COVID-19 weekly update

9th November 2022

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**clinical management**

**title:** Interplay of Immunosuppression and Immunotherapy Among Patients With Cancer and COVID-19

jama oncology| 3rd November 2022  
  
Key Points

Question Are immunotherapy (IO) drugs and/or baseline immunosuppression associated with cytokine storm and worse clinical outcomes in patients with cancer and COVID-19 disease?

Findings This cohort study of 12 046 patients with cancer and COVID-19 found that treatment with IO and other systemic anticancer therapies in the context of baseline immunosuppression was associated with an increased incidence of cytokine storm and worse outcomes in patients with cancer infected with SARS-CoV-2.

Meaning These findings suggest that patients with cancer with baseline immunosuppression and COVID-19 may experience worse outcomes when treated with IO or non-IO systemic anticancer therapy, whereas those without any preexisting immune suppression can safely receive anticancer therapeutic regimens.

Abstract

Importance Cytokine storm due to COVID-19 can cause high morbidity and mortality and may be more common in patients with cancer treated with immunotherapy (IO) due to immune system activation.

Objective To determine the association of baseline immunosuppression and/or IO-based therapies with COVID-19 severity and cytokine storm in patients with cancer.  
  
Design, Setting, and Participants This registry-based retrospective cohort study included 12 046 patients reported to the COVID-19 and Cancer Consortium (CCC19) registry from March 2020 to May 2022. The CCC19 registry is a centralized international multi-institutional registry of patients with COVID-19 with a current or past diagnosis of cancer. Records analyzed included patients with active or previous cancer who had a laboratory-confirmed infection with SARS-CoV-2 by polymerase chain reaction and/or serologic findings.

Exposures Immunosuppression due to therapy; systemic anticancer therapy (IO or non-IO).

Main Outcomes and Measures The primary outcome was a 5-level ordinal scale of COVID-19 severity: no complications; hospitalized without requiring oxygen; hospitalized and required oxygen; intensive care unit admission and/or mechanical ventilation; death. The secondary outcome was the occurrence of cytokine storm.

Results

In this qualitative analysis of documentation in the VA-wide EHR, the mean (SD) age of the 200 sampled patients at the time of their first positive PCR test result for SARS-CoV-2 in VA records was 60 (14.5) years. The sample included 173 (86.5%) men; 45 individuals (22.5%) were identified as Black and 136 individuals (68.0%) were identified as White. In qualitative analysis of documentation pertaining to long COVID in patients’ EHRs 2 dominant themes were identified: (1) clinical uncertainty, in that it was often unclear whether particular symptoms could be attributed to long COVID, given the medical complexity and functional limitations of many patients and absence of specific markers for this condition, which could lead to ongoing monitoring, diagnostic testing, and specialist referral; and (2) care fragmentation, describing how post–COVID-19 care processes were often siloed from and poorly coordinated with other aspects of care and could be burdensome to patients.

Conclusions and Relevance This cohort study found that in patients with cancer and COVID-19, administration of systemic anticancer therapies, especially IO, in the context of baseline immunosuppression was associated with severe clinical outcomes and the development of cytokine storm…

<https://jamanetwork.com/journals/jamaoncology/fullarticle/2797979>

**title:** Respiratory system mechanics, gas exchange, and outcomes in mechanically ventilated patients with COVID-19-related acute respiratory distress syndrome: a systematic review and meta-analysis [Review]

The Lancet Respiratory Medicine|3rd november 2022  
  
The association of respiratory mechanics, particularly respiratory system static compliance (CRS), with severity of hypoxaemia in patients with COVID-19-related acute respiratory distress syndrome (ARDS) has been widely debated, with some studies reporting distinct ARDS phenotypes based on CRS. Ascertaining whether such phenotypes exist is important, because they might indicate the need for ventilation strategies that differ from those used in patients with ARDS due to other causes. In a systematic review and meta-analysis of studies published between Dec 1, 2019, and March 14, 2022, we evaluated respiratory system mechanics, ventilator parameters, gas exchange parameters, and clinical outcomes in patients with COVID-19-related ARDS. Among 11 356 patients in 37 studies, mean reported CRS, measured close to the time of endotracheal intubation, was 35·8 mL/cm H2O (95% CI 33·9–37·8; I2=96·9%, τ2=32·6). Pooled mean CRS was normally distributed. Increasing ARDS severity (assessed by PaO2/FiO2 ratio as mild, moderate, or severe) was associated with decreasing CRS. We found no evidence for distinct CRS-based clinical phenotypes in patients with COVID-19-related ARDS, and we therefore conclude that no change in conventional lung-protective ventilation strategies is warranted. Future studies should explore the personalisation of mechanical ventilation strategies according to factors including respiratory system mechanics and haemodynamic status in patients with ARDS…

<https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00393-9/fulltext>

**title:** Incidence and management of inflammatory arthritis in England before and during the COVID-19 pandemic: a population-level cohort study using OpenSAFELY  
  
the lancet infectious diseases The Lancet Rheumatology |3rd november 2022  
  
Summary

Background

The impact of the COVID-19 pandemic on the incidence and management of inflammatory arthritis is not understood. Routinely captured data in secure platforms, such as OpenSAFELY, offer unique opportunities to understand how care for patients with inflammatory arthritis was impacted upon by the pandemic. Our objective was to use OpenSAFELY to assess the effects of the pandemic on diagnostic incidence and care delivery for inflammatory arthritis in England and to replicate key metrics from the National Early Inflammatory Arthritis Audit.

Methods

In this population-level cohort study, we used primary care and hospital data for 17·7 million adults registered with general practices using TPP health record software, to explore the following outcomes between April 1, 2019, and March 31, 2022: (1) incidence of inflammatory arthritis diagnoses (rheumatoid arthritis, psoriatic arthritis, axial spondyloarthritis, and undifferentiated inflammatory arthritis) recorded in primary care; (2) time to first rheumatology assessment; (3) time to first prescription of a disease-modifying antirheumatic drug (DMARD) in primary care; and (4) choice of first DMARD.

Findings

Among 17 683 500 adults, there were 31 280 incident inflammatory arthritis diagnoses recorded between April 1, 2019, and March 31, 2022. The mean age of diagnosed patients was 55·4 years (SD 16·6), 18 615 (59·5%) were female, 12 665 (40·5%) were male, and 22 925 (88·3%) of 25 960 with available ethnicity data were White. New inflammatory arthritis diagnoses decreased by 20·3% in the year commencing April, 2020, relative to the preceding year (5·1 vs 6·4 diagnoses per 10 000 adults). The median time to first rheumatology assessment was shorter during the pandemic (18 days; IQR 8–35) than before (21 days; 9–41). The proportion of patients prescribed DMARDs in primary care was similar before and during the pandemic; however, during the pandemic, fewer people were prescribed methotrexate or leflunomide, and more were prescribed sulfasalazine or hydroxychloroquine.

Interpretation

Inflammatory arthritis diagnoses decreased markedly during the early phase of the pandemic. The impact on rheumatology assessment times and DMARD prescribing in primary care was less marked than might have been anticipated. This study demonstrates the feasibility of using routinely captured, near real-time data in the secure OpenSAFELY platform to benchmark care quality on a national scale, without the need for manual data collection…

<https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(22)00305-8/fulltext>

**title:** The impact of COVID-19 on care of early inflammatory arthritis in the UK [Comment]

the lancet rheumatology | 3rd november 2022

In 2020, the COVID-19 pandemic brought an unprecedented change to rheumatology practice in the UK. There were massive shifts in working patterns of rheumatology teams, with many staff redeployed to other areas of clinical need. This, alongside huge pressures in primary care, had a substantial impact on usual care for patients being referred to rheumatology with suspected inflammatory arthritis.

In The Lancet Rheumatology, Mark Russell and colleagues 1 use the OpenSAFELY database to examine new diagnostic codes for inflammatory arthritis in 2019–22 to examine the impact of the COVID-19 pandemic…

The first finding of this study is that there was a 20% decrease in new inflammatory arthritis diagnoses in the year beginning April, 2020…Considerably fewer people were reviewed for rheumatology problems in secondary care during the peak of the pandemic, possibly due to delays in referral from primary care as a consequence of the introduction of remote appointments. Patients might also have felt that their joint complaints were not a priority to seek medical advice at the peak of the pandemic.

Given the redeployment of clinical staff, additional delays between referral and rheumatology review would have been expected. This study, however, found the opposite, with a reduction in referral time seen during the pandemic compared with referral times before the pandemic (median 18 days [IQR 8–35] vs 21 days [9–41])…

There were similar numbers of prescriptions issued for conventional synthetic DMARDs for patients diagnosed with inflammatory arthritis before and during the pandemic, but the choice of DMARD appeared to be affected, with fewer prescriptions issued for methotrexate and leflunomide during the pandemic…

The most concerning finding of the study is the lack of rebound increase in referrals in the months following 2020. This highlights a potential cohort of patients who have been missed and might present at a later date…

On a positive note, this study demonstrates the potential for routine data sources such as OpenSAFELY to audit care in the NHS beyond the COVID-19 pandemic…

<https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(22)00331-9/fulltext>

**title:** Reliability and Validity of an Instrument of COVID-19 Patient-Reported Symptoms in Outpatients

the JAMA Network Open | 28th october 2022

Question Is the Symptoms Evolution of COVID-19 (SE-C19) instrument a valid and reliable tool, able to detect symptom changes in outpatients with laboratory-confirmed COVID-19?

Findings In this diagnostic/prognostic study of SE-C19 using 657 outpatients with COVID-19 randomized to the NCT04425629 trial, 19 of 23 items from the SE-C19 instrument were identified as valid and reliable to measure disease-related symptoms.

Meaning These findings suggest that the SE-C19 instrument is a valid and reliable method for identifying symptom resolution among outpatients with COVID-19 and may be useful in the clinical research context.

Abstract

Importance Patient-reported outcome instruments are key in assessing COVID-19–related symptoms and associated burden. However, a valid and reliable instrument to assess symptom severity and progression among outpatients with COVID-19 is not yet available.

Objectives To assess the extent to which the Symptoms Evolution of COVID-19 (SE-C19) instrument is valid, reliable, and able to detect symptom changes in outpatients with COVID-19, as well as to establish a definition of symptom resolution.

Design, Setting, and Participants In this diagnostic/prognostic study, psychometric properties of SE-C19 were assessed in participants recruited into an ongoing, adaptive, phase 1/2/3, randomized, double-blind, placebo-controlled clinical trial, during 2020 to 2022. Adult outpatients with symptomatic COVID-19 were randomized 1:1:1 to receive 2.4 g or 8.0 g intravenous casirivimab and imdevimab or placebo, in outpatient centers at 114 sites, from 2 countries (US and Mexico).

Main Outcomes and Measures Reliability, validity, and sensitivity to change of the SE-C19 were assessed. SE-C19 and Patient Global Impression of Severity (PGIS) were administered daily from predose at day 1 to day 29.

Results Analysis was conducted on 657 adult outpatients (342 female patients [52.1%], 562 White patients [85.5%]), and 337 non-Hispanic patients [51.3%]. At baseline, patients reported a mean (SD) of 6.6 (3.9) symptoms (ie, rated as at least mild) with a mean (SD) of 3.8 (3.3) of these symptoms being rated as moderate or severe. Stable patients according to PGIS showed scores with intraclass correlation values indicating moderate-to-good test-retest reliability (ie, 0.50-0.90). At baseline, 20 item scores (87%) varied significantly across PGIS-defined groups, supporting the validity of the SE-C19. A symptom-resolution end point was defined after excluding the item sneezing due to its low ability to discriminate severity levels, and excluding confusion, rash, and vomiting, due to their low prevalence in this population. Symptom resolution required complete absence of all remaining items, except cough, fatigue, and headache, which could be mild or moderate in severity. A total of 19 of 23 items from the SE-C19 instrument were identified as valid and reliable to measure disease-related symptoms in outpatients with COVID-19.

Conclusions and Relevance This study identified 19 items that are valid and reliable to measure disease-related symptoms in outpatients with COVID-19, and proposed a definition of symptom resolution for potential use in future clinical trials…

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2797910>

**title:** Association of Finerenone Use With Reduction in Treatment-Emergent Pneumonia and COVID-19 Adverse Events Among Patients With Type 2 Diabetes and Chronic Kidney Disease: A FIDELITY Pooled Secondary Analysis

the JAMA Network Open | 26th october 2022

Question Is the Symptoms Evolution of COVID-19 (SE-C19) instrument a valid and reliable tool, able to detect symptom changes in outpatients with laboratory-confirmed COVID-19?

Findings In this diagnostic/prognostic study of SE-C19 using 657 outpatients with COVID-19 randomized to the NCT04425629 trial, 19 of 23 items from the SE-C19 instrument were identified as valid and reliable to measure disease-related symptoms.

Meaning These findings suggest that the SE-C19 instrument is a valid and reliable method for identifying symptom resolution among outpatients with COVID-19 and may be useful in the clinical research context.

Abstract

Importance Patient-reported outcome instruments are key in assessing COVID-19–related symptoms and associated burden. However, a valid and reliable instrument to assess symptom severity and progression among outpatients with COVID-19 is not yet available.

Objectives To assess the extent to which the Symptoms Evolution of COVID-19 (SE-C19) instrument is valid, reliable, and able to detect symptom changes in outpatients with COVID-19, as well as to establish a definition of symptom resolution.

Design, Setting, and Participants In this diagnostic/prognostic study, psychometric properties of SE-C19 were assessed in participants recruited into an ongoing, adaptive, phase 1/2/3, randomized, double-blind, placebo-controlled clinical trial, during 2020 to 2022. Adult outpatients with symptomatic COVID-19 were randomized 1:1:1 to receive 2.4 g or 8.0 g intravenous casirivimab and imdevimab or placebo, in outpatient centers at 114 sites, from 2 countries (US and Mexico).

Main Outcomes and Measures Reliability, validity, and sensitivity to change of the SE-C19 were assessed. SE-C19 and Patient Global Impression of Severity (PGIS) were administered daily from predose at day 1 to day 29.

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<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2797910>

**long term effects**

**title:** Complexity and Challenges of the Clinical Diagnosis and Management of Long COVID

JAMA Network Open | 3rd november 2022

Key points

Question What themes pertaining to long COVID can be identified in qualitative analysis of health records from the Department of Veterans Affairs health system?

Findings This qualitative study including health records from 200 randomly sampled veterans identified 2 dominant themes: (1) clinical uncertainty: it was often unclear whether particular symptoms were due to long COVID, given the medical complexity and functional limitations of many patients and absence of specific markers for this condition, which led to ongoing monitoring, diagnostic testing, and referral; and (2) care fragmentation: post–COVID-19 care processes were often siloed from other care and could be burdensome to patients.

Meaning These findings highlight the complexity of diagnosing and managing long COVID in clinical settings.

Abstract

Importance There is increasing recognition of the long-term health effects of SARS-CoV-2 infection (sometimes called long COVID). However, little is yet known about the clinical diagnosis and management of long COVID within health systems.

Objective To describe dominant themes pertaining to the clinical diagnosis and management of long COVID in the electronic health records (EHRs) of patients with a diagnostic code for this condition (International Statistical Classification of Diseases and Related Health Problems, Tenth Revision [ICD-10] code U09.9).

Design, Setting, and Participants This qualitative analysis used data from EHRs of a national random sample of 200 patients receiving care in the Department of Veterans Affairs (VA) with documentation of a positive result on a polymerase chain reaction (PCR) test for SARS-CoV-2 between February 27, 2020, and December 31, 2021, and an ICD-10 diagnostic code for long COVID between October 1, 2021, when the code was implemented, and March 1, 2022. Data were analyzed from February 5 to May 31, 2022.

Main Outcomes and Measures A text word search and qualitative analysis of patients’ VA-wide EHRs was performed to identify dominant themes pertaining to the clinical diagnosis and management of long COVID.

Results

In this qualitative analysis of documentation in the VA-wide EHR, the mean (SD) age of the 200 sampled patients at the time of their first positive PCR test result for SARS-CoV-2 in VA records was 60 (14.5) years. The sample included 173 (86.5%) men; 45 individuals (22.5%) were identified as Black and 136 individuals (68.0%) were identified as White. In qualitative analysis of documentation pertaining to long COVID in patients’ EHRs 2 dominant themes were identified: (1) clinical uncertainty, in that it was often unclear whether particular symptoms could be attributed to long COVID, given the medical complexity and functional limitations of many patients and absence of specific markers for this condition, which could lead to ongoing monitoring, diagnostic testing, and specialist referral; and (2) care fragmentation, describing how post–COVID-19 care processes were often siloed from and poorly coordinated with other aspects of care and could be burdensome to patients.

Conclusions and Relevance This qualitative study of documentation in the VA EHR highlights the complexity of diagnosing long COVID in clinical settings and the challenges of caring for patients who have or are suspected of having this condition…  
  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2798146>

**infection control**

**title:** Evaluation of mRNA-1273 Vaccine in Children 6 Months to 5 Years of Age

NEJM | 3rd november 2022  
  
Abstract

Background

The safety, reactogenicity, immunogenicity, and efficacy of the mRNA-1273 coronavirus disease 2019 (Covid-19) vaccine in young children are unknown.

Methods

Part 1 of this ongoing phase 2–3 trial was open label for dose selection; part 2 was an observer-blinded, placebo-controlled evaluation of the selected dose. In part 2, we randomly assigned young children (6 months to 5 years of age) in a 3:1 ratio to receive two 25-μg injections of mRNA-1273 or placebo, administered 28 days apart. The primary objectives were to evaluate the safety and reactogenicity of the vaccine and to determine whether the immune response in these children was noninferior to that in young adults (18 to 25 years of age) in a related phase 3 trial. Secondary objectives were to determine the incidences of Covid-19 and severe acute respiratory syndrome coronavirus 2 infection after administration of mRNA-1273 or placebo.

Results

On the basis of safety and immunogenicity results in part 1 of the trial, the 25-μg dose was evaluated in part 2. In part 2, 3040 children 2 to 5 years of age and 1762 children 6 to 23 months of age were randomly assigned to receive two 25-μg injections of mRNA-1273; 1008 children 2 to 5 years of age and 593 children 6 to 23 months of age were randomly assigned to receive placebo. The median duration of follow-up after the second injection was 71 days in the 2-to-5-year-old cohort and 68 days in the 6-to-23-month-old cohort. Adverse events were mainly low-grade and transient, and no new safety concerns were identified. At day 57, neutralizing antibody geometric mean concentrations were 1410 (95% confidence interval [CI], 1272 to 1563) among 2-to-5-year-olds and 1781 (95% CI, 1616 to 1962) among 6-to-23-month-olds, as compared with 1391 (95% CI, 1263 to 1531) among young adults, who had received 100-μg injections of mRNA-1273, findings that met the noninferiority criteria for immune responses for both age cohorts. The estimated vaccine efficacy against Covid-19 was 36.8% (95% CI, 12.5 to 54.0) among 2-to-5-year-olds and 50.6% (95% CI, 21.4 to 68.6) among 6-to-23-month-olds, at a time when B.1.1.529 (omicron) was the predominant circulating variant.

Conclusions

Two 25-μg doses of the mRNA-1273 vaccine were found to be safe in children 6 months to 5 years of age and elicited immune responses that were noninferior to those in young adults…

<https://www.nejm.org/doi/full/10.1056/NEJMoa2209367>

**title:** Covid-19 Vaccine Protection among Children and Adolescents in Qatar

NEJM | 2nd november 2022

Abstract

Background

The BNT162b2 vaccine against coronavirus disease 2019 (Covid-19) has been authorized for use in children 5 to 11 years of age and adolescents 12 to 17 years of age but in different antigen doses.

Methods

We assessed the real-world effectiveness of the BNT162b2 vaccine against infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) among children and adolescents in Qatar. To compare the incidence of SARS-CoV-2 infection in the national cohort of vaccinated participants with the incidence in the national cohort of unvaccinated participants, we conducted three matched, retrospective, target-trial, cohort studies — one assessing data obtained from children 5 to 11 years of age after the B.1.1.529 (omicron) variant became prevalent and two assessing data from adolescents 12 to 17 years of age before the emergence of the omicron variant (pre-omicron study) and after the omicron variant became prevalent. Associations were estimated with the use of Cox proportional-hazards regression models.

Results

Among children, the overall effectiveness of the 10-μg primary vaccine series against infection with the omicron variant was 25.7% (95% confidence interval [CI], 10.0 to 38.6). Effectiveness was highest (49.6%; 95% CI, 28.5 to 64.5) right after receipt of the second dose but waned rapidly thereafter and was negligible after 3 months. Effectiveness was 46.3% (95% CI, 21.5 to 63.3) among children 5 to 7 years of age and 16.6% (95% CI, −4.2 to 33.2) among those 8 to 11 years of age. Among adolescents, the overall effectiveness of the 30-μg primary vaccine series against infection with the omicron variant was 30.6% (95% CI, 26.9 to 34.1), but many adolescents had been vaccinated months earlier. Effectiveness waned over time since receipt of the second dose. Effectiveness was 35.6% (95% CI, 31.2 to 39.6) among adolescents 12 to 14 years of age and 20.9% (95% CI, 13.8 to 27.4) among those 15 to 17 years of age. In the pre-omicron study, the overall effectiveness of the 30-μg primary vaccine series against SARS-CoV-2 infection among adolescents was 87.6% (95% CI, 84.0 to 90.4) and waned relatively slowly after receipt of the second dose.

Conclusions

Vaccination in children was associated with modest, rapidly waning protection against omicron infection. Vaccination in adolescents was associated with stronger, more durable protection, perhaps because of the larger antigen dose…

<https://www.nejm.org/doi/full/10.1056/NEJMoa2210058>

**title:** Association Between State-Issued COVID-19 Vaccine Mandates and Vaccine Administration Rates in 12 US States and the District of Columbia

jAMa Health forum | 28th october 2022

Question What is the association between the announcement of state-issued COVID-19 vaccine mandates for workers in the US and vaccine administration rates in terms of first-dose administration and series completion coverage?

Findings In this cross-sectional study of 12 states and the District of Columbia with state-issued COVID-19 vaccine mandates, the state-issued vaccine mandates were associated with an increase in the percentage of the population receiving the first dose of the vaccine compared with 14 states without such mandates.

Meaning The findings of this study suggest that state-issued COVID-19 vaccine mandates may have encouraged state populations to seek vaccinations, even if the population was not specifically required to do so under the order.

Abstract

Importance Some US states have issued COVID-19 vaccine mandates; however, the association of these mandates with vaccination rates remains unknown.

Objective To examine the association between announcing state-issued COVID-19 vaccine mandates that did not provide a test-out option for workers and the vaccine administration rates in terms of state-level first-dose vaccine administration and series completion coverage.

Design, Setting, and Participants This cross-sectional study used publicly available, state-level aggregated panel data to fit linear regression models with 2-way fixed effects (state and time) estimating vaccine coverage changes 8 weeks before and 8 weeks after a state-issued COVID-19 vaccine mandate was announced. Mandates were announced on or after July 26, 2021, and were included only if they went into effect before December 31, 2021. Data were included from 13 state-level jurisdictions with a vaccine mandate in effect as of December 31, 2021, that did not allow recurring testing in lieu of vaccination (mandate group), and 14 state-level jurisdictions that allowed a test-out option and/or did not restrict vaccine requirements (comparison group).

Interventions/Exposures The event of interest was the announcement of a state-issued COVID-19 vaccine mandate applicable to specific groups of workers.

Main Outcomes and Measures The outcome measures were state-level daily COVID-19 vaccine first-dose administration and series completion coverage, reported as mean percentage point changes.

Results Of 5 508 539 first-dose administrations in the 8-week postannouncement period, an estimated 634 831 (11.5%) were associated with the mandate announcement. First-dose administration coverage among 13 jurisdictions increased starting at 3 weeks after the mandate announcement, with statistically significant differences of 0.20, 0.33, 0.39, 0.45, 0.49, and 0.59 percentage points higher than the referent category coverage of 62.9%. Increases in vaccine series completion coverage were observed from 5 to 8 weeks after the announcement, but statistically significant differences from the referent category coverage of 56.3% were observed only during weeks 7 and 8 after the announcement (both differed by 0.2 percentage points; P = .05 and P = .02, respectively).

Conclusions and Relevance The findings of this cross-sectional event study suggest that the announcement of state-issued vaccine mandates may be associated with short-term increases in vaccine uptake. This observed association may be a product of both a direct outcome experienced by groups governed by the mandate as well as the spillover outcome due to a government signaling the importance of vaccination to the general population of the state…

<https://jamanetwork.com/journals/jama-health-forum/fullarticle/2797733>

**public health & health inequalities**

**title:** COVID-19 Case Investigation and Contact Tracing in New York City, June 1, 2020, to October 31, 2021

JAMA Network open| 2nd november 2022

Key points

Question What were the outcomes of the COVID-19 contact tracing program in New York City?

Findings In this cross-sectional study, a workforce of 4147 contact tracers attempted case investigations on 941 035 persons and contact interviews on 1 218 650 persons from June 1, 2020, to October 31, 2021. Overall expense from May 6, 2020, to October 31, 2021, was approximately $600 million.

Meaning These results suggest that a large program can be rapidly developed, operationalized, and subsequently maintained.

Abstract

Importance Contact tracing is a core strategy for preventing the spread of many infectious diseases of public health concern. Better understanding of the outcomes of contact tracing for COVID-19 as well as the operational opportunities and challenges in establishing a program for a jurisdiction as large as New York City (NYC) is important for the evaluation of this strategy.

Objective To describe the establishment, scaling, and maintenance of Trace, NYC’s contact tracing program, and share data on outcomes during its first 17 months.

Design, Setting, and Participants This cross-sectional study included people with laboratory test–confirmed and probable COVID-19 and their contacts in NYC between June 1, 2020, and October 31, 2021. Trace launched on June 1, 2020, and had a workforce of 4147 contact tracers, with the majority of the workforce performing their jobs completely remotely. Data were analyzed in March 2022.

Main Outcomes and Measures Number and proportion of persons with COVID-19 and contacts on whom investigations were attempted and completed; timeliness of interviews relative to symptom onset or exposure for symptomatic cases and contacts, respectively.

Results

Case investigations were attempted for 941 035 persons. Of those, 840 922 (89.4%) were reached and 711 353 (75.6%) completed an intake interview (women and girls, 358 775 [50.4%]; 60 178 [8.5%] Asian, 110 636 [15.6%] Black, 210 489 [28.3%] Hispanic or Latino, 157 349 [22.1%] White). Interviews were attempted for 1 218 650 contacts. Of those, 904 927 (74.3%) were reached, and 590 333 (48.4%) completed intake (women and girls, 219 261 [37.2%]; 47 403 [8.0%] Asian, 98 916 [16.8%] Black, 177 600 [30.1%] Hispanic or Latino, 116 559 [19.7%] White). Completion rates were consistent over time and resistant to changes related to vaccination as well as isolation and quarantine guidance. Among symptomatic cases, median time from symptom onset to intake completion was 4.7 days; a median 1.4 contacts were identified per case. Median time from contacts’ last date of exposure to intake completion was 2.3 days. Among contacts, 30.1% were tested within 14 days of notification. Among cases, 27.8% were known to Trace as contacts. The overall expense for Trace from May 6, 2020, through October 31, 2021, was approximately $600 million.

Conclusions and Relevance Despite the complexity of developing a contact tracing program in a diverse city with a population of over 8 million people, in this case study we were able to identify 1.4 contacts per case and offer resources to safely isolate and quarantine to over 1 million cases and contacts in this study period…

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2798102>

**title:** Analysis of Emergency Department Encounters Among High Users of Health Care and Social Service Systems Before and During the COVID-19 Pandemic  
  
JAMA Network Open | 28th OCTOBER 2022

Question Did emergency department (ED) use decrease among the top 5% of high users of health care and social services in San Francisco County during the COVID-19 pandemic?

Findings In this cohort study of 8967 individuals, the rate of ED visits decreased by approximately 25% during the pandemic compared with nonpandemic years.

Meaning Factors associated with decreased ED encounters and health outcomes during the COVID-19 pandemic among previously high users are not clear and warrant further investigation.

Abstract

Importance Although the general US population had fewer emergency department (ED) visits during the COVID-19 pandemic, patterns of use among high users are unknown.

Objectives To examine natural trends in ED visits among high users of health and social services during an extended period and assess whether these trends differed during COVID-19.

Design, Setting, and Participants This retrospective cohort study combined data from 9 unique cohorts, 1 for each fiscal year (July 1 to June 30) from 2012 to 2021, and used mixed-effects, negative binomial regression to model ED visits over time and assess ED use among the top 5% of high users of multiple systems during COVID-19. Data were obtained from the Coordinated Care Management System, a San Francisco Department of Public Health platform that integrates medical and social information with service use.

Exposures Fiscal year 2020 was defined as the COVID-19 year.

Main Outcomes and Measures Measured variables were age, gender, language, race and ethnicity, homelessness, insurance status, jail health encounters, mental health and substance use diagnoses, and mortality. The main outcome was annual mean ED visit counts. Incidence rate ratios (IRRs) were used to describe changes in ED visit rates both over time and in COVID-19 vs non–COVID-19 years.

Results Of the 8967 participants, 3289 (36.7%) identified as White, 3005 (33.5%) as Black, and 1513 (16.9%) as Latinx; and 7932 (88.5%) preferred English. The mean (SD) age was 46.7 (14.2) years, 6071 (67.7%) identified as men, and 7042 (78.5%) had experienced homelessness. A statistically significant decrease was found in annual mean ED visits among high users for every year of follow-up until year 8, with the largest decrease occurring in the first year of follow-up (IRR, 0.41; 95% CI, 0.40-0.43). However, during the pandemic, ED visits decreased 25% beyond the mean reduction seen in prepandemic years (IRR, 0.75; 95% CI, 0.72-0.79).

Conclusions and Relevance In this study, multiple cohorts of the top 5% of high users of multiple health care systems in San Francisco had sustained annual decreases in ED visits from 2012 to 2021, with significantly greater decreases during COVID-19. Further research is needed to elucidate pandemic-specific factors associated with these findings and understand how this change in use was associated with health outcomes…

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2797909>

**mental health**

**title:** Revitalising mental healthcare after covid-19 [Features]

BMJ | 2nd november 2022  
  
The pandemic provided the impetus to set up and scale up innovative service models rapidly – which is much needed in an era of record demand…

At the start of the covid-19 pandemic, mental health services needed to maintain access to support while protecting patients and staff from the virus… In May 2020, NHS mental health trusts in England opened 24/7 helplines offering advice and support… Some trusts created alternatives to emergency departments, with calmer environments for urgent assessment…

More than two years later, record numbers of people are seeking help. In July 2022 more than 1.6 million people in England contacted NHS mental health services—up 22.7% from April 2020, in the first peak of the pandemic. Open referrals of children and young people are 66% above pre-pandemic levels..

Patient choice

In the past two years video and telephone consultations have become the norm, “saving time, increasing accessibility, and helping staff deal with the growing numbers of people in need of help,” says Adrian James, president of the Royal College of Psychiatrists. And they seem set to be adopted for the long term…

More collaboration in the community

Another positive development accelerated by the covid pandemic is a culture change in community mental health services, where healthcare, social care, and the voluntary sector work more collaboratively…

Expert by experience

Sue Harbor, an “expert by experience” leader for Open Mental Health who has had major depressive disorders, knows at first hand that it can be a “big struggle” to access services...

Harbor uses her experience of mental health services to support Open Mental Health in engaging with people with serious mental illness, including looking at how to encourage patients to take up physical health checks…

Speedier support and cultural change…

Will Higham, associate director of programme innovation at Rethink Mental Illness, tells The BMJ, “Post pandemic, the community approach is the right approach. In particular, the peer workforce can be a pathway to recovery for people, as well as being crucial to helping solve the workforce shortage, as there simply aren’t the clinical hours to deal with the level of need out there.”…

To help deal with the huge pressures facing community and specialist services, Andy Bell, deputy chief executive for the Centre for Mental Health, tells The BMJ, “We need to prioritise early intervention—for example, by investing in open access youth advice and counselling services, and by locating more mental health support in GP surgeries.”…

<https://www.bmj.com/content/379/bmj.o2122>

We

[TRFT Library & Knowledge Service](https://www.trftlibraryknowledge.com/) aim to bring together the latest guidelines, research and news on Covid-19 through our [Covid-19 portal](https://www.trftlibraryknowledge.com/coronavirus.html). For daily updates on Covid-19 visit our '[Latest Health](https://trfthealthweeklydigest.wordpress.com/)' newsfeed, or use the hashtag [#covid19rftlks](https://twitter.com/hashtag/covid19rftlks?src=hashtag_click) to see our latest tweets on Covid-19 research, guidelines and news.

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