UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION THIS DOCUMENT RELATES TO: TRACK THREE	MDL No. 2804 Case No. 17-md-2804 Judge Dan Aaron Polster

DEFENDANTS' MOTION TO RECONSIDER ORDER REQUIRING JURORS TO BE VACCINATED OR, IN THE ALTERNATIVE, MOTION FOR APPROPRIATE RELIEF FOR SUBSTANTIAL FAILURE TO COMPLY WITH THE JURY SELECTION AND SERVICE ACT

The Pharmacy Defendants[1] (Defendants) hereby move that the Court reconsider its June 14 Civil Jury Trial Order and vacate that Order on fairness grounds to the extent it requires that all prospective jurors in this case be vaccinated. In the alternative, to the extent the Court declines to reconsider its Order as a discretionary matter, Defendants move pursuant to 28 U.S.C. § 1867(c) to stay the proceedings for substantial failure to comply with the provisions of the Jury Selection and Service Act, 28 U.S.C. §§ 1861 to 1878, and request a hearing pursuant to 28 U.S.C. §§ 1867(d) and (f).[2]

Defendants have been at the forefront of the nationwide vaccination effort and this motion is not intended to suggest any change in Defendants' ongoing commitment to administering and facilitating vaccination. Rather, this motion concerns only the composition of a jury in this case and whether the Court's Order comports with law and fairness.

[1] CVS Pharmacy, Inc., Ohio CVS Stores, LLC, CVS TN Distribution, L.L.C., CVS Rx Services, Inc., CVS Indiana, L.L.C., Walgreens Boots Alliance, Inc., Walgreen Co., Walgreen Eastern Co., Inc., Rite Aid Hdqtrs. Corp., Rite Aid of Ohio, Inc., Rite Aid of Maryland, Inc. d/b/a Rite Aid Mid-Atlantic Customer Support Center, Eckerd Corp. d/b/a Rite Aid Liverpool Distribution Center, Giant Eagle, Inc./HBC Service Company, and Walmart Inc.

[2] Defendants do not seek to delay the trial to adjudicate this motion, but a stay appears to be the exclusive procedural tool available to enforce the provisions of the Act. *See* 28 U.S.C. § 1867(d). To avoid delay, defendants are willing to adjudicate the motion on an expedited basis, or upon stipulations of fact if the parties can agree.

I. MATERIAL FACTS

During a status conference on June 2, 2021, the Court asked whether the parties would consent to a requirement that all jurors in this matter be vaccinated against COVID-19. *See* ECF No. 3753 at 2–3. The issue had not been raised before, and Defendants had no notice that the Court was considering it. Plaintiffs consented during the status conference. Defendants did not consent. Instead, Defendants' liaison counsel raised potential concerns. *Id.* at 3–4. In response, the Court stated that it was not demanding a decision that day and asked Defendants to "talk about it and get back to Special Master Cohen with your thoughts." *Id.* at 4–5. The Court set no deadline, other than to say that jury summonses would be sent out in seven weeks. *Id.* at 5. One week later, on June 9, 2021, the Special Master emailed liaison counsel, who was selecting a jury in the New York opioids trial, seeking Defendants' position. The email set no deadline for Defendants to respond.

Three business days later, on June 14, 2021, without waiting to hear Defendants' position, the Court issued a Track Three Civil Jury Trial Order. ECF No. 3758. The pertinent provision (the "Vaccination Order") states that "to ensure the safety of everyone involved in the trial, the Court will only allow individuals who have been fully vaccinated against COVID-19 to serve as jurors." *Id.* at 3. Unbeknown to the Court, Defendants had finalized their position on such a limitation and were on the cusp of communicating it to the Special Master when the Vaccination Order issued.

As far as Defendants can tell, a vaccination requirement for jurors is not required by any statute, rule, or policy. To the contrary, the Administrative Office of the U.S. Courts recently issued a statement to a reporter providing that, "[w]hile courts may ask jurors COVID-19-related questions as part of their safety protocols, providing litigants with a jury selected at random from a fair cross section of the community remains of greatest importance." Decl. of John J. Connolly,

June 21, 2021 ("Connolly Decl."), Ex. B at 3 (copy of Madison Alder, *Next Pre-Trial Question for Jurors: Are You Vaccinated?*, U.S. Law Week (May 28, 2021 4:45AM)); *see also id.* ("The Administrative Office of the U.S. Courts … said courts might ask virus-related questions for court safety, but getting the vaccine isn't a legal qualification for service on a jury."). Nothing in this Court's Juror Selection Plan requires vaccination for jurors. *See* Am. General Order No. 2005-21-1, Aug. 8, 2019 (redirecting to Juror Selection Plan at https://www.ohnd.uscourts.gov/jury-service); U.S Dist. Ct., N.D. Ohio Juror Selection Plan, Parts C, D (Apr. 8, 2021) [hereafter, "Juror Selection Plan"] (stating policy of random selection from fair cross section of the community in each division and requirement that "all citizens resident within the District shall have the opportunity to be considered for service on grand and petit juries and shall have an obligation to serve as jurors when summoned for that purpose").

Moreover, under this Court's general Coronavirus Phased-In Recovery Plan, persons will be denied entrance to the courthouse "if they have a temperature of 100.4 degrees or higher or respond affirmatively to any COVID-19 screening question," but will not be denied access based on their vaccination status. *See* Am. General Order No. 2020-08-8 at 2, June 7, 2021. The Plan requires mask-wearing, but "[a]t the discretion of the presiding judge and upon inquiry of vaccination status, a participant(s) in a proceeding in the judge's courtroom may be permitted to remove his/her mask. Spectators and jurors must remain masked at all times." *Id.* at 3. Unvaccinated employees are already permitted to work in the courthouse and are even permitted to remove their face masks "when alone in their private office/cubicle which permits at least six feet of physical distance from other persons." *Id.* at 4. *See also* Dist. Colo. Jury Trial Protocols (June 2, 2021) (setting forth additional screening measures for unvaccinated jurors but not excluding them).

According to the Ohio Department of Health, as of June 16, 2021, only 42.6 percent of Ohio's population is fully vaccinated.[3] Connolly Decl., Ex. A at 1. That number will rise to some extent by September 29, but the rate of new vaccinations has slowed considerably. By all appearances a substantial portion of the potential jury pool—possibly 40 percent or more—will not be fully vaccinated at the time of jury selection. Eliminating all those people would not only reduce the size of the eligible jury pool, it would also skew the pool in ways that would likely affect the parties' ability to pick a fair and impartial jury.

The current data establishes that the statewide vaccinated population differs from the unvaccinated population in key geographic and demographic metrics: by gender (44.6 percent of women vs. 38.4 percent of men, *see* Connolly Decl., Ex. A at 4); by race (40.9 percent of "White" and 54.2 percent of "Asian" vs. 25.7 percent of "Black or African American"; *see id.* at 3); and by age (much higher percentages of vaccinations among older individuals, *see id.* at 1).

Vaccination rates also vary substantially by counties within this District and Division. *Compare* Connolly Decl., Ex. A at 5 (overall vaccination rate of 29.8 percent in Ashland County) *with id.* at 17 (47.1 percent in Cuyahoga). And within counties, significant disparities exist by race, age, and gender. *See id.* at 17 (age distribution in Cuyahoga); *id.* at 19 (showing Cuyahoga vaccination rates of 51.5 percent for White Americans, 26.6 percent for Black Americans, and 59.4 percent for Asian Americans).

Ample evidence suggests that vaccination rates also vary substantially based on political and social views. *See* Connolly Decl., Ex. C (pre-COVID article concluding that political conservatives were less likely to obtain vaccines). A New York Times analysis in April

[3] The Ohio Department of Health appears to use total population as the denominator in these calculations. Because children are not eligible for jury service and persons over 70 are often excused, *see* Juror Selection Plan Part L, the percent of vaccinations among all persons eligible for jury service cannot be stated precisely. But the percent of vaccinated persons between ages 20 and 69 can be calculated from the numbers provided by the Department of Health. That number equals 49.3 percent. *See* Connolly Decl. ¶ 9.

concluded that "[t]he disparity in vaccination rates has so far mainly broken down along political lines." Connolly Decl., Ex. D at 1. Indeed, "both willingness to receive a vaccine and actual vaccination rates to date were lower, on average, in counties where a majority of residents voted to re-elect former President Donald J. Trump in 2020." *Id.*; *see also* Connolly Decl., Ex. E (article in The Hill suggesting that vaccine rates vary among red and blue states). Other analyses have concluded that vaccinations vary significantly along other socioeconomic lines, with vaccination rates correlating positively with education and income. *See* Connolly Decl., Ex. F. And at least some individuals have declined the vaccine for religious reasons.

The National Center for State Courts, in a publication from May 2021, cautioned against restrictions like the Vaccination Order:

> **What impact will the use of vaccine status information have on the integrity of the jury system?** Restricting the jury pool to persons who are fully vaccinated may make it more difficult to secure enough prospective jurors to select juries. Along with the coronavirus' differential impact on people of color, public health experts have noted ongoing challenges in making vaccine distribution accessible to these communities, including higher rates of vaccine hesitancy in these communities. Excluding persons who are not fully vaccinated may make the jury pool less likely to reflect a fair cross section of the community, which in turn may also increase the risk of jury challenges.

Connolly Decl., Ex. G at 2.

In short, requiring vaccinations for all jurors will drastically reduce the eligible jury pool, and the remaining pool of eligible jurors is highly unlikely to reflect the community as a whole.

II. ARGUMENT

The Court's Vaccination Order is interlocutory and therefore may be revised or amended at any time prior to final judgment. *See* Fed. R. Civ. P. 54(b); *Stringer* v. *NFL*, 749 F. Supp. 2d 680, 699 (S.D. Ohio 2009). Although Defendants have styled this submission as a motion for

reconsideration at the direction of the Special Master, the usual standard for reconsideration[4] should not apply here, where the Court issued its order without briefing, before hearing Defendants' position, without setting a deadline for Defendants to provide their position, and where less than 14 days had passed from the time that the Court first raised the issue.

A. The Court Should Reconsider and Vacate the Order on Discretionary and Prudential Grounds.

Section B below argues that the Court's Vaccination Order violates the Jury Selection and Service Act (JSSA) and therefore must be vacated as a matter of law. But the Court need not reach that argument. Nothing *requires* the Court to insist on a fully vaccinated jury, and fairness and justice counsel against it.

First, the Vaccination Order is inconsistent with the Court's existing policies—amended as recently as June 7—which do not require vaccinations among jurors or employees and which require random selection of jurors from a fair cross section of the community. Instead, Amended General Order No. 2020-08-8 minimizes risk by requiring temperature checks, mask-wearing, and physical distancing. Those measures should be sufficient to ensure the safety of all participants at the trial of this matter.

Second, by both tradition and statute, "the American concept of the jury trial contemplates a jury drawn from a fair cross section of the community." *Taylor* v. *Louisiana*, 419 U.S. 522, 526 (1975); 28 U.S.C. § 1861 ("It is the policy of the United States that all litigants in Federal courts entitled to trial by jury shall have the right to grand and petit juries selected at random from a fair cross section of the community in the district or division wherein

[4] *See Stringer*, 749 F. Supp. 2d at 700 (noting that courts have "significant discretion" in resolving a motion to reconsider an interlocutory order, although ordinarily courts exercise that discretion "when there is (1) an intervening change of controlling law; (2) new evidence available; or (3) a need to correct a clear error or prevent manifest injustice" (citations omitted)). That standard does not logically apply when the movant is making substantive arguments for the first time.

the court convenes."); Juror Selection Plan Parts C, D. The "fair cross section" standard promotes justice by assuring that serious disputes are decided by a representative sample of the whole community. As the Supreme Court has explained:

> The American tradition of trial by jury, considered in connection with either criminal or civil proceedings, necessarily contemplates an impartial jury drawn from a cross-section of the community. This does not mean, of course, that every jury must contain representatives of all the economic, social, religious, racial, political and geographical groups of the community; frequently such complete representation would be impossible. But it does mean that prospective jurors shall be selected by court officials without systematic and intentional exclusion of any of these groups. Recognition must be given to the fact that those eligible for jury service are to be found in every stratum of society. Jury competence is an individual rather than a group or class matter. That fact lies at the very heart of the jury system. To disregard it is to open the door to class distinctions and discriminations which are abhorrent to the democratic ideals of trial by jury.

Thiel v. *Southern Pac. Co.*, 328 U.S. 217, 220 (1946) (citations omitted).

This foundational policy would be severely undermined if 40 to 50 percent of the eligible population is removed from the pool—for *any* reason. *See Peters* v. *Kiff*, 407 U.S. 493, 503 (1972) ("the exclusion from jury service of a substantial and identifiable class of citizens has a potential impact that is too subtle and too pervasive to admit of confinement to particular issues or particular cases"). Of course, if the 40–50 percent cohort were removed at random, the remaining pool might still reflect a fair cross section of the community. But wholesale removal of all unvaccinated individuals is a far cry from random removal of persons from the pool. The vaccinated population is unquestionably different from the full community; the only question is whether the vaccinated population by itself is a fair cross section of that community.

The Court should conclude that it is not. The available data on vaccination rates in Ohio show substantial differences by race, gender, and age. *See supra* Part I. These state-wide patterns are also seen in the individual counties in this District and Division—sometimes at even greater

variances. *Id.* In addition, vaccination has become a divisive political and social issue. Data available to date indicates that vaccination rates are higher among persons who identify as liberal rather than conservative, Democratic rather than Republican, professional rather than nonprofessional, and college-educated rather than not. *See supra* Part I. Accordingly, there is a substantial risk that a jury pool drawn solely from fully vaccinated persons will not fully reflect the community along ideological and socioeconomic dimensions (as well as racial, gender, and ethnic dimensions, as discussed above). The only way to ensure fairness is to permit vaccinated and unvaccinated persons to serve on the jury.

Third, jury service is both an obligation and a right of citizenship. *E.g.*, *Powers* v. *Ohio*, 499 U.S. 400, 402 (1991) ("Jury service is an exercise of responsible citizenship by all members of the community, including those who otherwise might not have the opportunity to contribute to our civic life."); Juror Selection Plan Part C. It seems extraordinary to exclude nearly half the population from jury service—for any reason—and as far as Defendants can tell no other court has imposed a similar restriction. Excluding identifiable groups from jury service eliminates their participation in one key feature of our democratic tradition. Persons who decline a governmental request to inject an mRNA or other vaccine into their arms may have a useful perspective about a governmental claim that pharmaceutical companies should pay for harms caused by persons who abused prescription opioids. At any rate, Defendants respectfully suggest that the Vaccination Order is not a precedent the Court should set.

Defendants and their counsel are certainly cognizant of safety issues and they do not want to create an unreasonable risk for any participant in the trial. Defendants are prepared to work with the Court, its staff, and Plaintiffs to ensure that all participants are safe. But the Court should not promote safety over fairness in jury selection when both are achievable. If safety

cannot be ensured by methods other than a vaccination requirement, the trial should be postponed until it can.

For these reasons, Defendants respectfully request that the Court exercise its discretion and vacate its Vaccination Order.

B. In the Alternative, Because the Vaccination Order Is Likely to Contravene the Jury Selection and Service Act, Defendants Move to Stay Under 28 U.S.C. § 1867(c) and Request a Hearing Under Sections 1867(d) and (f).

1. The JSSA Permits Civil Litigants to Challenge Unrepresentative Jury Pools.

Most challenges to the representativeness of a jury pool in civil cases are governed by the Jury Selection and Service Act, 28 U.S.C. §§ 1861 to 1878. *See* 28 U.S.C. § 1867(e). As noted, under § 1861 of the Act, federal policy requires that "all litigants in Federal courts entitled to trial by jury shall have the right to grand and petit juries selected at random from a fair cross section of the community." Moreover, "[n]o citizen shall be excluded from service as a grand or petit juror in the district courts of the United States … on account of race, color, religion, sex, national origin, or economic status." *Id.* § 1862. District Courts are required to have a written plan for random selection of grand and petit jurors designed to achieve these objectives. *Id.* § 1863(a). The plan must "specify detailed procedures to be followed by the jury commission or clerk in selecting names" for jury service and "[t]hese procedures shall be designed to ensure the random selection of a fair cross section of the persons residing in the community in the district or division wherein the court convenes." *Id*. § 1863(b)(3). The jury selection plan must "deem any person qualified to serve on grand and petit juries in the district court unless" that person does not satisfy one of five conditions not applicable here. *See id.* § 1865(b); *cf.* 28 U.S.C. § 1869(i) (defining "undue hardship or extreme inconvenience"). And the jury commission or the clerk from time to time "shall draw at random from the qualified jury wheel such number of names of

persons as may be required for assignment to grand and petit jury panels." *Id.* § 1866(a); *see also id.* § 1866(c) (except as provided in § 1865 or any jury selection plan, "no person or class of persons shall be disqualified, excluded, excused, or exempt from service as jurors," although a court may exclude any "person summoned for jury service" for certain defined reasons).

Under § 1867(c), "[i]n civil cases, before the voir dire examination begins, or within seven days after the party discovered or could have discovered, by the exercise of diligence, the grounds therefor, whichever is earlier, any party may move to stay the proceedings on the ground of substantial failure to comply with the provisions of this title in selecting the petit jury." A substantial failure to comply has been interpreted to mean one that "frustrates one of the three principles underlying the Act: (1) the random selection of jurors, (2) culling of the jury from a fair cross-section of the community, and (3) determination of disqualifications, exemptions, and exclusions based on objective criteria." *United States* v. *Stein*, 985 F.3d 1254, 1263 (10th Cir. 2021) (citations omitted); *see also United States* v. *Savides*, 787 F.2d 751, 754 (1st Cir. 1986).

Upon motion filed under § 1867(c)

> containing a sworn statement of facts which, if true, would constitute a substantial failure to comply with the provisions of this title, the moving party shall be entitled to present in support of such motion the testimony of the jury commission or clerk, if available, any relevant records and papers not public or otherwise available used by the jury commissioner or clerk, and any other relevant evidence.

28 U.S.C. § 1867(d). The movant is entitled to "inspect, reproduce, and copy such records or papers at all reasonable times during preparation and pendency of such a motion." 28 U.S.C. § 1867(f). A litigant "need not show prejudice to establish a 'substantial failure to comply' with the Act." *United States* v. *Kennedy*, 548 F.2d 608, 612 (5th Cir. 1977). "If the court determines that there has been a substantial failure to comply with the provisions of this title in selecting the

petit jury, the court shall stay the proceedings pending the selection of a petit jury in conformity with this title." 28 U.S.C. § 1867(d).

2. The Exclusion of All Unvaccinated Individuals from the Jury Pool Is Likely to Result in a Jury That Is Not a Fair Cross Section of the Community.

The wholesale exclusion of all unvaccinated persons from the jury pool would violate the statutory requirement that the jury be drawn from a fair cross section of the community. "In order to demonstrate a violation of the statutory fair cross section standard, a defendant must show that a distinctive group, that is, a cognizable group, was excluded from the jury selection process; that such group was systematically excluded; and that because of such exclusion the jury pool failed to be reasonably representative of the community." *United States* v. *Allen*, 160 F.3d 1096, 1102 (6th Cir. 1998) (citations omitted).[5] The sworn statement of facts attached hereto establishes at least a *prima facie* case that satisfies each of these requirements.

First, the Court's June 14 Order establishes that an identifiable group will be excluded from the jury selection process. Whether unvaccinated individuals constitute a "distinctive" or "cognizable" group has not previously been decided as far as Defendants can tell. But courts generally agree that groups based on gender, race, ethnicity, and religious affiliation qualify as distinctive. *See United States* v. *Cook*, No. CR 06-2403 RB, 2008 WL 11362043, at *4–5 (D.N.M. Oct. 2, 2008). Thus, to the extent exclusion of unvaccinated individuals creates a significant variance from community averages of persons in those groups, the unvaccinated group would be legally distinctive. As to other groups, such as those based on age, class, political

[5] Although the Sixth Amendment does not apply in this civil case, jury-pool challenges under the Sixth Amendment also require a showing that a "distinctive group" was excluded, and the Sixth Amendment cases interpreting that phrase are sometimes applied in JSSA cases. *E.g.*, *United States* v. *Royal*, 174 F.3d 1, 6 (1st Cir. 1999).

affiliation, and education, courts usually require some proof of a "common thread or basic similarity in attitude, ideas or experiences." *Ford* v. *Seabold*, 841 F.2d 677, 683 (6th Cir. 1988).

In the current environment, unvaccinated persons meet these tests. Initially, the currently available data indicate that the unvaccinated group varies significantly from the general community based on race, gender, and ethnicity. In particular, the statewide data shows a substantial disparity in vaccination rates among White, Asian, and Black Ohioans, with the latter significantly less likely to be vaccinated. The state-wide percentage difference is roughly 15 points between vaccinated White and Black Ohioans and almost 30 points between Asian and Black Ohioans. Connolly Decl., Ex. A at 3. In Cuyahoga County, the most populous county in this Division, the absolute disparity in vaccination rates among White and Black citizens is almost 25 points. *See id.* at 19. As a result, Black citizens are very likely to be underrepresented in the jury pool when compared with the community at large; defendants estimate the absolute disparity (statewide) at 4.3 percent and the comparative disparity at 33.0 percent.[6] *See* Connolly Decl. ¶ 10. These differences may qualify as substantial. *See Smith* v. *Berghuis*, 543 F.3d 326, 337-38 (6th Cir. 2008) (negligible absolute disparity and 18 to 34 percent comparative disparity), *rev'd on other grounds*, 559 U.S. 314 (2010);[7] *Garcia-Dorantes* v. *Warren*, 801 F.3d 584, 600-02 (6th Cir. 2015) (3.45 percent absolute disparity and 42 percent comparative disparity); *Omotosho* v. *Giant Eagle, Inc.*, 997 F. Supp. 2d 792, 800 (N.D. Ohio 2014) (6.04 absolute disparity and 63.7 percent comparative disparity).[8]

[6] The Sixth Circuit has explained that depending on circumstances courts may look to "absolute disparity" (percent eligible in the population less percent in pool) or "comparative disparity" (decreased likelihood that underrepresented group will be called for jury service). *E.g.*, *Garcia-Dorantes* v. *Warren*, 801 F.3d 584, 601-02 (6th Cir. 2015). In this case, these disparities might be calculated in different ways and a final result would have to await a hearing, but defendants have made an estimate for disparities among races in the Connolly Declaration at paragraph 10.

[7] Although the Supreme Court reversed *Smith*, courts in the Sixth Circuit continue to cite its analysis of absolute and comparative disparities. *See Garcia-Dorantes*, 801 F.3d at 601; *Omotosho*, 997 F. Supp. 2d at 800.

[8] The *Smith* and *Omotosho* courts both rejected challenges to the panel for other reasons.

Apart from disparities in recognized distinctive groups such as race and gender, there is clearly a common thread or basic similarity in attitude, ideas, and experience among the unvaccinated population. Evidence both empirical and anecdotal suggests that unvaccinated individuals skew conservative and Republican, *see* Connolly Decl., Exs. C, D, E, and those trends are likely to continue. By September 29, the unvaccinated group is likely to consist largely of traditional conservatives, libertarians, and government skeptics, along with a disproportionate percentage of nonprofessionals and lower-wage workers. *Compare Thiel* v. *Southern Pac. Co.*, 328 U.S. 217, 224-25 (1946) (impermissible to exclude all persons who work for a daily wage). Members of the anti-vaccination community might well have different views about prescription-opioid use and abuse when compared with the vaccinated population.

Second, the Vaccination Order unquestionably establishes that unvaccinated people will be "systematically excluded" from jury service. *See United States* v. *Jackman*, 46 F.3d 1240, 1248 (2d Cir. 1995) ("the existence of systematic underrepresentation turns on the process of selecting venires, not the outcome of that process in a particular case"); *Garcia-Dorantes*, 801 F.3d at 600 (inadvertent computer glitch that ended up excluding disproportionate number of African Americans deemed systematic when argument waived by State). That portion of the test should not be in dispute.

Finally, for the reasons set forth above, the exclusion of all unvaccinated people almost certainly will result in a jury pool that is not reasonably representative of the community. Before the jury pool is actually drawn, of course, Defendants cannot determine whether Black Americans or other discrete groups will be under- or over-represented when compared to the community at large. For that reason, if the Court is not inclined to vacate the Vaccination Order based on its anticipated effects, Defendants request a hearing pursuant to 28 U.S.C. §§ 1867(d)

and (f) after the jury pool is drawn but before the Court selects a jury. As the Supreme Court has held, subsection (f) "makes clear that a litigant has essentially an unqualified right to inspect jury lists. It grants access in order to aid parties in the 'preparation' of motions challenging jury-selection procedures. Indeed, without inspection, a party almost invariably would be unable to determine whether he has a potentially meritorious challenge." *Test* v. *United States*, 420 U.S. 28, 30 (1975); *see also United States* v. *Shader*, 472 F. Supp. 3d 1, 4-5 (E.D.N.Y. 2020). In addition to jury records and testimony from the jury commissioner, Defendants anticipate that such a hearing will include expert testimony analyzing the jury pool and the excluded class of unvaccinated persons in light of community characteristics.

III. CONCLUSION

For the reasons stated, Defendants respectfully request that the Court vacate its Vaccination Order and permit vaccinated and unvaccinated persons to be eligible to serve as jurors in this matter. In the alternative, Defendants move to stay this matter under 28 U.S.C. § 1867(c) and request an evidentiary hearing under § 1867(d) and (f).

Dated: June 21, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that the foregoing document was served via the Court's ECF system to all counsel of record on June 21, 2021.

/s/ Eric R. Delinsky
Eric R. Delinsky

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION THIS DOCUMENT RELATES TO: TRACK THREE	MDL No. 2804 Case No. 17-md-2804 Judge Dan Aaron Polster

DECLARATION OF JOHN J. CONNOLLY

1. I am over the age of 18 and competent to testify from personal knowledge as to the facts set forth herein. I am an attorney at Zuckerman Spaeder LLP, which represents CVS defendants in this matter.

2. Attached hereto as Exhibit A are pages downloaded under my supervision from an Ohio Department of Health website (https://coronavirus.ohio.gov/wps/portal/gov/covid-19/dashboards/covid-19-vaccine/covid-19-vaccination-dashboard) on June 17, 2021.

3. Attached hereto as Exhibit B is an article downloaded from US Law Week titled *Next Pre-Trial Question for Jurors: Are You Vaccinated?* by Madison Alder.

4. Attached hereto as Exhibit C is an article downloaded from a National Institutes of Health website (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5784985/pdf/pone.0191728.pdf) titled *The influence of political ideology and trust on willingness to vaccinate* by Bert Baumgaertner and others and published in a journal called PLoS One.

5. Attached hereto as Exhibit D is an article downloaded from www.nytimes.com titled *Least Vaccinated U.S. Counties Have Something in Common: Trump Voters* by Danielle Ivory et al.

6. Attached hereto as Exhibit E is an article downloaded from The Hill titled *State vaccine rates fall along red, blue divide* by Peter Sullivan.

7. Attached hereto as Exhibit F is an article downloaded from www.nytimes.com titled *The Vaccine Class Gap* by David Leonhardt.

8. Attached hereto as Exhibit G is a publication of the National Center for State Courts dated May 4, 2021, titled *Considerations about Collecting Information on COVID-19 Vaccine Status from Prospective Jurors*, downloaded from the Internet at website address https://www.ncsc.org/__data/assets/pdf_file/0027/64296/COVID-19-Vaccine-Considerations.pdf.

9. Using Ohio Department of Health numbers from Exhibit A, Page 1, I calculated the percentage of vaccinated Ohio residents between ages 20 and 69 to be 49.3 percent, as shown in the table below.

Age Group	Pct. Vacc. (ODOH)	Vacc. Pop. (ODOH)	Total Pop. Calculated	Pct. Vacc. Calculated
20-29	33.63%	522,300	1,553,078	33.63%
30-39	40.65%	600,488	1,477,215	40.65%
40-49	46.99%	651,800	1,387,104	46.99%
50-59	55.52%	856,103	1,541,972	55.52%
60-64	66.20%	527,266	796,474	66.20%
65-69	74.91%	499,556	666,875	74.91%
Wgtd Avg Calc.		3,657,513	7,422,718	**49.27%**

10. Using Ohio Department of Health numbers from Exhibit A, Page 3, I calculated an estimate for absolute and comparative disparities expected in the jury pool if only vaccinated persons were selected as set forth in the table below. This estimate is based on statewide numbers and omits the "Unknown" and "Other" races because vaccination data is not reported for those categories. The mathematical formulas are as follows: Col. C = (Col. B ÷ Col. A); Col. D = (Col.

B ÷ Col. B sum); Col. E = (Col. C ÷ Col. C sum); Col. F = (Col. D – Col. E); Col. I = (Col. F ÷ Col. E).

	Column A	Column B	Column C	Column D	Column E	Column F	Column I
	Pct. Vacc.	Vacc. Pop.	Total Pop.	Pct. Vacc.	Pct. Tot.	Absolute	Compar.
Race	(ODOH)	(ODOH)	Calculated	Pool	Pool	Disparity	Disparity
White	40.86%	3,903,405	9,553,120	86.91%	81.72%	5.19%	6.35%
Unknown							
Other							
Black or Afr.-	25.74%	392,683	1,525,575	8.74%	13.05%	-4.31%	-33.00%
Asian	54.18%	157,926	291,484	3.52%	2.49%	1.02%	41.02%
Am. Ind. Et al	33.15%	11,273	34,006	0.25%	0.29%	-0.04%	-13.72%
Nat. Haw.	56.09%	3,957	7,055	0.09%	0.06%	0.03%	45.99%
Multiracial	7.88%	21,937	278,388	0.49%	2.38%	-1.89%	-79.49%
		4,491,181	11,689,628				

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 21, 2021.

/s/ John J. Connolly

John J. Connolly

EXHIBIT A

State of Ohio | COVID-19 Vaccine Dashboard

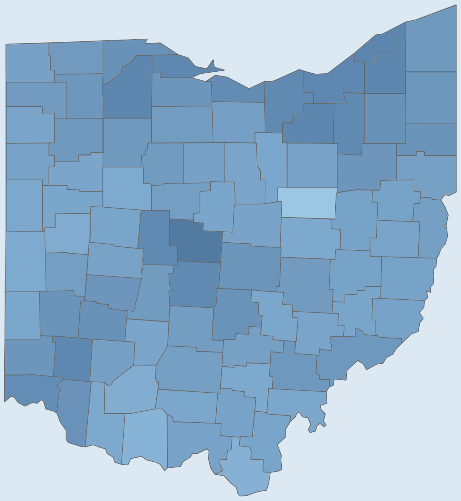
Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Statewide: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
33,521	42.59%	4,978,800

Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



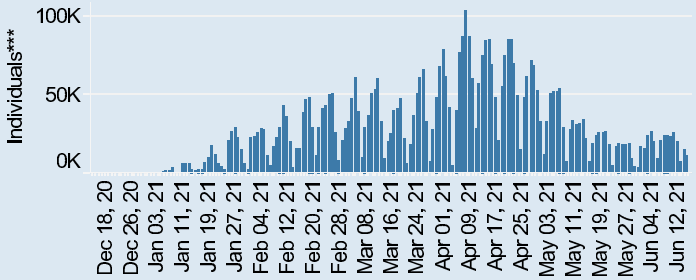
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group

0-19	8.97%	258,880
20-29	33.63%	522,300
30-39	40.65%	600,488
40-49	46.99%	651,800
50-59	55.52%	856,103
60-64	66.20%	527,266
65-69	74.91%	499,556
70-74	79.82%	416,949
75-79	76.47%	273,446
80+	74.48%	372,012

View Count By
Select to view counts by daily or cumulative
Daily Total



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Population data as reported by the US Census Bureau. There are no population estimates for "Unknown" or "Other" demographic groups, so there is no percentage of population for those groups. Data reported to the Ohio Department of Health. All data displayed are preliminary and subject to change as more information is reported to ODH.

State of Ohio | COVID-19 Vaccine Dashboard

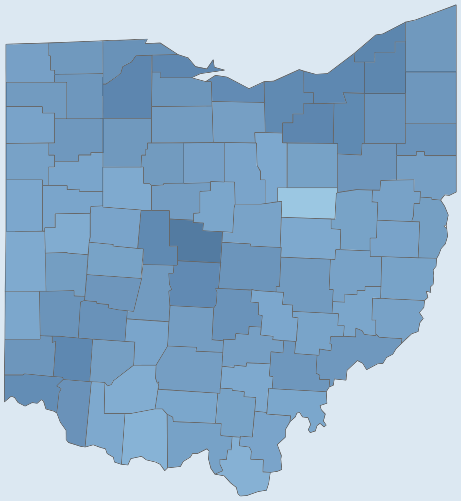
Last Updated: 2021-06-15

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Statewide: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
22,225	42.29%	4,943,253

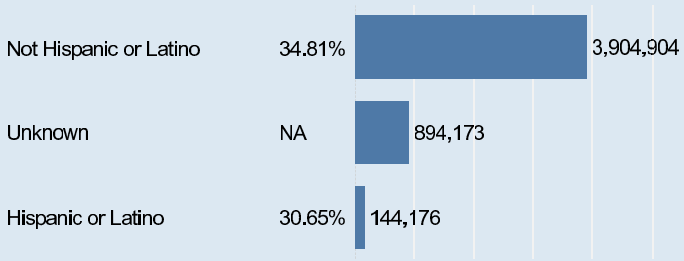
Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



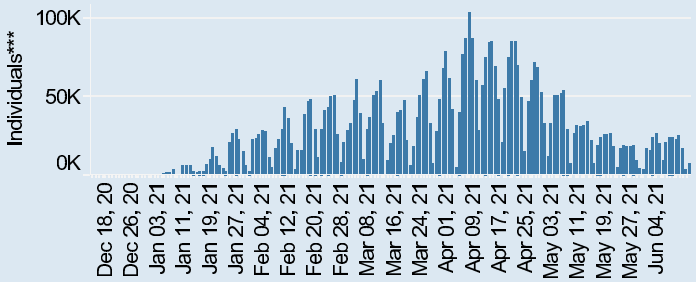
Residency Not Reported
6,535

Residents of Other States - Vaccinated in Ohio
129,722

Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
Select to view counts by daily or cumulative
Daily Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-15

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Statewide: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
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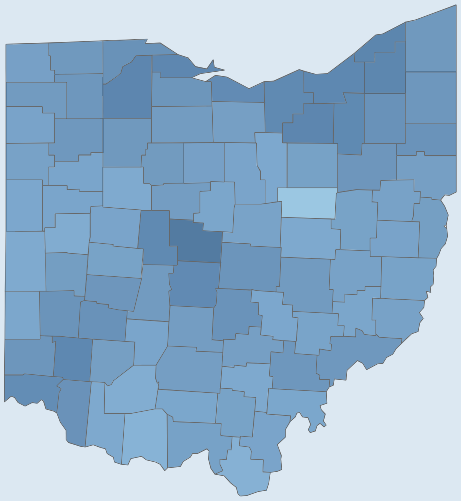
Counties are colored by % of Population with Vaccine Completed**



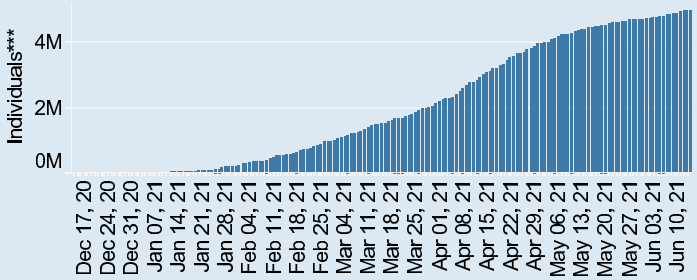
Residency Not Reported
6,535

Residents of Other States - Vaccinated in Ohio
129,722

Key Metrics
Select to view key demographic groups
Race

White	40.86%	3,903,405
Unknown	NA	216,651
Other	NA	235,421
Black or African American	25.74%	392,683
Asian	54.18%	157,926
American Indian Alaska Nati..	33.15%	11,273
Native Hawaiian Pacific Islan..	56.09%	3,957
Multiracial	7.88%	21,937

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-15

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Vaccine Completed**

Statewide: Vaccine Status
By Total and % of Population

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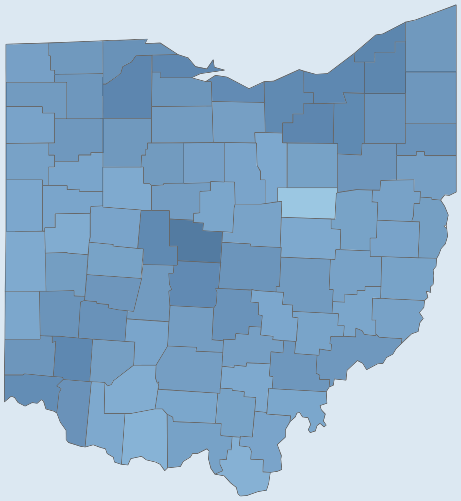
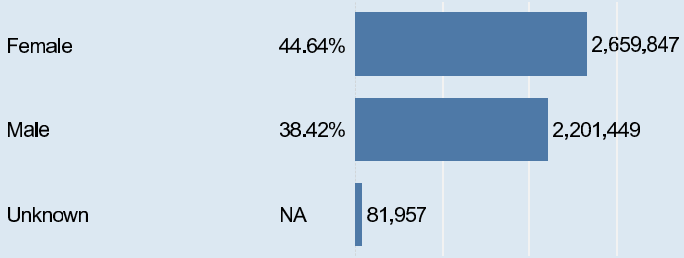


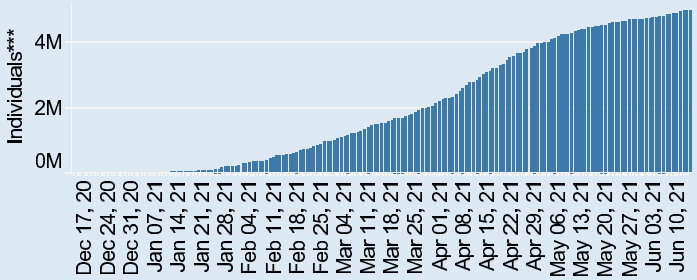
Residency Not Reported
6,535

Residents of Other States - Vaccinated in Ohio
129,722

Key Metrics
Select to view key demographic groups
Sex



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

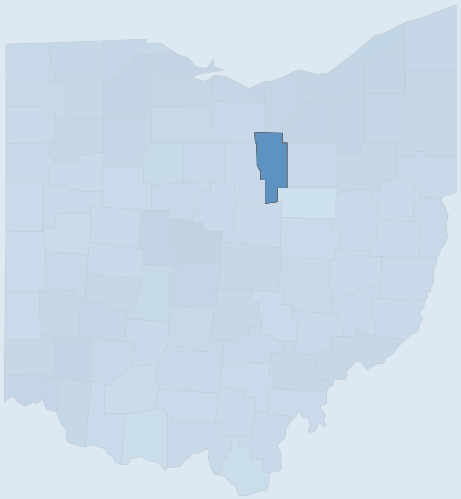
Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Ashland County: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
183	29.78%	15,927

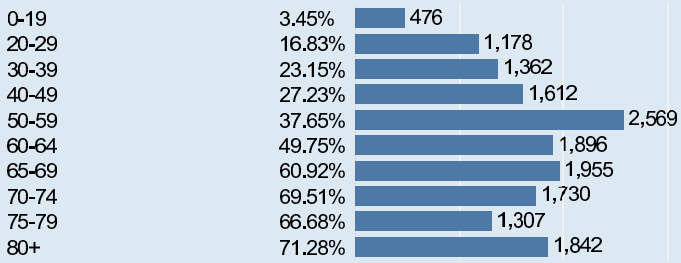
Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



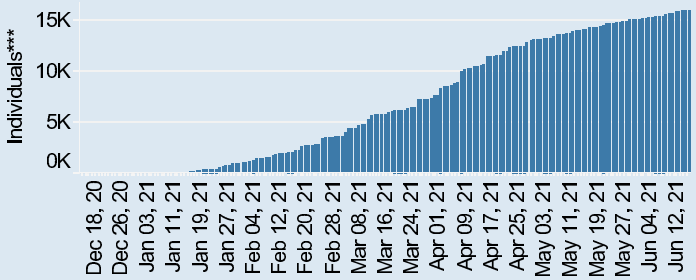
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Ashland County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
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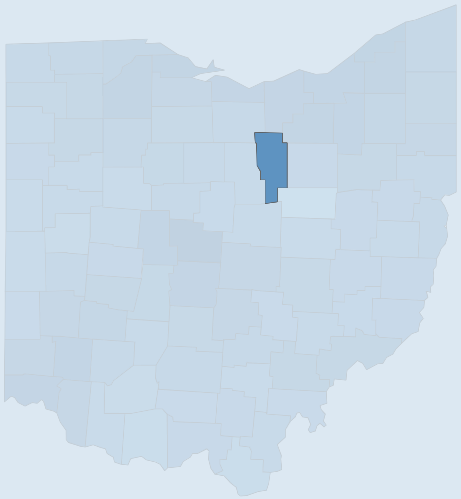
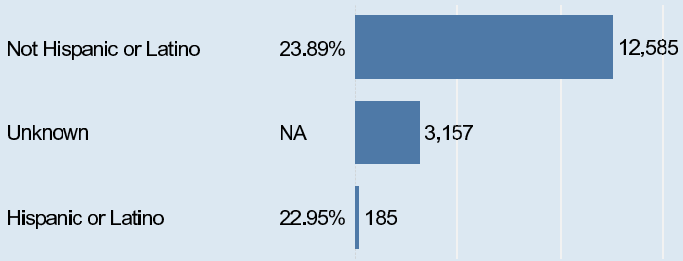


Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
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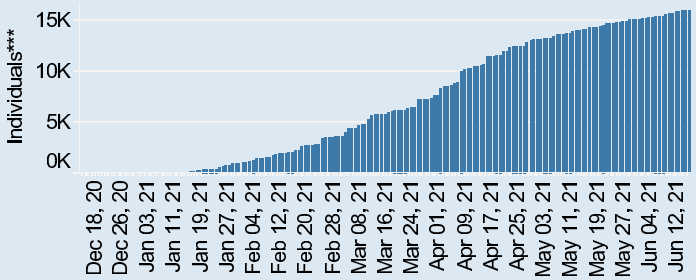
Cumulative Total



Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Ashland County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
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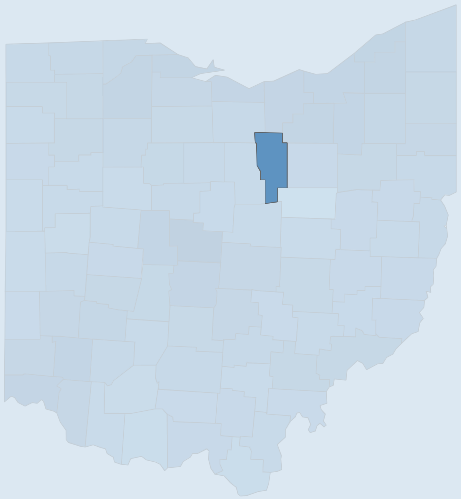
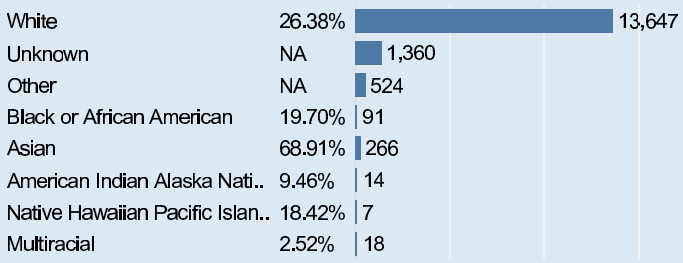


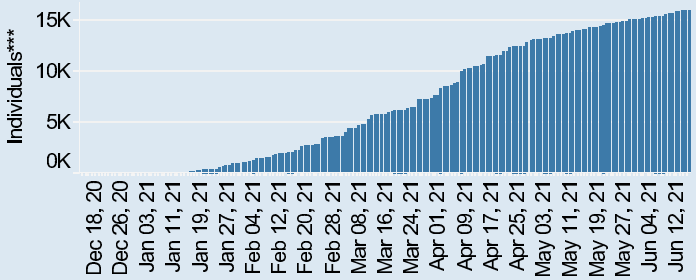
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
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Vaccine Completed**

Ashland County: Vaccine Status

By Total and % of Population

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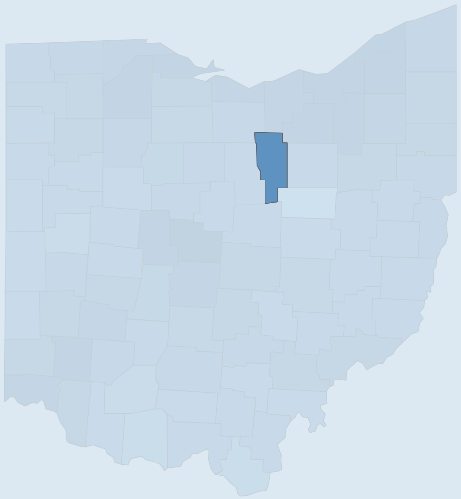
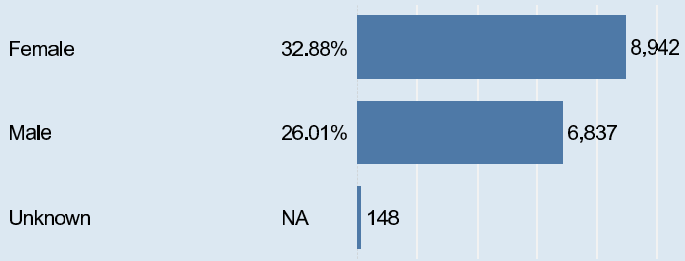


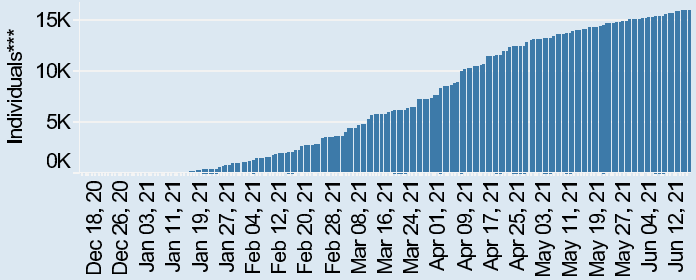
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

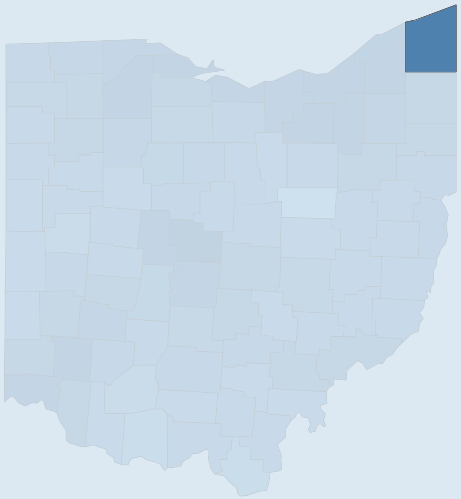
Ashtabula County: Vaccine Status

By Total and % of Population

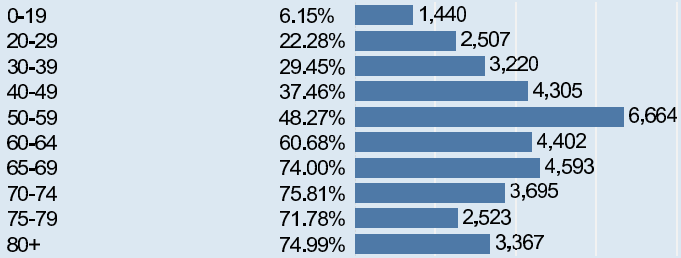
Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
195	37.76%	36,716

Click County to Filter Metrics

Counties are colored by % of Population with Vaccine Completed**



Key Metrics
Select to view key demographic groups
Age Group



View Count By
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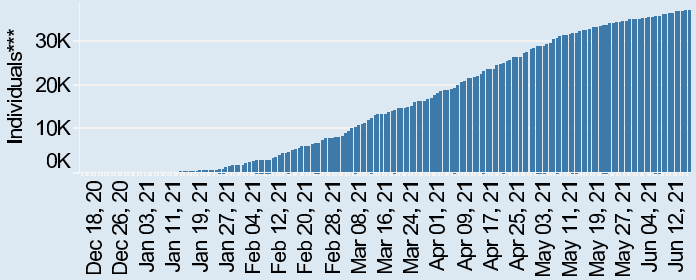
Cumulative Total



Residency Not Reported	Residents of Other States - Vaccinated in Ohio
6,700	130,645

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

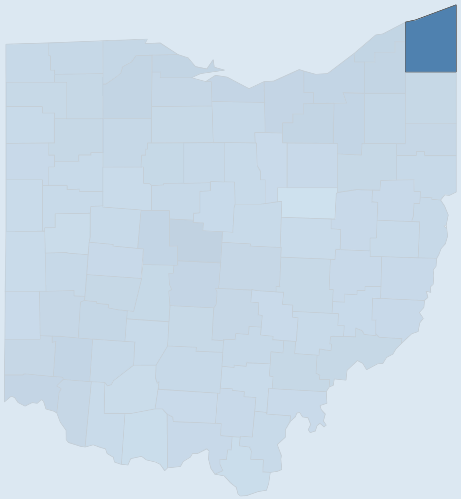
Ashtabula County: Vaccine Status

By Total and % of Population

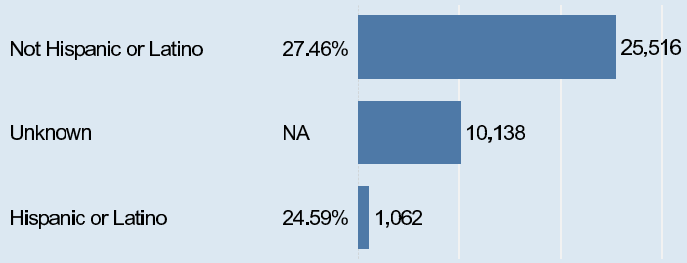
Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
195	37.76%	36,716

Click County to Filter Metrics

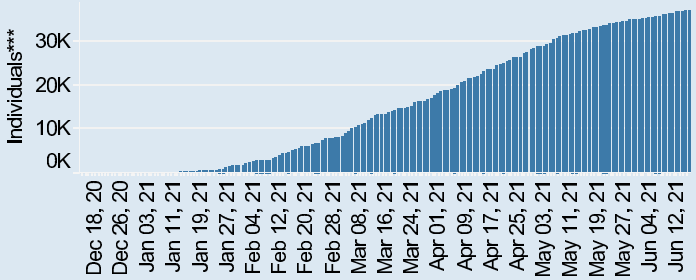
Counties are colored by % of Population with Vaccine Completed**



Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
Select to view counts by daily or cumulative
Cumulative Total



Residency Not Reported	Residents of Other States - Vaccinated in Ohio
6,700	130,645

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

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Select to view by Vaccine Started or Completed
Vaccine Completed**

Ashtabula County: Vaccine Status

By Total and % of Population

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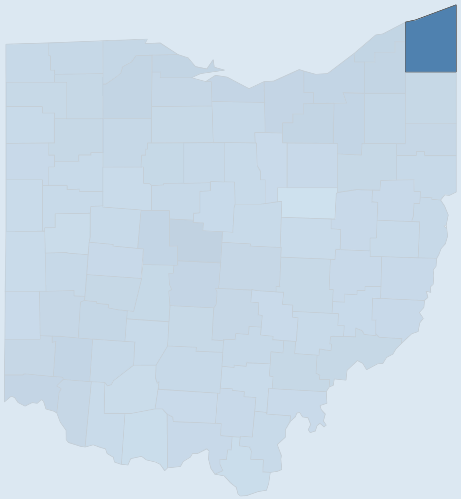
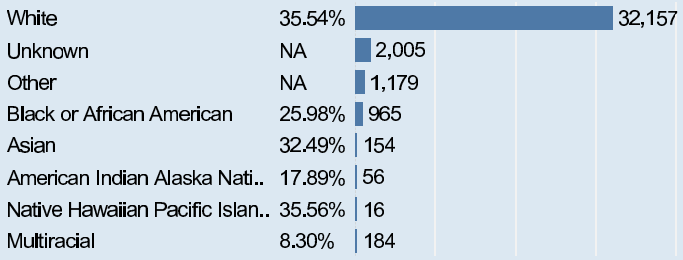


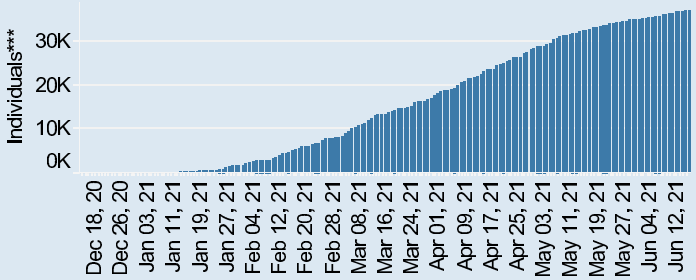
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

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Vaccine Completed**

Ashtabula County: Vaccine Status

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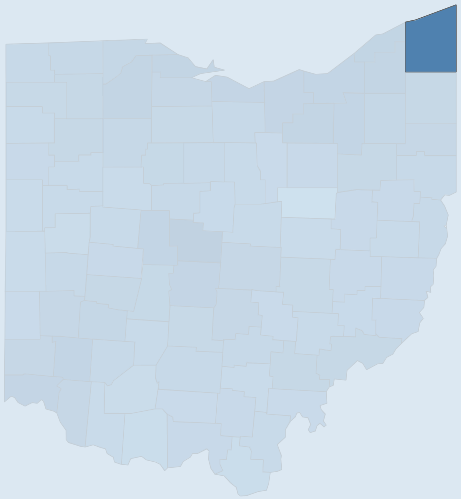

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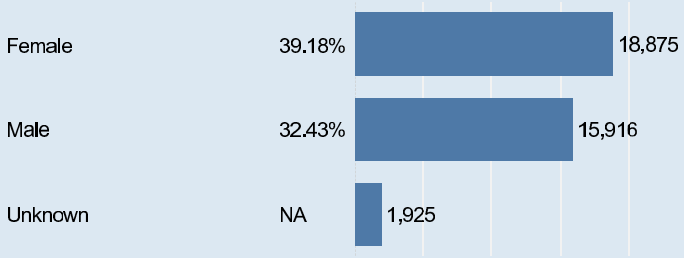
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



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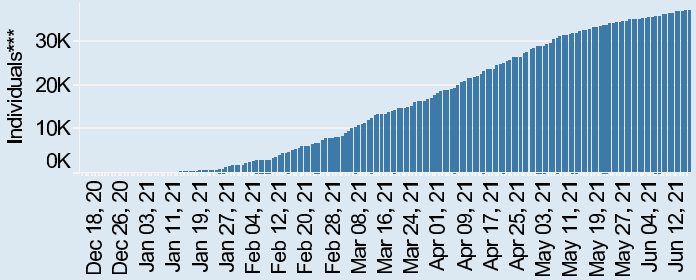

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

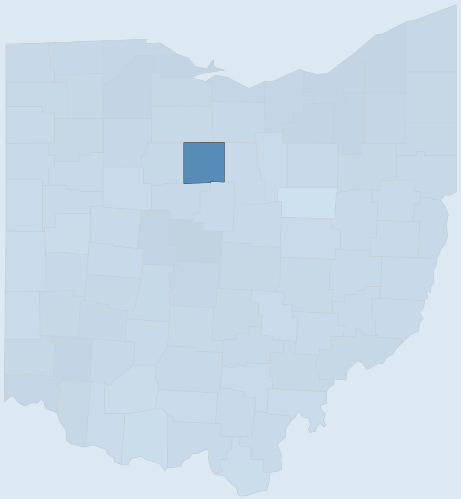
Crawford County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
61	33.60%	13,941

Click County to Filter Metrics

Counties are colored by % of Population with Vaccine Completed**



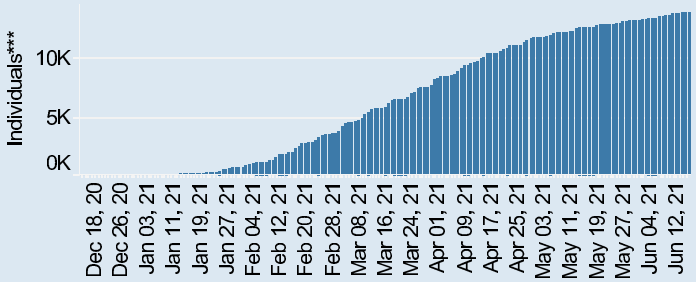
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group

0-19	3.26%	320
20-29	17.63%	844
30-39	22.71%	1,004
40-49	29.37%	1,470
50-59	41.81%	2,330
60-64	55.36%	1,668
65-69	66.75%	1,809
70-74	72.71%	1,572
75-79	73.87%	1,230
80+	72.58%	1,694

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

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Vaccine Completed**

Crawford County: Vaccine Status

By Total and % of Population

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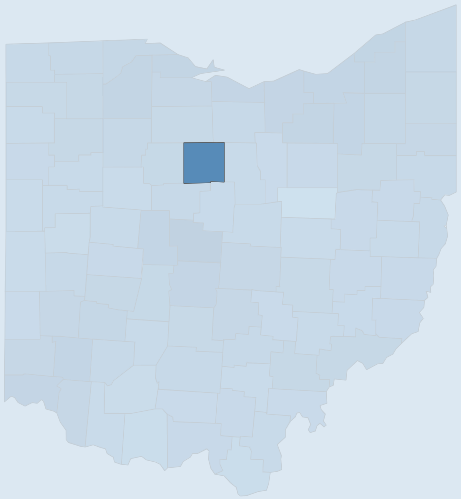
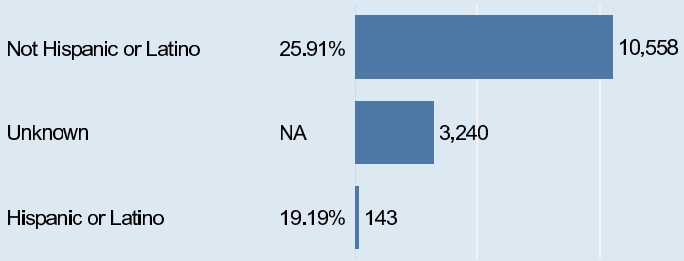


Key Metrics
Select to view key demographic groups
Ethnicity



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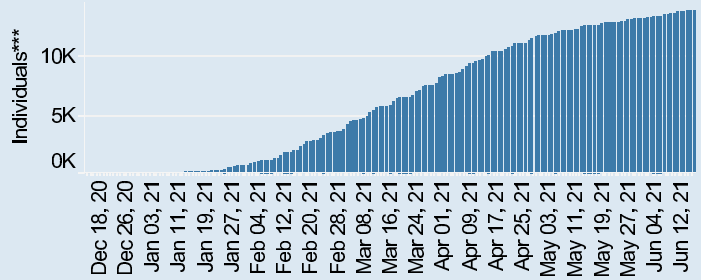

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State of Ohio | COVID-19 Vaccine Dashboard

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Crawford County: Vaccine Status

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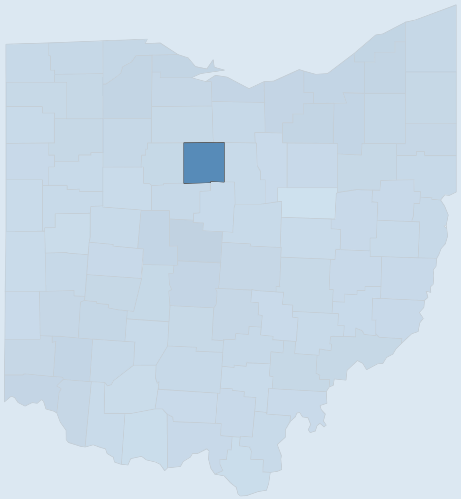

Residency Not Reported
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Residents of Other States - Vaccinated in Ohio
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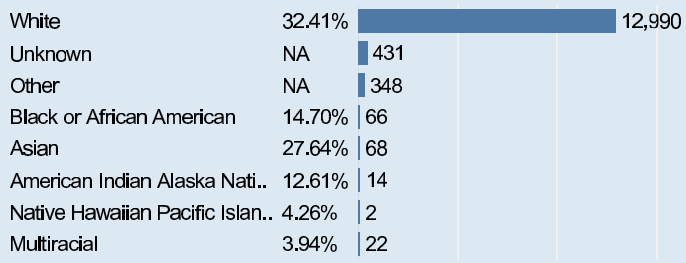
Key Metrics
Select to view key demographic groups
Race



View Count By
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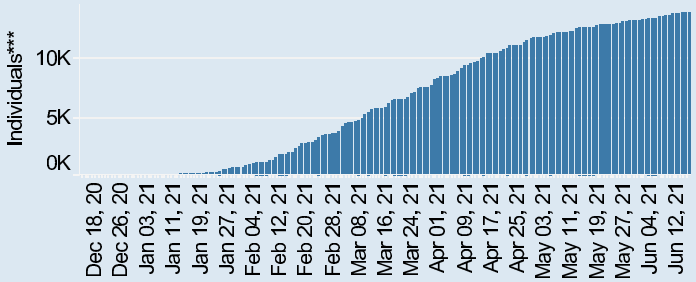

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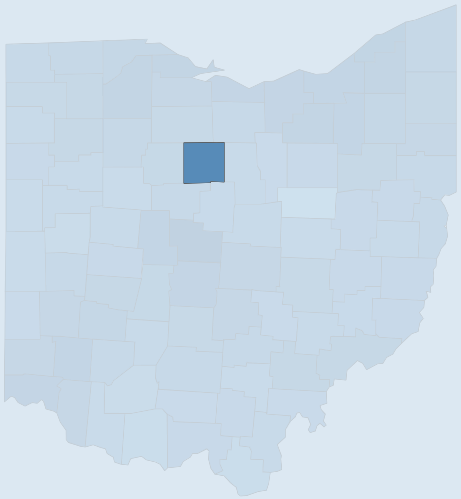

Residency Not Reported
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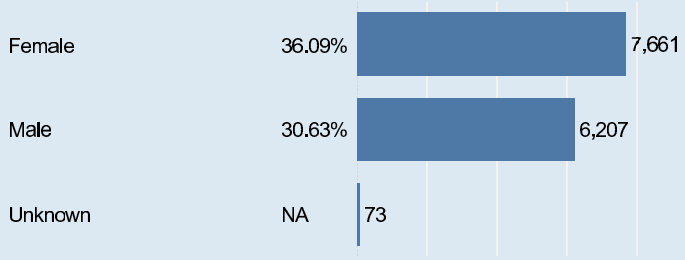
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



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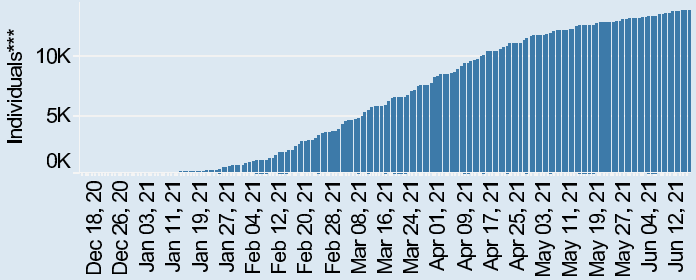

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

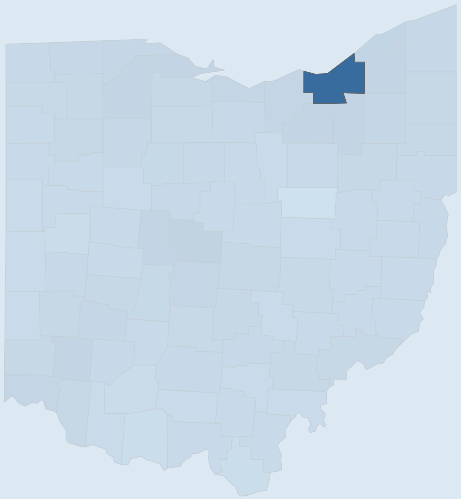
Cuyahoga County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
3,202	47.13%	582,137

Click County to Filter Metrics

Counties are colored by % of Population with Vaccine Completed**



Residency Not Reported
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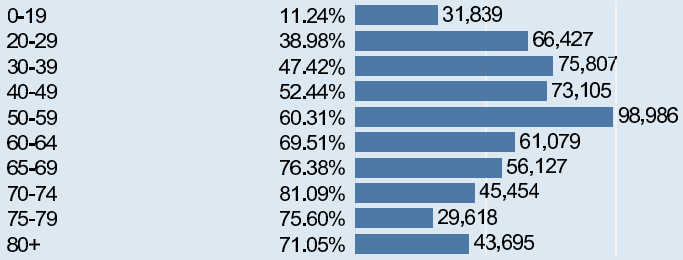
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group



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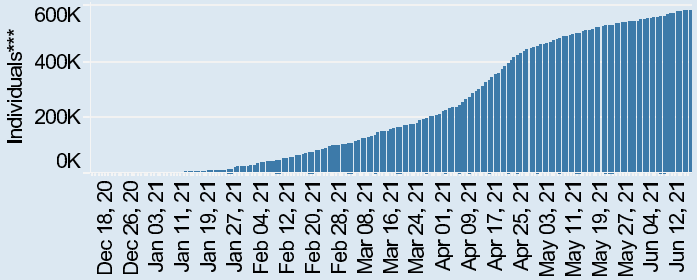

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
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Vaccine Completed**

Cuyahoga County: Vaccine Status

By Total and % of Population

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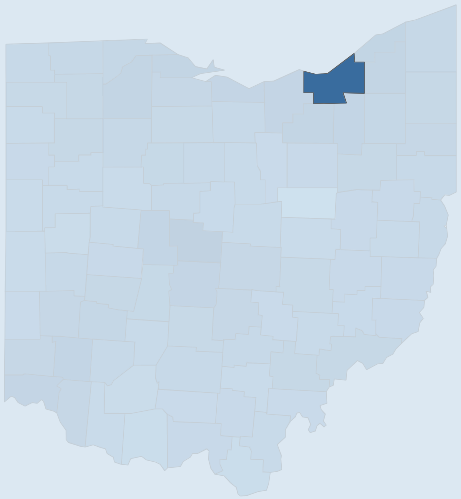

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Residents of Other States - Vaccinated in Ohio
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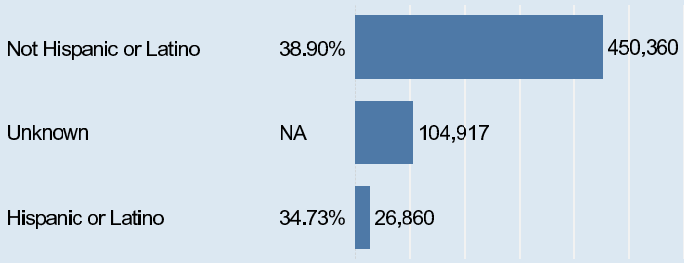
Key Metrics
Select to view key demographic groups
Ethnicity



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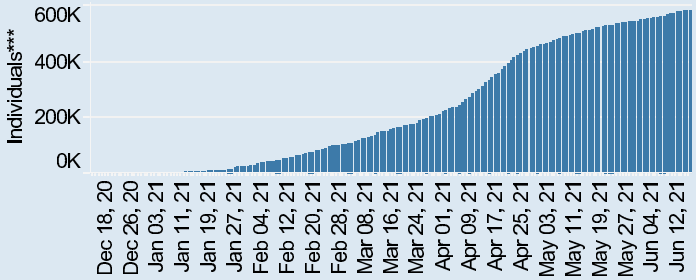

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Cuyahoga County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
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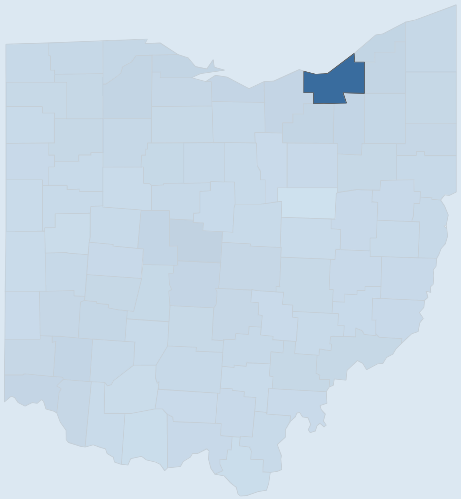
Click County to Filter Metrics

Counties are colored by % of Population with Vaccine Completed**



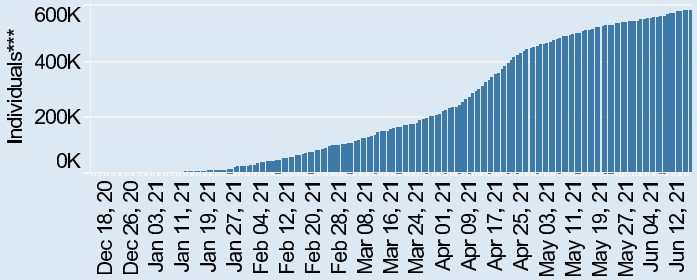
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race

White	51.50%	404,039
Unknown	NA	15,068
Other	NA	33,549
Black or African American	26.59%	100,241
Asian	59.39%	24,622
American Indian Alaska Nati..	45.57%	1,472
Native Hawaiian Pacific Islan..	74.62%	391
Multiracial	9.70%	2,755

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

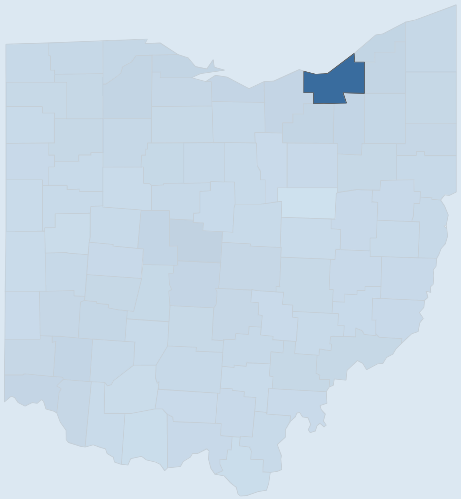
Cuyahoga County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
3,202	47.13%	582,137

Click County to Filter Metrics

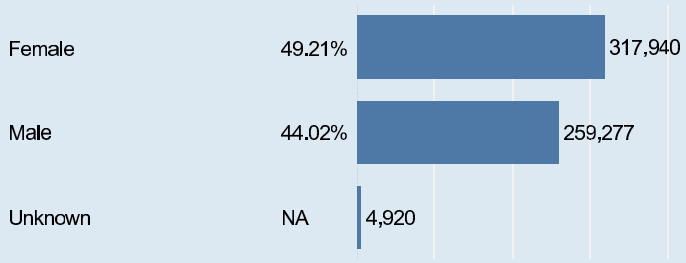
Counties are colored by % of Population with Vaccine Completed**



Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



View Count By
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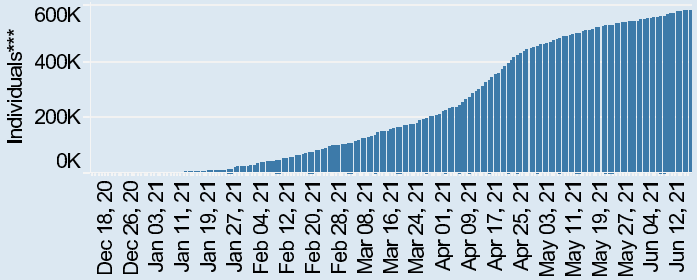
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

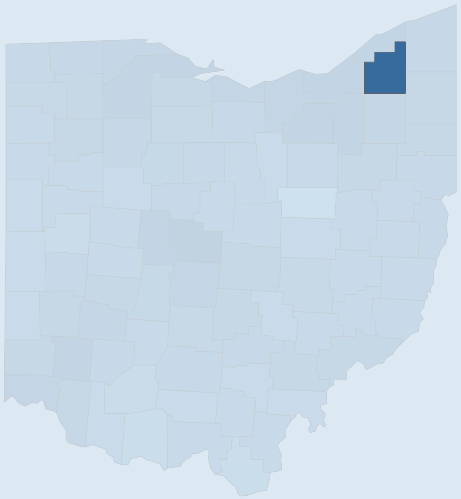
Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Geauga County: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
263	47.74%	44,707

Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



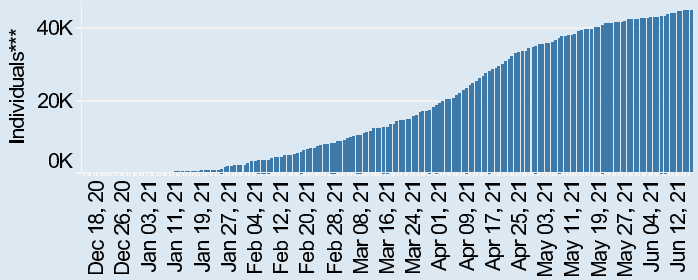
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group

0-19	12.09%	2,821
20-29	36.00%	3,497
30-39	44.11%	3,877
40-49	49.99%	5,307
50-59	59.14%	8,327
60-64	71.01%	5,187
65-69	76.93%	4,815
70-74	78.02%	3,975
75-79	81.16%	2,989
80+	82.08%	3,912

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Geauga County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
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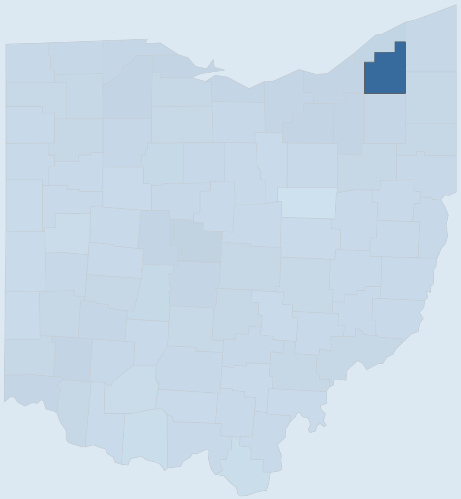
Counties are colored by % of Population with Vaccine Completed**



Residency Not Reported
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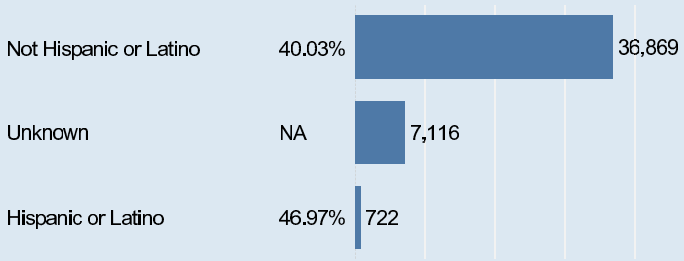
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
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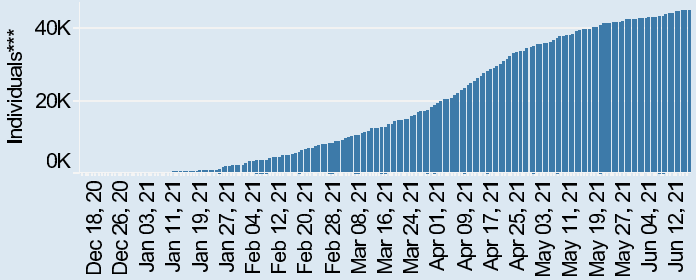
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Geauga County: Vaccine Status

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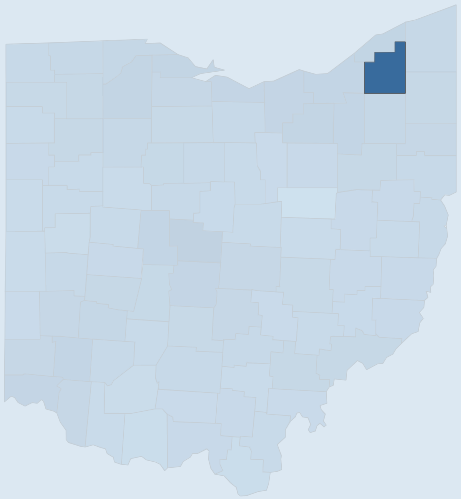


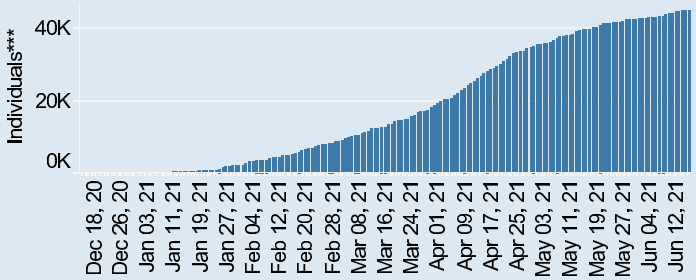
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race

White	45.56%	41,349
Unknown	NA	799
Other	NA	1,344
Black or African American	44.80%	521
Asian	60.48%	381
American Indian Alaska Nati..	46.46%	59
Native Hawaiian Pacific Islan..	52.94%	9
Multiracial	25.41%	245

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

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By Total and % of Population

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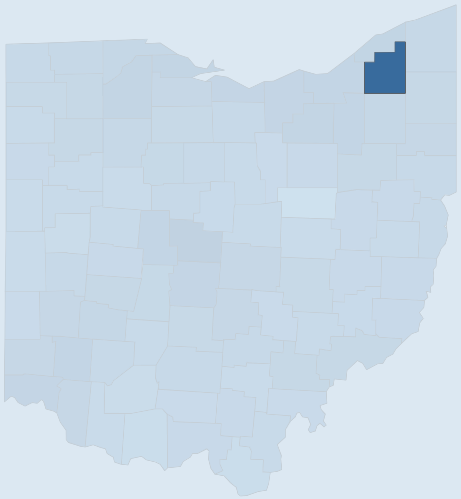

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Residents of Other States - Vaccinated in Ohio
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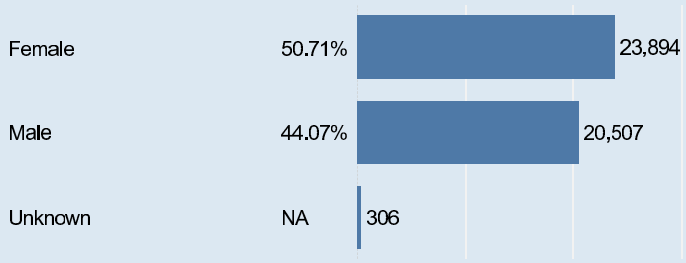
Key Metrics
Select to view key demographic groups
Sex



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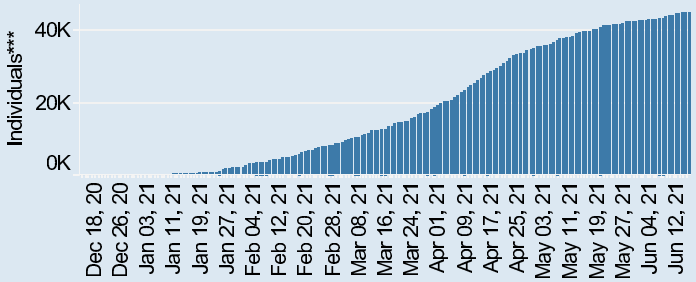
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

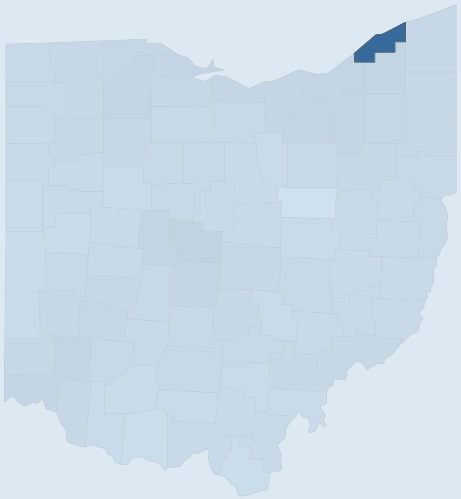
Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Lake County: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
671	48.52%	111,662

Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



Residency Not Reported
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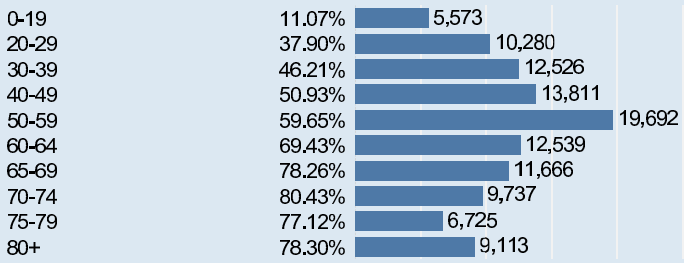
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group



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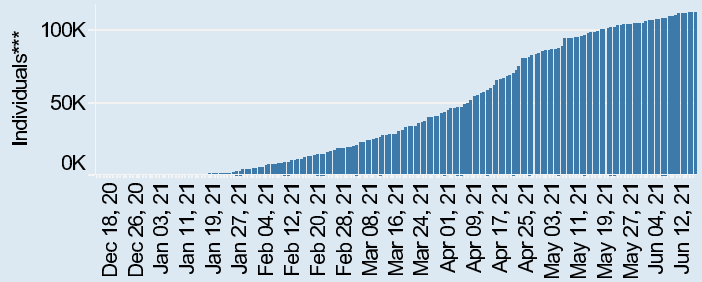

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State of Ohio | COVID-19 Vaccine Dashboard

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View By
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Vaccine Completed**

Lake County: Vaccine Status
By Total and % of Population

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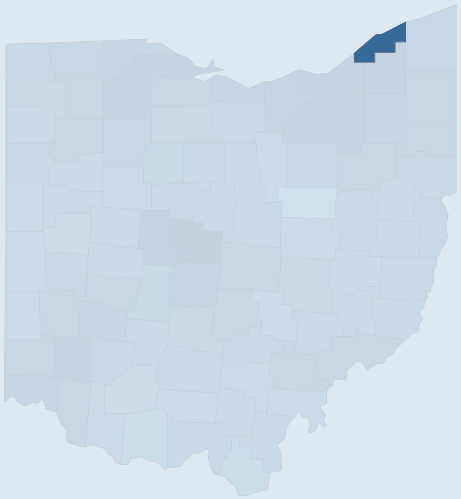

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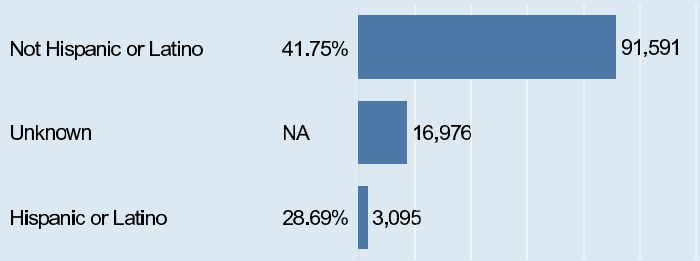
Key Metrics
Select to view key demographic groups
Ethnicity



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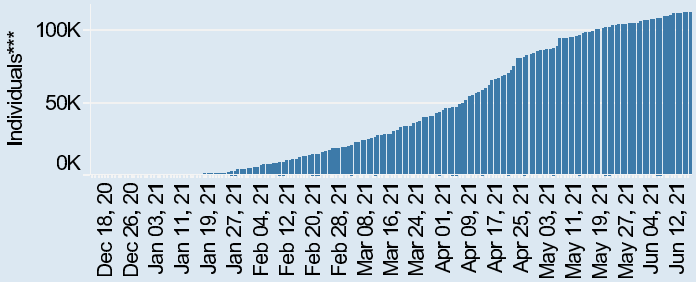

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Lake County: Vaccine Status
By Total and % of Population

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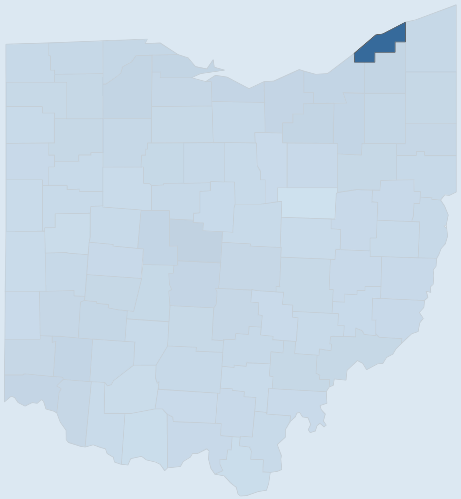

Residency Not Reported
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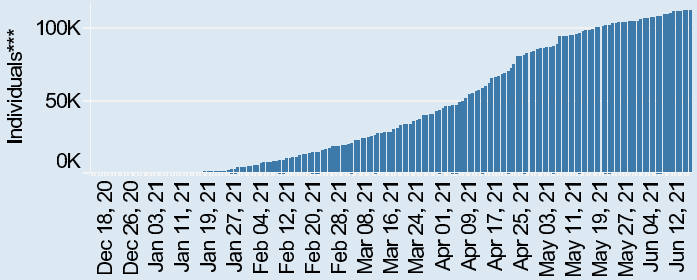
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race

White	47.32%	99,805
Unknown	NA	1,648
Other	NA	4,630
Black or African American	28.48%	3,143
Asian	54.58%	1,896
American Indian Alaska Nati..	46.82%	228
Native Hawaiian Pacific Islan..	90.48%	57
Multiracial	6.10%	255

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Lake County: Vaccine Status
By Total and % of Population

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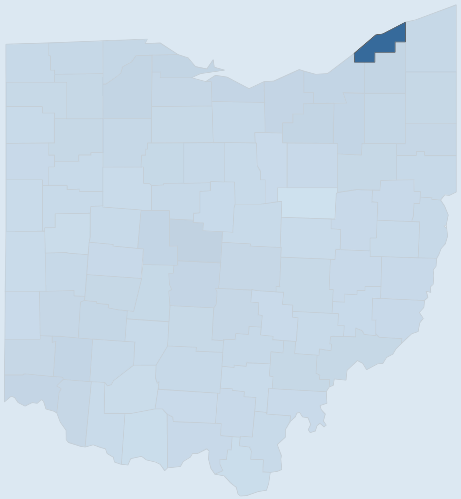

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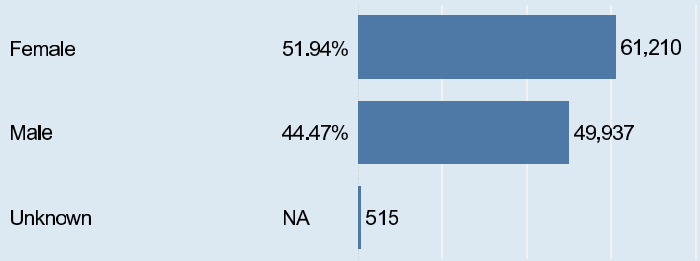
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



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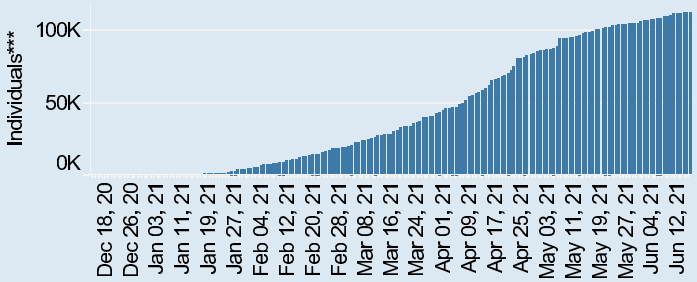
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

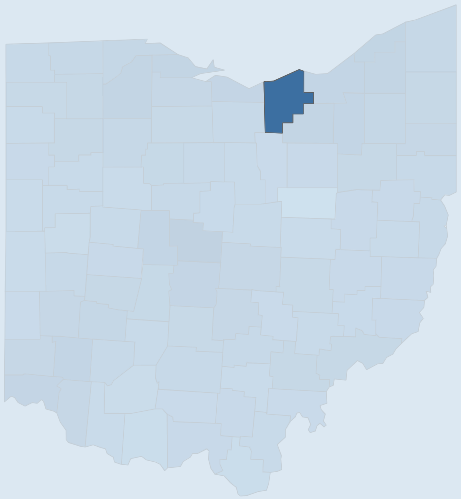
Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Lorain County: Vaccine Status
By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
1,112	45.98%	142,447

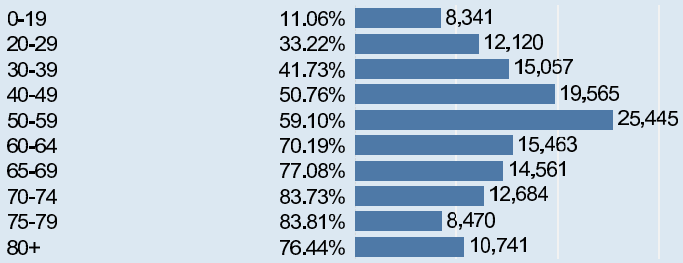
Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



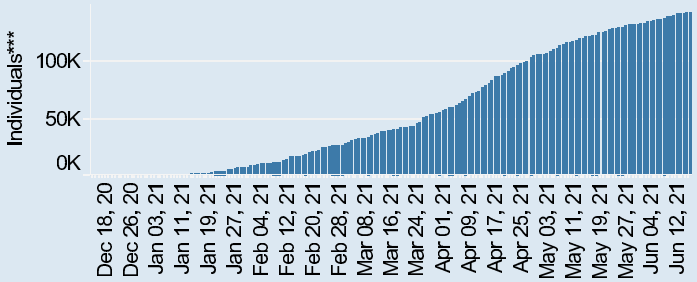
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Lorain County: Vaccine Status
By Total and % of Population

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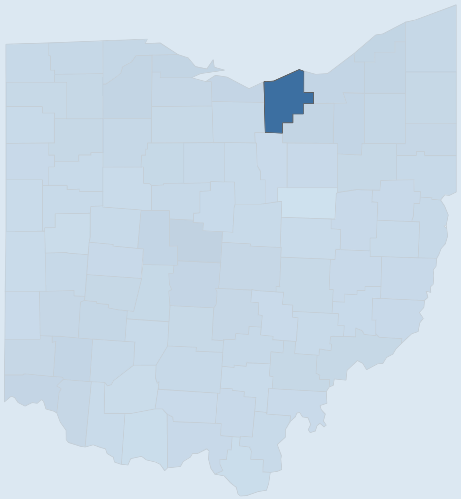

Residency Not Reported
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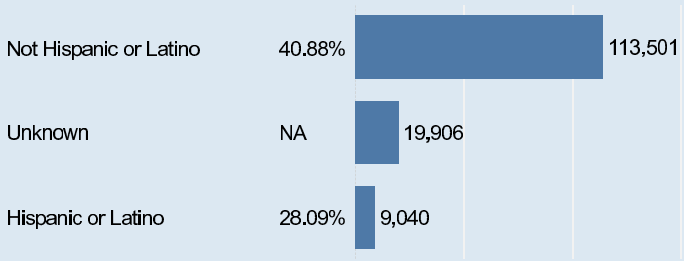
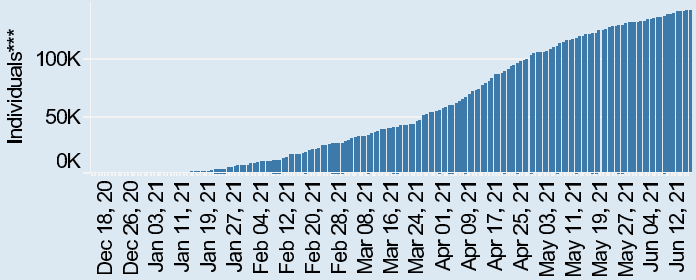
130,645

Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

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View By
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Vaccine Completed**

Lorain County: Vaccine Status
By Total and % of Population

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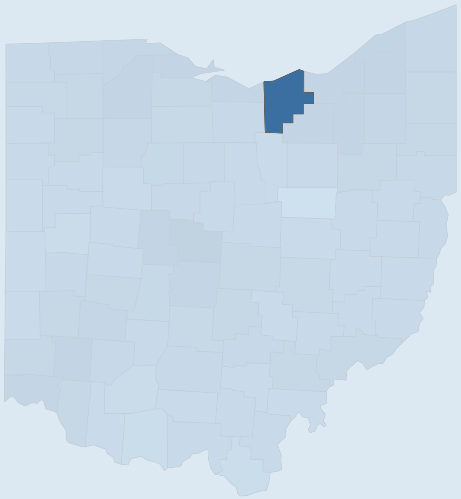

Residency Not Reported
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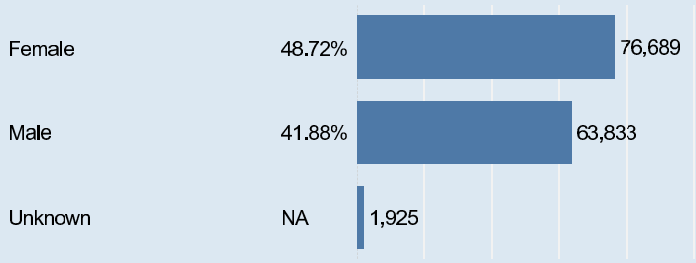
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



View Count By
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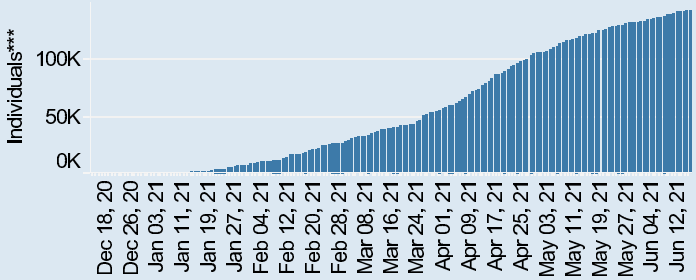
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
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Vaccine Completed**

Lorain County: Vaccine Status
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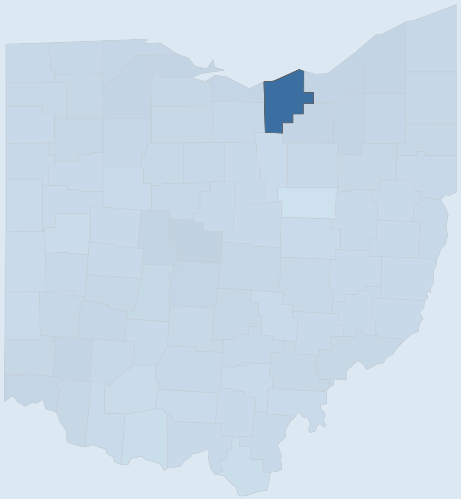

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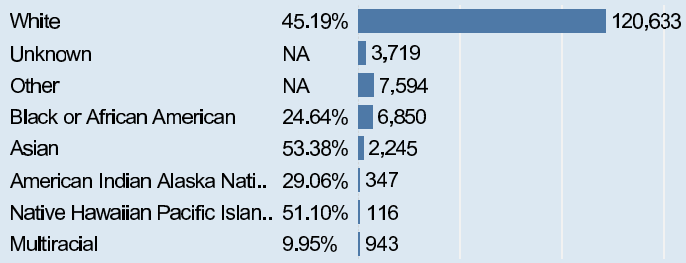
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race



View Count By
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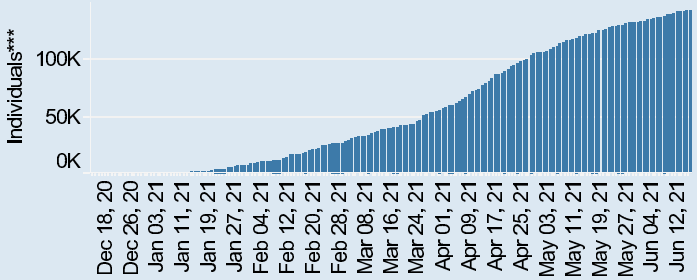

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

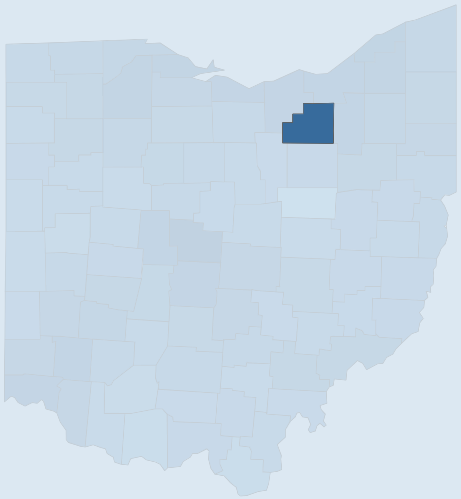
Medina County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
602	47.99%	86,261

Click County to Filter Metrics

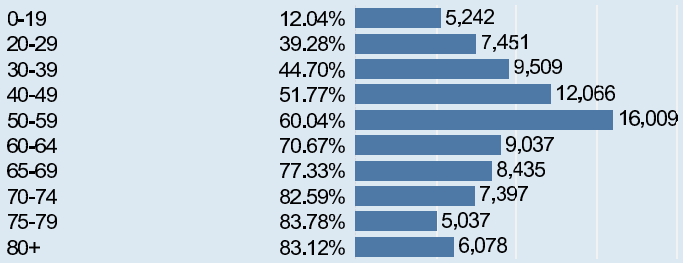
Counties are colored by % of Population with Vaccine Completed**



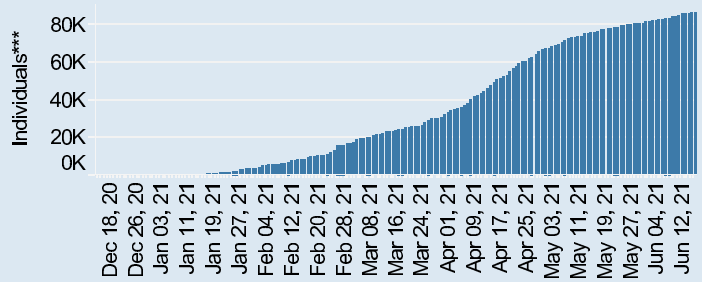
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
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Vaccine Completed**

Medina County: Vaccine Status

By Total and % of Population

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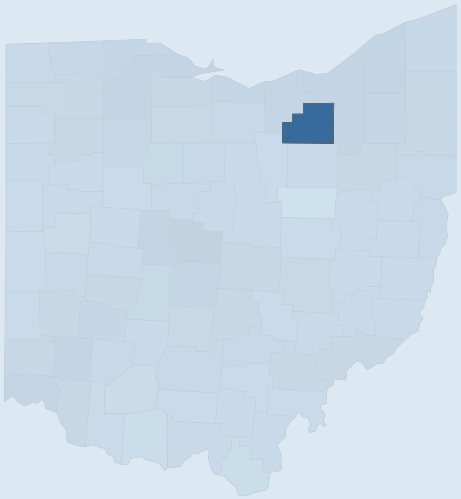

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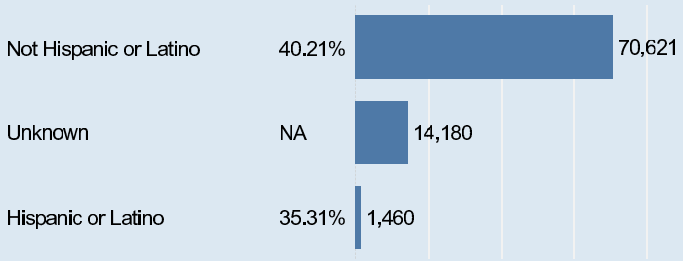
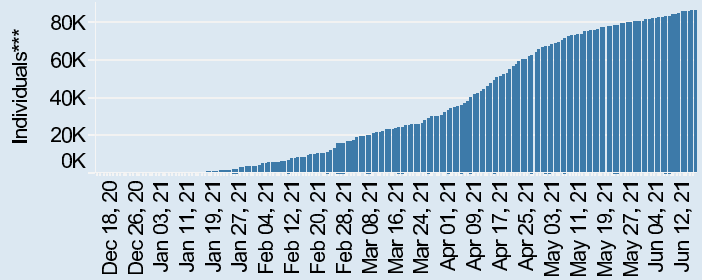
130,645

Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
Select to view counts by daily or cumulative
Cumulative Total



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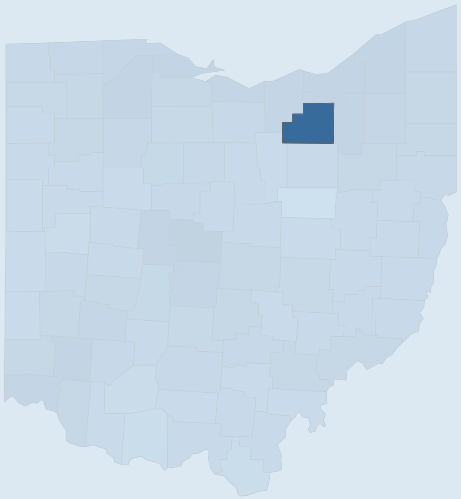

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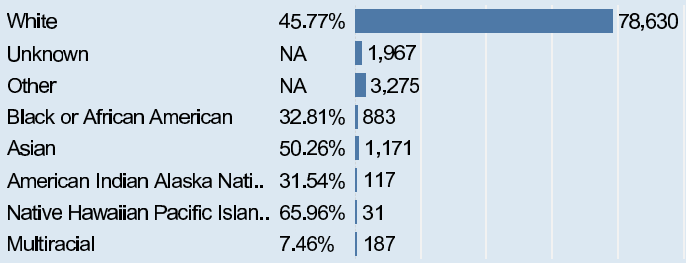
Key Metrics
Select to view key demographic groups
Race



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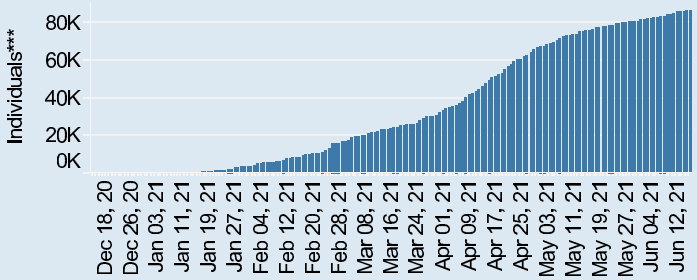

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State of Ohio | COVID-19 Vaccine Dashboard

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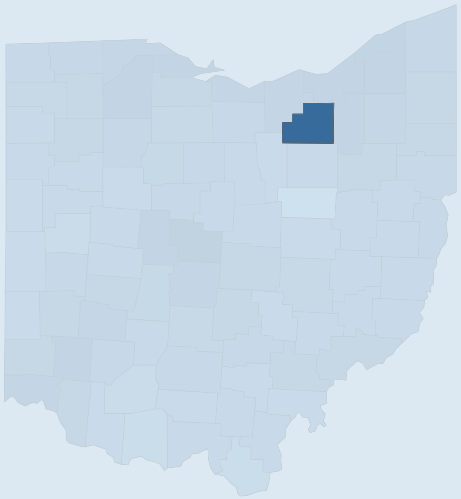

Residency Not Reported
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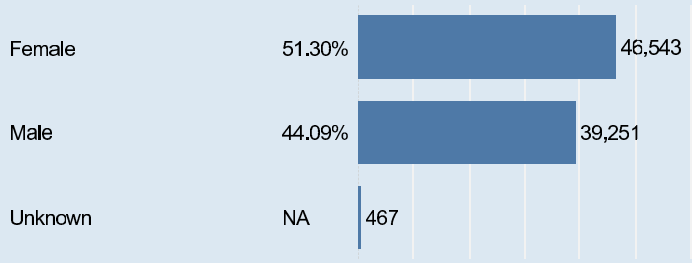
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



View Count By
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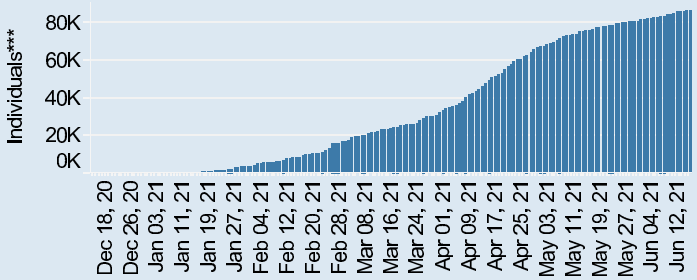
Cumulative Total



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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

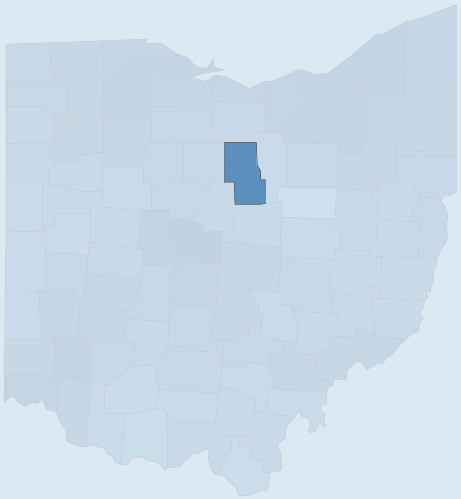
Richland County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
211	31.58%	38,259

Click County to Filter Metrics

Counties are colored by % of Population with Vaccine Completed**



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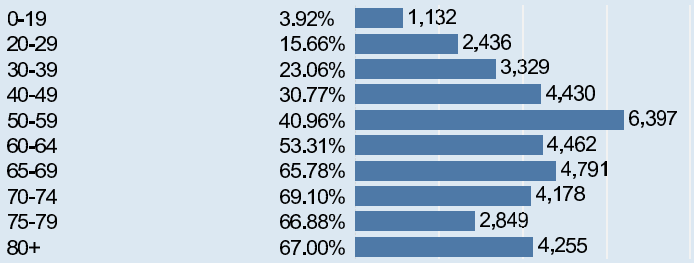
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Age Group



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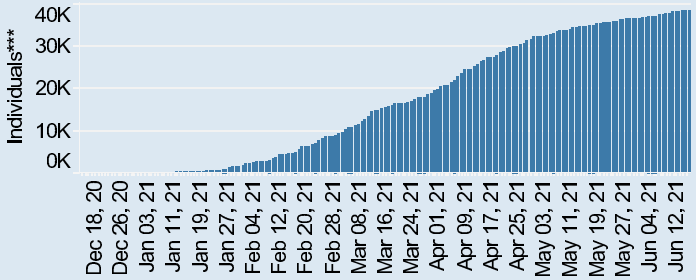

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State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Richland County: Vaccine Status

By Total and % of Population

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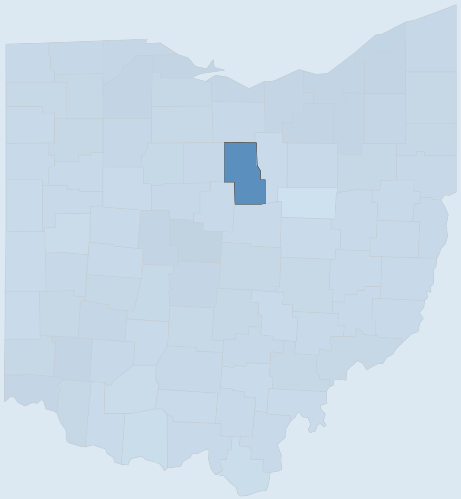

Residency Not Reported
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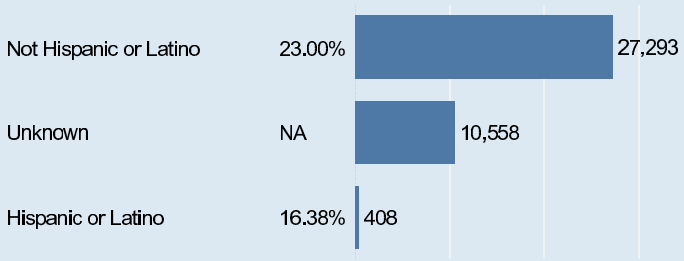
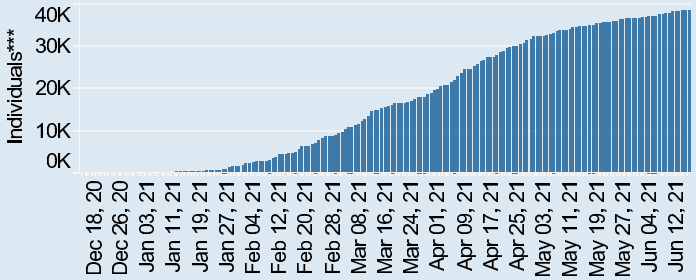
Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Ethnicity



View Count By
Select to view counts by daily or cumulative
Cumulative Total



*** Indicates that an individual has received at least one valid dose of COVID-19 vaccine.**
**** Indicates that an individual has received all recommended COVID-19 vaccine doses and is considered fully immunized; specific requirements (number of doses, spacing, age restrictions) may vary depending on COVID-19 vaccine brand.**
*****A person is counted in the 'Vaccine Started' category on the day that they receive their first valid dose of COVID-19 vaccine. A person is counted in the 'Vaccine Completed' category on the day that they get their final recommended valid dose of COVID-19 vaccine. All dates on this dashboard indicate the date the vaccine was administered.**
******The number of confirmed valid vaccines identified by ODH over the last 24 hours ending at 6 am daily. Although most vaccines are identified within 24 hours of the vaccine administration date, some may take longer to be reported.**

Population data as reported by the US Census Bureau. There are no population estimates for "Unknown" or "Other" demographic groups, so there is no percentage of population for those groups. Data reported to the Ohio Department of Health. All data displayed are preliminary and subject to change as more information is reported to ODH.

State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

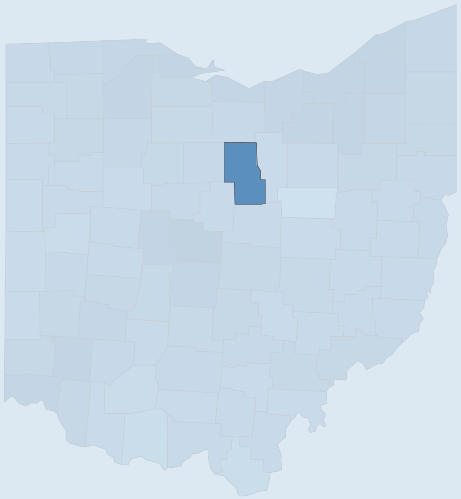
Richland County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
211	31.58%	38,259

Click County to Filter Metrics

Counties are colored by % of Population with Vaccine Completed**



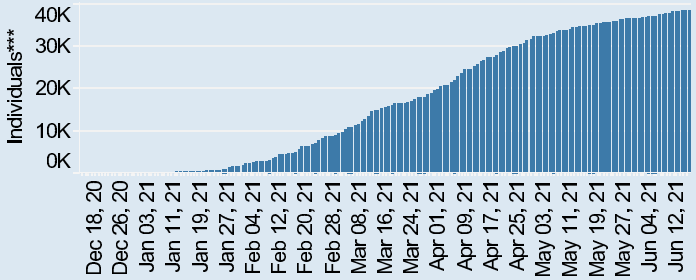
Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Race

White	30.12%	31,761
Unknown	NA	2,759
Other	NA	1,189
Black or African American	17.54%	2,038
Asian	38.07%	367
American Indian Alaska Nati..	24.75%	73
Native Hawaiian Pacific Islan..	40.00%	24
Multiracial	1.73%	48

View Count By
Select to view counts by daily or cumulative
Cumulative Total



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Population data as reported by the US Census Bureau. There are no population estimates for "Unknown" or "Other" demographic groups, so there is no percentage of population for those groups. Data reported to the Ohio Department of Health. All data displayed are preliminary and subject to change as more information is reported to ODH.

State of Ohio | COVID-19 Vaccine Dashboard

Last Updated: 2021-06-16

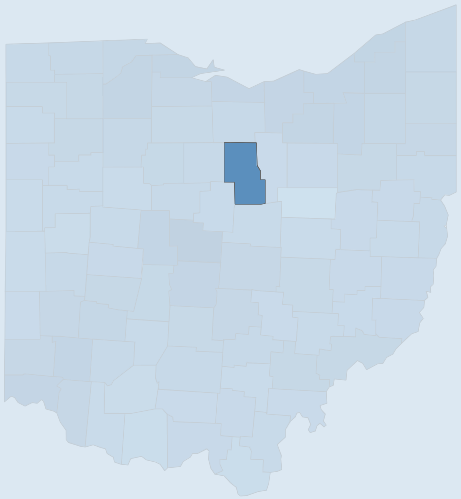
View By
Select to view by Vaccine Started or Completed
Vaccine Completed**

Richland County: Vaccine Status

By Total and % of Population

Vaccine Completed**, Change from Last 24 Hours****	Vaccine Completed** By Population	Vaccine Completed**, Total
211	31.58%	38,259

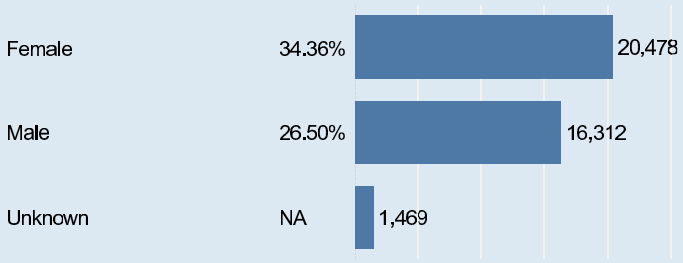
Click County to Filter Metrics
Counties are colored by % of Population with Vaccine Completed**



Residency Not Reported
6,700

Residents of Other States - Vaccinated in Ohio
130,645

Key Metrics
Select to view key demographic groups
Sex



View Count By
Select to view counts by daily or cumulative
Cumulative Total

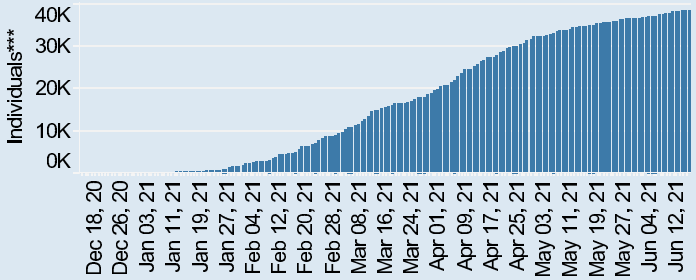


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EXHIBIT B

US Law Week

Next Pre-Trial Question for Jurors: Are You Vaccinated?

By Madison Alder

May 28, 2021, 4:45 AM

- Question could tell lawyers, judges more about potential juror views
- Courts may ask prospective jurors in questionnaires for safety reasons

Judges have a new question to consider as they ramp up in-person trials during the pandemic: whether prospective jurors can be asked about their vaccination status.

Asking about vaccination status could give insight into jurors' worldview and help the court from a safety perspective, but it could be seen as intrusive or as a proxy for asking about a juror's politics. It's ultimately up to judges whether they want those kinds of questions to be asked during jury selection, judges, lawyers, and jury experts told Bloomberg Law.

"It's a very fluid area right now," said Kimberly Mueller, chief judge of the Eastern District of California. Judges are "thinking very hard about what record is being made here and how does this information affect a party's right to a fair trial and a jury of his or her peers."

Jurors could be asked as part of pre-selection questionnaires or while they're checking in, which could provide the court with useful information for health and safety. Alternatively, the question might get raised during voir dire—the jury selection process.

"Something as salient in 2021 as the decision to intentionally remain unvaccinated is telling no matter the type of case," said Dan Johnson, CEO of jury research technology company JurorSearch.

Judges, however, can ultimately decide to not permit the question if they feel it isn't relevant. Suja Thomas, professor at the University of Illinois College of Law who studies and writes about juries, said she believes "a lot of judges would say the information is irrelevant to probably most cases."

'Incredibly Insightful'

For lawyers, the question is an opportunity to get a sense for a potential juror's empathy and feelings toward other people, jury consultants said.

"On the voir dire side, it's incredibly insightful about the personality traits of those that choose to remain unvaccinated," Johnson said. A juror's answer to that question could show potential "hostility toward scientific authority and the relative value of the individual versus society."

It could also indicate political views.

A March 2021 Pew Research Center study found Democrats were "27 percentage points more likely than Republicans to say they plan to get, or have already received, a coronavirus vaccine."

Approaches are likely to vary depending on the court, which is already the case when it comes to jury selection questions.

Already, at least one court has said it will ask jurors about vaccination status in its jury questionnaire. The Northern District of Mississippi on May 3 issued an order saying it would inquire about jurors' vaccination status through its jury administrator. Answering is voluntary, the court said, and will be shared with both parties.

Judges and lawyers could also approach the question in a less direct way, said Mike Liffrig, founder of First Court, which does jury consulting and alternative dispute resolution.

For example, they could ask "'is there anything that would trouble you working with 11 other people during this trial?'" Liffrig said. "They don't necessarily have to make it a public confession."

'Matter of Privacy'

Concerns about protecting privacy and building trust with jurors could convince judges and lawyers to avoid the question.

Judge Thomas Zilly, considered but ultimately decided against asking the question before presiding over the first in-person jury trial in the Western District of Washington since the beginning of the pandemic.

"It's one of those issues that could go either way, but I opted not to ask given that it's a matter of privacy," Zilly said in an interview following jury selection in the case. The jury selection process in the criminal case was virtual.

The Administrative Office of the U.S. Courts, which assists courts with non-judicial business, said courts might ask virus-related questions for court safety, but getting the vaccine isn't a legal qualification for service on a jury.

"While courts may ask jurors COVID-19-related questions as part of their safety protocols, providing litigants with a jury selected at random from a fair cross section of the community remains of greatest importance," an AO spokesperson said in a statement.

Lawyers might also consider the impact of asking about vaccination status. Every question has the potential to prejudice your case and make the juror not trust you, Thomas, the Illinois Law professor, said.

"You're always looking for the characteristic or experience that will benefit your side of the case," Thomas said. "But at the same time, you want potential jurors to trust you."

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EXHIBIT C

PLOS ONE

RESEARCH ARTICLE

The influence of political ideology and trust on willingness to vaccinate

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Abstract

In light of the increasing refusal of some parents to vaccinate children, public health strategies have focused on increasing knowledge and awareness based on a "knowledge-deficit" approach. However, decisions about vaccination are based on more than mere knowledge of risks, costs, and benefits. Individual decision making about vaccinating involves many other factors including those related to emotion, culture, religion, and socio-political context. In this paper, we use a nationally representative internet survey in the U.S. to investigate socio-political characteristics to assess attitudes about vaccination. In particular, we consider how political ideology and trust affect opinions about vaccinations for flu, pertussis, and measles. Our findings demonstrate that ideology has a direct effect on vaccine attitudes. In particular, conservative respondents are less likely to express pro-vaccination beliefs than other individuals. Furthermore, ideology also has an indirect effect on immunization propensity. The ideology variable predicts an indicator capturing trust in government medical experts, which in turn helps to explain individual-level variation with regards to attitudes about vaccine choice.

Citation: Baumgaertner B, Carlisle JE, Justwan F (2018) The influence of political ideology and trust on willingness to vaccinate. PLoS ONE 13(1): e0191728. https://doi.org/10.1371/journal.pone.0191728

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Introduction

One of the most successful public health interventions has been infant and childhood immunization programs. In 1900, 16 out of every one hundred American children died from disease before age five [1]. By the close of the century, 97% of American schoolchildren received vaccines against diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, and Haemophilus influenzae type b (Hib) by first grade [1]. While widespread vaccinations have nearly eradicated what were once very common and deadly diseases, the unfortunate irony is that without threat of such deadly diseases the proportion of the population that is not adequately vaccinated has grown [2]. In 2015, the national vaccination coverage among children aged 19–35 months was 91.9% for recommended MMR (measles, mumps, rubella) doses, but in states such as Colorado, Ohio, and West Virginia the coverage is as low as 86.0% [3]. For measles, the proportion of the population that should be vaccinated for prevention of disease outbreak is 90–95% [4]. Thus, the fact that vaccination coverage is dropping is particularly concerning especially in light of recent outbreaks.

Despite all 50 states requiring children to be vaccinated before attending school, all states allow exemptions for medical reasons, all but two allow exemptions for religious reasons, and

almost half allow exemptions for philosophical reasons [5]. Such exemptions contradict the efforts of the U.S. government to adhere to a federally mandated vaccine schedule and achievement of universal vaccination to maintain herd immunity. Various reasons for parents not vaccinating their children exist, from mere oversight [6], socio-economic barriers (that often interact with race/ethnicity) [7], and for some the result of conscious decisions. Oftentimes the deliberate decisions of parents are based on parental concern regarding vaccine safety [8] and efficacy [9,10].

For example, there is a growing parental and public interest in natural products and even some have taken up the mantel to "green our vaccines" due to public fears of the relationship between MMR vaccine and autism (a relationship for which no credible empirical evidence has been found [11]). When vaccinations concern children, as in the case of MMR, parents lack control over the outcome of vaccination and the potential damage, although extremely rare (less than 1 in a million), can be long-term or even fatal [12]. Moreover, benefits can be difficult to calculate, particularly given that the negative consequences of nearly-eradicated diseases are no longer salient. Consequently, many parents give greater weight to the risks of vaccines than the benefits [13]. With the ubiquity of the internet and information available online along with a shifting parent-doctor relationship, parents have become more involved in vaccination decisions and often override the mandated vaccine schedule.

In light of the increasing refusal of some parents to vaccinate children, public health strategies deploy a "knowledge-" or "information-deficit" approach that educates people on the risks, costs, and benefits of vaccination (and non-vaccination). If individuals respond to risk information in a straightforward way, it is reasonable that a knowledge-deficit approach would be successful. However, research across numerous domains suggests that, in general, decision making under risk is complex and not straightforward [14–22]. There is reason to believe that vaccine choice is no different [23]. For example, it is known that perceived risk of vaccines is related to gender (with women perceiving greater vaccine risk than men) as well as a variety of other demographic characteristics such as age, race, education, and income level, and other factors such as emotion, culture, religion, and socio-political context [24]. In this paper, we are interested in two sets of reasons for vaccination decision making and the relationship between them: ideology and trust.

From a sociological perspective, a number of existing empirical studies indicate that people's ideologies and worldviews strongly influence their perception and acceptance of risk. That is, rather than understanding risk as a result of individual cognition, Cultural Theory, attributable to Douglas [25,26] and Douglas and Wildavsky [27], posits that individuals are embedded in a sociocultural milieu wherein and by which risk is constructed and interpreted [27]. Specifically, Douglas and Wildavsky use four categories—hierarchical, individualist, fatalist, egalitarian—to understand how each cultural group applies salient values and interprets a particular phenomenon to be risky or not. Others have built on their work, substantiating the relationship between these four categories and perception of risk [28–32].

Related, political ideology, defined as the set of beliefs about the proper order of society [33], has a strong influence on political attitudes and behaviors and general value orientations —and by extension risk—in a pattern similar to what scholars find with Cultural Theory. Indeed, some scholars [34] find that some individuals actually respond to egalitarianism and individualism questions as if they were opposite ends of a single, liberal-conservative continuum, rather than two of four distinct worldviews. This finding demonstrates the close correspondence between Cultural Theory and political ideology and the explanatory value of political ideology and risk.

Research further bears out the close correspondence between Cultural Theory and political ideology. Studies find that liberals are more egalitarian and open to change than conservatives

[35–43]. Others find political conservatives to be more sensitive to threat and more risk averse than those who are politically liberal [44–46]. Moreover, ideological dispositions can shape support for or opposition to potentially risky technologies [47,48]. In particular, Rothman and Lichter [47] find that ideology is related to assessments of nuclear power safety for some groups including journalists and high-level government bureaucrats. Duckit and Sibley [49] distinguish between social and cultural conservatives (or right-wing authoritarians), who tend to perceive the world as "dangerous" or unstable, and economic conservatives (or those with high social dominance orientation), who perceive "the world as a ruthlessly competitive jungle in which the strong win and the weak lose" [50]. However, both types of conservatives have a desire to reduce uncertainty and threat and "prioritize traditionalism, rule-following, and acceptance of inequality" [51]. Thus previous research provides a conceptual linkage between ideology and risk.

In light of the above research findings, political ideology may be of particular importance in the case of vaccine attitudes. Some might suggest that because vaccinations have not yet been adopted by a major political party or ideological camp (compared to other issues such as abortion), the public should not possess well-developed partisan or ideological opinions about them. Although we concur with this assessment, we also suspect there to be ideological opinions about vaccines in the U.S. as a consequence of the aforementioned relationship that exists between political values and risk (or risky technologies). Moreover, we suspect that conservatives will be less likely to express pro-vaccination attitudes, despite the notorious vaccine skepticism that some liberals, such as Robert F. Kennedy Jr., have adopted. In fact, despite anecdotes attributing anti-vaccination trends to some enclaves of liberal leaning types, evidence points to more vaccination skepticism among conservatives [52]. Additionally, anti-vaccination opinions have been publicly discussed among conservative leaders. For example, during the 2016 presidential race, several Republican candidates expressed some degree of skepticism concerning vaccination [53]. Furthermore, Donald Trump has used Twitter to perpetuate a long debunked linkage between autism and vaccines since as far back as March 2012 [54,55]. By bringing the issue into the highly salient presidential election, Trump could have motivated an ideological gap in public attitudes about vaccination. The above considerations allow us to formulate our first testable hypothesis:

Hypothesis 1: Individuals who are more conservative are less likely to vaccinate against preventable diseases than less conservative individuals.

The other set of reasons for anti-vaccination attitudes we are interested in concerns trust, which has been an area of interest for researchers studying vaccination propensity [56]. Trust is particularly important when dissenting opinions exist regarding scientific facts and individuals have to choose between them. For example, are vaccines safe or is there a substantial risk of illness or death? Typically, individuals are unable to answer this question for themselves given that they lack the expertise to test vaccine safety or gather data on vaccination risk. Thus, people need to turn to experts who have either done the research or have access to the relevant information. In this context, we distinguish between two kinds of medical experts: government medical experts and primary health care providers. Anti-vaccination attitudes are often correlated with low levels of trust in the government [9], and lack of trust in corporations and public health agencies [9]. The less people trust governmental or scientific institutions the more likely they are to believe a link between vaccines and autism and thus, the less likely they are to demonstrate support for vaccinations. Given these considerations, we have the following hypothesis:

Hypothesis 2: Individuals with high levels of trust in government medical experts are more likely to express pro-vaccination attitudes against preventable diseases than individuals with low levels of trust.

Separate from trust in medical institutions, individual members of the health care community are also likely to influence vaccination attitudes. In particular, high levels of trust in a primary health care provider, e.g., a pediatrician, is expected to result in more positive attitudes towards vaccination than low levels of trust:

Hypothesis 3: Individuals with high levels of trust in their primary health care provider are more likely to express willingness to vaccinate against preventable diseases than individuals with low levels of trust.

So far, we have argued that ideology and trust influence vaccine attitudes in individuals. However, there are reasons to believe that these two independent variables also influence each other. As we discussed in our motivation of hypothesis 1, individuals who are more conservative are more likely to be skeptical about vaccination. This may be part of a more general pattern of skepticism towards different types of expertise. We know generally that trust in government vaccination programs, trust in science, and trust in government is usually lower for conservatives than for liberals [57–59]. Thus it is reasonable to expect that there are lower levels of trust towards our two types of medical experts among more conservative individuals than less conservative individuals:

Hypothesis 4: Individuals who are more conservative are less likely to trust government medical experts than less conservative individuals.

Hypothesis 5: Individuals who are more conservative are less likely to trust primary health care providers than less conservative individuals

We have additional reasons for expecting support for hypothesis 4, that individuals that are more conservative are less likely to trust government medical experts than less conservative individuals. There is evidence that trust in government medical experts, such as the Centers for Disease Control and Prevention, can be affected by ideological triggering. This can happen by signaling group identity, e.g., through partisan news outlets. Receiving information through partisan outlets allows individuals to selectively credit information related to vaccine risks and benefits in ways that reflect their ideological dispositions (e.g., vaccines against sexually-transmitted disease would lead to an increase in unprotected sex). The evidence comes from historical considerations. Consider the difference between the recent politically controversial HPV vaccine and the uneventful introduction of the HBV vaccine into the U.S. health system in the 1990s. These vaccines protect against the cancer-causing sexually transmitted diseases Human Papillomavirus and Hepatitis B, respectively. In the case of HBV, most people received their information about the vaccine and associated risks through their pediatrician, whereas many parents' first exposure to information about HPV came through partisan news outlets. The reason the HPV vaccine received a political spotlight is because Merck, the manufacturer of the HPV vaccine Gardasil, attempted to get approval through a fast-track review process from the U.S. Food and Drug Administration and lobbied a nation-wide campaign directing state legislatures to add the vaccine to immunization schedules required for school enrollment. If successful, Merck would have positioned itself in a dominant market position against GlaxoSmithKline's rival product, Cervarix. Without the fast track, both vaccines would have gone through the same process as the HBV vaccine, avoiding a political spotlight and receiving approval about three years later. Once in the political spotlight, however, the HPV vaccine lent itself to ideological objections. Some of these objections were religiously motivated, but not all (in fact, religious groups did not oppose the FDA approval of the HPV vaccine [60]).

In light of the above considerations, we investigate the socio-political characteristics to assess attitudes about vaccination. In particular, we consider how political ideology and trust

affect vaccination beliefs for flu, pertussis (whooping cough), and measles. We select these diseases because of their contrastive features. Flu vaccination is chosen annually while vaccination for pertussis and measles are done during childhood, and measles outbreaks have received heightened media attention compared to flu and pertussis. We investigate two forms of trust: trust in government medical experts (such as Centers for Disease Control and Prevention) and trust in primary health care provider (such as pediatrician or family doctor). Furthermore, we investigate the relationship between trust and ideology, where ideology is conceived as a continuum ranging from very conservative, to moderate, to very liberal.

Our results, in brief, demonstrate that political ideology affects vaccine attitudes indirectly, by affecting a person's trust in health-related information sources, and more directly as well. These findings are consistent with an earlier study by Rabinowitz et al. [61] One of the criticisms of this earlier study was that it made use of a convenience sample, rather than a nationally representative survey. Our study makes use of a larger and nationally representative sample. Thus our work constitutes an advance in knowledge of this topic by providing an important replication of earlier work done by others.

Methods

Data collection and sample characteristics

In order to test our hypotheses, we rely on data from a nationally representative online survey, collected from January 25–27, 2017. Our sample was provided by Survey Sampling International (SSI), a U.S.-based market research firm. After we obtained IRB exemption from our institution [Project Number: 17–007; exemption granted under category 2 at 45 CFR 46.101 (b)(2)], SSI sent the link to our survey (which was programmed on Qualtrics) to 1,006 respondents. In this context, the survey firm ensured that our final sample would match known parameters of the U.S. adult population on five major dimensions: age, gender, income, ethnicity, and census region. This goal was achieved. As we show in S1 Table, our respondent pool approximates the overall citizenry of the U.S. very closely.

The survey consisted of three major sections. First, respondents were asked a number of questions about their political beliefs. Second, subjects answered survey items tapping into attitudes about vaccinations (described below). Finally, all participants provided information about basic demographic characteristics.

Dependent variable

Our dependent variable taps into individual-level beliefs about vaccinations. We focused on three diseases: pertussis (whooping cough), measles, and influenza. Measuring vaccination attitudes is a non-trivial task. It seems likely that the overwhelming majority of our respondents received the vaccine for most preventable diseases at a very young age. As a result, asking respondents about their own immunization *record* would not necessarily capture their *beliefs* about the topic. An alternative approach would be to study the decisions that subjects make for their children. This too, is problematic since an exclusive focus on parents would decrease our sample size significantly and therefore compromise statistical power.

Our solution to this problem is as follows. We designed two *hypothetical* questions which correspond to slightly different scenarios. Question 1 simulates a low-risk setting. We asked our interviewees to imagine that they are currently "missing the vaccine for the following diseases but there is no immediate risk of getting infected." Respondents then gave separate answers for pertussis, measles, and influenza and they indicated how likely/unlikely they would be to get vaccinated. Answer options were (1) very unlikely, (2) unlikely, (3) neither likely nor unlikely, (4) likely, (5) very likely, and (6) I don't know. Question 2 corresponds to a

high-risk scenario. Again, we asked respondents to imagine that they were missing the relevant vaccines. However, "now there is an outbreak of that disease in [their] community." Here too, respondents gave separate answers for the three diseases of interest. The answer options remained the same.

Our approach leaves us with six analyzable variables (i.e., answers for three diseases in two different scenarios). We factor-analyzed these items and we expected to obtain two latent dimensions: one tapping into vaccination attitudes in high-risk scenarios and one capturing beliefs about immunizations in low-risk settings. This expectation is *not* supported. Our analysis reveals that all survey items clearly tap into one underlying dimension: the factor loadings for all variables are above 0.80. Furthermore, only one factor reaches an Eigenvalue of 1 or higher (Factor 1: 4.56). Given these findings, we created one latent construct ("Vaccination Attitudes") and we used this item for our statistical analysis below. Higher values on this variable indicate more favorable views about vaccinations. Factor loadings for this latent construct are displayed in Table 1. A detailed breakdown of the associations between all vaccine-related variables can be found in S2 Table.

Exogenous and mediator variables

Our main independent variable is political ideology. In order to capture this concept, we asked respondents to place themselves on a five-point scale ranging from "very liberal" to "very conservative." About 9.9 percent of respondents self-identified as "very liberal", 17.5 percent as "liberal", 41.4 percent as "moderate", 21.6 percent as "conservative", and 9.6 percent as "very conservative."

According to the theoretical framework discussed above, ideology should have a direct effect on vaccination attitudes. In addition, we also hypothesize that an individual's political worldview should influence how much trust they place in their primary health care provider as well as government medical experts. According to Hypotheses 2 and 3, these two types of trust should then also affect vaccination attitudes. Expressed in more formal terms, we also expect an *indirect* effect of ideology on vaccination attitudes that is mediated by trust. We measured these two mediator variables by asking respondents to what extent they trust their family's health care provider and government medical experts (such as Centers for Disease Control and Prevention) "regarding questions about health." There were six response options: (1) strongly distrust, (2) somewhat distrust, (3) neither trust nor distrust, (4) somewhat trust, (5) strongly trust, and (6) I don't know. All respondents who answered "I don't know" were excluded from the analysis.

Finally, we introduce a standard set of control variables from the public opinion literature to account for other causes of our dependent variables: age, gender (male 1/0), education,

Table 1. Factor loadings.

Survey Item	Factor Loading
Vaccination Attitudes (Pertussis; Low Risk Scenario)	0.86
Vaccination Attitudes (Measles; Low Risk Scenario)	0.89
Vaccination Attitudes (Influenza; Low Risk Scenario)	0.83
Vaccination Attitudes (Pertussis; High Risk Scenario)	0.90
Vaccination Attitudes (Measles; High Risk Scenario)	0.90
Vaccination Attitudes (Influenza; High Risk Scenario)	0.85
Cronbach's Alpha: 0.94 Eigenvalue of Estimated Factor: 4.56	

https://doi.org/10.1371/journal.pone.0191728.t001

income, and racial background (Caucasian 1/0). Correlations between all continuous variables in this paper can be found in Table 2. Descriptive Statistics for all variables can be found in S3 Table.

Analytical approach

We use a structural equation model to test for both direct and indirect effects. Calculations were performed using STATA 14. It should be noted that the results of the model we present herein use as the dependent variable the latent construct, described above. However, to demonstrate the robustness of our results we also estimated six separate models using each of the six base constructs as the outcome variable. The results are substantively identical and can be found in S4 Table.

The following three indices (and standard cutoffs), recommended by Hu and Bentler [62], were used to evaluate the goodness of fit of the model: (a) the Standardized Root Mean Square Residual (SRMR), (b) the Root Mean Square Error of Approximation (RMSEA), and (c) the Comparative Fit Index (CFI); a model was considered to have a good fit if SRMR was below 0.05, RMSEA was below 0.05, and CFI was 0.95 or more. The results revealed that the model fits the data very well: SRMR = 0.02; RMSEA = 0.04; and CFI = 0.97.

Results and discussion

Direct effects

Fig 1 provides results from our path model. We report unstandardized coefficients, standard errors as well as p-values. As predicted by Hypothesis 1, ideology has a strong and statistically significant effect on vaccination attitudes (B = -0.10; std. error: 0.03; $p<0.01$). More specifically, conservative respondents are less likely to indicate that they would vaccinate against pertussis, measles, and influenza than other individuals. Furthermore, both trust in health care provider (B = 0.27; std. error: 0.04; $p<0.01$) and trust in government medical experts (B = 0.19; std. error: 0.03; $p<0.01$) have direct effects on our dependent variable. For both variables, the path coefficient is positive and statistically significant which suggests that people with faith in these two entities are also more likely to indicate that they would vaccinate if they missed the immunization. These empirical findings are in line with Hypotheses 2 and 3 of this paper.

Table 2. Correlations between continuous variables.

	Age	Education	Income	Ideology	Trust (Gov. Medical Experts)	Trust (Health Care Provider)	Latent Vaccine Attitudes (DV)
Age							
Education	R = 0.07 (p<0.03)						
Income	R = 0.03 (p<0.35)	R = 0.43 (p<0.01)					
Ideology	R = 0.09 (p<0.01)	R = -0.05 (p<0.14)	R = 0.02 (p<0.58)				
Trust (Gov. Medical Experts)	R = -0.03 (p<0.48)	R = 0.05 (p<0.11)	R = 0.03 (p<0.30)	R = -0.18 (p<0.01)			
Trust (Health Care Provider)	R = 0.10 (p<0.01)	R = 0.05 (p<0.10)	R = 0.07 (p<0.02)	R = -0.01 (p<0.72)	R = 0.35 (p<0.01)		
Latent Vaccine Attitudes (DV)	R = -0.08 (p<0.02)	R = 0.14 (p<0.01)	R = 0.14 (p<0.01)	R = -0.17 (p<0.01)	R = 0.30 (p<0.01)	R = 0.29 (p<0.01)	

https://doi.org/10.1371/journal.pone.0191728.t002

Indirect effects

According to Hypotheses 4 and 5, an individual's political worldview should influence their level of trust in various health care-related information sources. Our statistical analysis provides evidence for only one of these paths. We see that ideology has a strong and statistically significant effect on trust in government medical experts (B = -0.18; std. error: 0.03; $p<0.01$). In particular, more conservative respondents tend to express lower levels of trust in institutions like the CDC than their less conservative counterparts. Contrary to our theoretical expectations however, we find no evidence in support of Hypothesis 5. In other words, an individual's political worldview does not seem to influence the extent to which they trust their family's primary health care provider (B = -0.02; std. error: 0.02; $p<0.41$).

These findings imply that there is, in fact, an indirect effect of ideology on vaccination attitudes that is mediated by trust in government medical experts. As we show in Table 3, the estimated size of this indirect effect is -0.04 (std. error: 0.01; $p<0.01$). This amounts to about 29 percent of the total ideology effect on our dependent variable (B = -0.14; std. error: 0.03; $p<0.01$). Taking into account all pathways in Fig 1, "strong conservatives" are thus estimated to score 0.56 points lower on our latent scale than "strong liberals." This means that the overall effect of ideology is not only statistically significant but also substantively meaningful.

Discussion of control variables

Finally, we turn to a discussion of the direct effects of our control variables. Table 3 demonstrates that vaccination attitudes are not only a function of trust and ideology but also of other socio-demographic characteristics. In particular, age and income seem to affect how

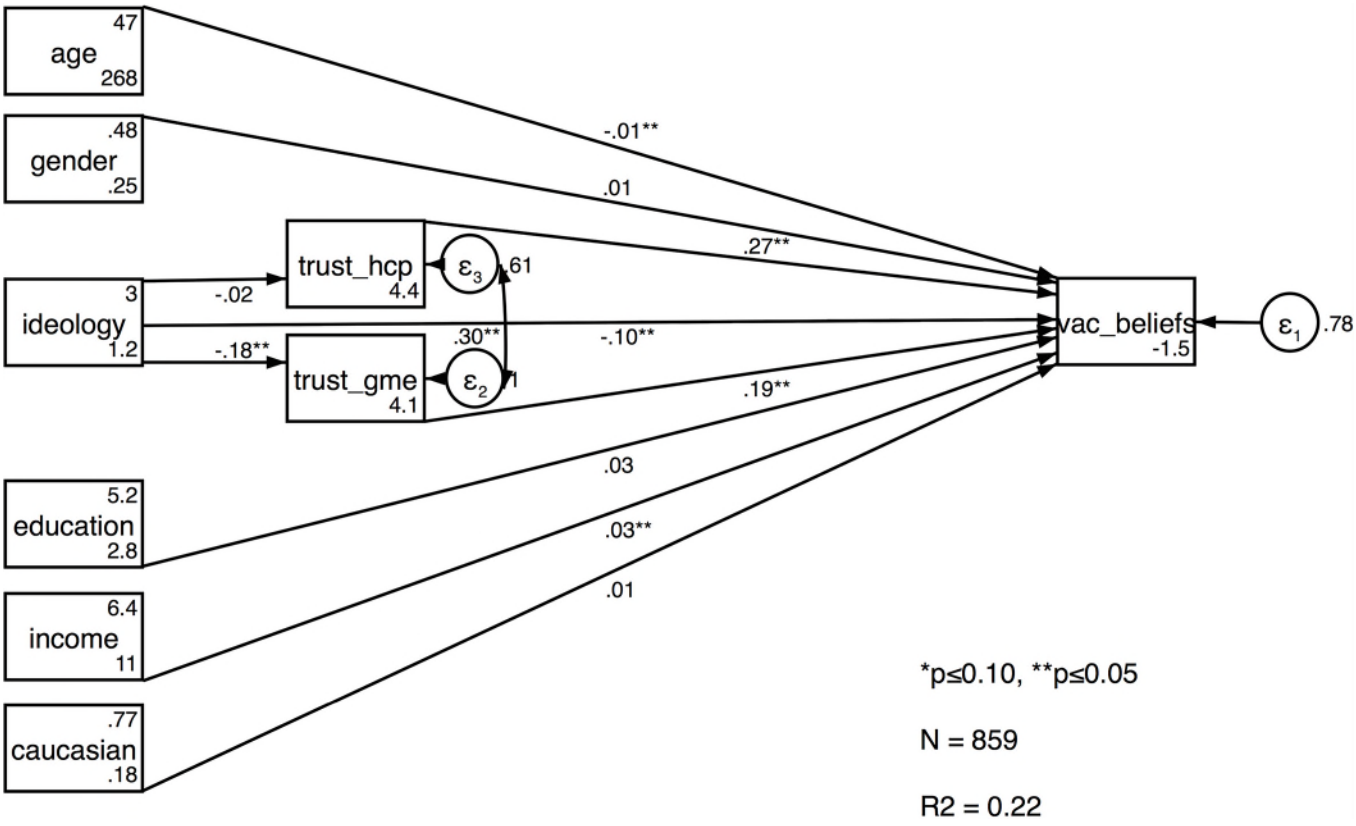

Fig 1. Path model results.

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Table 3. Direct and indirect effects.

Outcome	Direct Effect	Indirect Effect	Total Effect
Trust in Health Care Provider			
Ideology ➔ Trust in Health Care Provider	—	—	—
Trust in Government Medical Experts			
Ideology ➔ Trust in Government Medical Experts	-0.18**	—	-0.18**
Vaccination Attitudes (Latent Scale)			
Trust in Health Care Provider ➔ Vaccination Attitudes	0.27**	—	0.27**
Trust in Gov. Medical Experts ➔ Vaccination Attitudes	0.19**	—	0.19**
Ideology ➔ Vaccination Attitudes	-0.10**	-0.04**	-0.14**
Age ➔ Vaccination Attitudes	-0.01**	—	-0.01**
Income ➔ Vaccination Attitudes	0.03**	—	0.03**

*$p \leq 0.10$

**$p \leq 0.05$

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individuals think about vaccine choice. According to our results, older citizens have slightly more negative views about immunizations than younger respondents (B = -0.006; std. error: 0.002; $p<0.01$). By contrast, income (B = 0.03; std. error: 0.01; $p<0.01$) has a positive effect on this dependent variable. This suggests that vaccine attitudes are at least partially driven by the resources that respondents have at their disposal.

Conclusion

Decisions regarding vaccination are more complicated than simply considering risks, costs, and benefits. In this paper we argued that socio-political characteristics of individuals shape their vaccination attitudes. More specifically, we examined the role of ideology, trust, and the relationship between these and attitudes about vaccination. Our findings corroborate analyses that show that the intent to vaccinate differs among conservatives and liberals with conservatives expressing less intent to vaccinate. Similarly, those with lower levels of trust in government medical experts are also less likely to express intent to vaccinate, and these individuals also tend to be conservative. What has been less understood, however, is the nature of the relationship between ideology and trust. Our findings suggest that ideology has two routes in affecting people's vaccination attitude. One is direct, independent of trust. The other route goes through trust. That is, a person's ideology impacts who they trust such that they can selectively credit information related to vaccine risks and benefits in ways that reflect their ideology. We thus establish a direction in the relationship between ideology and trust, namely from ideology to trust.

Our findings may provide insights into addressing growing vaccine refusal. Current strategies tend to be driven by a knowledge-deficit approach, attempting to persuade the public by appealing to risks. While we do see that vaccine attitudes are partially driven by resources, our findings suggest that the success of knowledge-deficit strategies will be limited by whether individuals trust the sources by which they are informed of risks and benefits, where this trust in turn can be limited by ideology. These results and conclusions are consistent with earlier work by Rabinowitz et al. [61]. There it is argued that in the domain of vaccination choice (in addition to other domains such as smoking, alcohol consumption, and sexual behavior), the perception of facts and beliefs, particularly perceptions of social norms, can differ between conservatives, moderates, and liberals. We add to this the importance of variation in trust

across these ideologies. Thus, to better gauge expected success of vaccine campaigns, attention should be given to socio-political context, and where possible, measures should be taken to tailor messages appropriately.

Supporting information

S1 Table. Sample characteristics (compared to 2010 census). Our respondent pool approximates the overall citizenry of the U.S. very closely.
(DOCX)

S2 Table. Correlation matrix–dependent variables. A detailed breakdown of the associations between all vaccine-related variables.
(DOCX)

S3 Table. Descriptive statistics. Descriptive statistics for all variables.
(DOCX)

S4 Table. Robustness checks. We additionally estimated six separate models using each of the six base constructs as the outcome variable. The results are substantively identical to those presented in the main text.
(DOCX)

S1 File. Replication data.
(DTA)

S2 File. Replication commands.
(TXT)

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EXHIBIT D

The New York Times https://nyti.ms/3x0v9bj

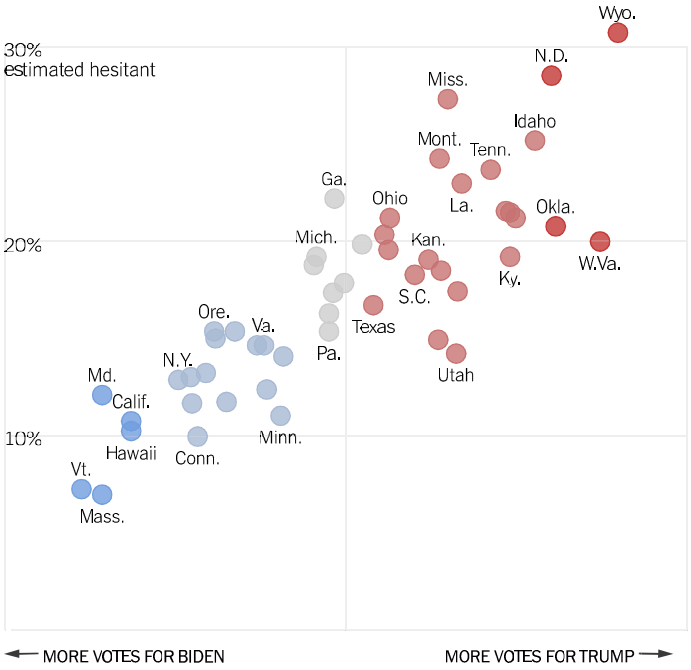
Least Vaccinated U.S. Counties Have Something in Common: Trump Voters

By Danielle Ivory, Lauren Leatherby and Robert Gebeloff April 17, 2021

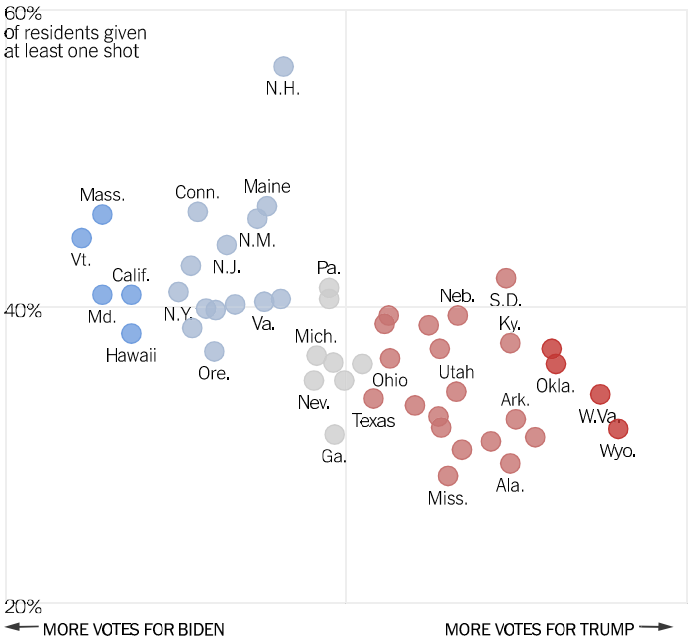
About 31 percent of adults in the United States have now been fully vaccinated. Scientists have estimated that 70 to 90 percent of the total population must acquire resistance to the virus to reach herd immunity. But in hundreds of counties around the country, vaccination rates are low, with some even languishing in the teens.

The disparity in vaccination rates has so far mainly broken down along political lines. The New York Times examined survey and vaccine administration data for nearly every U.S. county and found that both willingness to receive a vaccine and actual vaccination rates to date were lower, on average, in counties where a majority of residents voted to re-elect former President Donald J. Trump in 2020. The phenomenon has left some places with a shortage of supply and others with a glut.

States with larger Trump vote shares are likely to have more adults who are vaccine hesitant ...



... and have a smaller share of residents already vaccinated than states with larger Biden vote shares.



Source: Estimates of vaccine hesitancy by state come from the Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Data on the share of state residents who have been vaccinated comes from the Centers for Disease Control and Prevention and reflects vaccinations through April 16. Election data is from Edison Research.

For months, health officials across the United States have been racing to inoculate people as variants of the coronavirus have continued to gain a foothold, carrying mutations that can make infections more contagious and, in some cases, deadlier. Vaccinations have sped up and, in many places, people are still unable to book appointments because of high demand. In Michigan, where cases have spiraled out of control, Gov. Gretchen Whitmer, a Democrat, recently urged President Biden to send additional doses.

But in more rural — and more Republican — areas, health officials said that supply is far exceeding demand.

In a county in Wyoming, a local health official asked the state to stop sending first doses of the vaccine because the freezer was already stuffed to capacity with unwanted vials.

In an Iowa county, a clinic called people who had volunteered to give shots to tell them not to come in because so few residents had signed up for appointments.

In a county in Pennsylvania, a hospital set up a drive-through in the park, stocked with roughly 1,000 vaccine doses. Only about 300 people showed up.

And in interviews with more than two dozen state and county health officials — including some who said they were feeling weary after a year of hearing lifelong friends, family and neighbors tell them that the virus was a hoax or not particularly serious — most attributed low vaccination rates at least partly to hesitant conservative populations.

“I just never in a million years ever expected my field of work to become less medical and more political,” said Hailey Bloom, a registered Republican and the public information officer for the health department that covers Natrona County, Wyo., which Mr. Trump won by a wide margin last year.

The health department, Ms. Bloom said, set up a clinic in a former Macy’s at the local mall and was prepared to give 1,500 shots a day, four days a week. But it has never been able to fill all the slots, she said; usually, 300 or 400 people show up.

Ms. Bloom, like many other county officials, said she feared that reaching herd immunity might not be possible in her community. “It’s terrifying to think that this may never end,” she said. “So much hinges on these vaccinations.”

About 27 percent of Natrona County’s adult residents have been fully vaccinated, and the federal government has estimated, based on Census survey data, that about 32 percent of its residents may

be hesitant to get a shot.

The relationship between vaccination and politics reflects demographics. Vaccine hesitancy is highest in counties that are rural and have lower income levels and college graduation rates — the same characteristics found in counties that were more likely to have supported Mr. Trump. In wealthier Trump-supporting counties with higher college graduation rates, the vaccination gap is smaller, the analysis found, but the partisan gap holds even after accounting for income, race and age demographics, population density and a county's infection and death rate.

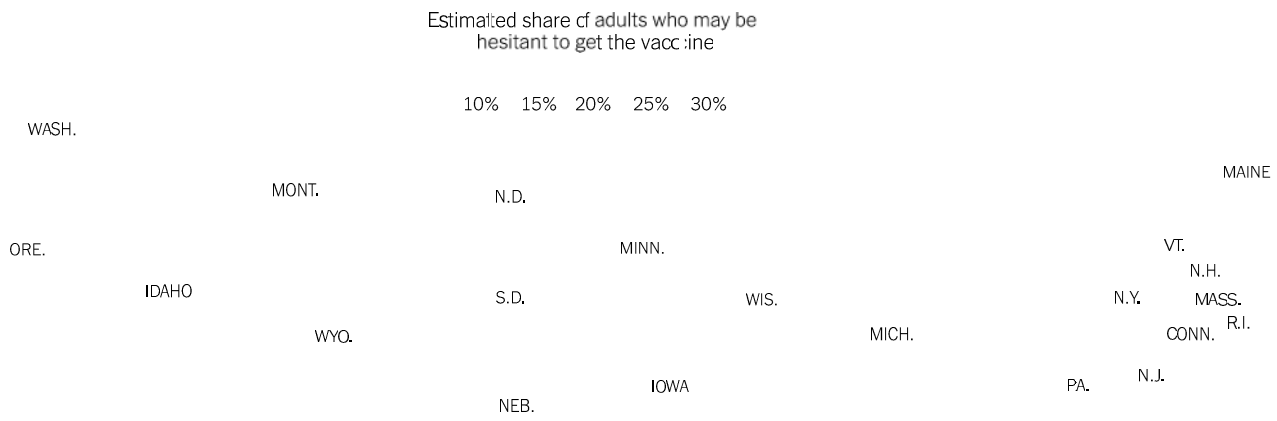
When asked in polls about their vaccination plans, Republicans across the country have been far less likely than Democrats to say they plan to get shots. Most recently, on Wednesday, Monmouth University and Quinnipiac University polls indicated that almost half of Republicans did not plan to pursue vaccinations. Only around one in 20 Democrats said the same.

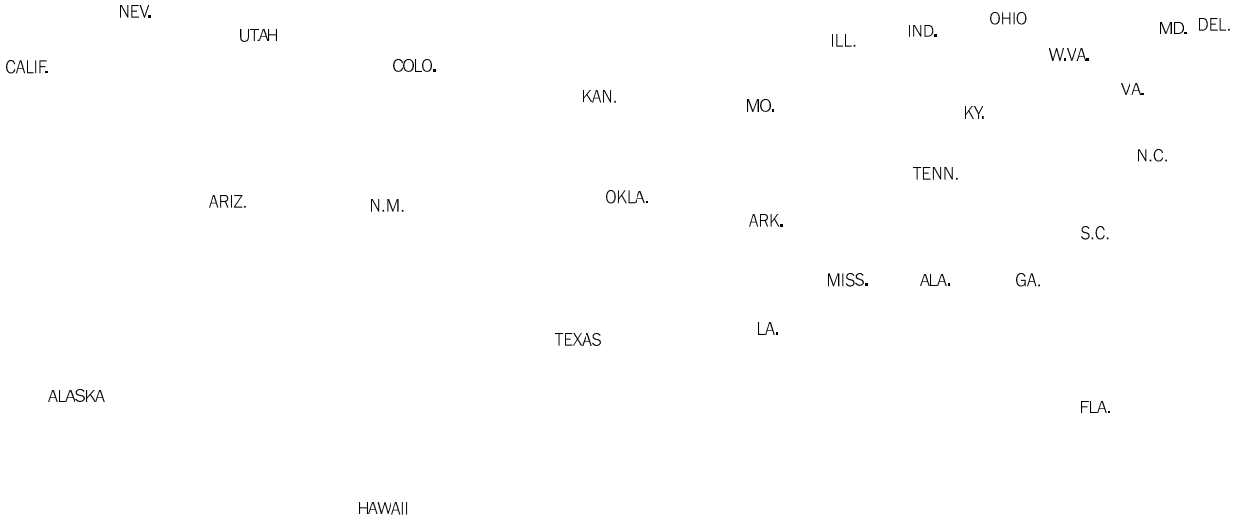
Using survey data collected in March, the federal government recently created new estimates of hesitancy for every county and state in the United States. U.S. Department of Health and Human Services modelers used demographic factors and state-level responses of adults who said they would "probably not" or "definitely not" get a Covid-19 vaccine from the Household Pulse Survey, then used Census data to estimate the share of residents who might say that in every county.

In more than 500 counties, at least a quarter of adults might not be willing to get vaccinated, according to the estimates, and a majority of these places supported Mr. Trump in the last election.

In the 10 states where the government projected that residents would be least hesitant to get a Covid-19 vaccine, voters chose Mr. Biden in the 2020 election. Mr. Trump won nine of the 10 states where the most residents said they would probably or definitely not get the vaccine. (He did not win Georgia, which is among those states.)

Federal government estimates of Covid-19 vaccine hesitancy





Source: Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation

Dr. Jean Stachon, the health officer in Sweetwater County, Wyo., where federal officials have estimated that about 31 percent of residents may be reluctant to receive a vaccine, said her department has made the tough philosophical decision to prioritize getting shots to the willing. At least once, that has meant opening a vial even when there were not enough interested people to use up all the doses in it.

“It pains me to think that the governor of Michigan is begging for vaccines,” she said. “And we’ve got vials and vials in our freezer.”

Dr. Stachon, who has been both a registered Democrat and Republican in the past and considers herself politically independent, said she had not given up hope. Sweetwater has fully vaccinated about 29 percent of its adult residents. Mr. Trump won the county by a margin of more than 50 points last year.

In Grant County, N.D., home to about 2,400 people, the federal government has estimated that 31 percent of the population may not be willing to get a shot. Mr. Trump won the county by a wide margin last year.

“People tell me, ‘I would like to wait’ — it’s the No. 1 thing I’m hearing,” said Erin Ourada, the administrator for Custer Health, which serves Grant and four other counties. “I keep seeing Grant County sit at the bottom of the list. It makes me sad.” About 13 percent of adult residents there have been fully vaccinated.

Actual vaccination data has revealed a pattern similar to what polling and the federal estimates have shown. The Times analyzed data from the Centers for Disease Control and Prevention and the U.S. Census Bureau and found a party split that was significant, though smaller.

In counties where a majority of residents voted for Mr. Trump in the 2020 election, adult vaccination rates were lower, on average, than in counties where a majority of residents voted for Mr. Biden. The rate was especially low in counties where Mr. Trump dominated, falling below 1 in 4 residents in counties where the former president won by a margin of 50 or more points.

The divide in vaccination rates remained even after accounting for a variety of factors, including infection rates, population density and educational attainment.

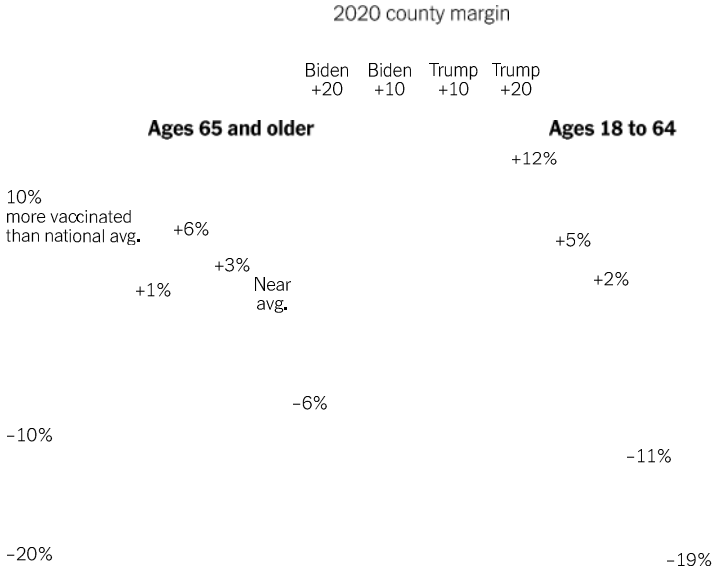
Counties where more residents voted for Trump often have lower vaccination rates

Note: Shows share of adults who are fully vaccinated and includes states with at least five counties. Some states, including Virginia and Georgia, have a higher share of missing data in the county data they report to the C.D.C. than other states, resulting in county figures that appear lower over all. Vaccination rates for all counties in Hawaii, as well as some counties in California and Virginia, are not included in the C.D.C. data set and are not in the visualization. Alaska does not report election results at a county level. Figures are artificially low in three Massachusetts counties because of missing residency information, per the C.D.C. ▪ Sources: Centers for Disease Control and Prevention, Texas Department of State Health Services, Edison Research.

The vaccination data may not match the split predicted in the polling data because of the way the rollouts have been organized in the United States, with all states giving preference to older Americans early on and with younger adults in many states qualifying only recently. A recent poll showed that older Republicans were less resistant to becoming vaccinated than younger Republicans.

The rate of full vaccination for older adults in Republican-leaning counties was 5 percent lower than the national average, the Times analysis found, but the rate for younger adults was 18 percent below average. It is an indication that the partisan divide in vaccinations may actually grow wider as younger people become eligible for the vaccine nationwide.

Vaccination rates by age group and 2020 election results



Note: The Times excluded seven states where significant federal data was missing.

It's possible that some of the differences in vaccination rates are driven by distribution issues and eligibility rules, said Jed Kolko, the chief economist at Indeed.com, who has studied partisan aspects of the pandemic. But as eligibility becomes more universal, "the more the differences will be about hesitancy alone," he said.

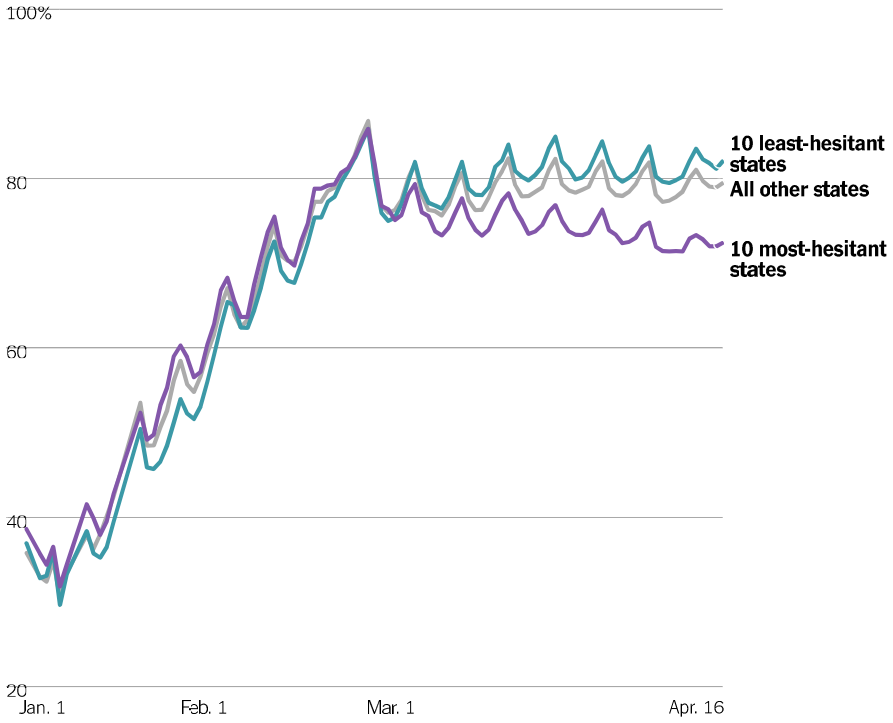
The share of vaccine doses that each state uses may provide clues about how hesitancy will unfold going forward.

At the beginning of March, all states were able to administer a similar share of doses delivered to them. But now, some states are lagging. On average, the 10 states where residents were least hesitant to get the Covid-19 vaccine, according to federal estimates, have administered 82 percent of the doses that they have received. The 10 states where residents were most hesitant have used 72 percent.

Dr. Lisa Cooper, director of the Johns Hopkins Center for Health Equity, said she was not surprised that conservative-leaning people might be less likely to want a vaccine.

“These are people who were fed untruths about how this virus wasn’t real,” Dr. Cooper said. “I think it is carrying through in the vaccination realm, too.”

Average share of delivered doses reported as used



Extra doses in Pfizer vials and inconsistencies in data reporting may result in the percentage of doses used adding up to more than 100. ▪ Source: Centers for Disease Control and Prevention

To be sure, there are counties that supported Mr. Trump in the last election and now have above-average vaccination rates.

Some officials in those counties said their rates have lately plateaued.

In Tama County, Iowa, where Mr. Trump won by a wide margin last year and the vaccination rate is above the national average, the health department runs a clinic a few days a week at a former juvenile correctional facility.

Until recently, staff and volunteers were regularly giving shots to about 120 to 150 people in a day, according to Shannon Zoffka, the executive director of the department and a registered Democrat. When the state expanded its eligibility rules to include all adults, she expected the phones to be ringing off the hook. Instead, she said, about 120 people made appointments for the entire past week.

“When you hit that saturation point, you don’t realize it’s coming,” she said. “It just happens.”

Likewise, some counties that supported Mr. Biden are now lagging in vaccination efforts. In Hudson County, N.J., which supported Mr. Biden by a wide margin last year, about 25 percent of adult residents have been fully vaccinated.

David Drumeler, the deputy county administrator and a registered Democrat, said that there was not enough supply to meet the demand and that many residents, some of whom do not have cars, were having difficulty getting to mass vaccination sites elsewhere in the state. Mr. Drumeler said that the county was strictly policing a residency requirement in the county to make sure its supply was reaching its intended target.

“It’s so frustrating to be so low on the percentage of folks getting vaccinated when all our shots are getting into arms,” Mr. Drumeler said. “But hesitancy is not a hurdle we are encountering yet.”

The situation is quite the opposite in Potter County, Pa., where Mr. Trump won by a wide margin, and where a recent drive-through vaccine clinic failed to draw large crowds.

Kevin Cracknell, who has spent 13 years as a registered nurse in the intensive care unit at the local hospital, said his biggest fear was that very few people in the area would get vaccinated and, as a result, waves of infection would continue to sweep through the community for years to come.

Mr. Cracknell, a registered Democrat, recalled a time this past January when patients with the virus — people he knew from town — began to fill the beds in his hospital.

“It’s like no other virus I’ve seen in my life,” he said. “The damage it does to the lungs.”

Mr. Cracknell let out a long breath. “Most of my patients supported Trump,” he said. “I love them to death. I want them to succeed. I want them to be healthy.”

So far, only about 15 percent of adults in the county have been fully vaccinated.

Timmy Facciola, Emily Schwing and Tiffany Wong contributed reporting. Sheelagh McNeill contributed research.

EXHIBIT E

THE HILL

State vaccine rates fall along red, blue divide

BY PETER SULLIVAN - 05/18/21 06:00 AM EDT

Just In...

Texas governor unveils $250M for 'hundreds of miles' of new border wall
CHANGING AMERICA — 9M 19S AGO

Whitmer announces Michigan reopening
STATE WATCH — 19M 23S AGO

Meghan McCain, Whoopi Goldberg spar over Biden's outburst at CNN reporter
MEDIA — 19M 43S AGO

Ex-Trump doctor turned GOP lawmaker wants Biden to take cognitive test
HOUSE — 23M 39S AGO

'Building back better' starts with our buildings
OPINION — 24M 16S AGO

Victoria's Secret replacing supermodels with Megan Rapinoe, 'women famous for achievements'
CHANGING AMERICA — 28M 37S AGO

Massive dust cloud headed toward US
BLOG BRIEFING ROOM — 37M 16S AGO

Obama on Supreme Court ruling: 'The Affordable Care Act is here to stay'
ADMINISTRATION — 40M 17S AGO

VIEW ALL

The U.S. vaccine map looks a lot like a map of how states vote in presidential elections, with most blue states vaccinating at levels well above the national average and GOP states bringing up the rear.

The politics of COVID-19 have been partisan from almost the onset of the pandemic, and polls consistently show that Republicans, particularly men, are more hesitant than Democrats to get vaccinated.

The deep-blue state of Vermont has the highest share of its population with at least one vaccine dose, at 65 percent, according to data compiled by The New York Times, followed by Massachusetts, Hawaii, New Hampshire and Connecticut.

The top 21 states for vaccination rates all went for President Biden in the 2020 presidential election. Iowa — with 47 percent of its population receiving at least one shot — is the highest ranking state on the list, at No. 22, that voted for former President Trump.

The state with the lowest vaccination rate, Mississippi, at 32 percent, is deeply red, as are the other four states that round out the bottom five: Louisiana, Alabama, Wyoming and Idaho.

"It does appear to be the case that states that voted for Biden in the 2020 election, in general or on average, appear to have higher vaccination rates than states that voted for Trump," said Jennifer Tolbert, director of state health reform at the Kaiser Family Foundation.

Survey results reveal a big reason why. An NPR-PBS-Marist poll this month found that 41 percent of Republicans said they are not going to get vaccinated, compared to just 4 percent of Democrats who said the same.

"Our country is profoundly politicized," said Monica Gandhi, an infectious diseases expert at the University of California, San Francisco, in explaining the gap in vaccination rates.

There are also some intriguing anomalies in the data. Pennsylvania, a swing state that voted for Biden last year, has a vaccination rate of 55 percent with at least one shot, exceeding the national average of 47 percent.

Meanwhile, two other states that voted for Biden — Georgia and Arizona — are at 37 percent and 44 percent, respectively.

Doug Heye, a Republican strategist, said those figures could align with the view that the 2020 presidential election results in Georgia were more of an "anomaly."

"I still view Georgia as a Republican state," he said.

Experts caution that there are other factors at play in vaccination rates. Tolbert, of the Kaiser Family Foundation, said Pennsylvania's higher rate is not necessarily a reflection of it trending more toward Democrats but could be due to other variables like the efficiency of its vaccination campaign.

Megan Ranney, a public health expert at Brown University, said another factor is that red states tend to have less well-funded public health infrastructure, which could make getting shots in people's arms more difficult.

"There certainly is a difference, but that doesn't explain all of the difference," she said. "It's not just politics."

Shobita Parthasarathy, a public policy professor at the University of Michigan, noted that some states with rural and urban areas also face challenges.

"Michigan is sort of a purple, leaning blue, state and you have less vaccination in the more rural areas but you also have less vaccination in Detroit," she said, noting that hesitancy can come from different groups.

Like many swing states, Michigan is more toward the middle of the pack when it comes to vaccinations.

Given the hesitancy among Republicans, discussion has swirled around getting Trump to more actively encourage vaccinations. The former president has said he recommends getting the shot but has not made that message priority. And when he received his shots as president, he did not do so on camera like many other world leaders have done.

Heye noted that Trump will be speaking to the North Carolina Republican convention on June 5 and said it could go a long way if he gave a push for vaccinations in his speech. The state party could even offer shots on site, Heye suggested.

"That could be a big boost," he said.

The White House has been looking to get local doctors more involved in the vaccination campaign, given that many people tend to trust their own doctor over government officials.

Paul Beck, an emeritus professor of political science at Ohio State University, said his state's relatively low vaccination rate, at 43 percent, comes at a time when Republicans have been doing increasingly well in what was once consistently the nation's biggest battleground state.

"There are a lot of people in Ohio, maybe a majority these days, who are sympathetic to the Trump side of things," Beck said.

"Obviously, Republicans are more hesitant to get the vaccine," he added.

Gandhi, the University of California expert, said the new guidance from the Centers for Disease Control and Prevention (CDC) last week that vaccinated people do not need to wear masks in most places could serve as an incentive for more people to get the shot.

Bank of America: All vaccinated workers to return to office after...

Overnight Health Care: US buying additional 200M Moderna vaccine...

While the guidance was scientifically sound, "they're also trying to motivate," she said of the CDC.

Ranney, of Brown University, worried that some states won't improve their vaccine rates, and that the country will "have persistent differences in vaccination rates."

"For those Southern states, they're all heading indoors to air conditioning," where the virus spreads more easily, over the summer, she said. "I am concerned about those states."

TAGS DONALD TRUMP JOE BIDEN CORONAVIRUS

EXHIBIT F

The New York Times | https://www.nytimes.com/2021/05/24/briefing/vaccination-class-gap-us.html

THE MORNING NEWSLETTER

The Vaccine Class Gap

The biggest vaccination gap isn't based on race or partisanship. It's based on class.

By David Leonhardt

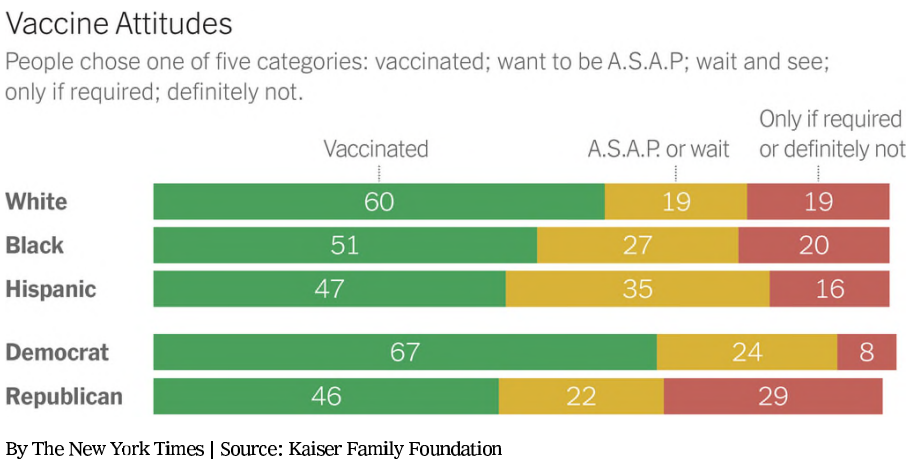
May 24, 2021

It is common to hear about two different demographic groups that are hesitant to receive a Covid-19 vaccination: Republican voters and racial minorities, especially Black and Latino Americans.

The two groups seem to have different motivations. For Republicans, the attitude is connected to a general skepticism of government and science. For Black and Hispanic Americans, it appears to stem from the country's legacy of providing substandard medical treatment, and sometimes doing outright harm, to minorities.

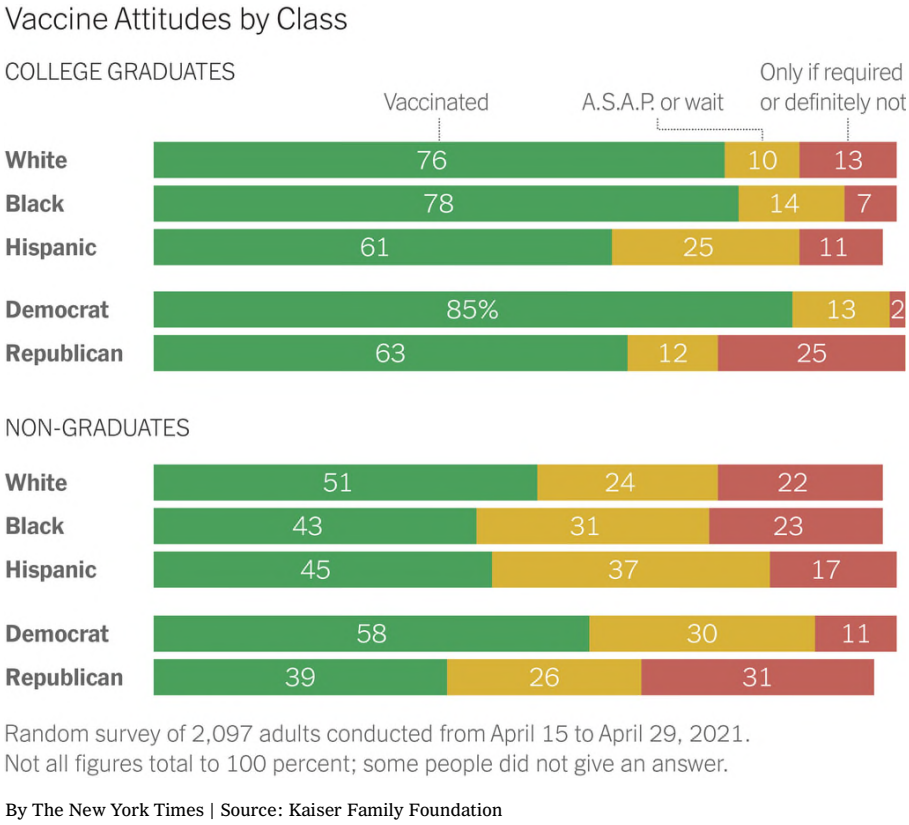
These ideas all have some truth to them. But they also can obscure the fact that many unvaccinated Republicans and minorities have something in common: They are working class. And there is a huge class gap in vaccination behavior.

Here is a look at vaccination behavior by racial groups and political identification, based on polling by the Kaiser Family Foundation:



By The New York Times | Source: Kaiser Family Foundation

Here are those same groups subdivided by class, using a four-year college degree as the dividing line between working class and professional:



As you can see, working-class members of every group are less likely to have received a vaccine and more likely to be skeptical. “No matter which of these groups we looked at, we see an education divide,” Mollyann Brodie, who oversees the Kaiser surveys, told me. In some cases, different racial groups with the same education levels — like Black and white college graduates — look remarkably similar.

This poll did not break out Asian-Americans, but other Kaiser surveys have, and it’s consistent: Asian-Americans have a higher median income than Black, Hispanic or white Americans and also a higher vaccination rate.

All of which points to the fact that the class divide is bigger than the racial divide.

There are still differences by ethnicity, because racial inequities are a reality of U.S. life. Many Hispanic Americans, across social classes, say either that they want a shot but have not yet received one or that they are waiting to see how the vaccines affect other people. And there are even bigger differences by partisanship, with many Republicans, including professionals, skeptical of the vaccines.

But you can’t understand the country’s struggle to vaccinate everyone — and save thousands of lives — without understanding the class gap.

The ‘coming apart’

The story here is bigger than Covid-19. Last year, the economists Anne Case and Angus Deaton published a book called “Deaths of Despair and the Future of Capitalism” that documented a growing class divide in one area of American life after another.

Income and wealth have grown much more quickly over recent decades for people with a bachelor's degree than people without one. Marriage, church attendance and self-reported happiness have declined more for the working class than the professional class; chronic pain, obesity and alcohol consumption have increased more. As the title of the book indicates, life expectancy has also diverged, partly because of deaths from alcoholism, drug overdoses and suicide.

"This B.A./non-B.A. divide," says Deaton, a Nobel laureate, "just comes up again and again and again."

Case and Deaton, who are Princeton professors, argue that behind these trends is a "coming apart" of the working-class experience. For many people, life lacks the structure, status and meaning that it once had.

Frequently, people are not officially employed by the company where they work, which robs them of the pride that comes from being part of a shared enterprise. They don't belong to a labor union, either. The timing of their work shifts can change unexpectedly. Many parents are trying to raise children without a partner.

These challenges can interfere with Covid vaccination in multiple ways. Carving out the time — to do the logistical research, get the shot, cope with side effects and schedule a second shot — can be hard. Working-class Americans also have less reason to trust public health officials; if you had suffered the damaging "coming apart" of the past few decades, would you trust people in positions of authority?

After I described the vaccination trends to Case and Deaton, they sent me some broader data on life expectancy, by both race and class. It shows a significant Black-white gap. But that gap has not grown over the past decade. What has grown is the life expectancy gap between college graduates and non-graduates, among both Black and white Americans.

"Though race divisions continue," Case said, "education is becoming more important relative to race, and perhaps that might be true for vaccinations, too."

What to do?

The growing class divide in living standards is one of the country's greatest problems, and it obviously will not be solved before the pandemic ends. But public health experts believe that there are specific strategies that can narrow the vaccination divide.

One is information. About 25 percent of unvaccinated people remain unsure whether somebody who previously had Covid should still get the vaccine, according to Kaiser. The answer is yes: Almost everybody 12 and older should.

Another promising strategy is making shots even more convenient. Employers can help by hosting on-site vaccinations and giving workers paid time off — including the day after the shot for people who experience side effects. Drugstores and supermarkets can accept walk-ins, as some already do. Government officials can send mobile, walk-in clinics into more communities. (Text your ZIP code to 438829 — or text "VACUNA" for Spanish — and you'll find your local options.)

"We've just got to remove all the barriers," Brodie said.

Finally, friends and relatives can turn a vaccination into something more than just a shot. “Say, ‘Let’s do this together. Let’s do something, so if you get vaccinated, let’s grab dinner after. Let’s celebrate together,’” Dr. Edith Bracho-Sanchez, a New York pediatrician, told CNN.

The U.S. is on the verge of victory over Covid. But the disease remains a threat to millions of Americans. The illness and death that occurs in coming months is likely to aggravate the country’s already extreme inequality.

THE LATEST NEWS

The Virus

A barbershop in Queens, New York, this month. In much of the U.S., the virus outlook is improving. Sarah Blesener for The New York Times

- For the first time in almost a year, the U.S. is recording fewer than 30,000 new cases a day.
- “It’s not enough”: Living through the pandemic on $100 a week.
- **Virus resources:** Track cases around the world.

International News

- Belarus forced a commercial airliner to land, then arrested an opposition journalist onboard. European officials called it a “state hijacking.” (Here’s what we know about the journalist.)
- A mountain cable car fell in northwestern Italy, killing at least 14 people.
- Extreme weather, including freezing rain and high winds, killed 21 runners in a 62-mile ultramarathon in China.

Other Big Stories

EXHIBIT G

Considerations about Collecting Information on COVID-19 Vaccine Status from Prospective Jurors

A Pandemic Resource from NCSC

May 4, 2021 | Version #1

COVID-19 vaccination rates are increasing rapidly across the country, increasing the likelihood of resuming or expanding in-person jury trials. Judicial policymakers are now asking under what conditions, if any, courts may ask prospective jurors to disclose whether they have received a COVID-19 vaccine as well as how to use that information when summoning and qualifying jurors for service. This document identifies questions that state courts should consider when developing policies related to the collection and use of information about the vaccine status of prospective jurors in the summoning, excusal, and in-court jury selection process.

Consult Sources of Reliable Information

Information about COVID-19 infection rates, the accessibility and distribution of vaccines, side effects, and mitigation strategies may vary from jurisdiction to jurisdiction and can change quickly in response to local conditions. Judicial policymakers should consult federal, state, and local health departments, the Center for Disease Control (CDC), and other reliable sources for new information as it becomes available. Currently, the CDC recommends that even persons who have been fully vaccinated should continue precautionary measures such as wearing facemasks, staying 6 feet from others, and avoiding crowds and poorly ventilated spaces in public places. Courts should likewise continue to observe state and local health recommendations about how to resume in-person jury trials as safely as possible. Demonstrating to the public that the court is taking responsible steps to reduce the risk of infection will encourage citizens to report for jury service when they are summoned.

May a court legally request personal health information, including information about vaccine status, from prospective jurors?

Many courts require jurors who request to be excused from jury service due to medical hardship to provide some form of documentation about their health status. Requesting such information does not violate the federal Health Insurance Portability and Accountability Act (HIPAA). HIPAA prohibits healthcare providers and health insurance companies from using or disclosing health information without patient consent; it does not apply to courts. State law may have more stringent requirements.

For what purpose will the court use information about vaccine status? As of mid-April 2021, less than one-quarter of the American population has been fully vaccinated. Persons most likely to be vaccinated are elderly, those with serious health conditions that made them especially vulnerable to COVID-19, and healthcare workers who routinely care for COVID-19 patients. Many of these persons would likely be excused from service due to advanced age, medical hardship, or occupational inconvenience. Based on currently available information, persons who are fully vaccinated are no longer at high risk for serious illness, and thus should no longer be excused for that reason. As vaccine rates increase, courts can expect to see a decline in the number of persons requesting to be excused or deferred due to COVID-19. Jurors' vaccine status is irrelevant for cases in which prospective jurors are summoned for remote jury selection or jury trials.

What impact will the use of vaccine status information have on the integrity of the jury system? Restricting the jury pool to persons who are fully vaccinated may make it more difficult to secure enough prospective jurors to select juries. Along with the coronavirus' differential impact on people of color, public health experts have noted ongoing challenges in making vaccine distribution accessible to these communities, including higher rates of vaccine hesitancy in these communities. Excluding persons who are not fully vaccinated may make the jury pool less likely to reflect a fair cross section of the community, which in turn may also increase the risk of jury challenges.

From whom will the court collect information about vaccine status? Prospective jurors are not the only participants of in-person jury trials. Other trial participants include the trial judge, lawyers, parties, court staff, and witnesses. Consistency dictates that if the court collects information about vaccine status, it should do so for all persons entering the courthouse, not just prospective jurors.

To whom may prospective jurors' vaccine status information be disclosed, if collected by the court? Although prospective jurors can choose to disclose their own personal health information to the court upon request, they maintain a privacy interest in that information and may have a reasonable expectation that the court will use the information only for legitimate court purposes related to jury service and will otherwise take steps to maintain its confidentiality.