

Abstract

INTRODUCTION:

To review the present literature on upper respiratory tract sampling in COVID-19 and provide recommendations to improve healthcare practices and directions in future studies.

METHODS:

Twelve relevant manuscripts were sourced from a total of 7288 search results obtained using PubMed, Medline and Google Scholar. The search keywords used were COVID-19, nasopharyngeal, oropharyngeal, swabs, SARS and CoV2. Original manuscripts were obtained and analysed by all authors. The review included manuscripts which have not undergone rigorous peer-review process in view of the magnitude of the topic discussed.

RESULTS:

The viral load of SARS-CoV-2 RNA in the upper respiratory tract was significantly higher during the first week and peaked at 4-6 days after onset of symptoms, during which it can be potentially sampled. Nasopharyngeal swab has demonstrated higher viral load than oropharyngeal swab, where the difference in paired samples is best seen at 0-9 days after the onset of illness. Sensitivity of nasopharyngeal swab was higher than oropharyngeal swabs in COVID-19 patients. Patient self-collected throat washing has been shown to contain higher viral load than nasopharyngeal or oropharyngeal swab, with significantly higher sensitivity when compared with paired nasopharyngeal swab.

RECOMMENDATIONS:

Routine nasopharyngeal swab of suspected COVID-19 infection should take anatomy of the nasal cavity into consideration to increase patient comfort and diagnostic yield. Routine oropharyngeal swab should be replaced by throat washing which has demonstrated better diagnostic accuracy, and it is safe towards others.

PMID: 32342928

2. Malays J Pathol. 2020 Apr;42(1):13-21.

Diagnostic performance of COVID-19 serology assays.

[Zainol Rashid Z¹](#), [Othman SN](#), [Abdul Samat MN](#), [Ali UK](#), [Wong KK](#).

Author information:

1. Universiti Kebangsaan Malaysia Medical Centre, Faculty of Medicine, Department of Medical Microbiology & Immunology, 56000 Kuala Lumpur, Malaysia. ^{(10)(2e)} @ppukm.ukm.edu.my.

Abstract**INTRODUCTION:**

The World Health Organization (WHO) declared COVID-19 outbreak as a world pandemic on 12th March 2020. Diagnosis of suspected cases is confirmed by nucleic acid assays with real-time PCR, using respiratory samples. Serology tests are comparatively easier to perform, but their utility may be limited by the performance and the fact that antibodies appear later during the disease course. We aimed to describe the performance data on serological assays for COVID-19.

MATERIALS AND METHODS:

A review of multiple reports and kit inserts on the diagnostic performance of rapid tests from various manufacturers that are commercially available were performed. Only preliminary data are available currently.

RESULTS:

From a total of nine rapid detection test (RDT) kits, three kits offer total antibody detection, while six kits offer combination SARS-CoV-2 IgM and IgG detection in two separate test lines. All kits are based on colloidal gold-labeled immunochromatography principle and one-step method with results obtained within 15 minutes, using whole blood, serum or plasma samples. The sensitivity for both IgM and IgG tests ranges between 72.7% and 100%, while specificity ranges between 98.7% to 100%. Two immunochromatography using nasopharyngeal or throat swab for detection of COVID-19 specific antigen are also reviewed.

CONCLUSIONS:

There is much to determine regarding the value of serological testing in COVID-19 diagnosis and monitoring. More comprehensive evaluations of their performance are rapidly underway. The use of serology methods requires appropriate interpretations of the results and understanding the strengths and limitations of such tests.

PMID: 32342927

3. Malays J Pathol. 2020 Apr;42(1):3-11.

Properties of Coronavirus and SARS-CoV-2.

Malik YA¹.

Author information:

1. University Malaya, Faculty of Medicine, Department of Medical Microbiology, Lembah Pantai, 59100, Kuala Lumpur, Malaysia. (10)(2e) @gmail.com.

Abstract

were identified beginning with the discovery of SARS-CoV in 2002. With the recent detection of SARS-CoV-2, there are now seven human coronaviruses. Those that cause mild diseases are the 229E, OC43, NL63 and HKU1, and the pathogenic species are SARS-CoV, MERS-CoV and SARS-CoV-2. Coronaviruses (order Nidovirales, family Coronaviridae, and subfamily Orthocoronavirinae) are spherical (125nm diameter), and enveloped with club-shaped spikes on the surface giving the appearance of a solar corona. Within the helically symmetrical nucleocapsid is the large positive sense, single stranded RNA. Of the four coronavirus genera (α , β , γ , δ), human coronaviruses (HCoVs) are classified under α -CoV (HCoV-229E and NL63) and β -CoV (MERS-CoV, SARS-CoV, HCoV-OC43 and HCoV-HKU1). SARS-CoV-2 is a β -CoV and shows fairly close relatedness with two bat-derived CoV-like coronaviruses, bat-SL-CoVZC45 and bat-SL-CoVZXC21. Even so, its genome is similar to that of the typical CoVs. SARS-CoV and MERS-CoV originated in bats, and it appears to be so for SARS-CoV-2 as well. The possibility of an intermediate host facilitating the emergence of the virus in humans has already been shown with civet cats acting as intermediate hosts for SARS-CoVs, and dromedary camels for MERS-CoV. Human-to-human transmission is primarily achieved through close contact of respiratory droplets, direct contact with the infected individuals, or by contact with contaminated objects and surfaces. The coronaviral genome contains four major structural proteins: the spike (S), membrane (M), envelope (E) and the nucleocapsid (N) protein, all of which are encoded within the 3' end of the genome. The S protein mediates attachment of the virus to the host cell surface receptors resulting in fusion and subsequent viral entry. The M protein is the most abundant protein and defines the shape of the viral envelope. The E protein is the smallest of the major structural proteins and participates in viral assembly and budding. The N protein is the only one that binds to the RNA genome and is also involved in viral assembly and budding. Replication of coronaviruses begin with attachment and entry. Attachment of the virus to the host cell is initiated by interactions between the S protein and its specific receptor. Following receptor binding, the virus enters host cell cytosol via cleavage of S protein by a protease enzyme, followed by fusion of the viral and cellular membranes. The next step is the translation of the replicase gene from the virion genomic RNA and then translation and assembly of the viral replicase complexes. Following replication and subgenomic RNA synthesis, encapsidation occurs resulting in the formation of the mature virus. Following assembly, virions are transported to the cell surface in vesicles and released by exocytosis.

PMID: 32342927

4. Malays J Pathol. 2020 Apr;42(1):1.

Challenges of Covid-19 testing.

[Tan GC¹](#), [Cheong SK](#).

Author information:

1. Universiti Kebangsaan Malaysia, Faculty of Medicine, Department of Pathology, Kuala Lumpur, Malaysia.

[@ppukm.ukm.edu.my](#).

Abstract

No abstract available.

PMID: 32342925

5. Lupus Sci Med. 2020 Apr 3;7(1):e000396. doi: 10.1136/lupus-2020-000396. eCollection 2020.

Thoughts on COVID-19 and autoimmune diseases.

[Askanase AD¹](#), [Khalili L¹](#), [Buyon JP²](#).

Author information:

1. Department of Rheumatology, Columbia University Medical Center, New York, New York, USA.

2. Department of Rheumatology, NYU Langone Health, New York, New York, USA.

Abstract

Over the 2 months since coronavirus first appeared in China, cases have emerged on every continent, and it is clear that patients with autoimmune diseases might also be affected. Coronavirus disease 2019 (COVID-19) is a highly contagious viral illness with a mortality rate approaching 2%. Here we discuss the challenges that patients with autoimmune diseases might face and the information on using immunomodulatory therapies like chloroquine, tocilizumab and baricitinib to quench the cytokine storm in patients with very severe COVID-19 pneumonia.

© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions.

Published by BMJ.

PMCID: PMC7174058

PMID: 32341791

[Similar articles](#)

Conflict of interest statement

Competing interests: None declared.

6. Fam Med Community Health. 2020 Apr 9;8(2):e000361corr1. doi: 10.1136/fmch-2020-000361corr1. eCollection 2020.

Correction: Contributions and challenges of general practitioners in China fighting against the novel coronavirus crisis.

[No authors listed]

Erratum for

- [Contributions and challenges of general practitioners in China fighting against the novel coronavirus crisis](#). [Fam Med Community Health. 2020]

Abstract

[This corrects the article DOI: 10.1136/fmch-2020-000361.].

© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

PMCID: PMC7174024

PMID: 32341774

[Similar articles](#)

7.Signal Transduct Target Ther. 2020 Apr 28;5(1):57. doi: 10.1038/s41392-020-0158-2.

[A retrospective cohort study of methylprednisolone therapy in severe patients with COVID-19 pneumonia.](#)

[Wang Y¹](#), [Jiang W²](#), [He Q²](#), [Wang C³](#), [Wang B⁴](#), [Zhou P⁵](#), [Dong N⁶](#), [Tong Q⁷](#).

Author information:

1. Department of Cardiovascular Surgery, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China.
2. Department of Gastroenterology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China.
3. Department of Rheumatology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China.
4. Department of Infectious Diseases, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China.
5. Department of Hand Surgery, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China.
6. Department of Cardiovascular Surgery, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China. ^{(10)(2e)} [@gmail.com](#).
7. Department of Infectious Diseases, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 43000, China. ^{(10)(2e)} [@hust.edu.cn](#).

PMID: 32341331

[Similar articles](#)

8.ASAIO J. 2020 May;66(5):471. doi: 10.1097/MAT.0000000000001174.

[COVID-19 Update.](#)

[Slaughter MS¹](#).

Author information:

1. Department Cardiovascular and Thoracic Surgery, University of Louisville, Louisville, KY.

PMID: 32341268

[Similar articles](#)

9. WHO South East Asia J Public Health. 2020 Apr;9(1):1-4. doi: 10.4103/2224-3151.282988.

Quo vadis after COVID-19: a new path for global emergency preparedness?

[Khetrapal Singh P¹](#), [Ofrin RH²](#).

Author information:

1. WHO Regional Director for South-East Asia, New Delhi, India.
2. Regional Emergency Director, WHO Health Emergencies Programme WHO Regional Office for South-East Asia, New Delhi, India.

PMID: 32341214

[Similar articles](#)

Conflict of interest statement

None

10. Fam Med Community Health. 2020 Apr;8(2). pii: e000400. doi: 10.1136/fmch-2020-000400.

Suspected cases of COVID-19: study protocol for reporting characteristics and the outcomes.

[Hamed E¹](#), [Abd Elhamid M²](#), [Alemrayat B²](#).

Author information:

1. Qatar University Health Centre, Primary Health Care Corporation, Doha, Qatar (10)(2e) [@gmail.com](#).
2. Qatar University Health Centre, Primary Health Care Corporation, Doha, Qatar.

PMID: 32341172

[Similar articles](#)

Conflict of interest statement

Competing interests: Kindly note that we added BA as a coauthor in your study following the review and approval of all authors.

11. BMJ. 2020 Apr 27;369:m1664. doi: 10.1136/bmj.m1664.

Covid-19: Leading statistician slams UK's reporting of swab tests as "travesty of science".

[Wise J¹](#).

Author information:

1. London.

PMID: 32341080

[Similar articles](#)

12.BMJ. 2020 Apr 27;369:m1649. doi: 10.1136/bmj.m1649.

Mourning our dead in the covid-19 pandemic.

[O'Mahony S](#)¹.

Author information:

1. Centre for the Humanities and Health, King's College London, UK.

PMID: 32341049

[Similar articles](#)

Conflict of interest statement

Competing interests: None declared

13.BMJ. 2020 Apr 27;369:m1622. doi: 10.1136/bmj.m1622.

Doctors' deaths from covid-19 should be reported to the coroner.

[Agius RM](#)¹.

Author information:

1. University of Manchester, Manchester M13 9PL, UK.

PMID: 32341008

[Similar articles](#)

Conflict of interest statement

Competing interests: None declared.

14.BMJ. 2020 Apr 27;369:m1557. doi: 10.1136/bmj.m1557.

Mitigating the wider health effects of covid-19 pandemic response.

[Douglas M](#)^{1,2}, [Katikireddi SV](#)^{2,3}, [Taulbut M](#)², [McKee M](#)⁴, [McCartney G](#)².

Author information:

1. Usher Institute, University of Edinburgh, Edinburgh, UK.
2. Public Health Scotland, Glasgow, UK.
3. MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK.
4. London School of Hygiene and Tropical Medicine, London, UK.

PMID: 32341002

[Similar articles](#)

Conflict of interest statement

Competing interests: We have read and understood BMJ policy on declaration of interests and have no relevant interests to declare. Provenance and peer review: Not commissioned; externally peer reviewed.

15. BMJ. 2020 Apr 27;369:m1632. doi: 10.1136/bmj.m1632.

What the Diamond Princess taught the world about covid-19.

[Baraniuk C](#)¹.

Author information:

1. Belfast.

PMID: 32341001

[Similar articles](#)

Conflict of interest statement

Competing interests: I have read and understood BMJ policy on declaration of interests and have no relevant interests to declare.

16. BMJ. 2020 Apr 27;369:m1679. doi: 10.1136/bmj.m1679.

Covid-19: What do we know so far about a vaccine?

[Mahase E](#)¹.

Author information:

1. The BMJ.

PMID: 32340998

[Similar articles](#)

17. BMJ. 2020 Apr 27;369:m1575. doi: 10.1136/bmj.m1575.

Global regulatory agility during covid-19 and other health emergencies.

[Mak TK](#)^{1,2,3}, [Lim JC](#)^{4,2}, [Thanaphollert P](#)⁵, [Mahlangu GN](#)⁶, [Cooke E](#)⁷, [Lumpkin MM](#)⁸.

Author information:

1. Centre of Regulatory Excellence, Duke-NUS Medical School, Singapore.
2. SingHealth Duke-NUS Global Health Institute, Singapore.
3. Vaccine and Infectious Disease Organization-International Vaccine Centre, University of Saskatchewan, Canada.
4. Centre of Regulatory Excellence, Duke-NUS Medical School, Singapore ^{(10)(2e)} @duke-nus.edu.sg.
5. Food and Drug Administration Thailand, Bangkok, Thailand.
6. Medicines Control Authority of Zimbabwe, Harare, Zimbabwe.
7. Access to Medicines and Health Products Division, World Health Organization, Geneva, Switzerland.
8. Bill & Melinda Gates Foundation, Seattle, USA.

PMID: 32340997

[Similar articles](#)

Conflict of interest statement

Competing interests: The BMJ has judged that there are no disqualifying financial ties to commercial companies. The authors declare no other interests. The BMJ policy on financial interests is here:

www.bmj.com/sites/default/files/attachments/resources/2016/03/16-current-bmj-education-coi-form.pdf.

18. BMJ. 2020 Apr 27;369:m1633. doi: 10.1136/bmj.m1633.

Managing patients with rheumatic conditions during the covid-19 pandemic.

[Caporali R](#)¹, [Favalli EG](#)¹.

Author information:

1. Reumatologia Clinica, ASST PINI-CTO, 20122 Milan, Italy.

PMID: 32340996

[Similar articles](#)

Conflict of interest statement

Competing interests: None declared.

19. BMJ. 2020 Apr 27;369:m1630. doi: 10.1136/bmj.m1630.

Covid-19: protecting patients in hospital for neurorehabilitation and their therapists.

[Mamo J](#)¹, [Feroz B](#)¹, [Mahmood S](#)¹.

Author information:

1. Department of Neurorehabilitation, Royal Berkshire Hospital, Reading RG1 5AN, UK.

PMID: 32340995

[Similar articles](#)

Conflict of interest statement

Competing interests: None declared.

20.J Thorac Oncol. 2020 May;15(5):e67-e68. doi: 10.1016/j.jtho.2020.03.015.

Pathology of 2019 Novel Coronavirus Pneumonia: A Dynamic Disease Process.

[Tian S¹](#), [Xiao SY²](#).

Author information:

1. Department of Pathology, Zhongnan Hospital of Wuhan University, Wuhan, People's Republic of China.
2. Department of Pathology, Zhongnan Hospital of Wuhan University, Wuhan, People's Republic of China; Department of Pathology, University of Chicago Medicine, Chicago, Illinois. Electronic address: [\(10\)\(2e\)@uchicago.edu](#).

PMID: 32340678

[Similar articles](#)

21.J Thorac Oncol. 2020 May;15(5):e67. doi: 10.1016/j.jtho.2020.03.013.

Pulmonary Pathology of Early Phase 2019 Novel Coronavirus Pneumonia.

[Joob B¹](#), [Wiwanitkit V²](#).

Author information:

1. Sanitation 1 Medical Academic Center, Bangkok, Thailand. Electronic address: [\(10\)\(2e\)@hotmail.com](#).
2. Dr. D.Y. Patil University, Pune, India, Hainan Medical University, Haikou, People's Republic of China.

PMID: 32340677

[Similar articles](#)

22.Sr Care Pharm. 2020 May 1;35(5):237. doi: 10.4140/TCP.n.2020.237.

How Will COVID-19 Affect Long-Term Care?

[Baldwin P](#).

Abstract

The decision of the Centers for Medicare & Medicaid Services to suspend routine surveys in favor of focused inspections targeted at infection control is the first signal that long-term care will be at the epicenter of federal oversight.

PMID: 32340661

[Similar articles](#)

23. Sr Care Pharm. 2020 May 1;35(5):190-194. doi: 10.4140/TCP.n.2020.190.

On the Pharmacy Radar: COVID-19 and Older People.

[Alderman C.](#)

Abstract

The COVID-19 pandemic presents many medical and social issues for older people. Presented here is a range of information arising from related areas that have impact upon the safety and efficacy of drug therapy in the context of COVID-19. Issues include pharmacy practice, clinical therapeutics, and possible new treatments for the virus. More information will be published in coming issues of *The Senior Care Pharmacist*.

PMID: 32340654

[Similar articles](#)

24. J Otolaryngol Head Neck Surg. 2020 Apr 27;49(1):23. doi: 10.1186/s40463-020-00414-9.

Recommendations from the CSO-HNS taskforce on performance of tracheotomy during the COVID-19 pandemic.

[Sommer DD¹](#), [Engels PT²](#), [Usaf CEKW³](#), [Khalili S⁴](#), [Corsten M⁵](#), [Tewfik MA⁶](#), [Fung K⁷](#), [Cote D⁸](#), [Gupta M⁹](#), [Sne N²](#), [Brown TFE⁵](#), [Paul J¹⁰](#), [Kost KM⁶](#), [Witterick IJ¹¹](#).

Author information:

1. Division of Otolaryngology - Head & Neck Surgery - Department of Surgery, McMaster University Medical Centre, McMaster University, 3V1 Clinic, 1200 Main St West, Hamilton, ON, L8N 3Z5, Canada. [\(10\)\(2e\)@sympatico.ca](#).
2. Department of Surgery and Critical Care, McMaster University, Hamilton, ON, Canada.
3. United States Army Institute of Surgical Research, Fort Sam Houston, TX, USA.
4. Aurora Neuroscience Innovation Institute, Milwaukee, WI, USA.
5. Division of Otolaryngology - Head & Neck Surgery, Dalhousie University, Halifax, NS, Canada.
6. Department of Otolaryngology - Head and Neck Surgery, McGill University, Montreal, QC, Canada.
7. Department of Otolaryngology - Head and Neck Surgery, Western University, London, ON, Canada.
8. Division of Otolaryngology - Head and Neck Surgery, University of Alberta, Edmonton, AB, Canada.
9. Division of Otolaryngology - Head & Neck Surgery - Department of Surgery, McMaster University Medical Centre, McMaster University, 3V1 Clinic, 1200 Main St West, Hamilton, ON, L8N 3Z5, Canada.
10. Department of Anesthesia, McMaster University, Hamilton, ON, Canada.
11. Department of Otolaryngology - Head & Neck Surgery, University of Toronto, Toronto, ON, Canada.

Abstract

INTRODUCTION:

The performance of tracheotomy is a common procedural request by critical care departments to the surgical services of general surgery, thoracic surgery and otolaryngology - head & neck surgery. A Canadian Society of Otolaryngology - Head & Neck Surgery (CSO-HNS) task force was convened with multi-specialty involvement from otolaryngology-head & neck surgery, general surgery, critical care and anesthesiology to develop a set of recommendations for the performance of tracheotomies during the COVID-19 pandemic.

MAIN BODY:

The tracheotomy procedure is highly aerosol generating and directly exposes the entire surgical team to the viral aerosol plume and secretions, thereby increasing the risk of transmission to healthcare providers. As such, we believe extended

endotracheal intubation should be the standard of care for the entire duration of ventilation in the vast majority of patients. Pre-operative COVID-19 testing is highly recommended for any non-emergent procedure.

CONCLUSION:

The set of recommendations in this document highlight the importance of avoiding tracheotomy procedures in patients who are COVID-19 positive if at all possible. Recommendations for appropriate PPE and environment are made for COVID-19 positive, negative and unknown patients requiring consideration of tracheotomy. The safety of healthcare professionals who care for ill patients and who keep critical infrastructure operating is paramount.

PMID: 32340627

[Similar articles](#)

25.J Cardiovasc Magn Reson. 2020 Apr 27;22(1):26. doi: 10.1186/s12968-020-00628-w.

Society for Cardiovascular Magnetic Resonance (SCMR) guidance for the practice of cardiovascular magnetic resonance during the COVID-19 pandemic.

Han Y¹, Chen T², Bryant J³, Bucciarelli-Ducci C⁴, Dyke C⁵, Elliott MD⁶, Ferrari VA², Friedrich MG⁷, Lawton C⁴, Manning WJ⁸, Ordovas K⁹, Plein S¹⁰, Powell AJ¹¹, Raman SV¹², Carr J¹³.

Author information:

1. Departments of Medicine (Cardiovascular Division) and Radiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA. (10)(2e) @pennmedicine.upenn.edu.
2. Cardiovascular Division, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA.
3. National Heart Research Institute Singapore, National Heart Center Singapore, 5 Hospital Drive, Singapore, Singapore.
4. Bristol Heart Institute, Bristol NIHR Biomedical Research Centre, University Hospitals Bristol and University of Bristol, Bristol, UK.
5. Division of Cardiology, National Jewish Health, Denver, CO, USA.
6. Carolinas Medical Center, Charlotte, NC, USA.
7. Departments of Medicine and Diagnostic Radiology, McGill University, Montreal, Canada.
8. Departments of Medicine (Cardiovascular Division) and Radiology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA.
9. Departments of Radiology and Medicine, University of California, San Francisco, San Francisco, CA, USA.
10. Leeds Institute for Genetics Health and Therapeutics & Leeds Multidisciplinary Cardiovascular Research Centre, University of Leeds, Leeds, UK.
11. Department of Cardiology, Boston Children's Hospital, and the Department of Pediatrics, Harvard Medical School, Boston, MA, USA.
12. Department of Medicine, Indiana University School of Medicine, Indianapolis, IN, USA.
13. Department of Radiology, Feinberg School of Medicine, Northwestern University, Chicago, IL, USA.

Abstract

The aim of this document is to provide general guidance and specific recommendations on the practice of cardiovascular magnetic resonance (CMR) in the era of the COVID-19 pandemic. There are two major considerations. First, continued urgent and semi-urgent care for the patients who have no known active COVID-19 should be provided in a safe manner for both patients and staff. Second, when necessary, CMR on patients with confirmed or suspected active COVID-19 should focus on the specific clinical question with an emphasis on myocardial function and tissue characterization while optimizing patient and staff safety.

PMID: 32340614

[Similar articles](#)

26. Med Educ Online. 2020 Dec;25(1):1759869. doi: 10.1080/10872981.2020.1759869.

COVID-19: an FY1 on the frontline.

[Jeyabaladevan P¹](#).

Author information:

1. Foundation Doctor, Barts NHS Trust, London, UK.

Abstract

The global spread of COVID-19 has put increased pressure on the NHS. The Government has put in a number of strategies to cope with this pandemic, which includes increasing funding for the NHS. However, increased funding itself will not ease the workload. With a number of our staff isolating from work due to COVID-19, we as the workforce have to step out of comfort zones and work in unfamiliar specialties. These are unprecedented times and are placing strains on our health service. Nonetheless, we as healthcare professionals have taken oaths that we are honouring and will continue to do so, till this virus is put to rest.

PMID: 32340566

[Similar articles](#)

27. J Prim Care Community Health. 2020 Jan-Dec;11:2150132720922957. doi: 10.1177/2150132720922957.

Increasing the Signal-to-Noise Ratio: COVID-19 Clinical Synopsis for Outpatient Providers.

[Sartor Z¹](#), [Hess B¹](#).

Author information:

1. Waco Family Medicine Residency Program, Waco, TX, USA.

Abstract

The novel coronavirus (SARS-CoV-2), which is the cause of coronavirus disease (COVID-19 formally 2019-nCoV), has received widespread attention from the medical community. Despite the rapid publication of research on the virus and the disease it causes, there is a lack of concise and relevant material to help busy medical providers navigate recognition and management of the disease in the ambulatory setting. This review article aims to bridge this gap by briefly reviewing the key points of the evaluation and treatment of patients with COVID-19 in the ambulatory clinic environment.

PMID: 32340531

[Similar articles](#)

28. Ren Fail. 2020 Nov;42(1):393-397. doi: 10.1080/0886022X.2020.1756323.

Survival rate in acute kidney injury superimposed COVID-19 patients: a systematic review and meta-analysis.

[Ali H¹](#), [Daoud A²](#), [Mohamed MM³](#), [Salim SA⁴](#), [Yessayan L⁵](#), [Baharani J¹](#), [Murtaza A⁶](#), [Rao V⁷](#), [Soliman KM⁷](#).

Author information:

1. Department of Medicine, Division of Nephrology, University Hospitals of Birmingham, UK.

2. Department of Medicine, Division of Nephrology, Faculty of Medicine, Cairo University, Egypt.
3. Department of Medicine, Division of Nephrology, University of Tennessee, USA.
4. Department of Medicine, Division of Nephrology, University of Mississippi Medical Center, Jackson, MS, USA.
5. Department of Medicine, Division of Nephrology, University of Michigan, Ann Arbor, MI, USA.
6. Department of Medicine, Division of Nephrology, Walsall Manor Hospital, UK.
7. Department of Medicine, Division of Nephrology, Medical University of South Carolina, USA.

PMID: 32340507

[Similar articles](#)

29. Monaldi Arch Chest Dis. 2020 Apr 27;90(2). doi: 10.4081/monaldi.2020.1316.

The role of natriuretic peptide estimation in severe COVID-19.

[Mahajan K¹](#), [Negi P²](#).

Author information:

1. Indira Gandhi Government Medical College Shimla. (10)(2e) [@gmail.com](#).
2. Indira Gandhi Government Medical College. (10)(2e) [@gmail.com](#).

Abstract

Since its inception in Wuhan in December 2019, Coronavirus disease 2019 (COVID-19) has shattered the economies and health-care infrastructures worldwide. Even the best of health-care systems (United States, Italy) have been overwhelmed and collapsed because of this unprecedented pandemic. India is preparing itself for the onslaught of Coronavirus. After recording its first case on January 30th, 2020, the rise was slow until the last week of March. However, since then, the number of cases has increased exponentially, and as on April 14th, 2020, there have been more than 10,000 cases of coronavirus disease (COVID-19) in India, which has resulted in more than 350 deaths.

PMID: 32340429

[Similar articles](#)

30. Mar Drugs. 2020 Apr 23;18(4). pii: E225. doi: 10.3390/md18040225.

Putative Inhibitors of SARS-CoV-2 Main Protease from A Library of Marine Natural Products: A Virtual Screening and Molecular Modeling Study.

[Gentile D¹](#), [Patamia V¹](#), [Scala A²](#), [Sciortino MT²](#), [Piperno A²](#), [Rescifina A^{1,3}](#).

Author information:

1. Department of Drug Sciences, University of Catania, V.le A. Doria, 95125 Catania, Italy.
2. Department of Chemical, Biological, Pharmaceutical, and Environmental Sciences, University of Messina, V.le F. Stagno d'Alcontres 31, 98166 Messina, Italy.
3. Consorzio Interuniversitario Nazionale di ricerca in Metodologie e Processi Innovativi di Sintesi (CINMPS), Via E. Orabona, 4, 70125 Bari, Italy.

Abstract

The current emergency due to the worldwide spread of the COVID-19 caused by the new severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a great concern for global public health. Already in the past, the outbreak of severe acute respiratory syndrome (SARS) in 2003 and Middle Eastern respiratory syndrome (MERS) in 2012 demonstrates the potential of coronaviruses to cross-species borders and further underlines the importance of identifying

new-targeted drugs. An ideal antiviral agent should target essential proteins involved in the lifecycle of SARS-CoV. Currently, some HIV protease inhibitors (i.e., Lopinavir) are proposed for the treatment of COVID-19, although their effectiveness has not yet been assessed. The main protease (M^P) provides a highly validated pharmacological target for the discovery and design of inhibitors. We identified potent M^P inhibitors employing computational techniques that entail the screening of a Marine Natural Product (MNP) library. MNP library was screened by a hyphenated pharmacophore model, and molecular docking approaches. Molecular dynamics and re-docking further confirmed the results obtained by structure-based techniques and allowed this study to highlight some crucial aspects. Seventeen potential SARS-CoV-2 M^P inhibitors have been identified among the natural substances of marine origin. As these compounds were extensively validated by a consensus approach and by molecular dynamics, the likelihood that at least one of these compounds could be bioactive is excellent.

PMID: 32340389

[Similar articles](#)

31. Int J Environ Res Public Health. 2020 Apr 23;17(8). pii: E2933. doi: 10.3390/ijerph17082933.

Discrimination and Social Exclusion in the Outbreak of COVID-19.

[He J¹](#), [He L²](#), [Zhou W¹](#), [Nie X¹](#), [He M¹](#).

Author information:

1. School of Ethnology and Sociology, Yunnan University, Kunming 650092, China.
2. Department of Economics, Bates College, Lewiston, ME 04240, USA.

Abstract

This paper is aimed to document the observed social exclusion and discrimination in the outbreak of COVID-19 across the world and inside of China. Discrimination and social exclusion has occurred in various forms, while 25.11% of respondents overseas experienced discrimination in the breakout of COVID-19, and 90% of respondents inside of China exhibited discriminatory attitudes. The discrimination and social exclusion also lead to a range of damaging social outcomes. Thus, this is an urgent call for the inclusiveness in policy and media in the face of this public health emergency.

PMID: 32340349

[Similar articles](#)

32. Int J Environ Res Public Health. 2020 Apr 23;17(8). pii: E2932. doi: 10.3390/ijerph17082932.

Airborne Transmission Route of COVID-19: Why 2 Meters/6 Feet of Inter-Personal Distance Could Not Be Enough.

[Setti L¹](#), [Passarini F²](#), [De Gennaro G³](#), [Barbieri P⁴](#), [Perrone MG⁵](#), [Borelli M⁶](#), [Palmisani J³](#), [Di Gilio A³](#), [Piscitelli P^{7,8}](#), [Miani A^{8,9}](#).

Author information:

1. Department of Industrial Chemistry, University of Bologna, Viale del Risorgimento 4, 40136 Bologna, Italy.
2. Interdepartmental Centre for Industrial Research "Renewable Sources, Environment, Blue Growth, Energy", University of Bologna, 47921 Rimini, Italy.
3. Department of Biology, University "Aldo Moro" of Bari, 70121 Bari, Italy.
4. Department of Chemical and Pharmaceutical Sciences, University of Trieste, 34127 Trieste, Italy.
5. Environmental Research Division, TCR TECORA, 20094 Milan, Italy.
6. Department of Life Sciences, University of Trieste, 34127 Trieste, Italy.
7. UNESCO Chair on Health Education and Sustainable Development, University of Naples Federico II, 80131 Naples,

Italy.

8. Italian Society of Environmental Medicine (SIMA), 20149 Milan, Italy.

9. Department of Environmental Sciences and Policy, University of Milan, 20133 Milan, Italy.

Abstract

The COVID-19 pandemic caused the shutdown of entire nations all over the world. In addition to mobility restrictions of people, the World Health Organization and the Governments have prescribed maintaining an inter-personal distance of 1.5 or 2 m (about 6 feet) from each other in order to minimize the risk of contagion through the droplets that we usually disseminate around us from nose and mouth. However, recently published studies support the hypothesis of virus transmission over a distance of 2 m from an infected person. Researchers have proved the higher aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1 (with the virus remaining viable and infectious in aerosol for hours) and that airborne transmission of SARS-CoV can occur besides close-distance contacts. Indeed, there is reasonable evidence about the possibility of SARS-CoV-2 airborne transmission due to its persistence into aerosol droplets in a viable and infectious form. Based on the available knowledge and epidemiological observations, it is plausible that small particles containing the virus may diffuse in indoor environments covering distances up to 10 m from the emission sources, thus representing a kind of aerosol transmission. On-field studies carried out inside Wuhan Hospitals showed the presence of SARS-CoV-2 RNA in air samples collected in the hospitals and also in the surroundings, leading to the conclusion that the airborne route has to be considered an important pathway for viral diffusion. Similar findings are reported in analyses concerning air samples collected at the Nebraska University Hospital. On March 16th, we have released a Position Paper emphasizing the airborne route as a possible additional factor for interpreting the anomalous COVID-19 outbreaks in northern Italy, ranked as one of the most polluted areas in Europe and characterized by high particulate matter (PM) concentrations. The available information on the SARS-CoV-2 spreading supports the hypothesis of airborne diffusion of infected droplets from person to person at a distance greater than two meters (6 feet). The inter-personal distance of 2 m can be reasonably considered as an effective protection only if everybody wears face masks in daily life activities.

PMID: 32340347

[Similar articles](#)

33. *Viruses*. 2020 Apr 23;12(4). pii: E476. doi: 10.3390/v12040476.

Shedding Light on the Effect of Natural Anti-Herpesvirus Alkaloids on SARS-CoV-2: A Treatment Option for COVID-19.

[Hassan STS¹](#).

Author information:

1. Department of Applied Ecology, Faculty of Environmental Sciences, Czech University of Life Sciences Prague, Kamýcká 129, 6-Suchbát, 16521 Prague, Czech Republic.

Abstract

The whole world is currently facing an unseen enemy, called coronavirus disease 2019 (COVID-19), which is causing a global pandemic. This disease is caused by a novel single-stranded enveloped RNA virus, known as the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). Although huge efforts are being made to produce effective therapies to combat this disease, it continues to be one of the greatest challenges in medicine. There is no doubt that herpesviruses are one of the most important viruses that infect humans and animals, and infections induced by these pathogens have developed into a great threat to public health. According to the currently available evidence, the correlation between herpesviruses and coronaviruses is limited to the induced complications following the infections. For instance, the inflammation that is induced at the sites of infection could tie these viruses to each other in a relationship. Another example, bovine herpesvirus 1, which is an important pathogen of cattle, can cause a severe respiratory infection; the same way in which SARS-CoV-2 affects humans. Considering the current circumstances related to the COVID-19 crisis, this editorial paper, which belongs to the Special Issue "Recent Advances in Herpesviruses Research: What's in the Pipeline?" aims to draw attention to some natural anti-herpesvirus alkaloid

compounds, which have recently been proven to have excellent inhibitory efficacy against SARS-CoV-2 replication. Thus, this special focus is an attempt to hunt down various treatment options to combat COVID-19 based on repurposing drugs that are known to have multiple antiviral properties, including against herpesvirus.

PMID: 32340120

[Similar articles](#)

34. Int J Environ Res Public Health. 2020 Apr 23;17(8). pii: E2906. doi: 10.3390/ijerph17082906.

The Use of Digital Health in the Detection and Management of COVID-19.

[Alwashmi MF](#)^{1,2}.

Author information:

1. School of Pharmacy, Memorial University of Newfoundland, Health Sciences Centre, 300 Prince Philip Drive, St John's, NL A1B 3V6, Canada.
2. Chief Scientific Officer, BreatheSuite Inc., St John's, NL A1B 2X2, Canada.

Abstract

Digital health is uniquely positioned to enhance the way we detect and manage infectious diseases. This commentary explores the potential of implementing digital technologies that can be used at different stages of the COVID-19 outbreak, including data-driven disease surveillance, screening, triage, diagnosis, and monitoring. Methods that could potentially reduce the exposure of healthcare providers to the virus are also discussed.

PMID: 32340107

[Similar articles](#)