

References

Jonathan Fluxman, MD

1. Sinaei, R., Nejadbiglari, H., Sinaei, R. *et al.* Finding positive SARS-CoV-2 RT-PCR in cerebrospinal fluid of two pediatric patients with severe COVID-19: a brief case report. *BMC Pediatr* **23**, 49 (2023). <https://doi.org/10.1186/s12887-022-03806-0>
2. Kumar S. TMT has limited sensitivity to detect coronary microvascular disease, study finds. Medical Dialogues. Oct. 15 2012. <https://medicaldialogues.in/cardiology-ctvs/news/tmt-has-limited-sensitivity-to-detect-coronary-microvascular-disease-finds-study-83073>
3. Rush C. Prevalence of Coronary Artery Disease and Coronary Microvascular Dysfunction in Heart Failure. JN Learning. June 23, 2021. <https://edhub.ama-assn.org/jn-learning/audio-player/18620561>
4. Jin, Y., Ji, W., Yang, H. *et al.* Endothelial activation and dysfunction in COVID-19: from basic mechanisms to potential therapeutic approaches. *Sig Transduct Target Ther* **5**, 293 (2020). <https://doi.org/10.1038/s41392-020-00454-7>
5. Chang T, Yang J, Deng H, Chen D, Yang X, Tang ZH. Depletion and Dysfunction of Dendritic Cells: Understanding SARS-CoV-2 Infection. *Front Immunol.* 2022;13:843342. Published 2022 Feb 21. doi:10.3389/fimmu.2022.843342
<https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2022.843342/full>
6. Maher, A.K., Burnham, K.L., Jones, E.M. *et al.* Transcriptional reprogramming from innate immune functions to a pro-thrombotic signature by monocytes in COVID-19. *Nat Commun* **13**, 7947 (2022). <https://doi.org/10.1038/s41467-022-35638-y>
<https://www.nature.com/articles/s41467-022-35638-y#citeas>
7. Stein, S.R., Ramelli, S.C., Grazioli, A. *et al.* SARS-CoV-2 infection and persistence in the human body and brain at autopsy. *Nature* **612**, 758–763 (2022). <https://doi.org/10.1038/s41586-022-05542-y> <https://www.nature.com/articles/s41586-022-05542-y>
8. Centers for Disease Control and Prevention. 2020–2021 Flu Season Summary Updated Oct. 25, 2022. <https://www.cdc.gov/flu/season/faq-flu-season-2020-2021.htm>
9. ZOE Editorial Staff. What are the most common COVID symptoms? Dec. 13, 2022. <https://zoe.com/learn/covid-new-top-10-covid-symptoms>
10. Global Burden of Disease Long COVID Collaborators. Estimated Global Proportions of Individuals With Persistent Fatigue, Cognitive, and Respiratory Symptom Clusters Following Symptomatic COVID-19 in 2020 and 2021. *JAMA.* 2022;328(16):1604–1615. doi:10.1001/jama.2022.18931 <https://jamanetwork.com/journals/jama/fullarticle/2797443>
11. Yeo YH, Wang M, He X, *et al.* Excess risk for acute myocardial infarction mortality during the

COVID-19 pandemic. *J Med Virol.* 2023;95(1):e28187. doi:10.1002/jmv.28187
<https://pubmed.ncbi.nlm.nih.gov/36176195/>

12. Tang JW, Bahnfleth WP, Bluysen PM, et al. Dismantling myths on the airborne transmission of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). *J Hosp Infect.* 2021;110:89-96. doi:10.1016/j.jhin.2020.12.022 <https://pubmed.ncbi.nlm.nih.gov/33453351/>

13. Laxminarayan R, Wahl B, Dudala SR, et al. Epidemiology and transmission dynamics of COVID-19 in two Indian states. *Science.* 2020;370(6517):691-697.
doi:10.1126/science.abd7672 <https://pubmed.ncbi.nlm.nih.gov/33154136/>

14. Packer S, Patrylas P, Smith I, et al. COVID-19 cluster surveillance using exposure data collected from routine contact tracing: The genomic validation of a novel informatics-based approach to outbreak detection in England. *PLOS Digit Health.* 2024;3(4):e0000485. Published 2024 Apr 25. doi:10.1371/journal.pdig.0000485
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11045073/>

15. Chaudhuri S, Kasibhatla P, Mukherjee A, et al. Analysis of overdispersion in airborne transmission of COVID-19. *Physics of Fluids.* May 31, 2022. <https://doi.org/10.1063/5.0089347>
<https://pubs.aip.org/aip/pof/article/34/5/051914/2846582/Analysis-of-overdispersion-in-airborne>

16. UK COVID-19 Inquiry. INQ000148403 – Witness Statement of Dr Jonathan Fluxman, on behalf of Doctors in Unite, dated 13/04/2023. Published: 24 July 2023 <https://covid19.public-inquiry.uk/documents/inq000148403-witness-statement-of-dr-jonathan-fluxman-on-behalf-of-doctors-in-unite-dated-13-04-2023/>

17. Althouse BM, Wenger EA, Miller JC, et al. Superspreading events in the transmission dynamics of SARS-CoV-2: Opportunities for interventions and control. *PLoS Biol.* 2020;18(11):e3000897. Published 2020 Nov 12. doi:10.1371/journal.pbio.3000897
<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000897>

18. Park SY, Kim YM, Yi S, et al. Coronavirus Disease Outbreak in Call Center, South Korea. *Emerg Infect Dis.* 2020;26(8):1666-1670. doi:10.3201/eid2608.201274
<https://wwwnc.cdc.gov/eid/article/26/8/20-1274-f2>

19. Manica M, Poletti P, Deandrea S, et al. Estimating SARS-CoV-2 transmission in educational settings: A retrospective cohort study. *Influenza Other Respir Viruses.* 2023;17(1):e13049. doi:10.1111/irv.13049 <https://covid.dropcite.com/articles/3b4e0c76-5405-4c4c-91d8-53df47c0a9bb>

20. Park E, Choi SY, Lee S, Kim M, Lee K, Lee S, Yoon S, Kim N, Oh WS, Kim E, Kim BI, Song JS. Widespread Household Transmission of SARS-CoV-2 B.1.1.529 (Omicron) Variant from Children, South Korea, 2022. *Yonsei Med J.* 2023 May;64(5):344-348. <https://doi.org/10.3349/ymj.2022.0608>

<https://eymj.org/DOIx.php?id=10.3349/ymj.2022.0608>

21. Tseng YJ, Olson KL, Bloch D, Mandl KD. Smart Thermometer-Based Participatory Surveillance to Discern the Role of Children in Household Viral Transmission During the COVID-19 Pandemic. *JAMA Netw Open*. 2023 Jun 1;6(6):e2316190. doi: 10.1001/jamanetworkopen.2023.16190. Erratum in: *JAMA Netw Open*. 2023 Aug 1;6(8):e2330424. doi: 10.1001/jamanetworkopen.2023.30424. PMID: 37261828; PMCID: PMC10236238. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10236238/>
22. Saey TH. Anatomy of the South Korean MERS outbreak. *ScienceNews*. Dec. 22, 2015. <https://www.sciencenews.org/article/anatomy-south-korean-mers-outbreak>
23. Jimenez JL, Marr LC, Randall K, et al. What were the historical reasons for the resistance to recognizing airborne transmission during the COVID-19 pandemic?. *Indoor Air*. 2022;32(8):e13070. doi:10.1111/ina.13070 <https://pubmed.ncbi.nlm.nih.gov/36040283/>
24. Abbott S, Funk S. Real-time epidemiological estimates from ONS Community Infection Survey data. April 28, 2023. <https://epiforecasts.io/inc2prev/report>
25. Bowe, B., Xie, Y. & Al-Aly, Z. Acute and postacute sequelae associated with SARS-CoV-2 reinfection. *Nat Med* **28**, 2398–2405 (2022). <https://doi.org/10.1038/s41591-022-02051-3>
<https://www.nature.com/articles/s41591-022-02051-3>
26. Buonanno G, Ricolfi L, Morawska L, Stabile L. Increasing ventilation reduces SARS-CoV-2 airborne transmission in schools: A retrospective cohort study in Italy's Marche region. *Front Public Health*. 2022;10:1087087. Published 2022 Dec 9. doi:10.3389/fpubh.2022.1087087
<https://pubmed.ncbi.nlm.nih.gov/36568748/>
27. Shields A, Faustini SE, Perez-Toledo M, et al. SARS-CoV-2 seroprevalence and asymptomatic viral carriage in healthcare workers: a cross-sectional study. *Thorax*. 2020;75(12):1089-1094. doi:10.1136/thoraxjnl-2020-215414
<https://thorax.bmj.com/content/75/12/1089>
28. World Economic Forum. Guidance on Health Measures. Annual Meeting 2023. Jan. 16-10, 2023. https://www3.weforum.org/docs/AM23_Health_and_Safety_Measures.pdf
29. Windsor-Shellard B, Nasir R. Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 28 December 2020. Census2021. Office for National Statistics. Jan. 25, 2021.
<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetweeen9marchand28december2020>
30. National infection prevention and control manual (NIPCM) for England. Version 2.10. NHS England. May 23, 2024. <https://www.england.nhs.uk/national-infection-prevention-and-control-manual-nipcm-for-england/>

31. Puhach, O., Meyer, B. & Eckerle, I. SARS-CoV-2 viral load and shedding kinetics. *Nat Rev Microbiol* **21**, 147–161 (2023). <https://doi.org/10.1038/s41579-022-00822-w>
<https://www.nature.com/articles/s41579-022-00822-w>
32. Read JM, Green CA, Harrison EM, Docherty AB, Funk S, Harrison J, Girvan M, Hardwick HE, Turtle L, Dunning J, Nguyen-Van-Tam JS, Openshaw PJ, Baillie JK, Semple MG; ISARIC4C investigators. Hospital-acquired SARS-CoV-2 infection in the UK's first COVID-19 pandemic wave. *Lancet*. 2021 Sep 18;398(10305):1037-1038. doi: 10.1016/S0140-6736(21)01786-4. Epub 2021 Aug 13. PMID: 34391505; PMCID: PMC8360701.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8360701/#:~:text=Hospitals%20providing%20acute%20and%20general,outbreaks%20seen%20in%20care%20homes>
33. Deaths involving coronavirus (COVID-19) among health and social care workers (those aged 20 to 64 years), England and Wales, deaths registered, 9 March 2020 to 28 February 2022. Office for National Statistics. Feb. 28, 2022.
<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/adhocs/14379deathsinvolvingcoronaviruscovid19amonghealthandsocialcareworkersthoseaged20to64yearsenglandandwalesdeathsregistered9march2020to28february2022>
34. UK Parliament. Long Covid. Volume 825: debated on Thursday 17 November 2022
<https://hansard.parliament.uk/lords/2022-11-17/debates/E105F485-3B07-4020-AA3A-118870DCF534/LongCovid> <https://hansard.parliament.uk/lords/2022-11-17/debates/E105F485-3B07-4020-AA3A-118870DCF534/LongCovid>
35. Publication of statistics on deaths involving COVID-19 in care homes in England: transparency statement. Mar. 26, 2024. Care Quality Commission.
<https://www.cqc.org.uk/publications/major-reports/publication-statistics-deaths-involving-covid-19-care-homes-england>
36. Williams K. 'We need to do better' - over 14,000 people died with Covid after catching it in hospital. Mar. 13, 2013. Mirror. <https://www.mirror.co.uk/news/uk-news/we-need-better-over-14000-28046576>
37. UK COVID-19 Inquiry. What is the UK Covid-19 Inquiry? <https://covid19.public-inquiry.uk/>

Paul Conway

1. Evans RA, Dube S, Lu Y, et al. Impact of COVID-19 on immunocompromised populations during the Omicron era: insights from the observational population-based INFORM study. *The Lancet, Regional Health*. Oct. 12, 2023.
[https://www.thelancet.com/journals/lanepi/article/PIIS2666-7762\(23\)00166-7/fulltext](https://www.thelancet.com/journals/lanepi/article/PIIS2666-7762(23)00166-7/fulltext)
2. Ketkar A, Willey V, Pollack M, et al. Assessing the risk and costs of COVID-19 immunocompromised populations in a large United States commercial insurance health plan: the EPOCH-US Study. *Curr Med Res Opin*. 2023 Aug;39(8):1103-1118. doi: 10.1080/03007995.2023.2233819. Epub 2023 Jul 17. PMID: 37431293.

<https://www.tandfonline.com/doi/full/10.1080/03007995.2023.2233819>

3. Special Considerations in Solid Organ Transplant, Hematopoietic Cell Transplant, and Cellular Immunotherapy Candidates, Donors, and Recipients. NIH COVID-19 Treatment Guidelines. Updated Mar. 6, 2023.

<https://www.covid19treatmentguidelines.nih.gov/special-populations/transplant/#Vaccination%20For%20Covid-19>

Kaitlin Sundling, MD, PHD

1. Documentary: The Cancer Detectives on PBS's American Experience. Mar. 26, 2024
<https://www.pbs.org/wgbh/americanexperience/films/cancer-detectives/>
2. Elfström M, Gray PG, Dillner J. Cervical cancer screening improvements with self-sampling during the COVID-19 pandemic. *Elife*. 2023 Dec 12;12:e80905. doi: 10.7554/eLife.80905. PMID: 38085566; PMCID: PMC10715724.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10715724/>
3. Mast C, Deckert , Munoz del Rio A. Troubling Cancer Screening Rates Still Seen Nearly Two Years Into the Pandemic. *Epic Research*. Jan. 18, 2022.
<https://www.epicresearch.org/articles/troubling-cancer-screening-rates-still-seen-nearly-two-years-into-the-pandemic>
4. Bartelt K, Piff A, Fox B, Sandberg N. Cervical Dysplasia Rates Remain Steady Despite Reports of Declines in Cervical Cancer Diagnoses. *Epic Research*. Oct. 31, 2023.
<https://www.epicresearch.org/articles/cervical-dysplasia-rates-remain-steady-despite-reports-of-declines-in-cervical-cancer-diagnoses>
5. Maria A. Villarroel, Ph.D., Adena M. Galinsky, Ph.D., Peng-Jun Lu, M.D., Ph.D., and Cassandra Pingali, M.S., M.P.H. Human Papillomavirus Vaccination Coverage in Children Ages 9–17 Years: United States, 2022. *CDC. NCHS Data Brief No. 495*, February 2024
<https://www.cdc.gov/nchs/products/databriefs/db495.htm>
6. The HPV Vaccine: Why Parents Really Choose to Refuse. *Newsroom. Johns Hopkins Medicine*. Oct. 24, 2018. <https://www.hopkinsmedicine.org/news/newsroom/news-releases/2018/10/the-hpv-vaccine-why-parents-really-choose-to-refuse>
7. White MK, Pagano JS, Khalili K. Viruses and human cancers: a long road of discovery of molecular paradigms. *Clin Microbiol Rev*. 2014 Jul;27(3):463-81. doi: 10.1128/CMR.00124-13. PMID: 24982317; PMCID: PMC4135891.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4135891/>

8. Caramaschi S, Kapp ME, Miller SE, et al. Histopathological findings and clinicopathologic correlation in COVID-19: a systematic review. *Mod Pathol*. 2021;34(9):1614-1633. doi:10.1038/s41379-021-00814-w [https://www.modernpathology.org/article/S0893-3952\(22\)00542-7/fulltext](https://www.modernpathology.org/article/S0893-3952(22)00542-7/fulltext)
9. Al-Aly Z, Topol E. Solving the puzzle of Long Covid. *Science*. 2024;383(6685):830-832. doi:10.1126/science.adl0867 <https://www.science.org/doi/10.1126/science.adl0867>
10. Hanahan D, Weinberg RA. Hallmarks of cancer: the next generation. *Cell*. 2011;144(5):646-674. doi:10.1016/j.cell.2011.02.013 <https://pubmed.ncbi.nlm.nih.gov/21376230/>
11. COVID-19: What People with Cancer Should Know. National Cancer Institute. April 10, 2024. <https://www.cancer.gov/about-cancer/coronavirus/coronavirus-cancer-patient-information>
12. Chavez-MacGregor M, Lei X, Zhao H, Scheet P, Giordano SH. Evaluation of COVID-19 Mortality and Adverse Outcomes in US Patients With or Without Cancer. *JAMA Oncol*. 2022;8(1):69-78. doi:10.1001/jamaoncol.2021.5148 <https://jamanetwork.com/journals/jamaoncology/fullarticle/2785677>
13. Sultan R. 3 COVID Experts on Why the CDC's Isolation Guidelines Are Bad for Public Health. SELF. Mar. 7, 2024. <https://www.self.com/story/cdc-new-covid-19-isolation-guidelines>
14. Sundling K. Safer air needs proven technology. Substack. Oct. 2, 2023. <https://precaution.substack.com/p/safer-air-needs-proven-technology>
15. Sundling K. Health and Safety in University Classrooms. Substack. Aug. 31, 2023. <https://precaution.substack.com/p/health-and-safety-in-university-classrooms>
16. Joo R, Sánchez-Tapia A, Mortara S, et al. Ten simple rules to host an inclusive conference. *PLoS Comput Biol*. 2022;18(7):e1010164. Published 2022 Jul 21. doi:10.1371/journal.pcbi.1010164 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9302732/>
17. McAlpine ED, Michelow P. The cytopathologist's role in developing and evaluating artificial intelligence in cytopathology practice. *Cytopathology*. 2020;31(5):385-392. doi:10.1111/cyt.12799 <https://pubmed.ncbi.nlm.nih.gov/31957101/>

Long COVID Scotland

1. Menz BD, Modi ND, Sorich MJ, Hopkins AM. Health Disinformation Use Case Highlighting the Urgent Need for Artificial Intelligence Vigilance: Weapons of Mass Disinformation. *JAMA Intern Med*. 2024;184(1):92-96. doi:10.1001/jamainternmed.2023.5947

<https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2811333>

2. Elliott L. Buoyant UK labour market data belies rise in long-term sickness. *The Guardian*. Feb. 13, 2024. <https://www.theguardian.com/politics/2024/feb/13/uk-labour-market-long-term-sickness-economy-workers>
3. Thousands of Scots Living with Long Covid Left Unsupported and Unable to Work. *Chest Heart & Stroke Scotland*. Mar. 7, 2024. <https://www.chss.org.uk/news/thousands-of-scots-living-with-long-covid-left-unsupported-and-unable-to-work/>
4. Accessing Long Covid services in Scotland: to be believed, listened to and supported. *Alliance*. Feb. 15, 2024. <https://www.alliance-scotland.org.uk/blog/news/accessing-long-covid-services-in-scotland-to-be-believed-listened-to-and-supported/>

Jacqueline Becker, PhD

1. Becker JH, Lin JJ, Doernberg M, et al. Assessment of Cognitive Function in Patients After COVID-19 Infection. *JAMA Netw Open*. 2021;4(10):e2130645. Published 2021 Oct 1. doi:10.1001/jamanetworkopen.2021.30645
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2785388>
<https://store.samhsa.gov/sites/default/files/pep23-01-00-001.pdf>
2. Becker J. Overview of the Impacts of Long COVID on Behavioral Health. SAMHSA (Substance Abuse and Mental Health Services Administration). May 3, 2024. <https://www.samhsa.gov/resource/spark/overview-impacts-long-covid-behavioral-health>
3. Douaud, G., Lee, S., Alfaro-Almagro, F. et al. SARS-CoV-2 is associated with changes in brain structure in UK Biobank. *Nature* **604**, 697–707 (2022). <https://doi.org/10.1038/s41586-022-04569-5> <https://www.nature.com/articles/s41586-022-04569-5>
4. Liu Y, Chen Y, Wang Q, et al. One-Year Trajectory of Cognitive Changes in Older Survivors of COVID-19 in Wuhan, China: A Longitudinal Cohort Study. *JAMA Neurol*. 2022;79(5):509–517. doi:10.1001/jamaneurol.2022.0461
<https://jamanetwork.com/journals/jamaneurology/fullarticle/2789919>
5. Rossi S, Prodi E, Morese R, Paone G, Ruberto T, Sacco L. Persistent 18F-FDG Brain PET Fronto-Temporal Hypometabolism and Cognitive Symptoms Two Years after SARS-CoV-2 Infection: A Case Report. *Neurol Int*. 2023;15(3):908-916. Published 2023 Jul 25. doi:10.3390/neurolint15030058
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10443341/>
6. Hall PA, Ayaz H, Meng G, et al. Neurocognitive and psychiatric symptoms following infection with COVID-19: Evidence from laboratory and population studies. *Brain Behav Immun Health*. 2023;28:100595. doi:10.1016/j.bbih.2023.100595

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9870612/>

7. Clemente L, La Rocca M, Quaranta N, et al. Prefrontal dysfunction in post-COVID-19 hyposmia: an EEG/fNIRS study. *Front Hum Neurosci*. 2023;17:1240831. Published 2023 Sep 27. doi:10.3389/fnhum.2023.1240831
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10564993/>
8. Tabacof L, Tosto-Mancuso J, Wood J, et al. Post-acute COVID-19 Syndrome Negatively Impacts Physical Function, Cognitive Function, Health-Related Quality of Life, and Participation. *Am J Phys Med Rehabil*. 2022;101(1):48-52.
doi:10.1097/PHM.0000000000001910
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8667685/>
9. Van Wambeke E, Bezler C, Kasprowicz AM, Charles AL, Andres E, Geny B. Two-Years Follow-Up of Symptoms and Return to Work in Complex Post-COVID-19 Patients. *J Clin Med*. 2023;12(3):741. Published 2023 Jan 17. doi:10.3390/jcm12030741
<https://pubmed.ncbi.nlm.nih.gov/36769389/>

Matthias Maiwald, MD

1. Wan WY, Thoon KC, Loo LH, et al. Trends in Respiratory Virus Infections During the COVID-19 Pandemic in Singapore, 2020. *JAMA Netw Open*. 2021;4(6):e2115973. Published 2021 Jun 1. doi:10.1001/jamanetworkopen.2021.15973
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2781461>
2. Caini S, Meijer A, Nunes MC, et al. Probable extinction of influenza B/Yamagata and its public health implications: a systematic literature review and assessment of global surveillance databases. *Lancet Microbe*. Published online May 7, 2024. doi:10.1016/S2666-5247(24)00066-1 [https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247\(24\)00066-1/fulltext](https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(24)00066-1/fulltext)
3. Vittucci AC, Piccioni L, Coltella L, et al. The Disappearance of Respiratory Viruses in Children during the COVID-19 Pandemic. *Int J Environ Res Public Health*. 2021;18(18):9550. Published 2021 Sep 10. doi:10.3390/ijerph18189550
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8467075/>
4. Perez-Lopez A, Hasan M, Iqbal M, Janahi M, Roscoe D, Tang P. Dramatic decrease of laboratory-confirmed influenza A after school closure in response to COVID-19. *Pediatr Pulmonol*. 2020;55(9):2233-2234. doi:10.1002/ppul.24933
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7361779/>
5. Olsen SJ, Winn AK, Budd AP, et al. Changes in Influenza and Other Respiratory Virus Activity During the COVID-19 Pandemic - United States, 2020-2021. *MMWR Morb Mortal Wkly Rep*.

2021;70(29):1013-1019. Published 2021 Jul 23. doi:10.15585/mmwr.mm7029a1
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8297694/>

6. Marriott D, Beresford R, Mirdad F, et al. Concomitant Marked Decline in Prevalence of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Other Respiratory Viruses Among Symptomatic Patients Following Public Health Interventions in Australia: Data from St Vincent's Hospital and Associated Screening Clinics, Sydney, NSW. *Clin Infect Dis*. 2021;72(10):e649-e651. doi:10.1093/cid/ciaa1256
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7499558/>
7. Fuchs H. Experts urge prioritizing children in pandemic. DW. Science Germany. Feb. 23, 2022. <https://www.dw.com/en/how-have-children-fared-in-germany-in-the-latest-wave-of-the-covid-pandemic/a-60861300>
8. Eden, JS., Sikazwe, C., Xie, R. et al. Off-season RSV epidemics in Australia after easing of COVID-19 restrictions. *Nat Commun* 13, 2884 (2022). <https://doi.org/10.1038/s41467-022-30485-3> <https://www.nature.com/articles/s41467-022-30485-3>
9. Ujiie M, Tsuzuki S, Nakamoto T, Iwamoto N. Resurgence of Respiratory Syncytial Virus Infections during COVID-19 Pandemic, Tokyo, Japan. *Emerg Infect Dis*. 2021;27(11):2969-2970. doi:10.3201/eid2711.211565 <https://pubmed.ncbi.nlm.nih.gov/34388086/>
10. Loconsole D, Centrone F, Rizzo C, et al. Out-of-Season Epidemic of Respiratory Syncytial Virus during the COVID-19 Pandemic: The High Burden of Child Hospitalization in an Academic Hospital in Southern Italy in 2021. *Children (Basel)*. 2022;9(6):848. Published 2022 Jun 8. doi:10.3390/children9060848
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9221938/>
11. Meyer Sauter PM, Chalker VJ, Berger C, Nir-Paz R, Beeton ML; ESGMAC and the ESGMAC–MyCOVID study group. *Mycoplasma pneumoniae* beyond the COVID-19 pandemic: where is it?. *Lancet Microbe*. 2022;3(12):e897. doi:10.1016/S2666-5247(22)00190-2
<https://pubmed.ncbi.nlm.nih.gov/35964636/>
12. Meyer Sauter PM, Beeton ML; ESGMAC the ESGMAC MAPS study group. *Mycoplasma pneumoniae*: gone forever?. *Lancet Microbe*. 2023;4(10):e763. doi:10.1016/S2666-5247(23)00182-9 <https://pubmed.ncbi.nlm.nih.gov/37393927/>
13. Meyer Sauter PM, Beeton ML; European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Group for *Mycoplasma* and *Chlamydia* Infections (ESGMAC), and the ESGMAC *Mycoplasma pneumoniae* Surveillance (MAPS) study group. *Mycoplasma pneumoniae*: delayed re-emergence after COVID-19 pandemic restrictions. *Lancet Microbe*. 2024;5(2):e100-e101. doi:10.1016/S2666-5247(23)00344-0
[https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247\(23\)00344-0/fulltext](https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(23)00344-0/fulltext)

14. Meyer Sauter PM, Beeton ML; European Society of Clinical Microbiology and Infectious Diseases (ESCMID) Study Group for Mycoplasma and Chlamydia Infections (ESGMAC), and the ESGMAC Mycoplasma pneumoniae Surveillance (MAPS) study group. Pneumonia outbreaks due to re-emergence of Mycoplasma pneumoniae. *Lancet Microbe*. 2024;5(6):e514. doi:10.1016/S2666-5247(23)00406-8
[https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247\(23\)00406-8/fulltext](https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(23)00406-8/fulltext)
15. Li H, Li S, Yang H, Chen Z, Zhou Z. Resurgence of Mycoplasma pneumonia by macrolide-resistant epidemic clones in China. *Lancet Microbe*. 2024;5(6):e515. doi:10.1016/S2666-5247(23)00405-6 [https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247\(23\)00405-6/fulltext](https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(23)00405-6/fulltext)
16. Conroy G. What's behind China's mysterious wave of childhood pneumonia? *Nature*. Nov. 27, 2023. <https://www.nature.com/articles/d41586-023-03732-w>
17. Zhang XB, He W, Gui YH, et al. Current Mycoplasma pneumoniae epidemic among children in Shanghai: unusual pneumonia caused by usual pathogen. *World J Pediatr*. 2024;20(1):5-10. doi:10.1007/s12519-023-00793-9 <https://pubmed.ncbi.nlm.nih.gov/38231466/>
18. Phetsouphanh, C., Darley, D.R., Wilson, D.B. et al. Immunological dysfunction persists for 8 months following initial mild-to-moderate SARS-CoV-2 infection. *Nat Immunol* **23**, 210–216 (2022). <https://doi.org/10.1038/s41590-021-01113-x>
<https://www.nature.com/articles/s41590-021-01113-x>
19. Shen, XR., Geng, R., Li, Q. et al. ACE2-independent infection of T lymphocytes by SARS-CoV-2. *Sig Transduct Target Ther* **7**, 83 (2022). <https://doi.org/10.1038/s41392-022-00919-x>
<https://www.nature.com/articles/s41392-022-00919-x>
20. Leifler KS. Examining COVID-19's long-term effects on the innate immune system. *Medical Press*. Jan. 20, 2023. <https://medicalxpress.com/news/2023-01-covid-long-term-effects-innate-immune.html>
21. Cheong JG, Ravishankar A, Sharma S, et al. Epigenetic memory of coronavirus infection in innate immune cells and their progenitors. *Cell*. 2023;186(18):3882-3902.e24. doi:10.1016/j.cell.2023.07.019 [https://www.cell.com/cell/abstract/S0092-8674\(23\)00796-1](https://www.cell.com/cell/abstract/S0092-8674(23)00796-1)
22. Sawitzki B. Haunting innate immune memories of COVID-19. *Cell*. 2023;186(18):3753-3755. doi:10.1016/j.cell.2023.07.033 [https://www.cell.com/cell/abstract/S0092-8674\(23\)00848-6](https://www.cell.com/cell/abstract/S0092-8674(23)00848-6)

Kevin Kavanagh, MD, MS -- Spread

1. Karimzadeh S, Bhopal R, Nguyen Tien H. Review of infective dose, routes of transmission and outcome of COVID-19 caused by the SARS-COV-2: comparison with other respiratory

viruses [published correction appears in *Epidemiol Infect.* 2021 May 14;149:e116. doi: 10.1017/S0950268821001084]. *Epidemiol Infect.* 2021;149:e96. Published 2021 Apr 14. doi:10.1017/S0950268821000790
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8082124/>

2. Airborne Transmission of SARS-CoV-2: Proceedings of a Workshop—in Brief | The National Academies Press. Oct. 2020. <https://nap.nationalacademies.org/catalog/25958/airborne-transmission-of-sars-cov-2-proceedings-of-a-workshop>
3. Lind, M.L., Dorion, M., Houde, A.J. et al. Evidence of leaky protection following COVID-19 vaccination and SARS-CoV-2 infection in an incarcerated population. *Nat Commun* 14, 5055 (2023). <https://doi.org/10.1038/s41467-023-40750-8>
4. Ferretti, L., Wymant, C., Petrie, J. et al. Digital measurement of SARS-CoV-2 transmission risk from 7 million contacts. *Nature* 626, 145–150 (2024). <https://doi.org/10.1038/s41586-023-06952-2>
5. Mandavilli A. 239 Experts With One Big Claim: The Coronavirus Is Airborne. *The New York Times*. July 4, 2020. <https://www.nytimes.com/2020/07/04/health/239-experts-with-one-big-claim-the-coronavirus-is-airborne.html>
6. Morawska L, Milton DK. It Is Time to Address Airborne Transmission of Coronavirus Disease 2019 (COVID-19). *Clin Infect Dis.* 2020;71(9):2311-2313. doi:10.1093/cid/ciaa939
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7454469/>
7. Raymenants, J., Geenen, C., Budts, L. et al. Indoor air surveillance and factors associated with respiratory pathogen detection in community settings in Belgium. *Nat Commun* 14, 1332 (2023). <https://doi.org/10.1038/s41467-023-36986-z>
8. Ventilation in Buildings. CDC. COVID-19. May 12, 2023.
<https://www.cdc.gov/coronavirus/2019-ncov/community/ventilation.html>
9. What is a MERV rating? EPA. Indoor Air Quality (IAQ). Mar. 5, 2024.
<https://www.epa.gov/indoor-air-quality-iaq/what-merv-rating>
10. Buonanno G, Ricolfi L, Morawska L, Stabile L. Increasing ventilation reduces SARS-CoV-2 airborne transmission in schools: A retrospective cohort study in Italy's Marche region. *Front Public Health.* 2022;10:1087087. Published 2022 Dec 9. doi:10.3389/fpubh.2022.1087087
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9787545/>
11. Getting to and Sustaining the Next Normal. A Roadmap for Living with COVID. The Rockefeller Foundation. March 2022. <https://www.rockefellerfoundation.org/wp-content/uploads/2022/03/Getting-to-and-Sustaining-the-Next-Normal-A-Roadmap-for->

[Living-with-Covid-Report-Final.pdf](#)

12. Chu DK, Akl EA, Duda S, et al. Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. *Lancet*. 2020;395(10242):1973-1987. doi:10.1016/S0140-6736(20)31142-9 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31142-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext)
13. Adalja A. When It Comes to Isolation, COVID Shouldn't Be Singled Out From the Pack. *MedPage Today*. 2024 Feb. 20, 2024. <https://www.medpagetoday.com/opinion/second-opinions/108817>
14. Bridges CA. Long COVID: More than 1 in 4 Floridians with COVID developed lasting symptoms, survey says. *USA Today*. Feb. 16, 2024. <https://www.usatoday.com/story/news/2024/02/16/long-covid-census-survey-shows-1-in-4-cases-florida-had-lasting-symptoms/72625729007/>
15. Many young people suffer from brain fog after the pandemic. *lf*. Feb. 15, 2023. <https://via.tt.se/pressmeddelande/3340271/manga-unga-lider-av-hjarndimma-efter-pandemin>
16. Elliott L. Record long-term sickness bodes ill for UK economic growth. *The Guardian*. 2024. <https://www.theguardian.com/business/2024/feb/17/record-long-term-sickness-bodes-ill-for-uk-economic-growth>
17. New data shows long Covid is keeping as many as 4 million people out of work [Internet]. 2022. Available from: <https://www.brookings.edu/articles/new-data-shows-long-covid-is-keeping-as-many-as-4-million-people-out-of-work>
18. Kavanagh KT, M Maiwald, LE Cormier. Viewpoint: The Impending Pandemic of Resistant Organisms – A Paradigm Shift Towards Source Control is Needed. *Medicine*. Aug. 2, 2024. https://journals.lww.com/md-journal/fulltext/2024/08020/viewpoint_the_impending_pandemic_of_resistant.46.aspx

Kevin Kavanagh, MD, MS – Vaccines.

1. Roos D. How Crude Smallpox Inoculations Helped George Washington Win the War. *History*. June 20, 2023. <https://www.history.com/news/smallpox-george-washington-revolutionary-war>
2. Zimmer C, Corum J, Wee SI, Dristoffersen M. Coronavirus Vaccine Tracker. *New York Times*. Aug. 31, 2022. <https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html>

3. Sellaturay P, Nasser S, Islam S, Gurugama P, Ewan PW. Polyethylene glycol (PEG) is a cause of anaphylaxis to the Pfizer/BioNTech mRNA COVID-19 vaccine. *Clin Exp Allergy*. 2021 Jun;51(6):861-863. doi: 10.1111/cea.13874. Epub 2021 Apr 9. PMID: 33825239; PMCID: PMC8251011. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8251011/>
4. Sutton N, San Francisco Ramos A, Beales E, et al. Comparing reactogenicity of COVID-19 vaccines: a systematic review and meta-analysis. *Expert Rev Vaccines*. 2022;21(9):1301-1318. doi:10.1080/14760584.2022.2098719 <https://www.tandfonline.com/doi/full/10.1080/14760584.2022.2098719>
5. Griffin I, King J, Lyons B, et al. Estimates of SARS-CoV-2 Hospitalization and Fatality Rates in the Prevaccination Period, United States. *Emerging Infectious Diseases*. 2024;30(6):1144-1153. doi:10.3201/eid3006.231285. https://wwwnc.cdc.gov/eid/article/30/6/23-1285_article#;
6. Hetrick C. COVID-19 Vaccination Campaign Saved 2.4 Million Lives. USC Schaeffer. Oct. 30, 2023. <https://healthpolicy.usc.edu/article/covid-vaccine-lives-saved-study/>
7. COVID-19 Incidence and Mortality Among Unvaccinated and Vaccinated Persons Aged ≥ 12 Years. CDC. Feb. 10, 2024. <https://www.youtube.com/watch?v=FpTKit6u9Wc>
8. Cox C, Amin K, Kates J, Michaud J. Why Do Vaccinated People Represent Most COVID-19 Deaths Right Now? KFF. Nov. 30, 2022. <https://www.kff.org/policy-watch/why-do-vaccinated-people-represent-most-covid-19-deaths-right-now/>
9. Link-Gelles R, Ciesla AA, Mak J, et al. Early Estimates of Updated 2023–2024 (Monovalent XBB.1.5) COVID-19 Vaccine Effectiveness Against Symptomatic SARS-CoV-2 Infection Attributable to Co-Circulating Omicron Variants Among Immunocompetent Adults — Increasing Community Access to Testing Program, United States, September 2023–January 2024. *MMWR Morb Mortal Wkly Rep* 2024;73:77–83. DOI: <http://dx.doi.org/10.15585/mmwr.mm7304a2>
10. Kavanagh KT. COVID-19 Booster Shots for Older Americans Might be Needed. *Infection Control Today*. Aug. 2, 2021. <https://www.infectioncontrolday.com/view/covid-19-booster-shots-for-older-americans-might-be-needed>
11. Kavanagh KT. Israel to Offer COVID-19 Booster Shots to Older Citizens. *Infection Control Today*. July 29, 2021. <https://www.infectioncontrolday.com/view/latest-data-point-to-a-need-for-covid-19-booster-shots>
12. Tortorici MA, Addetia A, Seo AJ, et al. Persistent immune imprinting occurs after vaccination with the COVID-19 XBB.1.5 mRNA booster in humans. *Immunity*. 2024;57(4):904-911.e4. doi:10.1016/j.immuni.2024.02.016 <https://www.cell.com/immunity/fulltext/S1074->

[7613\(24\)00092-X](#)

13. Faksova K, Walsh D, Jiang Y, et al. COVID-19 vaccines and adverse events of special interest: A multinational Global Vaccine Data Network (GVDN) cohort study of 99 million vaccinated individuals. *Vaccine*. 2024;42(9):2200-2211. doi:10.1016/j.vaccine.2024.01.100 <https://www.sciencedirect.com/science/article/pii/S0264410X24001270?via%3Dihub>
14. Kavanagh KT. Is COVID-19 Primarily a Heart and Vascular Disease ? *Infection Control Today*. Sept. 8, 2020. <https://www.infectioncontrolday.com/view/is-covid-19-primarily-a-heart-and-vascular-diseases>
15. Wong HL, Hu M, Zhou CK, et al. Risk of myocarditis and pericarditis after the COVID-19 mRNA vaccination in the USA: a cohort study in claims databases. *Lancet*. 2022;399(10342):2191-2199. doi:10.1016/S0140-6736(22)00791-7 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9183215/>
16. Klein N. Myocarditis Analyses in the Vaccine Safety Datalink: Rapid Cycle Analyses and “Head-to-Head” Product Comparisons. CDC, Kaiser Permanente, Marshfield Clinic. Feb. 4, 2022. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-02-04/10-COVID-Klein-508.pdf>
17. Mallick D, Goyal L, Chourasia P, Zapata MR, Yashi K, Surani S. COVID-19 Induced Postural Orthostatic Tachycardia Syndrome (POTS): A Review. *Cureus*. 2023 Mar 31;15(3):e36955. doi: 10.7759/cureus.36955. PMID: 37009342; PMCID: PMC10065129. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10065129/>
18. Al-Aly, Z., Xie, Y. & Bowe, B. High-dimensional characterization of post-acute sequelae of COVID-19. *Nature* **594**, 259–264 (2021). <https://doi.org/10.1038/s41586-021-03553-9> <https://www.nature.com/articles/s41586-021-03553-9>
19. Cai, M., Xie, Y., Topol, E.J. et al. Three-year outcomes of post-acute sequelae of COVID-19. *Nat Med* **30**, 1564–1573 (2024). <https://doi.org/10.1038/s41591-024-02987-8> <https://www.nature.com/articles/s41591-024-02987-8>
20. Bowe, B., Xie, Y. & Al-Aly, Z. Acute and postacute sequelae associated with SARS-CoV-2 reinfection. *Nat Med* **28**, 2398–2405 (2022). <https://doi.org/10.1038/s41591-022-02051-3> <https://www.nature.com/articles/s41591-022-02051-3>
21. Foret-Bruno P, Shafran R, Stephenson T, et al. Prevalence and co-occurrence of cognitive impairment in children and young people up to 12-months post infection with SARS-CoV-2 (Omicron variant). *Brain Behav Immun*. 2024;119:989-994. doi:10.1016/j.bbi.2024.05.001 <https://www.sciencedirect.com/science/article/pii/S0889159124003891?via%3Dihub>

22. 15% EU people reported memory and concentration issues. Eurostat. Jan. 29, 2024.
<https://ec.europa.eu/eurostat/en/web/products-eurostat-news/w/ddn-20240129-1>
23. Marra AR, Kobayashi T, Callado GY, et al. The effectiveness of COVID-19 vaccine in the prevention of post-COVID conditions: a systematic literature review and meta-analysis of the latest research. *Antimicrob Steward Healthc Epidemiol.* 2023;3(1):e168.
doi:10.1017/ash.2023.447 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10644173/>
24. Nayyerabadi M, Fourcade L, Joshi SA, et al. Vaccination after developing long COVID: Impact on clinical presentation, viral persistence, and immune responses. *Int J Infect Dis.* Nov 2023;136:136-145. doi:10.1016/j.ijid.2023.09.006
[https://linkinghub.elsevier.com/retrieve/pii/S1201-9712\(23\)00720-8](https://linkinghub.elsevier.com/retrieve/pii/S1201-9712(23)00720-8)