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Year: 2020

Title: 中国疾病预防控制中心新型冠状病毒肺炎应急响应机制流行病学组. 新型冠状病毒肺炎流行病学特征分析

Journal: 中华流行病学杂志

Volume: 41

Issue: 02

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Short Title: 中国疾病预防控制中心新型冠状病毒肺炎应急响应机制流行病学组. 新型冠状病毒肺炎流行病学特征分析

DOI: 10.3760/cma.j.issn.0254-6450.2020.02.003

<http://html.rhhz.net/zhlxbx/004.htm>

Abstract: 摘要目的 新型冠状病毒肺炎在武汉暴发流行以来，已在全国范围内蔓延。对截至2020年2月11日中国内地报告所有病例的流行病学特征进行描述和分析。方法 选取截至2020年2月11日中国内地传染病报告信息系统中上报所有新型冠状病毒肺炎病例。分析包括：①患者特征；②病死率；③年龄分布和性别比例；④疾病传播的时空特点；⑤所有病例、湖北省以外病例和医务人员病例的流行病学曲线。结果 中国内地共报告72 314例病例，其中确诊病例44 672例（61.8%），疑似病例16 186例（22.4%），临床诊断病例10 567例（14.6%），无症状感染者889例（1.2%）。在确诊病例中，大多数年龄在30~79岁（86.6%），湖北省（74.7%），轻症病例为主（80.9%）。确诊病例中，死亡1 023例，粗病死率为2.3%。个案调查结果提示，疫情在2019年12月从湖北向外传播，截至2020年2月11日，全国31个省的1 386个县区受到了影响。流行曲线显示在1月23—26日左右达到峰值，并且观察到发病数下降趋势。截至2月11日，共有1 716名医务工作者感染，其中5人死亡，粗病死率为0.3%。结论 新型冠状病毒肺炎传播流行迅速，从首次报告病例日后30 d蔓延至31个省（区/市），疫情在1月24—26日达到首个流行峰，2月1日出现单日发病异常高值，而后逐渐下降。随着人们返回工作岗位，需积极应对可能出现的疫情反弹。

The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China

The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team  

Abstract: Objective An outbreak of 2019 novel coronavirus diseases (COVID-19) in Wuhan, China has spread quickly nationwide. Here, we report results of a descriptive, exploratory analysis of all cases diagnosed as of February 11, 2020. **Methods** All COVID-19 cases reported through February 11, 2020 were extracted from China's Infectious Disease Information System. Analyses included: 1) summary of patient characteristics; 2) examination of age distributions and sex ratios; 3) calculation of case fatality and mortality rates; 4) geo-temporal analysis of viral spread; 5) epidemiological curve construction; and 6) subgroup analysis. **Results** A total of 72

314 patient records-44 672 (61.8%) confirmed cases, 16 186 (22.4%) suspected cases, 10567 (14.6%) clinical diagnosed cases (Hubei only), and 889 asymptomatic cases (1.2%)-contributed data for the analysis. Among confirmed cases, most were aged 30-79 years (86.6%), diagnosed in Hubei (74.7%), and considered mild/mild pneumonia (80.9%). A total of 1 023 deaths occurred among confirmed cases for an overall case-fatality rate of 2.3%. The COVID-19 spread outward from Hubei sometime after December 2019 and by February 11, 2020, 1 386 counties across all 31 provinces were affected. The epidemic curve of onset of symptoms peaked in January 23-26, then began to decline leading up to February 11. A total of 1 716 health workers have become infected and 5 have died (0.3%). **Conclusions** The COVID-19 epidemic has spread very quickly. It only took 30 days to expand from Hubei to the rest of Mainland China. With many people returning from a long holiday, China needs to prepare for the possible rebound of the epidemic.

Topics: case series, clinical, epi, virology (18/02/2020)

Year: 2020

Author:

Title: Biotech start-ups hit by coronavirus work stoppages

Journal: C&EN Global Enterprise

DOI: 10.1021/cen-09807-buscon3

Abstract: s the outbreak of the new coronavirus, now officially named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), continues to mushroom, the related work stoppages in China have put a spotlight on Western biotech companies'™ dependence on Chinese contract research organizations (CROs). The situation has prompted some start-ups to rethink their contingency plans" particularly when it comes to chemistry services. Biotech firms had anticipated delays related to the Lunar New Year holidays, and so far outbreak-related travel restrictions have extended that work gap by only a week. But as the virus spreads" according to Chinese authorities, as of Feb. 13, more than 60,100 people had been infected and nearly 1,400 had died, most of them in China" some biotech firms that rely on China are becoming nervous about how long their projects could be on hold. Much attention is on WuXi AppTec, the largest Chinese CRO.

URL: <https://doi.org/10.1021/cen-09807-buscon3>

Categories: Ethics, social science, economics; Opinion piece

Year: 2020

Author: Andersen, Petter I.; Ianevski, Aleksandr; Lysvand, Hilde; Vitkauskiene, Astra; Oksenysh, Valentyn; BjÅ, rÅs, Magnar; Telling, Kaidi; Lutsar, Irja; Dampis, Uga; Irie, Yasuhiko; Tenson, Tanel; Kantele, Anu; Kainov, Denis E.

Title: Discovery and development of safe-in-man broad-spectrum antiviral agents

Journal: International Journal of Infectious Diseases

DOI: <https://doi.org/10.1016/j.ijid.2020.02.018>

Abstract: Viral diseases are one of the leading causes of morbidity and mortality in the world. Virus-specific vaccines and antiviral drugs are the most powerful tools to combat viral diseases. However, broad-spectrum antiviral agents (BSAAs, i.e. compounds targeting viruses belonging to two or more viral families) could provide additional protection of general population from emerging and re-emerging viral diseases reinforcing the arsenal of available antiviral options. Here, we

reviewed discovery and development of BSAs and summarized the information on 119 safe-in-man agents in freely accessible database (<https://drugvirus.info/>). Future and ongoing pre-clinical and clinical studies will increase the number of BSAs, expand spectrum of their indications, and identify drug combinations for treatment of emerging and re-emerging viral infections as well as co-infections.

URL: <https://doi.org/10.1016/j.ijid.2020.02.018>

Categories: Clinical care and treatment; Narrative review

Year: 2020

Author: Bai, S. L.; Wang, J. Y.; Zhou, Y. Q.; Yu, D. S.; Gao, X. M.; Li, L. L.; Yang, F.

Title: Analysis of the first cluster of cases in a family of novel coronavirus pneumonia in Gansu Province

Journal: Zhonghua Yu Fang Yi Xue Za Zhi

DOI: 10.3760/cma.j.issn.0253-9624.2020.0005

Abstract: The epidemiological history and clinical characteristics of 7 cases of COVID-19 and 1 case of close contact in the first family aggregation epidemic of COVID-19 in Gansu Province were analyzed. The first patient A developed on January 22, 2020, with a history of residence in Wuhan, and confirmed severe cases of NCP on January 24, 2020; patient B, on January 23, 2020, diagnosed on January 31, severe cases; patient C, asymptomatic, diagnosed on January 27; patient D, asymptomatic, diagnosed on January 27; patient E, on January 24, diagnosed on January 28; patient F, asymptomatic, diagnosed on January 31; Patient G was asymptomatic and was diagnosed on January 31. In close contact, H was asymptomatic, PCR test was negative and asymptomatic, and he was discharged early. Among the 7 patients, 1 case died of (B) aggravation, and the other patients' condition was effectively controlled after active treatment. Except for the discharged cases, 5 cases were positive for COVID-19 specific IgM antibody and 1 case was negative. In this clustering outbreak, 4 patients remained asymptomatic, but PCR and IgM antibodies were positive, indicating that asymptomatic patients may be the key point to control the epidemic. Specific IgM antibody screening for patients whose pharyngeal swab nucleic acid test is negative but with ground glass-like lung lesions is very important for early detection and early isolation.

URL: <https://doi.org/10.3760/cma.j.issn.0253-9624.2020.0005>

Categories: Case study/case series; Epidemiology

Year:

Author: Burki, Talha

Title: Outbreak of coronavirus disease 2019

Journal: The Lancet Infectious Diseases

DOI: 10.1016/S1473-3099(20)30076-1

Abstract:

URL: [https://doi.org/10.1016/S1473-3099\(20\)30076-1](https://doi.org/10.1016/S1473-3099(20)30076-1)

Categories: Narrative review; Opinion piece

Year: 2020
Author: Chen, W.; Wang, Q.; Li, Y. Q.; Yu, H. L.; Xia, Y. Y.; Zhang, M. L.; Qin, Y.; Zhang, T.; Peng, Z. B.; Zhang, R. C.; Yang, X. K.; Yin, W. W.; An, Z. J.; Wu, D.; Yin, Z. D.; Li, S.; Chen, Q. L.; Feng, L. Z.; Li, Z. J.; Feng, Z. J.
Title: Early containment strategies and core measures for prevention and control of novel coronavirus pneumonia in China
Journal: Zhonghua Yu Fang Yi Xue Za Zhi
DOI: 10.3760/cma.j.issn.0253-9624.2020.03.003
Abstract: In December 2019, novel coronavirus pneumonia epidemic occurred in Wuhan, Hubei Province, and spread rapidly across the country. In the early stages of the epidemic, China adopted the containment strategy and implemented a series of core measures around this strategic point, including social mobilization, strengthening case isolation and close contacts tracking management, blocking epidemic areas and traffic control to reduce personnel movements and increase social distance, environmental measures and personal protection, with a view to controlling the epidemic as soon as possible in limited areas such as Wuhan. This article summarizes the background, key points and core measures in the country and provinces. It sent prospects for future prevention and control strategies.
URL: <https://doi.org/10.3760/cma.j.issn.0253-9624.2020.03.003>
Categories: Infection prevention and control; Narrative review

Year: 2020
Author: Chen, Yun; Guo, Yao; Pan, Yihang; Zhao, Zhizhuang Joe
Title: Structure analysis of the receptor binding of 2019-nCoV
Journal: Biochemical and Biophysical Research Communications
DOI: <https://doi.org/10.1016/j.bbrc.2020.02.071>
Abstract: 2019-nCoV is a newly identified coronavirus with high similarity to SARS-CoV. We performed a structural analysis of the receptor binding domain (RBD) of spike glycoprotein responsible for entry of coronaviruses into host cells. The RBDs from the two viruses share 72% identity in amino acid sequences, and molecular simulation reveals highly similar ternary structures. However, 2019-nCoV has a distinct loop with flexible glycy residues replacing rigid prolyl residues in SARS-CoV. Molecular modeling revealed that 2019-nCoV RBD has a stronger interaction with angiotensin converting enzyme 2 (ACE2). A unique phenylalanine F486 in the flexible loop likely plays a major role because its penetration into a deep hydrophobic pocket in ACE2. ACE2 is widely expressed with conserved primary structures throughout the animal kingdom from fish, amphibians, reptiles, birds, to mammals. Structural analysis suggests that ACE2 from these animals can potentially bind RBD of 2019-nCoV, making them all possible natural hosts for the virus. 2019-nCoV is thought to be transmitted through respiratory droplets. However, since ACE2 is predominantly expressed in intestines, testis, and kidney, fecal-oral and other routes of transmission are also possible. Finally, antibodies and small molecular inhibitors that can block the interaction of ACE2 with RBD should be developed to combat the virus.
URL: <https://doi.org/10.1016/j.bbrc.2020.02.071>
Categories: Virology, immunology

Year: 2020
Author: Chen, Y.; Jin, Y. L.; Zhu, L. J.; Fang, Z. M.; Wu, N.; Du, M. X.; Jiang, M. M.; Wang, J.; Yao, Y. S.
Title: The network investigation on knowledge, attitude and practice about Novel coronavirus pneumonia of the residents in Anhui Province
Journal: Zhonghua Yu Fang Yi Xue Za Zhi
DOI: 10.3760/cma.j.issn.0253-9624.2020.0004
Abstract: Objective: To analyze the current situation of the knowledge, attitudes and practice about Novel coronavirus pneumonia (NCP) of the residents in Anhui Province. Methods: Anonymous network sampling survey was carried out with an electronic questionnaire that designed by the questionnaire star, and a total of 4016 subjects from Anhui province were investigated. The content of the survey includes that the basic information of subjects, the residents' knowledge, attitudes and practice about NCP, as well as their satisfaction with the prevention and control measures adopted by the government and health authorities and the suggestions on future prevention. The questionnaire doesn't involve any privacy information, and all questions were mandatory to ensure the response rate. Results: The M (P(25), P(75)) age the 4016 subjects was 21 (19, 24), and the ranging from 7 to 80 years old. The number of males was 1431 (35.6%). Social networking tools such as WeChat and QQ were the main sources of epidemic information for residents (97.8%, 3 929 respondents). Residents have a high awareness rate of the main symptoms, transmission routes, using of masks, hand washing and treatment information of NCP, while a low awareness rate of the atypical symptoms. 92.6% of the subjects (n=3 720) think that the outbreak was scary. In terms of psychological behavior scores, the results showed that female (9.38 \pm 4.81), the urban (9.37 \pm 5.02) and the medical workers (10.79 \pm 5.19) had a poorer mental health than the male (8.45 \pm 5.00), the rural (8.71 \pm 4.75) and the non-medical workers (the students: 8.85 \pm 4.83; public institute workers: 9.02 \pm 5.08; others: 8.97 \pm 5.39) (P < 0.05). 71.9% of the residents (n=2 887) were satisfied with the local epidemic control measures. The residents took various of the measures to prevent and control the epidemic. The ratio of residents that could achieve "no gathering and less going out", "wear masks when going out" and "do not go to crowded and closed places" was up to 97.4% (n=3 913), 93.6% (n=3758) and 91.5% (n=3 673) respectively. Conclusion: The residents in Anhui province have a good KAP about NCP, yet it is necessary to strengthen the community publicity, the mental health maintenance of residents and students' health education.
URL: <https://doi.org/10.3760/cma.j.issn.0253-9624.2020.0004>
Categories: Case study/case series; Ethics, social science, economics; Narrative review

Year: 2020
Author: Chen, Yusha; Pradhan, Sushmita; Xue, Siliang
Title: What are we doing in the dermatology outpatient department amidst the raging of 2019-nCoV?
Journal: Journal of the American Academy of Dermatology
DOI: <https://doi.org/10.1016/j.jaad.2020.02.030>
Abstract:
URL: <https://doi.org/10.1016/j.jaad.2020.02.030>
Categories: Awaiting classification; Infection prevention and control; Opinion piece

Year: 2020
Author: Cyranoski, David
Title: When will the coronavirus outbreak peak?
Journal: Nature
DOI: doi:10.1038/d41586-020-00361-5
Abstract: Officials want to know but predictions vary wildly, from now to after hundreds of millions of people are infected. Officials want to know but predictions vary wildly, from now to after hundreds of millions of people are infected.
URL: <https://doi.org/doi:10.1038/d41586-020-00361-5>
Categories: Epidemiology; Opinion piece

Year: 2020
Author: Du, B.; Qiu, H. B.; Zhan, X.; Wang, Y. S.; Kang, H. Y. J.; Li, X. Y.; Wang, F.; Sun, B.; Tong, Z. H.
Title: Pharmacotherapeutics for the New Coronavirus Pneumonia
Journal: Zhonghua Jie He He Hu Xi Za Zhi
DOI: 10.3760/cma.j.issn.1001-0939.2020.0012
Abstract: The New Coronavirus Pneumonia (NCP, also named as COVID-19 by WHO on Feb 11 2020, is now causing a severe public health emergency in China since. The number of diagnosed cases is more than 40,000 until the submission of this manuscript. Coronavirus has caused several epidemic situations world widely, but the present contagious disease caused by 2019 new Coronavirus is unprecedentedly fulminating. The published cohorts of 2019 new Coronavirus (n-Cov) are single-center studies, or retrospective studies. We here share the therapeutic experiences of NCP treatment with literature review. Combination of Ribavirin and Interferon- β is recommended by the 5(th) edition National Health Commission's Regimen (Revised Edition) because of the effect on MERS (Middle East Respiratory Syndrome), and the effectiveness of Lopinavir/Ritonavir and Remdisivir needs to be confirmed by randomized controlled trial (RCT), given the situation of no specific antiviral drug on NCP is unavailable. Systemic glucocorticosteroid is recommended as a short term use (1~2 mg.kg(-1).d(-1), 3~5d) by the 5(th) edition National Health Commission's Regimen (Revised Edition) yet RCTs are expected to confirm the effectiveness. Inappropriate application of antibiotics should be avoided, especially the combination of broad-spectrum antibiotics, for the NCP is not often complicated with bacterial infection.
URL: <https://doi.org/10.3760/cma.j.issn.1001-0939.2020.0012>
Categories: Clinical care and treatment; Narrative review

Year: 2020
Author: Ena, J.; Wenzel, R. P.
Title: A Novel Coronavirus Emerges
Journal: Rev Clin Esp
DOI: 10.1016/j.rce.2020.01.001
Abstract:
URL: <https://doi.org/10.1016/j.rce.2020.01.001>
Categories: Awaiting classification; Narrative review

Year: 2020
Author: Kapiriri, Lydia; Ross, Alison
Title: The Politics of Disease Epidemics: a Comparative Analysis of the SARS, Zika, and Ebola Outbreaks
Journal: Global Social Welfare
DOI: 10.1007/s40609-018-0123-y
Abstract: Over the past few decades, disease outbreaks have become increasingly frequent and widespread. The epicenters of these outbreaks have differed, and could be linked to different economic contexts. Arguably, the responses to these outbreaks have been "political" and inherently burdensome to marginalized populations. Key lessons can be learned from exploring the narratives about the different epidemics in varying income settings. Based on a review of the published medical, social, and political literature, which was accessed using four electronic databases—PubMed, Sociological Abstracts, Scholars Portal, and Web of Science, the overall objective of this paper discuss scholars' narratives on the "politics" of Ebola in a low-income setting, Zika virus in a middle-income setting, and SARS in a high-income setting. Various themes of the politics of epidemics were prominent in the literature. The narratives demonstrated the influence of power in whose narratives and what narratives are presented in the literature. While marginalized populations were reported to have borne the brunt of all disease outbreaks in the different contexts, the prevalence of their narratives within the reviewed literature was limited. Regardless of income setting, there is a need to give voice to the most marginalized communities during an epidemic. The experiences and narratives of those most vulnerable to an epidemic—specifically poor communities—need to be represented in the literature. This could contribute to mitigating some of the negative impact of the politics in epidemics.
URL: <https://doi.org/10.1007/s40609-018-0123-y>
Categories: Ethics, social science, economics; Systematic review

Year: 2020
Author: Lai, Chih-Cheng; Shih, Tzu-Ping; Ko, Wen-Chien; Tang, Hung-Jen; Hsueh, Po-Ren
Title: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and corona virus disease-2019 (COVID-19): the epidemic and the challenges
Journal: International Journal of Antimicrobial Agents
DOI: <https://doi.org/10.1016/j.ijantimicag.2020.105924>
Abstract: ABSTRACT Emergence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, previously provisionally named 2019 novel coronavirus or 2019-nCoV) disease (COVID-19) in China at the end of 2019, has caused a large global outbreak and a major public health issue. As of February 11, 2020, data from the WHO has shown that more than 43,000 confirmed cases have been identified in 28 countries/regions, with more than 99% of the cases being detected in China. On January 30, 2020, WHO has declared COVID-19 as the sixth public health emergency of international concern. The SARS-CoV-2 is closely related to two bat-derived severe acute respiratory syndrome-like coronaviruses, bat-SL-CoVZC45 and bat-SL-CoVZXC21. It is spread by human-to-human transmission via droplets or direct contact, and infection has been estimated to have mean incubation period of 6.4 days and a basic reproduction number of 2.24-3.58. Among the patients

with pneumonia caused by the SARS-CoV-2 (novel coronavirus pneumonia or Wuhan pneumonia), fever was the most common symptom, followed by cough. Bilateral lung involvement with ground glass opacity was the most common finding from computerized tomography images of the chest. Although the one case of SARS-CoV-2 pneumonia in the United States responding well to remdesivir, which is now undergoing a clinical trial in China. Currently, controlling infection to prevent the spread of the SARS-CoV-2 is the primary intervention being used. However, public health authorities should keep monitoring the situation closely, as the more we can learn about this novel virus and its associated outbreak, the better we can respond.

URL: <https://doi.org/10.1016/j.ijantimicag.2020.105924>

Categories: Clinical care and treatment; Epidemiology; Narrative review; Other related diseases and viruses

Year: 2020

Author: Luo, Hui; Tang, Qiao-Ling; Shang, Ya-Xi; Liang, Shi-Bing; Yang, Ming; Robinson, Nicola; Liu, Jian-Ping

Title: Can Chinese Medicine Be Used for Prevention of Corona Virus Disease 2019 (COVID-19)? A Review of Historical Classics, Research Evidence and Current Prevention Programs

Journal: Chin J Integr Med

DOI: 10.1007/s11655-020-3192-6

Abstract: **OBJECTIVE:** Since December 2019, an outbreak of corona virus disease 2019 (COVID-19) occurred in Wuhan, and rapidly spread to almost all parts of China. This was followed by prevention programs recommending Chinese medicine (CM) for the prevention. In order to provide evidence for CM recommendations, we reviewed ancient classics and human studies. **METHODS:** Historical records on prevention and treatment of infections in CM classics, clinical evidence of CM on the prevention of severe acute respiratory syndrome (SARS) and H1N1 influenza, and CM prevention programs issued by health authorities in China since the COVID-19 outbreak were retrieved from different databases and websites till 12 February, 2020. Research evidence included data from clinical trials, cohort or other population studies using CM for preventing contagious respiratory virus diseases. **RESULTS:** The use of CM to prevent epidemics of infectious diseases was traced back to ancient Chinese practice cited in Huangdi's Internal Classic (Huang Di Nei Jing) where preventive effects were recorded. There were 3 studies using CM for prevention of SARS and 4 studies for H1N1 influenza. None of the participants who took CM contracted SARS in the 3 studies. The infection rate of H1N1 influenza in the CM group was significantly lower than the non-CM group (relative risk 0.36, 95% confidence interval 0.24-0.52; n=4). For prevention of COVID-19, 23 provinces in China issued CM programs. The main principles of CM use were to tonify qi to protect from external pathogens, disperse wind and discharge heat, and resolve dampness. The most frequently used herbs included Radix astragali (Huangqi), Radix glycyrrhizae (Gancao), Radix saphoshnikoviae (Fangfeng), Rhizoma Atractylodis Macrocephalae (Baizhu), Lonicerae Japonicae Flos (Jinyinhua), and Fructus forsythia (Lianqiao). **CONCLUSIONS:** Based on historical records and human evidence of SARS and H1N1 influenza prevention, Chinese herbal formula could be an alternative approach for prevention of COVID-19 in high-risk population. Prospective, rigorous population studies are warranted to confirm the potential preventive effect of CM.

URL: <https://doi.org/10.1007/s11655-020-3192-6>

Categories: Clinical care and treatment; Systematic review

Year: 2020
Author: Novel Coronavirus Pneumonia Emergency Response Epidemiology, Team
Title: The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19) in China
Journal: Zhonghua Liu Xing Bing Xue Za Zhi
DOI: 10.3760/cma.j.issn.0254-6450.2020.02.003
Abstract: Objective: An outbreak of 2019 novel coronavirus diseases (COVID-19) in Wuhan, China has spread quickly nationwide. Here, we report results of a descriptive, exploratory analysis of all cases diagnosed as of February 11, 2020. Methods: All COVID-19 cases reported through February 11, 2020 were extracted from China's Infectious Disease Information System. Analyses included: 1) summary of patient characteristics; 2) examination of age distributions and sex ratios; 3) calculation of case fatality and mortality rates; 4) geo-temporal analysis of viral spread; 5) epidemiological curve construction; and 6) subgroup analysis. Results: A total of 72 314 patient records-44 672 (61.8%) confirmed cases, 16 186 (22.4%) suspected cases, 10567 (14.6%) clinical diagnosed cases (Hubei only), and 889 asymptomatic cases (1.2%)-contributed data for the analysis. Among confirmed cases, most were aged 30-79 years (86.6%), diagnosed in Hubei (74.7%), and considered mild (80.9%). A total of 1 023 deaths occurred among confirmed cases for an overall case-fatality rate of 2.3%. The COVID-19 spread outward from Hubei sometime after December 2019 and by February 11, 2020, 1 386 counties across all 31 provinces were affected. The epidemic curve of onset of symptoms peaked in January 23-26, then began to decline leading up to February 11. A total of 1 716 health workers have become infected and 5 have died (0.3%). Conclusions: The COVID-19 epidemic has spread very quickly. It only took 30 days to expand from Hubei to the rest of Mainland China. With many people returning from a long holiday, China needs to prepare for the possible rebound of the epidemic.
URL: <https://doi.org/10.3760/cma.j.issn.0254-6450.2020.02.003>
Categories: Case study/case series; Epidemiology; Narrative review

Year: 2020
Author: Pan, Lingai; Wang, Li; Huang, Xiaobo
Title: How to face the novel coronavirus infection during the 2019â€“2020 epidemic: the experience of Sichuan Provincial Peopleâ€™s Hospital
Journal:
DOI: 10.1007/s00134-020-05964-0
Abstract: January 17, 2020: the Sichuan Provincial Peopleâ€™s Hospital officially launched the 2019 influenza emergency response plan and established a leading group for influenza prevention and control. The president of Sichuan Provincial Peopleâ€™s Hospital serves as the team leader, and its members include related departments such as the administrative department, the intensive care unit, the infectious disease department, the respiratory department, nurses, the nosocomial infection control department and the radiology department. Afterwards we established multiple working groups: the emergency team, the prevention and control team, the medical emergency team, the material security team, the publicity and education team and the information updating team. Since the transmission dynamics were unclear, establishing fever clinics, isolation wards and

emergency wards were the most important measures. JO - Intensive Care Medicine

URL: <https://doi.org/10.1007/s00134-020-05964-0>

Categories: Clinical care and treatment; Infection prevention and control; Narrative review

Year: 2020

Author: Salata, Cristiano; Calistri, Arianna; Parolin, Cristina; Pal , Giorgio

Title: Coronaviruses: a paradigm of new emerging zoonotic diseases

Journal: Pathogens and Disease

DOI: 10.1093/femspd/ftaa006

Abstract: A novel type of coronavirus (2019-nCoV) infecting humans appeared in Wuhan, China, at the end of December 2019. Since the identification of the outbreak the infection quickly spread involving in one month more than 31,000 confirmed cases with 638 death. Molecular analysis suggest that 2019-nCoV could be originated from bats after passaging in intermediate hosts, highlighting the high zoonotic potential of coronaviruses.

URL: <https://doi.org/10.1093/femspd/ftaa006>

Categories: Narrative review; Reservoir

Year: 2020

Author: Service, Robert F.

Title: "The disruption is enormous." Coronavirus epidemic snarls science worldwide | Science | AAAS

Journal:

DOI:

Abstract: Normal daily life has come to a virtual standstill in large parts of China as a result of the epidemic of COVID-19" and so has science. Universities across the country remain closed; access to labs is restricted, projects have been mothballed, field work interrupted, and travel severely curtailed. But scientists elsewhere in the world are noticing an impact as well, as collaborations with China are on pause and scientific meetings for the next five months have been canceled or postponed. The damage to science pales compared to the human suffering; the total number of cases has risen to 71,429, the World Health Organization (WHO) reported today, almost 99% of them in China, and there have been 1775 deaths. Still, for individual researchers the losses can be serious" and stressful. "Basically, everything has completely stopped," says John Speakman, who runs an animal behavior lab at the Chinese Academy of Sciences (CAS) in Beijing that has effectively been shut since the Lunar New Year on 25 January. "The disruption is enormous. The stress on the staff is really high." But Speakman says he understands why the Chinese government took the measures. "It's annoying, but I completely support what they have done," he says.

URL: <https://doi.org/>

Categories: Ethics, social science, economics; Opinion piece

Year: 2020
Author: Shirato, Kazuya; Nao, Naganori; Katano, Harutaka; Takayama, Ikuyo; Saito, Shinji; Kato, Fumihiro; Katoh, Hiroshi; Sakata, Masafumi; Nakatsu, Yuichiro; Mori, Yoshio; Kageyama, Tsutomu; Matsuyama, Shutoku; Takeda, Makoto
Title: Development of Genetic Diagnostic Methods for Novel Coronavirus 2019 (nCoV-2019) in Japan
Journal: Japanese Journal of Infectious Diseases
DOI: 10.7883/yoken.JJID.2020.061
Abstract:
URL: <https://doi.org/10.7883/yoken.JJID.2020.061>
Categories: Case study/case series; Clinical care and treatment; Infection prevention and control

Year:
Author: The Lancet Infectious, Diseases
Title: Challenges of coronavirus disease 2019
Journal: The Lancet Infectious Diseases
DOI: 10.1016/S1473-3099(20)30072-4
Abstract:
URL: [https://doi.org/10.1016/S1473-3099\(20\)30072-4](https://doi.org/10.1016/S1473-3099(20)30072-4)
Categories: Ethics, social science, economics; Opinion piece

Year: 2020
Author: Tian, Xiaolong; Li, Cheng; Huang, Ailing; Xia, Shuai; Lu, Sicong; Shi, Zhengli; Lu, Lu; Jiang, Shibo; Yang, Zhenlin; Wu, Yanling; Ying, Tianlei
Title: Potent binding of 2019 novel coronavirus spike protein by a SARS coronavirus-specific human monoclonal antibody
Journal: Emerg Microbes Infect
DOI: 10.1080/22221751.2020.1729069
Abstract: The newly identified 2019 novel coronavirus (2019-nCoV) has caused more than 11,900 laboratory-confirmed human infections, including 259 deaths, posing a serious threat to human health. Currently, however, there is no specific antiviral treatment or vaccine. Considering the relatively high identity of receptor-binding domain (RBD) in 2019-nCoV and SARS-CoV, it is urgent to assess the cross-reactivity of anti-SARS CoV antibodies with 2019-nCoV spike protein, which could have important implications for rapid development of vaccines and therapeutic antibodies against 2019-nCoV. Here, we report for the first time that a SARS-CoV-specific human monoclonal antibody, CR3022, could bind potently with 2019-nCoV RBD (KD of 6.3 nM). The epitope of CR3022 does not overlap with the ACE2 binding site within 2019-nCoV RBD. These results suggest that CR3022 may have the potential to be developed as candidate therapeutics, alone or in combination with other neutralizing antibodies, for the prevention and treatment of 2019-nCoV infections. Interestingly, some of the most potent SARS-CoV-specific neutralizing antibodies (e.g. m396, CR3014) that target the ACE2 binding site of SARS-CoV failed to bind 2019-nCoV spike protein, implying that the difference in the RBD of SARS-CoV and 2019-nCoV has a critical impact for the cross-reactivity of neutralizing antibodies, and that it is still necessary to develop novel monoclonal antibodies that could bind specifically to 2019-nCoV RBD.

URL: <https://doi.org/10.1080/22221751.2020.1729069>

Categories: Virology, immunology

Year:

Author: Xiang, Yu-Tao; Li, Wen; Zhang, Qinge; Jin, Yu; Rao, Wen-Wang; Zeng, Liang-Nan; Lok, Grace K. I.; Chow, Ines H. I.; Cheung, Teris; Hall, Brian J.

Title: Timely research papers about COVID-19 in China

Journal: The Lancet

DOI: 10.1016/S0140-6736(20)30375-5

Abstract:

URL: [https://doi.org/10.1016/S0140-6736\(20\)30375-5](https://doi.org/10.1016/S0140-6736(20)30375-5)

Categories: Ethics, social science, economics; Opinion piece

Year: 2020

Author: Yu, Ping; Zhu, Jiang; Zhang, Zhengdong; Han, Yingjun; Huang, Lihong

Title: A familial cluster of infection associated with the 2019 novel coronavirus indicating potential person-to-person transmission during the incubation period

Journal: The Journal of Infectious Diseases

DOI: 10.1093/infdis/jiaa077

Abstract: An ongoing outbreak of pneumonia associated with 2019 novel coronavirus (2019-nCoV) was reported in China. It is unclear if the infectivity exists during the incubation period, although a person-to-person transmission has been reported in previous studies. We report the epidemiological features of a familial cluster of four patients in Shanghai, of which one was 88 years old man with moving difficulties and was only exposed to his asymptomatic family members who developed symptoms later. The epidemiological evidence has shown a potential transmission of the 2019-nCoV during the incubation period.

URL: <https://doi.org/10.1093/infdis/jiaa077>

Categories: Case study/case series; Epidemiology

Year: 2020

Author: Zeng, L. K.; Tao, X. W.; Yuan, W. H.; Wang, J.; Liu, X.; Liu, Z. S.

Title: First case of neonate infected with novel coronavirus pneumonia in China

Journal: Zhonghua Er Ke Za Zhi

DOI: 10.3760/cma.j.issn.0578-1310.2020.0009

Abstract:

URL: <https://doi.org/10.3760/cma.j.issn.0578-1310.2020.0009>

Categories: Awaiting classification; Case study/case series

Year: 2020

Author: Zhang, Wei; Du, Rong-Hui; Li, Bei; Zheng, Xiao-Shuang; Yang, Xing-Lou; Hu, Ben; Wang, Yan-Yi; Xiao, Geng-Fu; Yan, Bing; Shi, Zheng-Li; Zhou, Peng

Title: Molecular and serological investigation of 2019-nCoV infected patients: implication of multiple shedding routes

Journal: Emerg Microbes Infect

DOI: 10.1080/22221751.2020.1729071

Abstract: In December 2019, a novel coronavirus (2019-nCoV) caused an outbreak in Wuhan, China, and soon spread to other parts of the world. It was believed that 2019-nCoV was transmitted through respiratory tract and then induced pneumonia, thus molecular diagnosis based on oral swabs was used for confirmation of this disease. Likewise, patient will be released upon two times of negative detection from oral swabs. However, many coronaviruses can also be transmitted through oral-fecal route by infecting intestines. Whether 2019-nCoV infected patients also carry virus in other organs like intestine need to be tested. We conducted investigation on patients in a local hospital who were infected with this virus. We found the presence of 2019-nCoV in anal swabs and blood as well, and more anal swab positives than oral swab positives in a later stage of infection, suggesting shedding and thereby transmitted through oral-fecal route. We also showed serology test can improve detection positive rate thus should be used in future epidemiology. Our report provides a cautionary warning that 2019-nCoV may be shed through multiple routes.

URL: <https://doi.org/10.1080/22221751.2020.1729071>

Categories: Case study/case series; Infection prevention and control; Virology, immunology