang M, Wen L, et al

[Lien original](#)

An 'Infodemic': Leveraging High-Volume Twitter Data to Understand Public Sentiment for the COVID-19 Outbreak

Background: Twitter has been used to track trends and disseminate health information during viral epidemics. On January 21, 2020, the CDC activated its Emergency Operations Center and the WHO released its first situation report about coronavirus disease 2019 (COVID-19), sparking significant media attention. How Twitter content and sentiment has evolved in the early stages of any outbreak, including the COVID-19 epidemic, has not been described. Objective: To quantify and understand early changes in Twitter activity, content, and sentiment about the COVID-19 epidemic. (...)

medRxiv (e-date: 07/04/2020)

Medford RJ, Saleh SN, Sumarsono A, Perl TM, Lehmann CU

[Lien original](#)

Feasibility of Controlling COVID-19 Outbreaks in the UK by Rolling Interventions

Background: Recent outbreak of a novel coronavirus disease 2019 (COVID-19) in China has led a rapid global spread around the world. For controlling COVID-19 outbreaks, many countries have implemented two non-pharmaceutical interventions: suppression like immediate lockdowns in cities at epicentre of outbreak; or mitigation that slows down but not stopping epidemic for reducing peak healthcare demand. (...)

medRxiv (e-date: 07/04/2020)

Yang P, Qi J, Zhang S, Bi G, Wang X, Yang Y, et al

[Lien original](#)

Generic probabilistic modelling and non-homogeneity issues for the UK epidemic of COVID-19

Coronavirus COVID-19 spreads through the population mostly based on social contact. To gauge the potential for widespread contagion, to cope with associated uncertainty and to inform its mitigation, more accurate and robust modelling is centrally important for policy making. We provide a flexible modelling approach that increases the accuracy with which insights can be made. We use this to analyse different scenarios relevant to the COVID-19 situation in the UK. We present a stochastic model that captures the inherently probabilistic nature of contagion between population members. (...)

medRxiv (e-date: 07/04/2020)

Zhigljavsky A, Noonan J

[Lien original](#)

Increased Detection coupled with Social Distancing and Health Capacity Planning Reduce the Burden of COVID-19 Cases and Fatalities: A Proof of Concept Study using a Stochastic Computational Simulation Model

Objective: In absence of any vaccine, the Corona Virus Disease 2019 (COVID-19) pandemic is being contained through a non-pharmaceutical measure termed Social Distancing (SD). However, whether SD alone is enough to flatten the epidemic curve is debatable. Using a Stochastic Computational Simulation Model, we investigated the impact of increasing SD, hospital beds and COVID-19 detection rates in preventing COVID-19 cases and fatalities. (...)

medRxiv (e-date: 07/04/2020)

Ghosh P, Basheer S, Paul S, Chakrabarti P, Sarkar J
[Lien original](#)

Exposure to air pollution and COVID-19 mortality in the United States

Background: United States government scientists estimate that COVID-19 may kill between 100,000 and 240,000 Americans. The majority of the pre-existing conditions that increase the risk of death for COVID-19 are the same diseases that are affected by long-term exposure to air pollution. We investigate whether long-term average exposure to fine particulate matter (PM_{2.5}) increases the risk of COVID-19 deaths in the United States. (...)
medRxiv (e-date: 07/04/2020)

Wu X, Nethery RC, Sabath BM, Braun D, Dominici F
[Lien original](#)

Predict the next moves of COVID-19: reveal the temperate and tropical countries scenario

The spread of COVID-19 engulfs almost all the countries and territories of the planet, and infections and fatality are increasing rapidly. The first epi-center of its' massive spread was in Wuhan, Hubei province, China having a temperate weather, but the spread has got an unprecedented momentum in European temperate countries mainly in Italy and Spain (as of March 30, 2020). (...)

medRxiv (e-date: 07/04/2020)

Hasan NA, Haque MM
[Lien original](#)

Validation of reported risk factors for disease classification and prognosis in COVID-19: a descriptive and retrospective study

Risk indicators viral load (ORF1ab Ct), lymphocyte percentage (LYM%), C-reactive protein (CRP), interleukin-6 (IL-6), procalcitonin (PCT) and lactic acid (LA) in COVID-19 patients have been proposed in recent studies. However, the predictive effects of those indicators on disease classification and prognosis remains largely unknown. We dynamically measured those reported indicators in 132 cases of COVID-19 patients including the moderate-cured (moderated and cured), severe-cured (severe and cured) and critically ill (died). (...)

medRxiv (e-date: 07/04/2020)

Tan L, Kang X, Ji X, Wang Q, li Y, Wang Q, et al
[Lien original](#)

Little Risk of the COVID-19 Resurgence on Students in China (outside Hubei) Caused by School Reopening

Objective: School reopening has not yet started in China where the COVID-19 outbreak has reached ending stage, largely due to a great concern about COVID-19 infections on students. We attempted to quantitatively evaluate the risk of COVID-19 infections on students caused by school reopening. Study design: We collected the data of the numbers of teachers, population size and newly confirmed COVID-19 cases in the past 14 days in typical provinces/cities of China, and then analyzed the risk of COVID-19 infections in schools with respect to each province/city. (...)

medRxiv (e-date: 07/04/2020)

Long C, Zeng T, Fu X
[Lien original](#)

Community responses during early phase of the COVID-19 epidemic: a cross-sectional study

Community responses are important for outbreak management during the early phase when preventive interventions are the major options. Therefore, this study aims to examine the behavioral responses of the community during the early phase of the COVID-19 epidemic in the Razavi Khorasan Province of Iran. A cross-sectional online survey was proceeded after confirmed COVID-19 in Iran. (...)

medRxiv (e-date: 07/04/2020)

Pourhaji f, delshad mh, Pourhaji F, Ghanbarizadeh SR, Azhdari Zarmehri H, Bazrafshan E, et al.

[Lien original](#)

Association of COVID-19 Infections in San Francisco in Early March 2020 with Travel to New York and Europe

Real-time dissemination of epidemiological survey data from positive COVID-19 cases is critical to support efforts to contain or reduce spread of viral infection in the community. Here we detected a significant association between domestic travel or travel to Europe and the identification of new cases in San Francisco, California, USA. These findings suggest that domestic and European travelers may need to be prioritized for evaluation of acute infection from COVID-19 in the setting of limited testing capacity.

medRxiv (e-date: 07/04/2020)

Gu W, Reyes K, Hsu E, Miller S, Chiu CY

[Lien original](#)

Efficient sample pooling strategies for COVID-19 data gathering

Sample pooling of CoViD-19 PCR tests has been recently proposed as a low cost alternative to individual tests. We show that sample pooling is efficient as long as the fraction of the population infected is relatively small. Fisher information theory suggests a rule of thumb that for low infection rates p , pooling $2/p$ samples is close to optimal. We present a simple strategy for survey design when not even a ballpark estimate of the infection rate is available.

medRxiv (e-date: 07/04/2020)

Szapudi I

[Lien original](#)

On predicting the novel COVID-19 human infections by using Infectious Disease modelling method in the Indian State of Tamil Nadu during 2020

Since the introduction of the novel Corona Virus (The COVID 19) to the Chinese city Wuhan in the Hubei province during the late December 2019, the effectiveness of the deadly disease, its human infection, spreading severity and the mortality rate of the infection has been an issue of debate. The outbreak of the virus along the time has become a massive threat to the global public health security and has been declared as a pandemic.(...)

medRxiv (e-date: 07/04/2020)

Ayubali AA, Satheesh SR

[Lien original](#)

Mandated Bacillus Calmette-Guérin (BCG) vaccination predicts flattened curves for the spread of COVID-19

Prior work suggests that BCG vaccination reduces the risk of different infectious diseases. BCG vaccination may thus serve as a protective factor against COVID-19. Here, we drew on day-by-day reports of both confirmed cases and deaths and analyzed growth curves in countries that mandate BCG policies versus countries that do not. Linear mixed models revealed that the presence of mandated BCG policies was associated with a significant flattening of the exponential increase in both confirmed cases and deaths during the first 30-day period of country-wise outbreaks. (...)

medRxiv. (e-date: 07/04/2020)

Berg MK, Yu Q, Salvador CE, Melani I, Kitayama S

[Lien original](#)

Mitigating COVID-19 outbreak via high testing capacity and strong transmission-intervention in the United States

Most models of the COVID-19 pandemic in the United States do not consider geographic variation, and their relevance to public policies is not straightforward. We developed a mathematical model that characterizes infections by state and incorporates inflows and outflows of interstate travelers. Modeling reveals that curbing interstate travel when the disease is already widespread will make little difference. (...)

medRxiv (e-date: 07/04/2020)

Chen S, Li Q, Gao S, Kang Y, Shi X

[Lien original](#)

Estimating the effect of physical distancing on the COVID-19 pandemic using an urban mobility index

Governments around the world are implementing population-wide physical distancing measures in an effort to control transmission of COVID-19, but metrics to evaluate their effectiveness are not readily available. We used a publicly available mobility index based on the relative frequency of trips planned in a popular transit application to evaluate the effect of physical distancing on infection growth rates and reproductive number in 34 states and countries. (...)

medRxiv (e-date: 07/04/2020)

Soucy J-PR, Sturrock SL, Berry I, Daneman N, MacFadden DR, Brown KA

[Lien original](#)

Adaptive cyclic exit strategies from lockdown to suppress COVID-19 and allow economic activity

Many countries have applied lockdown to suppress COVID-19, with devastating economic consequences. Here we propose exit strategies from lockdown that suppress the epidemic and provide sustainable, albeit reduced, economic activity. We use mathematical models to show that a cyclic schedule of 4-day work and 10-day lockdown, or similar variants that can be adapted in response to epidemiological observations, can in certain conditions suppress the epidemic while providing part-time employment. (...)

medRxiv (e-date: 07/04/2020)

Karin O, Bar-On YM, Milo T, Katzir I, Mayo A, Korem Y, et al

[Lien original](#)

Thoughts on Higher Medical Education Under Major Public Health Emergencies: Thinking Ahead After COVID-19 Outbreak

Objective: To explore the most suitable teaching and learning pattern in medical school during COVID-19 Outbreak. Design: This study is a case-control study. We had tried to apply a new blended teaching model based on 5G network that combined team-based learning (TBL) and online interaction to the students before the outbreak and then universities responded to the COVID-19 outbreak by closing campuses and shifting to other forms of distance learning. (...)

medRxiv (e-date: 07/04/2020)

Lin W, Chen Y, Shi S, Liang J, Huang H, Li L, et al.

[Lien original](#)

A Simulated Single Ventilator / Dual Patient Ventilation Strategy for Acute Respiratory Distress Syndrome During the COVID-19 Pandemic

The potential for acute shortages of ventilators at the peak of Covid-19 pandemic has raised the possibility of needing to support two patients from a single ventilator. To provide a system for understanding and prototyping designs we have developed a mathematical model of two patients supported by a mechanical ventilator. We propose a standard setup where we simulate the introduction of T-splitters to supply air to two patients and a modified setup where we introduce a variable resistance in each inhalation pathway and one-way valves in each exhalation pathway. (...)

medRxiv (e-date: 07/04/2020)

Solis-Lemus JA, Costar E, Doorly D, Kerrigan EC, Kennedy CH, Tait F, et al

[Lien original](#)

Comparison of transmissibility of coronavirus between symptomatic and asymptomatic patients: Reanalysis of the Ningbo Covid-19 data

We investigate the transmissibility of coronavirus for symptomatic and asymptomatic patients using the Ningbo Covid-19 data¹. Through more in-depth and comprehensive statistical analysis, we conclude that there is no difference in the transmission rates of coronavirus between the symptomatic and asymptomatic patients, which is consistent with the original findings in Chen et al.

medRxiv (e-date: 07/04/2020)

Yin G, Jin H

[Lien original](#)

N95 Mask Decontamination using Standard Hospital Sterilization Technologies

The response to the COVID19 epidemic is generating severe shortages of personal protective equipment around the world. In particular, the supply of N95 respirator masks has become severely depleted with supplies having to be rationed and health care workers having to use masks for prolonged periods in many countries. (...)

medRxiv (e-date: 08/04/2020)

Kumar A, Kasloff SB, Leung A, Cutts T, Strong JE, Hills K, et al

[Lien original](#)

The relationship of COVID-19 severity with cardiovascular disease and its traditional risk factors: A systematic review and meta-analysis

Background: Whether cardiovascular disease (CVD) and its traditional risk factors predict severe coronavirus disease 2019 (COVID-19) is uncertain, in part, because of potential confounding by age and sex. Methods: We performed a systematic review of studies that explored pre-existing CVD and its traditional risk factors as risk factors of severe COVID-19 (defined as death, acute respiratory distress syndrome, mechanical ventilation, or intensive care unit admission). (...)

medRxiv (e-date: 08/04/2020)

Matsushita K, Ding N, Kou M, Hu X, Chen M, Gao Y, et al.

[Lien original](#)

RNA genome conservation and secondary structure in SARS-CoV-2 and SARS-related viruses

As the COVID-19 outbreak spreads, there is a growing need for a compilation of conserved RNA genome regions in the SARS-CoV-2 virus along with their structural propensities to guide development of antivirals and diagnostics. Using sequence alignments spanning a range of betacoronaviruses, we rank genomic regions by RNA sequence conservation, identifying 79 regions of length at least 15 nucleotides as exactly conserved over SARS-related complete genome sequences available near the beginning of the COVID-19 outbreak.(...)

bioRxiv (e-date: 08/04/2020)
Rangan R, Zheludev IN, Das R
[Lien original](#)

Comparison of transmissibility of coronavirus between symptomatic and asymptomatic patients: Reanalysis of the Ningbo Covid-19 data

We investigate the transmissibility of coronavirus for symptomatic and asymptomatic patients using the Ningbo Covid-19 data. Through more in-depth and comprehensive statistical analysis, we conclude that there is no difference in the transmission rates of coronavirus between the symptomatic and asymptomatic patients, which is consistent with the original findings in Chen et al. (...)

medRxiv (e-date: 08/04/2020)
Yin G, Jin H
[Lien original](#)

Validation of reported risk factors for disease classification and prognosis in COVID-19: a descriptive and retrospective study

Risk indicators viral load (ORF1ab Ct), lymphocyte percentage (LYM%), C-reactive protein (CRP), interleukin-6 (IL-6), procalcitonin (PCT) and lactic acid (LA) in COVID-19 patients have been proposed in recent studies. However, the predictive effects of those indicators on disease classification and prognosis remains largely unknown.(...)

medRxiv (e-date: 08/04/2020)
Tan L, Kang X, Ji X, Wang Q, li Y, Wang Q, et al
[Lien original](#)

Co-detection of respiratory pathogens in patients hospitalized with Coronavirus viral disease-2019 pneumonia

medRxiv (e-date: 08/04/2020)
Blasco ML, Buesa J, Colomina J, Forner MJ, Galindo MJ, Navarro J, et al
[Lien original](#)

Social distancing to slow the U.S. COVID-19 epidemic: an interrupted time-series analysis

Background: Social distancing measures to address the U.S. COVID-19 epidemic may have significant health, social, and economic impacts. Objective: To estimate the mean change in state-level COVID-19 epidemic growth before versus after the implementation of statewide social distancing measures. Design: Interrupted time-series analysis. Setting: United States. Measurements: Our primary exposure was time in relation to implementation of the first statewide social distancing measure. (...)

medRxiv (e-date: 08/04/2020)
Siedner MJ, Harling G, Reynolds Z, Gilbert RF, Venkataramani A, Tsai AC.
[Lien original](#)

[Sommaire](#)

BLOG NEWS

Richard Lehman's covid-19 reviews—6 April 2020

The BMJ Opinion (e-date: 06/04/2020)
[Lien original](#)

[Sommaire](#)

AUTRE

Analyse article chloroquine

Société française de gériatrie et gérontologie (e-date: 07/04/2020)

[Lien original](#)

[Sommaire](#)