service across centers ("across-center ratio"). To compare negotiated prices between payers at each center, we calculated the ratio between the maximum and minimum negotiated prices ("within-center ratio") for each service.

All available prices were current as of March 25, 2021. We performed all analyses using R, version 4.0.4. The Mass General Brigham Institutional Review Board did not require approval because the study used publicly available data and involved no patient records.

Results | Of 71 NCI-Designated Cancer Centers, 52 (74.3%) met inclusion criteria. A total of 26 of 52 centers (50.0%) disclosed commercial payer-negotiated prices for any items or services. Disclosure differed by service type (**Table**); whereas 25 centers (48.1%) disclosed prices for thyroid-stimulating hormone testing or neck ultrasonography, only 8 (15.4%) disclosed professional fees for total thyroidectomy.

Normalized payer-negotiated prices varied widely across centers (Table). For instance, across-center ratios were 70.1 (raw median price range, $161-$10 790) for radioactive iodine treatment and 44.7 (raw median price range, $108-$4845) for neck computed tomography. Within centers, negotiated service prices varied widely across payers; for example, median (interquartile range) within-center ratios were 4.8 (2.3-10.2) for fine-needle aspirate biopsy and 4.6 (2.6-6.5) for thyroid uptake scan.

Discussion | Half of NCI-Designated Cancer Centers disclosed payer-negotiated prices for thyroid cancer services as required by law.[4] Although CMS has audited hospitals since January 2021,[5] this high nondisclosure rate may be attributable to the modest repercussions of nonadherence (ie, maximum $300 daily penalty).

Among centers disclosing negotiated prices, there was considerable variation in disclosure by service type. Although approximately 15% of centers disclosed surgeon professional fees for thyroid resection, nondisclosure may be legal: CMS requires hospitals to disclose negotiated rates for hospital-employed physicians,[4] but physicians practicing at hospitals are often employed by affiliated physician organizations (eg, faculty practice plans). Among services with disclosed prices, negotiated rates varied widely between cancer centers and across payers at the same center. This may reflect differences in cancer center market power, particularly for commoditized services, such as imaging.

Limitations of this study include potential lack of generalizability to other hospital or service types. Furthermore, the study was conducted shortly after implementation of price transparency requirements and may thus underestimate future disclosure rates as cancer centers overcome obstacles to adherence or respond to CMS penalties.

Nonetheless, these findings suggest that CMS should consider more stringent penalties for nondisclosure and more inclusive definitions of physician employment to enhance disclosure and promote transparency. Inconsistent disclosure could otherwise hinder efforts by patients and payers to take cost into account when selecting hospitals and physicians.

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Associations of Vaccination and of Prior Infection With Positive PCR Test Results for SARS-CoV-2 in Airline Passengers Arriving in Qatar

The SARS-CoV-2 pandemic has severely affected international travel. With efficacious COVID-19 vaccines available, Qatar implemented a pilot program between February 18 and April 26, 2021, to ease travel restrictions by waiving the quarantine requirement for vaccinated residents who received their second vaccine dose at least 14 days before

arrival. The program still required a polymerase chain reaction (PCR) test to be performed on each passenger on arrival at Hamad International Airport, Qatar's international travel gate. We investigated the incidence of PCR-positive test results in arriving passengers.

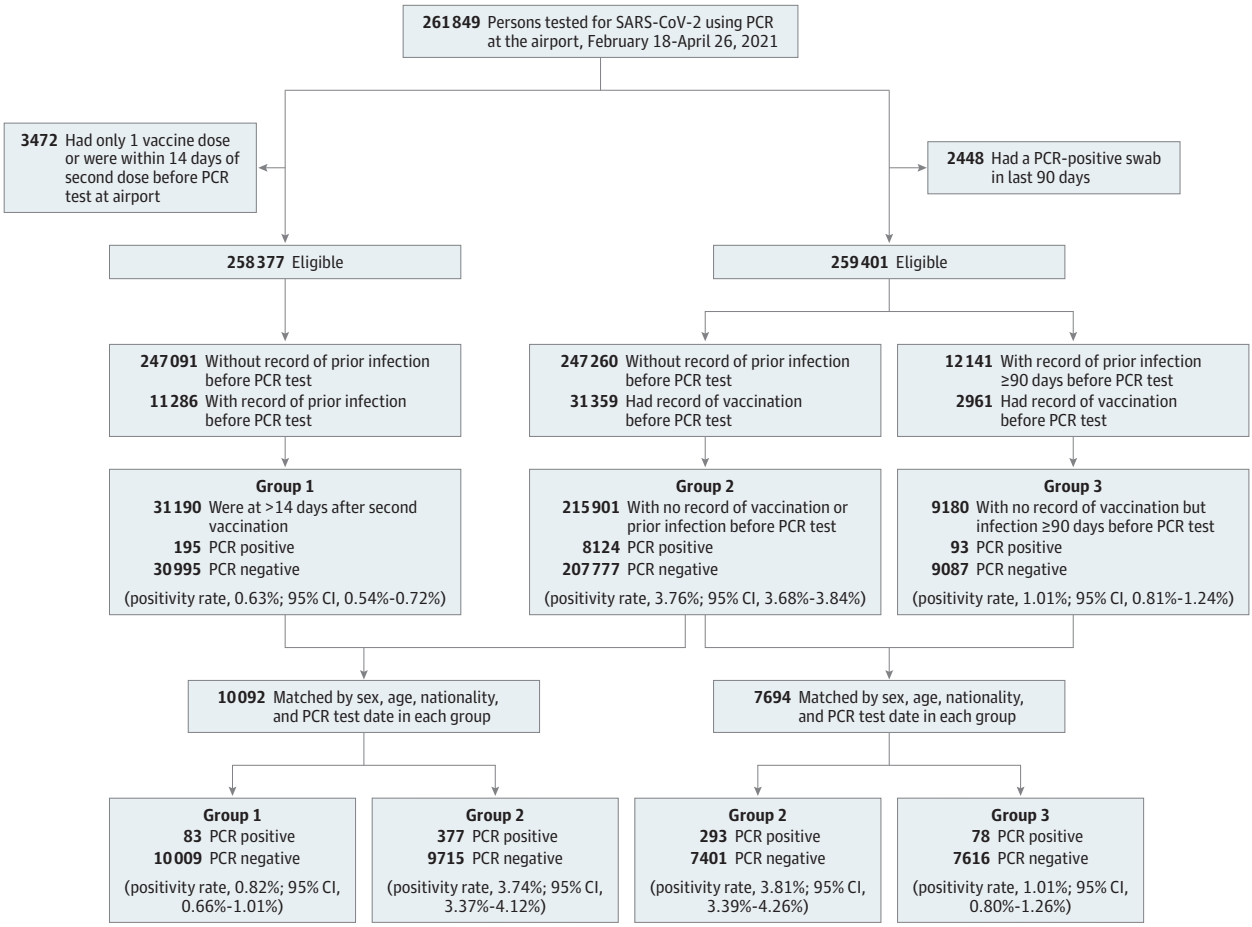
Methods | All PCR test data for residents arriving on international flights, regardless of departure country and vaccination status, throughout the program (February 18-April 26, 2021) were analyzed. TaqPath COVID-19 combo kits (100% sensitivity and specificity; Thermo Fisher Scientific[1]) are used for more than 85% of PCR testing in Qatar. PCR methods are detailed in the eMethods in the Supplement. PCR test results, vaccination records, and related demographic details were retrieved from the integrated nationwide digital health information platform that hosts the national centralized SARS-CoV-2 databases, and which includes all PCR testing and vaccination records in Qatar since the pandemic began (Supplement).

Supplemental content

We assessed whether vaccination (using the BNT162b2 [Pfizer-BioNTech] or mRNA-1273 [Moderna] vaccines) and prior infection were associated with lower risk for testing PCR positive. PCR positivity in vaccinated persons and those with a documented prior infection was compared with PCR positivity in those with no record of vaccination or prior infection after one-to-one matching by age, sex, nationality (>40 nationalities), and testing date to control for differences in exposure risk[2] and SARS-CoV-2 variant exposure.[3] Fully vaccinated was defined as at least 14 days after the second dose before the airport PCR test. Reinfection was defined as the first PCR-positive swab at least 90 days after a prior infection. Individuals with a PCR-positive swab less than 90 days before the airport PCR test and vaccinated persons who received only 1 dose or who did not present at least 14 days after the second dose before the airport PCR test were excluded.

Frequency distributions and central tendency measures were generated. Associations with PCR positivity were investigated using relative risks and associated 95% CIs and χ^2 tests. Two-sided $P \leq .05$ indicated statistically significant evidence

Figure. Study Selection of Persons Tested on Arrival at the Qatar Airport From February 18 to April 26, 2021



Group 1 includes persons who received their second vaccine dose at least 14 days before the airport polymerase chain reaction (PCR) test. Group 2 includes persons with no record of vaccination and no record of prior infection before the airport PCR test. Group 3 includes persons with no record of vaccination but with a record of prior infection at least 90 days before the airport PCR test.

Table. Associations of Vaccination and of Prior Infection With PCR Positivity on Arrival at the Airport Among Residents of Qatar Returning on International Flights

Exposure	PCR test results on arrival at airport		Relative risk (95% CI)	χ^2 *P* value
	Positive	Negative		
Vaccination status				
Vaccinated and second dose completed ≥14 d before the PCR test at the airport	83	10 009	0.22 (0.17-0.28)	<.001
Unvaccinated and had no record of prior infection	377	9715		
Prior infection status				
Unvaccinated but record of prior infection ≥90 d before the PCR test at the airport	78	7616	0.26 (0.21-0.34)	<.001
Unvaccinated and had no record of prior infection	293	7401		

Abbreviation: PCR, polymerase chain reaction.

for an association. Analyses were performed using STATA/SE version 16.1.

Variants were ascertained using viral genome sequencing of randomly collected PCR-positive specimens from arriving passengers.[4]

This study was approved by Hamad Medical Corporation and Weill Cornell Medicine-Qatar institutional review boards with a waiver of informed consent.

Results | In total, 261 849 persons (75.1% male) were tested using PCR for SARS-CoV-2 on arrival at the Qatar airport. Median age was 33 years (interquartile range, 27-41 years). Of 31 190 completely vaccinated individuals (group 1; 99.7% with BNT162b2 and 0.3% with mRNA-1273) and 215 901 individuals with no record of vaccination or prior infection (group 2), 10 092 could be matched, among whom PCR positivity was 0.82% (95% CI, 0.66%-1.01%) and 3.74% (95% CI, 3.37%-4.12%), respectively (**Figure**).

Of 9180 individuals with no record of vaccination but with a record of prior infection at least 90 days before the PCR test (group 3), 7694 could be matched to individuals with no record of vaccination or prior infection (group 2), among whom PCR positivity was 1.01% (95% CI, 0.80%-1.26%) and 3.81% (95% CI, 3.39%-4.26%), respectively (Figure).

The relative risk for PCR positivity was 0.22 (95% CI, 0.17-0.28) for vaccinated individuals and 0.26 (95% CI, 0.21-0.34) for individuals with prior infection compared with no record of vaccination or prior infection (**Table**).

Sequencing of 72 PCR-positive specimens from arriving passengers identified B.1.351 (beta; n = 32; 44.4%), B.1.1.7 (alpha; n = 20; 27.8%), B.1.617 (delta; n = 8; 11.1%), and "wild-type" strains (n = 12; 16.7%).

Discussion | Vaccination and prior infection were associated with reduced risk for SARS-CoV-2 PCR test positivity in residents of Qatar returning on international flights. Nevertheless, both vaccine immunity and natural immunity were imperfect, with breakthrough infections recorded. This highlights the need to maintain PCR testing for arriving travelers.

Limitations include ascertainment of infection history using records of previous PCR-positive results, thereby missing those who had prior mild or asymptomatic infections but were never tested. Findings may not be generalizable to other airports, regions, or domestic travel.

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COMMENT & RESPONSE

Viewpoint on Comprehensive Medicaid Reform

To the Editor The recent Viewpoint by Dr Gee and colleagues[1] addressed 5 components that would improve Medicaid's administration and patient outcomes. However, 1 important aspect omitted from this article is the national standardization and uniformity of eligibility and benefits.

Medicare and Medicaid were enacted in 1965 with the similar intent to provide health care coverage, but with 1 critical difference—Medicare was a federal, uniform, standardized program and Medicaid was a federal-state combination producing 56 different Medicaid programs (50 states; Washington, DC; and 5 territories). This difference has enormous individual and population implications. For example, while a single, male Medicare beneficiary, regardless of income, can retire from New York to Alabama and experience no eligibility or coverage change, this is not true for a Medicaid beneficiary. If the latter man's income exceeds 133% of the federal poverty level, he would be eligible for Medicaid coverage and health care access in New York but would have no coverage and thus limited access in Alabama.[2] As the Viewpoint[1] authors mention, Medicaid disproportionately insures racial and ethnic minority populations, and the majority of Medicaid beneficiaries are women. Thus, this lack of national uniformity creates age, racial and ethnic, and gender disparities across the US, which affects a range of health care needs, including care of pregnant women and their infants—a key reason for which Medicaid was enacted.

Recent examples of Medicaid geographic variability include the adoption of Affordable Care Act–related Medicaid expansion[3]; the numbers of waiver requests for program changes, including work requirements[4]; and the coverage of family planning services.[5]

Given that Medicaid is the largest health care insurer in the US, why did the Viewpoint fail to discuss this lack of uniformity and the discrimination by age, race and ethnicity, and gender that ensues? One reason may be that change to Medicaid's federal-state relationship appears difficult to accomplish in this climate of devolution. However, the first step in changing the seemingly impossible is to bring attention to the issue, as was done with tobacco regulation, same-sex marriage, and legalization of cannabis. Until all people in the US are covered with an efficient, equitable, and national health plan, addressing this Medicaid core issue should be a priority, as we build on its many strengths.

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In Reply In response to our Viewpoint[1] on Medicaid reform, Dr Gabow discusses the need to establish and standardize eligibility criteria and benefits for beneficiaries in the Medicaid program. We agree that the current variation across US states results in unequal access and services. As Gabow points out, the federal government currently specifies core requirements of the Medicaid program as a condition of receiving funding. States have broad flexibility regarding eligibility and benefits and other aspects of their programs. We believe that these core Medicaid requirements should be strengthened and eligibility systems should be bolstered to ensure that all beneficiaries have equal access to medical care, including the essential health needs of underserved populations. President Biden's administration has already sought to revise a number of these state decisions with the intent of providing broader beneficiary protections, such as those that have implemented strict work requirements, and has proposed to stabilize churn through initiatives such as buy-in programs, a public health insurance option, and premium subsidies, among other possible solutions.

While standardizing additional federal oversight and strengthening core Medicaid requirements is appropriate, we do believe it is important to maintain state flexibility in issues related to optional benefits, provider payments, and delivery systems. This flexibility allows for Medicaid programs to support the specific geographic needs of each state and also allows for models of innovation to be explored and implemented.

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