

# PA Vaccine Conversations on Twitter

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Vaccine Hesitancy Project Update based on June 24, 2022 – June 30, 2022

The CMU centers for:

Informed DEMocracy And Social cyber-security

Computational Analysis of Social and Organizational Systems



Carnegie Mellon University



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## PA Vaccine Conversations Project

- ❑ This report is an effort to summarize social media conversations around COVID-19 issues in Pennsylvania, with a focus on vaccination. It contains an analysis of the general topics related to COVID-19 vaccination. This includes discussions related to COVID-19 regulations, mandates, masks, pro-and anti-vaccination campaigns, science messages, misinformation, disinformation, conspiracy theories, and vaccine hesitancy messages.
- ❑ Anti-Vax messaging includes vaccine hesitancy messages, opinions, questions, policy health and science related information, misinformation, disinformation, and conspiracy theories.

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## Report Overview June 24 – June 30

- ❑ COVID-19 vaccine for children, mandates, masks and military are trending this week, many tweets compare the new abortion ruling and vaccine mandates in a political context;
- ❑ Trending stories: [jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001](https://online.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001) Ron Johnson now says he helped coordinate effort to pass false elector slates to Pence, but his new explanation drew a quick rebuke; [the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs](https://the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs) VIRAL FEARS First outbreak of highly infectious polio detected in UK since 1984 – the 6 signs to know; [wtae.com/article/pittsburgh-threatening-to-fire-police-officers-who-have-not-been-vaccinated-against-covid-19/40458602](https://wtae.com/article/pittsburgh-threatening-to-fire-police-officers-who-have-not-been-vaccinated-against-covid-19/40458602) Pittsburgh threatening to fire police officers who have not been vaccinated against COVID-19; [redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196](https://redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196) 14,000 Army Guard Troops Could Be Axed Thursday for Refusing COVID Vax; [reuters.com/world/us/us-appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27](https://reuters.com/world/us/us-appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27) U.S. appeals court vacates federal vaccine mandate pending additional hearing; [cnn.it/3npMITW](https://cnn.it/3npMITW) Elmo is now vaccinated for Covid-19; [nature.com/articles/s41467-022-31401-5](https://nature.com/articles/s41467-022-31401-5) Age and sex-specific risks of myocarditis and pericarditis following Covid-19 messenger RNA vaccines; [Vaccine.UPMC.com](https://vaccine.upmc.com) COVID-19 Vaccines at UPMC;
- ❑ Popular anti-vax tweets: A 6 month old baby is being denied a ❤️ transplant at Vanderbilt unless his parents vaccinate him. They've refused on religious & medical grounds. His heart is failing and his life CANNOT be lost because of the agenda clearly at play here. Parental rights matter. (THREAD) <https://t.co/TBUlNhNXys>; I watched as a friend who was 6 months pregnant was forced to choose between taking the vaccine or losing her job. Where was all this defense of women's medical freedom then?; The "principled conservative" Liz Cheney voted AGAINST my amendment to protect service members who've been unfairly punished by Biden's out of control vax mandate. She's a PUPPET of Nancy Pelosi. Wyoming - you MUST elect @HagemanforWY. Cheney is OUT OF CONTROL!!; After two years of mask and vaccine mandates, the phrase "my body, my choice" rings a bit hollow #Abortion #RoeVsWade

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## Countering disinformation June 24 – June 30

- ❑ This week, we see a moderately high number of vaccine hesitancy and disinformation stories;
- ❑ Many anti-vax stories published misused data about deaths and side effects of the COVID-19 vaccine for children. Australian Associated Press posted an article with fact-checking this claim <https://www.aap.com.au/factcheck/data-misused-to-claim-covid-vaccines-are-killing-us-kids/> "The US Food and Drug Administration has authorised that children as young as six months can receive COVID-19 vaccines, amid social media claims the jabs have killed 125 American kids and injured 50,000. Health experts say the claim is false, with no supporting evidence. They say the claim misuses data that is not intended to show a causal link between vaccines and a wide range of unverified adverse medical reactions;"
- ❑ Another story with factchecking disinformation claims about children's COVID-19 vaccine <https://theparadise.ng/fact-check-infants-should-not-be-vaccinated-against-covid-19-due-to-potential-long-term-side-effects/> Fact Check: Infants should not be vaccinated against COVID-19 due to potential long-term side effects;
- ❑ It is necessary to ensure that fact-checking links are widely shared. The suggestion is to promote them via social media communication; also, through partnerships with local organizations and communities who would share this information or similar fact-checking details from journalists and researchers in the media.

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## Popular anti-vax stories sorted by shares

Anti-vax, disinformation, and vaccine hesitancy stories sorted by the number or shares:

- ❑ [dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda](https://dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda) CDC Caught Using False Data To Recommend Kids' COVID Vaccine
- ❑ [rumble.com/v1a5oej-comparing-natural-immunity-to-vaccine-induced-immunity-dr-steven-pelech-an.html](https://rumble.com/v1a5oej-comparing-natural-immunity-to-vaccine-induced-immunity-dr-steven-pelech-an.html) Comparing natural Immunity to vaccine-induced immunity | Dr. Steven Pelech & Julie Ponesse
- ❑ [dailysceptic.org/2022/06/22/covid-vaccines-more-likely-to-put-you-in-hospital-than-keep-you-out-bmi-editors-analysis-of-pfizer-and-moderna-trial-data-finds](https://dailysceptic.org/2022/06/22/covid-vaccines-more-likely-to-put-you-in-hospital-than-keep-you-out-bmi-editors-analysis-of-pfizer-and-moderna-trial-data-finds) Covid Vaccines More Likely to Put You in Hospital Than Keep You Out, BMJ Editor's Analysis of Pfizer and Moderna Trial Data Finds
- ❑ [ravarora.substack.com/p/the-truth-about-vaccine-induced-myocarditis-c21](https://ravarora.substack.com/p/the-truth-about-vaccine-induced-myocarditis-c21) The Truth About Vaccine-Induced Myocarditis: Part 2
- ❑ [sharylattkisson.com/2022/06/republicans-question-cdc-and-fda-on-their-ok-for-covid-19-vaccine-for-toddlers-and-babies](https://sharylattkisson.com/2022/06/republicans-question-cdc-and-fda-on-their-ok-for-covid-19-vaccine-for-toddlers-and-babies) Republicans question CDC and FDA on their ok for Covid-19 vaccine for toddlers and babies
- ❑ [theepochtimes.com/cdc-confirmed-post-vaccination-death-from-blood-clotting-two-weeks-before-alerting-public-emails-4556517.html](https://theepochtimes.com/cdc-confirmed-post-vaccination-death-from-blood-clotting-two-weeks-before-alerting-public-emails-4556517.html) CDC Confirmed Post-Vaccination Death From Blood Clotting 2 Weeks Before Alerting Public: Emails
- ❑ [boriquagato.substack.com/p/how-do-you-miss-the-most-blatant](https://boriquagato.substack.com/p/how-do-you-miss-the-most-blatant) how do you miss the most blatant safety

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## Anti-vax stories sorted by the projected impact

- ❑ [dailysceptic.org/2022/06/22/covid-vaccines-more-likely-to-put-you-in-hospital-than-keep-you-out-bmi-editors-analysis-of-pfizer-and-moderna-trial-data-finds](https://dailysceptic.org/2022/06/22/covid-vaccines-more-likely-to-put-you-in-hospital-than-keep-you-out-bmi-editors-analysis-of-pfizer-and-moderna-trial-data-finds) Covid Vaccines More Likely to Put You in Hospital Than Keep You Out, BMJ Editor's Analysis of Pfizer and Moderna Trial Data Finds
- ❑ [theepochtimes.com/cdc-confirmed-post-vaccination-death-from-blood-clotting-two-weeks-before-alerting-public-emails-4556517.html](https://theepochtimes.com/cdc-confirmed-post-vaccination-death-from-blood-clotting-two-weeks-before-alerting-public-emails-4556517.html) CDC Confirmed Post-Vaccination Death From Blood Clotting 2 Weeks Before Alerting Public: Emails
- ❑ [ravarora.substack.com/p/the-truth-about-vaccine-induced-myocarditis-c21](https://ravarora.substack.com/p/the-truth-about-vaccine-induced-myocarditis-c21) The Truth About Vaccine-Induced Myocarditis: Part 2
- ❑ [dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda](https://dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda) CDC Caught Using False Data To Recommend Kids' COVID Vaccine
- ❑ [rumble.com/v1a5oej-comparing-natural-immunity-to-vaccine-induced-immunity-dr-steven-pelech-an.html](https://rumble.com/v1a5oej-comparing-natural-immunity-to-vaccine-induced-immunity-dr-steven-pelech-an.html) Comparing natural Immunity to vaccine-induced immunity | Dr. Steven Pelech & Julie Ponesse
- ❑ [sharylattkisson.com/2022/06/republicans-question-cdc-and-fda-on-their-ok-for-covid-19-vaccine-for-toddlers-and-babies](https://sharylattkisson.com/2022/06/republicans-question-cdc-and-fda-on-their-ok-for-covid-19-vaccine-for-toddlers-and-babies) Republicans question CDC and FDA on their ok for Covid-19 vaccine for toddlers and babies
- ❑ [boriquagato.substack.com/p/how-do-you-miss-the-most-blatant](https://boriquagato.substack.com/p/how-do-you-miss-the-most-blatant) how do you miss the most blatant safety

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## Measures for countering health disinformation

- ❑ Anti-vaccine narratives are still highly active on social media, while there are not that many counter-narratives about the positive effects of vaccines;
- ❑ There is a need for a reframing of social media as a medically and socially valuable resource and platform because of its high impact on society;
- ❑ Healthcare organizations need to implement social media strategies to create and expand conversations countering disinformation on social media;
- ❑ It would be helpful for health communicators to cooperate with local influencers who could spread pro-vaccination messages. Another strategy could be to motivate health practitioners to use social media as a channel for communication with the public;
- ❑ "Strategies focused on meaningfully and safely engaging HCPs on social media, promoting interconnectivity across the medical and public health communities on COVID-19 vaccine truths, and sustaining these messaging efforts across vaccine implementation stages will be our best hope of preventing any more missed doses and promoting "misinformation immunity" for all." (Hernandez et al. 2021. "The COVID-19 vaccine social media infodemic: healthcare providers' missed dose in addressing misinformation and vaccine hesitancy.")

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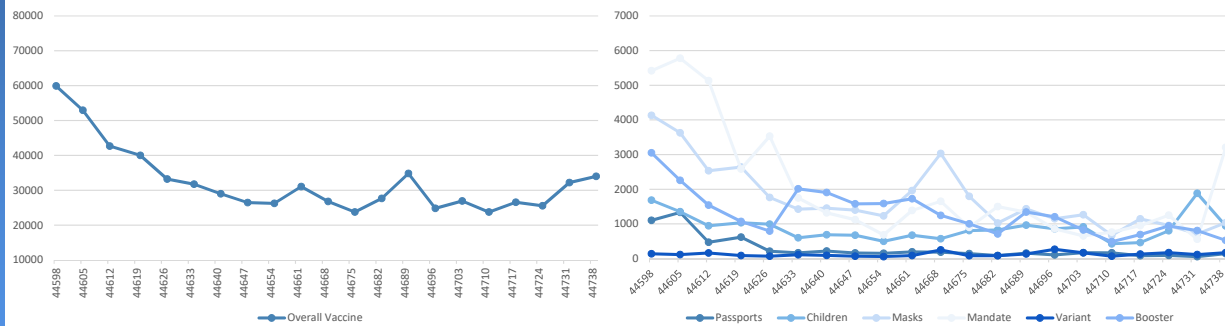
## Measures for countering health disinformation

- ❑ As a trusted source of information on vaccines, family physicians play a crucial role in driving vaccine acceptance;
- ❑ Sharing stories, building trust with patients, addressing pain associated with vaccination, presenting vaccination as the default approach early on, focusing on the benefits of protection, and being honest about side effects could also help to promote pro-vaccination attitudes (Shen & Dubey 2019. "Addressing vaccine hesitancy: Clinical guidance for primary care physicians working with parents");
- ❑ It is helpful to provide more information for the patients about the possible disinformation strategies they may deal with, such as manipulating emotions to promote misinformation and conspiracy theories to sow confusion and create division. Inoculation strategy may help to prepare the community by presenting counterarguments to misinformation and raising awareness of negative emotional appeals spread by anti-vaccine campaigns;
- ❑ Framing vaccination as a concrete, actionable strategy to reduce COVID-19 risk may help to address negative emotions, increase self-efficacy and ensure the feelings of control over reducing COVID-19 risk.

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## Trends (tweets per week) June 24 – June 30



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## High Level View by City June 24 – June 30

	Total PA	Philadelphia		Pittsburgh		Erie		Allentown/Bethlehem		Other	
Conversation	Tweets	Tweets	%	Tweets	%	Tweets	%	Tweets	%	Tweets	%
Overall Vaccine	29834	14642	49.1%	10327	34.6%	263	0.9%	3241	10.9%	1361	4.6%
Vaccine Passports	142	53	0.4%	45	0.4%	2	0.8%	26	0.8%	16	1.2%
FDA Approval	40	22	0.2%	11	0.1%			4	0.1%	3	0.2%
Boosters	326	171	1.2%	89	0.9%	2	0.8%	40	1.2%	24	1.8%
Employees	125	48	0.3%	32	0.3%	1	0.4%	35	1.1%	9	0.7%
"Experimental"	209	97	0.7%	52	0.5%	6	2.3%	45	1.4%	9	0.7%
Children	659	327	2.2%	215	2.1%	8	3.0%	81	2.5%	28	2.1%
Myocarditis	138	71	0.5%	31	0.3%	2	0.8%	29	0.9%	5	0.4%
Heart	369	176	1.2%	100	1.0%	4	1.5%	73	2.3%	16	1.2%
Masks	994	554	3.8%	249	2.4%	8	3.0%	84	2.6%	99	7.3%
Thrombosis/VITT	7	2	0.0%	4	0.0%			1	0.0%		
Mandates	2884	1505	10.3%	937	9.1%	17	6.5%	319	9.8%	106	7.8%
Natural Immunity	117	70	0.5%	29	0.3%			15	0.5%	3	0.2%
Efficacy	71	28	0.2%	23	0.2%			18	0.6%	2	0.1%
Omicron	170	93	0.6%	39	0.4%			24	0.7%	14	1.0%
Delta Variant	47	24	0.2%	5	0.0%			6	0.2%	12	0.9%
Race	579	373	2.5%	133	1.3%	6	2.3%	38	1.2%	29	2.1%
Ivermectin	14	8	0.1%	4	0.0%			1	0.0%	1	0.1%
Military	815	325	2.2%	409	4.0%	4	1.5%	64	2.0%	13	1.0%
Breakthrough	22	14	0.1%	3	0.0%			5	0.2%		

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- Conversation topics trending this week over last
  - Mandates
  - Military
  - Experimental
- Many tweets comparing the new abortion ruling and vaccine mandates in a political context

## High Level View by County June 24 – June 30

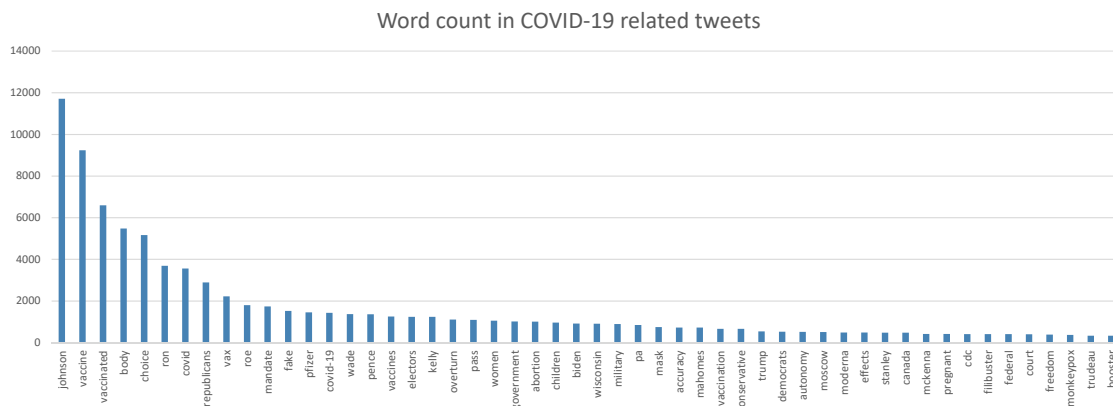
County	Allegheny	Beaver	Butler	Cambria	Fayette	Indiana	Somerset	Westmoreland
Overall Vaccine	10580	29	31	5	13	11	2	43
Vaccine Passports	46	1				6		
FDA	11							
Boosters	95		1		1			1
Employees	34		1					
"Experimental"	53			2				1
Children	215				1			
Myocarditis	31	1						
Heart	103	2						
Masks	263		3			1		4
Thrombosis/VITT	4							
Mandates	954	1	3	1	2	7		5
Natural Immunity	32							
Efficacy	24							
Omicron	41		1					
Delta Variant	8		1				1	
Race	139	1						
Ivermectin	4							
Military	411							
Breakthrough	3							

- Race: pulled by one of the vaccine keywords plus at least one other term in ("Black", "African American", "of color", "Latin", "Hispanic", "brown", "eugenic")

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## Top Words Used per Week June 24 – June 30



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## Top Hashtags by County June 24 – June 30

- ❑ We've checked hashtags in several counties such as Allegheny, Beaver, Butler, Cambria, Fayette, Indiana, Somerset, and West Moreland. After removing hashtags that were part of our search criteria, the top 5 hashtags for each county related to COVID19/vaccines are as follows\*:

Allegheny	Beaver + Butler	Indiana
covid19 (107)	covid (1)	novaccinemandates (6)
caringforeachother (62)	monkeypox (1)	novaccinepassports (6)
roevswade (37)	vaccine (1)	abortionrights (1)
wvu (37)	vaccinesideeffects (1)	covidvaccine (1)
abortion (27)	truth (1)	unvaccinated (1)

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## Top Hashtags by City June 24 – June 30

- ❑ After removing hashtags that were part of our search criteria, the top 5 hashtags for each region related to COVID19/vaccines are as follows:

Philadelphia	Chester	Norristown	Pittsburgh	Erie	Allentown/ Bethlehem	Other
covid19 (122)	caringforeachother (15)	roevswade (55)	covid19 (107)	wisen (8)	covid19 (46)	vaccine (17)
caringforeachother (89)	covid19 (15)	abortion (53)	caringforeachother (62)	bluevoices (5)	roevswade (24)	covid19 (14)
roevswade (50)	roevswade (9)	covid19 (27)	roevswade (37)	covid19 (5)	caringforeachother (19)	caringforeachother (9)
abortion (35)	abortion (8)	wisen (21)	wvu (37)	wtpblue (5)	wisen (19)	fauci (7)
monkeypox (32)	monkeypox (6)	biotech (20)	abortion (27)	vaccine (3)	abortion (17)	monkeypox (7)

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## Top URLs by County June 24 – June 30

Allegheny	Butler + Beaver	Indiana	West Moreland
<a href="https://www.jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001">jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001</a> Ron Johnson now says he helped coordinate effort to pass false elector slates to Pence, but his new explanation drew a quick rebuke (108)	<a href="https://cbwrong.blogspot.com/2022/06/there-is-some-real-scary-stuff-going-on.html">cbwrong.blogspot.com/2022/06/there-is-some-real-scary-stuff-going-on.html</a> I COULD BE WRONG. (2)	<a href="https://boriquagato.substack.com/p/how-do-you-miss-the-most-blatant">boriquagato.substack.com/p/how-do-you-miss-the-most-blatant</a> how do you miss the most blatant safety signal in vaccine history? (1)	<a href="https://bit.ly/3AbjIRZ">bit.ly/3AbjIRZ</a> Pittsburgh denies covid vaccine exemptions to some cops citing religious reasons (1)
<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (48)	<a href="https://redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196">redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196</a> 14,000 Army Guard Troops Could Be Axed Thursday for Refusing COVID Vax (1)	<a href="https://nejm.org/doi/full/10.1056/nejmp1502918">nejm.org/doi/full/10.1056/nejmp1502918</a> The Next Epidemic — Lessons from Ebola (1)	<a href="https://chop.edu/centers-programs/vaccine-education-center/vaccine-ingredients/fetal-tissues">chop.edu/centers-programs/vaccine-education-center/vaccine-ingredients/fetal-tissues</a> Vaccine Ingredients – Fetal Cells (1)
<a href="https://www.mirror.co.uk/news/politics/breaking-boris-johnson-partygate-lies-27355646">mirror.co.uk/news/politics/breaking-boris-johnson-partygate-lies-27355646</a> Boris Johnson Partygate 'lies' investigation begins (28)	<a href="https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/28/fact-sheet-biden-harris-administration-monkeypox-outbreak-response">whitehouse.gov/briefing-room/statements-releases/2022/06/28/fact-sheet-biden-harris-administration-monkeypox-outbreak-response</a> FACT SHEET: Biden-Harris Administration's Monkeypox Outbreak Response (1)	<a href="https://nypost.com/2022/06/18/eric-adams-gives-unvaccinated-nyc-workers-shot-at-jobs">nypost.com/2022/06/18/eric-adams-gives-unvaccinated-nyc-workers-shot-at-jobs</a> Eric Adams gives unvaccinated NYC workers 'shot' to get jobs back (1)	<a href="https://wtaw.com/article/pittsburgh-threatening-to-fire-police-officers-who-have-not-been-vaccinated-against-covid-19/40458602">wtaw.com/article/pittsburgh-threatening-to-fire-police-officers-who-have-not-been-vaccinated-against-covid-19/40458602</a> Pittsburgh threatening to fire police officers who have not been vaccinated against COVID-19 (1)
<a href="https://www.vaccineupmc.com">VaccineUPMC.com</a> COVID-19 Vaccines at UPMC (27)	<a href="https://covid.cdc.gov/covid-data-tracker">covid.cdc.gov/covid-data-tracker</a> CDC COVID Data Tracker (1)		
<a href="https://www.the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs">the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs</a> VIRAL FEARS First outbreak of highly infectious polio detected in UK since 1984 – the 6 signs to know (2)	<a href="https://www.whdh.com/news/elmo-just-got-his-covid-19-vaccine">whdh.com/news/elmo-just-got-his-covid-19-vaccine</a> Elmo just got his Covid-19 vaccine (1)		

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## Top URLs by City June 24 – June 30

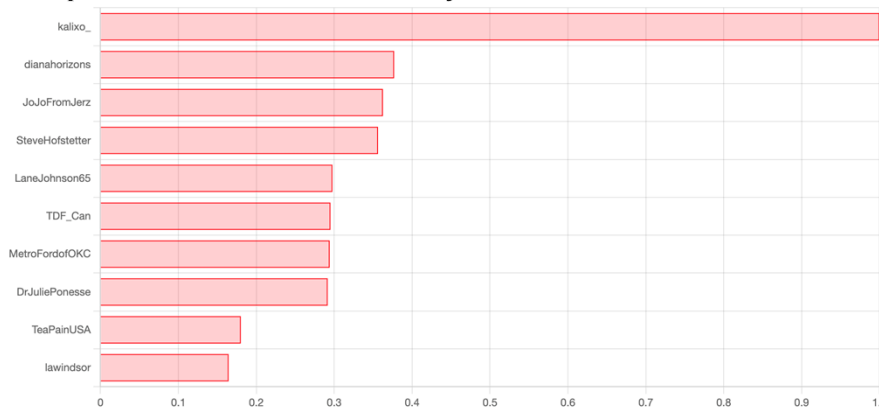
Philadelphia	Chester	Norristown	Pittsburgh	Erie	Allentown/ Bethlehem	Other
<a href="https://redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196">redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196</a> 14,000 Army Guard Troops Could Be Axed Thursday for Refusing COVID Vax (74)	<a href="https://www.reuters.com/world/us/appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27">reuters.com/world/us/appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27</a> U.S. appeals court vacates federal vaccine mandate pending additional hearing (42)	<a href="https://www.reuters.com/world/us/appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27">reuters.com/world/us/appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27</a> U.S. appeals court vacates federal vaccine mandate pending additional hearing (102)	<a href="https://www.jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001">jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001</a> Ron Johnson now says he helped coordinate effort to pass false elector slates to Pence, but his new explanation drew a quick rebuke (108)	<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (2)	<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (37)	<a href="https://www.evanhospital.com/virus-coronavirus-update-5">evanhospital.com/virus-coronavirus-update-5</a> Coronavirus Update (5)
<a href="https://www.reuters.com/world/us/appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27">reuters.com/world/us/appeals-court-vacates-federal-vaccine-mandate-pending-additional-hearing-2022-06-27</a> U.S. appeals court vacates federal vaccine mandate pending additional hearing (42)	<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (39)	<a href="https://www.jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001">jsonline.com/story/news/politics/2022/06/23/ron-johnson-now-says-he-coordinated-handoff-false-elector-slates-pence/7715502001</a> Ron Johnson now says he helped coordinate effort to pass false elector slates to Pence, but his new explanation drew a quick rebuke (15)	<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (48)	<a href="https://www.foxnews.com/opinion/cdc-recommends-covid-19-vaccines-babies-kids-under-5-6-things-parents-need-know">foxnews.com/opinion/cdc-recommends-covid-19-vaccines-babies-kids-under-5-6-things-parents-need-know</a> CDC recommends COVID-19 vaccines for babies, kids under 5. Here are 6 things parents need to know (2)	<a href="https://www.cnn.it/3npMITW">cnn.it/3npMITW</a> Elmo is now vaccinated for Covid-19 (14)	<a href="https://www.washingtonpost.com/politics/2022/06/22/sen-ron-johnson-under-fire-over-fake-electors-disclosure-hearing">washingtonpost.com/politics/2022/06/22/sen-ron-johnson-under-fire-over-fake-electors-disclosure-hearing</a> Sen. Ron Johnson under fire over fake-electors disclosure at hearing (5)
<a href="https://www.cnn.it/3npMITW">cnn.it/3npMITW</a> Elmo is now vaccinated for Covid-19 (32)	<a href="https://www.nature.com/articles/s41467-022-31401-5">nature.com/articles/s41467-022-31401-5</a> Age and sex-specific risks of myocarditis and pericarditis following Covid-19 messenger RNA vaccines (5)	<a href="https://www.nypost.com/2022/06/29/dr-fauci-reveals-covid-rebound-after-pfizers-paxlovid-treatment">nypost.com/2022/06/29/dr-fauci-reveals-covid-rebound-after-pfizers-paxlovid-treatment</a> Dr. Fauci reveals 'COVID rebound' after Pfizer's Paxlovid treatment (12)	<a href="https://www.mirror.co.uk/news/politics/breaking-boris-johnson-partygate-lies-27355646">mirror.co.uk/news/politics/breaking-boris-johnson-partygate-lies-27355646</a> Boris Johnson Partygate 'lies' investigation begins (28)	<a href="https://www.gorie.com/story/news/coronavirus/2022/06/23/covid-19-vaccine-available-erie-children-6-months-4-years-saint-vincent-upmc-hamot-lecom-health/65362176007">gorie.com/story/news/coronavirus/2022/06/23/covid-19-vaccine-available-erie-children-6-months-4-years-saint-vincent-upmc-hamot-lecom-health/65362176007</a> Erie health systems receive COVID-19 vaccine for young children; shots to start Thursday (2)	<a href="https://www.redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196">redstate.com/bobhoge/2022/06/27/14000-army-guard-troops-could-be-axed-thursday-for-refusing-covid-vax-n585196</a> 14,000 Army Guard Troops Could Be Axed Thursday for Refusing COVID Vax (13)	<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (4)
<a href="https://www.rumble.com/v/1a5oej-comparing-natural-immunity-to-vaccine-induced-immunity-dr-steven-pelech-julie-ponesse">rumble.com/v/1a5oej-comparing-natural-immunity-to-vaccine-induced-immunity-dr-steven-pelech-julie-ponesse</a> Comparing natural immunity to vaccine-induced immunity   Dr. Steven Pelech & Julie Ponsesse (25)	<a href="https://www.ravara.substack.com/p/the-truth-about-vaccine-induced-myocarditis-part-2">ravara.substack.com/p/the-truth-about-vaccine-induced-myocarditis-part-2</a> The Truth About Vaccine-Induced Myocarditis: Part 2 (5)	<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (9)	<a href="https://www.vaccineupmc.com">VaccineUPMC.com</a> COVID-19 Vaccines at UPMC (27)	<a href="https://www.justthenews.com/nation/free-speech/twitter-dismisses-clarence-thomas-threat-censors-peer-reviewed-study-covid-vax">justthenews.com/nation/free-speech/twitter-dismisses-clarence-thomas-threat-censors-peer-reviewed-study-covid-vax</a> Twitter dismisses Clarence Thomas threat but censors peer-reviewed study on COVID vax and fertility (2)	<a href="https://www.thepostmillennial.com/trudeau-says-no-govt-should-tell-a-woman-what-she-can-and-cant-do-with-her-body-the-same-day-he-defends-vax-mandates">thepostmillennial.com/trudeau-says-no-govt-should-tell-a-woman-what-she-can-and-cant-do-with-her-body-the-same-day-he-defends-vax-mandates</a> Trudeau says no gov't should tell a woman what to do with her body the same day he defends vax mandates (12)	<a href="https://www.nature.com/articles/s41467-022-31401-5">nature.com/articles/s41467-022-31401-5</a> Age and sex-specific risks of myocarditis and pericarditis following Covid-19 messenger RNA vaccines (4)
<a href="https://www.dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda">dailycaller.com/2022/06/27/cdc-kids-vaccine-covid-coronavirus-flawed-study-fda</a> CDC Caught Using False Data To Recommend Kids' COVID Vaccine (22)	<a href="https://www.sharylattkisson.com/2022/06/6/republicans-question-cdc-and-fda-on-their-ok-for-covid-19-vaccine-for-toddlers-and-babies">sharylattkisson.com/2022/06/6/republicans-question-cdc-and-fda-on-their-ok-for-covid-19-vaccine-for-toddlers-and-babies</a> Republicans question CDC and FDA on their ok for Covid-19 vaccine for toddlers and babies (5)	<a href="https://www.the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs">the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs</a> VIRAL FEARS First outbreak of highly infectious polio detected in UK since 1984 – the 6 signs to know (8)	<a href="https://www.the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs">the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs</a> VIRAL FEARS First outbreak of highly infectious polio detected in UK since 1984 – the 6 signs to know (2)	<a href="https://www.thepoachtimes.com/cdc-confirmed-post-vaccination-death-from-blood-clotting-two-weeks-before-alerting-public-emails-4556517.html">thepoachtimes.com/cdc-confirmed-post-vaccination-death-from-blood-clotting-two-weeks-before-alerting-public-emails-4556517.html</a> CDC Confirmed Post Vaccination Death From Blood Clotting 2 Weeks Before Alerting Public: Emails (2)	<a href="https://www.dailysceptic.org/2022/06/22/covid-vaccines-more-likely-to-put-you-in-hospital-than-keep-you-out-hmbl-editors-analysis-of-pfizer-and-moderna-trial-data-finds">dailysceptic.org/2022/06/22/covid-vaccines-more-likely-to-put-you-in-hospital-than-keep-you-out-hmbl-editors-analysis-of-pfizer-and-moderna-trial-data-finds</a> Covid Vaccines More Likely to Put You in Hospital Than Keep You Out, BMJ Editor's Analysis of Pfizer and Moderna Trial Data Finds (11)	<a href="https://www.the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs">the-sun.com/health/5615177/first-outbreak-highly-infectious-polio-uk-signs</a> VIRAL FEARS First outbreak of highly infectious polio detected in UK since 1984 – the 6 signs to know (4)

Carnegie Mellon University



## Analysis of Tweeters - Super Spreaders

- ❑ Super Spreaders are users which generate content that is shared often, and hence spread information effectively.

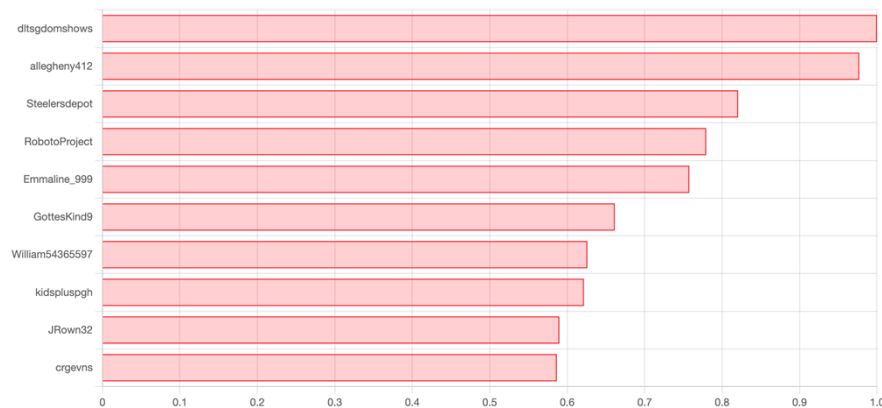


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## Analysis of Tweeters - Super Friends

- ❑ Super Friends are users that exhibit frequent two-way communication, facilitating large or strong communication networks.

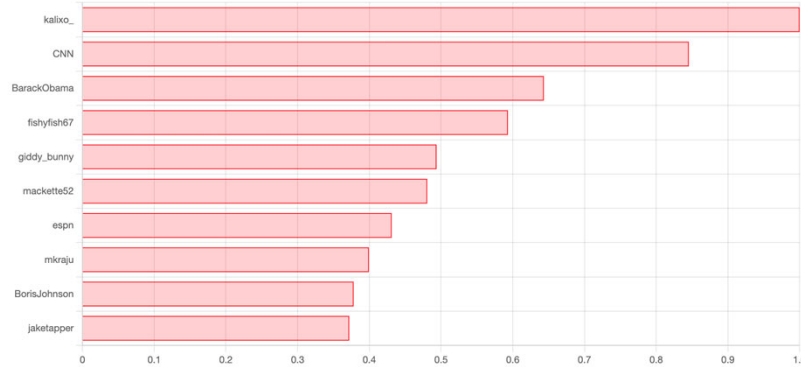


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## Analysis of Tweeters - Other Influencers

- Other Influencers are users which have an active network presence, by tweeting often or mentioning users often, and operate in central parts of the conversation, such as by using important hashtags, or mentioning important users.



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## Accounts Referenced by the Most Tweets

- This shows the tweeters that are most often referenced (e.g. mentioned) in PA tweets. Value is the number of tweets that reference the agent.

Agent Label	Value
kalix_	2636
dianahorizons	1000
mat_boone	707
TeaPainUSA	439
lawindsor	363
RepLizCheney	352
greg_price11[+]	343
SecDef	341
RepMikeJohnson[+]	318
SenRonJohnson[+]	300
kalix_	2636
dianahorizons	1000
mat_boone	707

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## Trending Tweets June 24 – June 30

Tweets that are the most forwarded, either by retweet, reply, or quote:

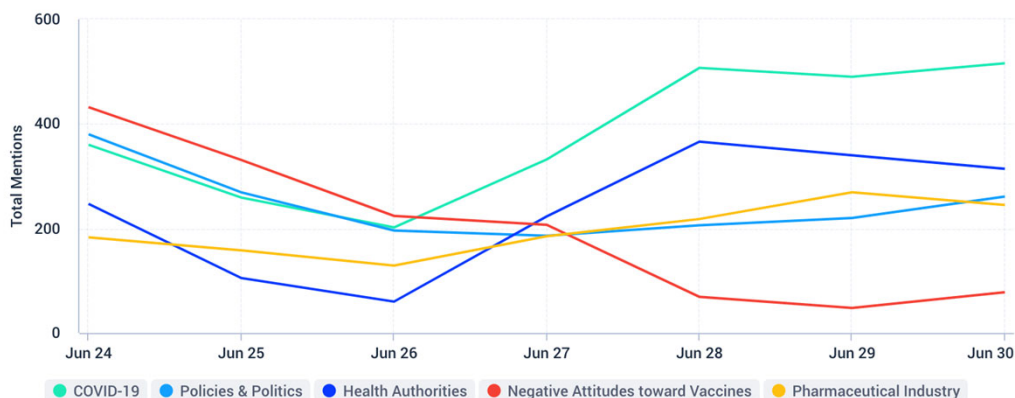
- ❑ republicans were so loud with "my body my choice" when it came to getting vaccinated;
- ❑ really said "my body my choice" about the vaccine and then proceeded to overturn roe v. wade;
- ❑ Ron Johnson, who spent the 4th of July in Moscow, is one of the biggest impediments to breakin' the filibuster and codify in' Roe as law. Who's ready to send him home this November?;
- ❑ BREAKING: @RepLizCheney just voted with Democrats on the Armed Services Committee to kill an amendment that would've forced Defense Secretary Lloyd Austin to rescind the covid vaccine mandate for the military;
- ❑ The Army Reserve and Army National Guard deadline imposed by @SecDef for mandatory COVID-19 vaccination is June 30th. THREAD on the effects of the military vaccine mandate so far;
- ❑ Good news! The 5th circuit blocked the Biden Administration's vax mandate for federal workers pending full en banc hearing. The covid vax mandates has fueled generalized vaccine skepticism and is a black mark on public health. <https://t.co/DfymCnZFTS>;
- ❑ Ron Johnson claims Rep Mike Kelly sent him PA elector docs to give to Mike Pence on Jan 6. Kelly denied having any knowledge of this. I just asked Johnson who is lying here, and more... video coming soon, stay tuned. <https://t.co/1Qn9avZPqg>;
- ❑ A 6 month old baby is being denied a ❤️ transplant at Vanderbilt unless his parents vaccinate him. They've refused on religious & medical grounds. His heart is failing and his life CANNOT be lost because of the agenda clearly at play here. Parental rights matter. (THREAD) <https://t.co/TBUluhNXys>;
- ❑ I watched as a friend who was 6 months pregnant was forced to choose between taking the vaccine or losing her job. Where was all this defense of women's medical freedom then?;
- ❑ The "principled conservative" Liz Cheney voted AGAINST my amendment to protect service members who've been unfairly punished by Biden's out of control vax mandate. She's a PUPPET of Nancy Pelosi. Wyoming - you MUST elect @HagemanforWY. Cheney is OUT OF CONTROL!!;
- ❑ After two years of mask and vaccine mandates, the phrase "my body, my choice" rings a bit hollow #Abortion #RoeVsWade

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## General PA Conversation June 24 – June 30

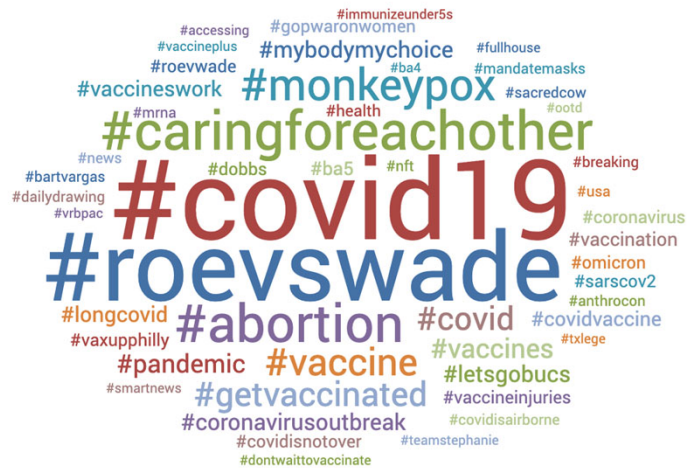


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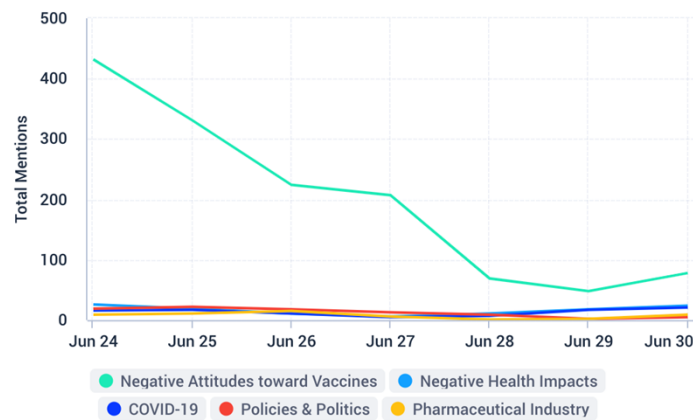
## PA Hashtag Cloud June 24 – June 30



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## Negative Attitudes June 24 – June 30



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## Negative Hashtag Cloud June 24 – June 30



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## Trending Posts on June 24 – June 30

708 34 40

120 74 9

58 41 5

39 24 2

53 10 6

26 131 4

92 6 6

63 32 6

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## Trending Posts on Instagram June 24 – June 30

A new study has identified the best- and worst-performing states during the pandemic based on economic, educational, and health outcomes (color represents political party of state governor/D.C. mayor during the pandemic):

Best Performers		Worst Performers	
① Utah		① New Jersey	
② Nebraska		② D.C.	
③ Vermont		③ New York	
④ Montana		④ New Mexico	
⑤ South Dakota		⑤ California	
⑥ Florida		⑥ Illinois	
⑦ New Hampshire		⑦ Maryland	
⑧ Maine		⑧ Nevada	
⑨ Arkansas		⑨ Connecticut	
⑩ Idaho		⑩ Pennsylvania	

**redpillings**  
Jun 28, 2022 at 4:23 PM

A recent study published by the National Bureau of Economic Research ranked...  
[See more](#)

8.1K 258



**panationalguard**  
Jun 24, 2022 at 11:13 AM

Gov. Tom Wolf recognized several Pennsylvania National Guard members for their work at #COVID19 vaccine clinics for teachers in 2021 during a ceremony Thursday at PA Emergency Management Agency.  
[See less](#)

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## Trending Posts on Reddit June 24 – June 30

Posted 9 days ago to /r/Pittsburgh: Pitts...

**Pittsburgh police officers get disciplinary letters over vaccine mandate**

[WPXI.COM](#)




UPVOTES 0 COMMENTS 17

Posted 9 days ago to AutoNewspaper: C...

**[Local] - Pittsburgh denies COVID-19 vaccine exemptions to some police officers | Pgh Post-...**

[POST-GAZETTE.COM](#)



UPVOTES 1 COMMENTS 0

Posted 11 days ago to covidlonghauers

**Long Term Covid or something else?**

[REDD.IT](#)

UPVOTES 2 COMMENTS 10

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## For More Information

- ❑ Director Kathleen M. Carley - [kathleen.carley@cs.cmu.edu](mailto:kathleen.carley@cs.cmu.edu)
  - ❑ <http://www.casos.cs.cmu.edu/bios/carley/carley.html>
- ❑ IDeaS website - <https://www.cmu.edu/ideas-social-cybersecurity/>
- ❑ CASOS website - <http://www.casos.cs.cmu.edu/>
- ❑ Social Cybersecurity Working Group - <http://social-cybersecurity.org>
- ❑ Facebook: [@IDeasCMU](https://www.facebook.com/IDeasCMU)
- ❑ Twitter: [@IDeaSCMU](https://twitter.com/IDeaSCMU)
- ❑ YouTube: [IDeaS Center](https://www.youtube.com/IDeaS-Center)
- ❑ Ask to be on our Email-Distro Lists

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