

PA Vaccine Conversations on Twitter

Dr. Iuliia Alieva, Dawn Robertson, Dr. Kathleen M. Carley
Vaccine Hesitancy Project Update based on on July 1, 2022 – July 7, 2022

The CMU centers for:

Informed DEMocracy And Social cyber-security

Computational Analysis of Social and Organizational Systems



Carnegie Mellon University



7/12/2022

1

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.

7/12/2022



2

Carnegie Mellon University

Report Overview July 1– July 7

- ❑ COVID-19 vaccine for children, mandates, masks, FDA approval and the disinformation about the presence of graphene oxide in Pfizer vaccine are trending this week;
- ❑ Trending stories: theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine Where's the herd immunity? Our research shows why Covid is still wreaking havoc; wsj.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines? abc7ne.ws/3yLQVTj With breakthrough COVID cases commonplace, experts set expectations about 'vaccine efficacy'; occupydemocrats.com/2022/07/02/florida-silencing-pediatrician-fired-after-criticizing-desantis-for-blocking-vaccine-access FLORIDA SILENCING: Pediatrician FIRED after criticizing DeSantis for blocking vaccine access; link.theepochtimes.com/mkt_app/40000-army-national-guard-troops-face-pay-loss-discharge-as-covid-vaccine-deadline-kicks-in_4571563.html 40,000 Army National Guard Troops Face Pay Loss, Discharge as COVID Vaccine Deadline Kicks In;
- ❑ Popular anti-vax tweets: Just ran the numbers on Biden Admin's new vax deal w Pfizer. The old deal gave Pfizer \$19.50 a dose. They're now paying > \$30. Pfizer raised price by over 50%. The deal will bring Pfizer \$9.5 billion. Their expected revenue is > \$100B this year, shattering records. Criminal; Uruguay demanded #pfizer state if graphene oxide was in the jab and what else is in it. Pfizer withdraws from Uruguay; It is a 'pandemic of the VACCINATED', we told you this! Geert Vanden Bosche said this, Mike Yeadon said this, I, Dr. Paul Alexander said this, bad cattitude (el gato malo) leaned in hard (eloquent)... <https://t.co/v2knyY6kFi>; Is This Why Pfizer Wanted Trial Data Buried for 75 Years?; Dr. Malone - inventor of the mRNA tech that was used by Pfizer and Moderna to develop their covid injections: "The more DOSES you receive..., the HIGHER your RISK for INFECTIONS, DISEASE and DEATH compared to the unvaccinated." <https://t.co/ZWHyVsND7I>

7/12/2022



Countering disinformation July 1– July 7

- ❑ This week, we see many vaccine hesitancy and disinformation stories;
- ❑ Many anti-vax stories are focused on vaccination for children. FactCheck.org has recently published a guide to COVID-19 vaccines for the youngest kids <https://www.factcheck.org/2022/07/scicheck-a-guide-to-covid-19-vaccines-for-the-youngest-kids/>
- ❑ This guide covers various questions and issues related to children's vaccination, such as "How effective are the vaccines," "How safe are the vaccines," and "Do experts recommend that all eligible children receive this vaccine?"
- ❑ FactCheck.org also published a debunking story for an old disinformation claim about vaccines altering DNA. This story is still pervasive on social media and should be addressed <https://www.factcheck.org/2022/06/scicheck-website-peddles-old-debunked-falsehood-about-covid-19-mrna-vaccines/>

7/12/2022



Popular anti-vax stories sorted by shares

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

- ❑ palexander.substack.com/p/it-is-a-pandemic-of-the-vaccinated It is a 'pandemic of the VACCINATED', we told you this! Geert Vanden Bosche said this, Mike Yeadon said this, I, Dr. Paul Alexander said this, bad cattitude (el gato malo) leaned in hard (eloquent)...
- ❑ childrenshealthdefense.org/defender/fauci-covid-rebound-pfizer-paxlovid-taxpayers Fauci Gets COVID Again After Taking Pfizer's Treatment — the Drug That Cost Taxpayers \$10.5 Billion
- ❑ wsi.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines?
- ❑ cosmicworld.site/johns-hopkins-university-confirms-you-can-be-vaccinated-with-a-pcr-test-even-without-knowing Johns Hopkins University confirms: You can be vaccinated with a PCR test, even without knowing
- ❑ icandecide.org/pfizer Pfizer Documents Produced by the FDA in FOIA Litigation
- ❑ voiceforscienceandsolidarity.org/videos-and-interviews/dont-vaccinate-your-children-with-covid-vaccines-ever Don't vaccinate your children with covid-vaccines! Ever!
- ❑ twitter.com/LeviNathan555/status/1543622501300948994 #WeThePeople know that they are the real #virus. & #Elected #officials betrayed our #TRUST! #Nuremberg2
- ❑ dailysceptic.org/2022/07/03/read-the-urgent-letter-from-76-doctors-telling-the-government-why-the-u-s-decision-to-vaccinate-infants-must-not-happen-here Read the Urgent Letter From 76 Doctors Telling the Government Why the U.S. Decision to Vaccinate Infants Must Not Happen Here
- ❑ elobservador.com.uy/nota/juez-intimo-al-gobierno-y-a-pfizer-a-que-presenten-en-48-horas-toda-la-informacion-sobre-las-vacunas-contr-a-el-covid-19-20227219938 Uruguay: Judge ordered the government and Pfizer to present all the information on vaccines against covid-19 within 48 hours

7/12/2022



Anti-vax stories sorted by the projected impact

- ❑ cosmicworld.site/johns-hopkins-university-confirms-you-can-be-vaccinated-with-a-pcr-test-even-without-knowing Johns Hopkins University confirms: You can be vaccinated with a PCR test, even without knowing
- ❑ wsi.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines?
- ❑ voiceforscienceandsolidarity.org/videos-and-interviews/dont-vaccinate-your-children-with-covid-vaccines-ever Don't vaccinate your children with covid-vaccines! Ever!
- ❑ dailysceptic.org/2022/07/03/read-the-urgent-letter-from-76-doctors-telling-the-government-why-the-u-s-decision-to-vaccinate-infants-must-not-happen-here Read the Urgent Letter From 76 Doctors Telling the Government Why the U.S. Decision to Vaccinate Infants Must Not Happen Here
- ❑ elobservador.com.uy/nota/juez-intimo-al-gobierno-y-a-pfizer-a-que-presenten-en-48-horas-toda-la-informacion-sobre-las-vacunas-contr-a-el-covid-19-20227219938 Uruguay: Judge ordered the government and Pfizer to present all the information on vaccines against covid-19 within 48 hours
- ❑ palexander.substack.com/p/it-is-a-pandemic-of-the-vaccinated It is a 'pandemic of the VACCINATED', we told you this! Geert Vanden Bosche said this, Mike Yeadon said this, I, Dr. Paul Alexander said this, bad cattitude (el gato malo) leaned in hard (eloquent)...
- ❑ icandecide.org/pfizer Pfizer Documents Produced by the FDA in FOIA Litigation
- ❑ twitter.com/LeviNathan555/status/1543622501300948994 #WeThePeople know that they are the real #virus. & #Elected #officials betrayed our #TRUST! #Nuremberg2
- ❑ childrenshealthdefense.org/defender/fauci-covid-rebound-pfizer-paxlovid-taxpayers Fauci Gets COVID Again After Taking Pfizer's Treatment — the Drug That Cost Taxpayers \$10.5 Billion

7/12/2022



Measures for countering health disinformation

- ❑ Anti-vaccine narratives are still pervasive 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.")

7/12/2022



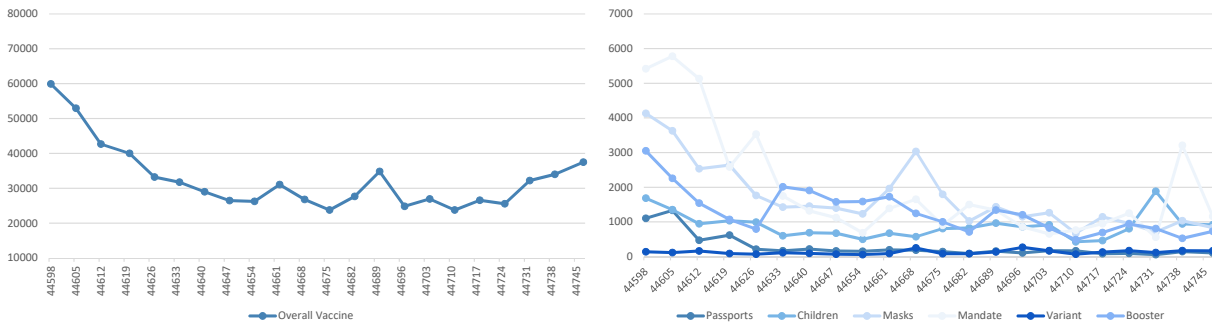
Measures for countering health disinformation

- ❑ 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.

7/12/2022



Trends (tweets per week) July 1– July 7



7/12/2022



High Level View by City July 1 – July 7

	Total PA	Philadelphia		Pittsburgh		Erie		Allentown/Bethlehem		Other	
Conversation	Tweets	Tweets	%	Tweets	%	Tweets	%	Tweets	%	Tweets	%
Overall Vaccine	32440	14450	44.5%	13038	40.2%	217	0.7%	3677	11.3%	1058	3.3%
Vaccine Passports	107	71	0.5%	21	0.2%			12	0.3%	3	0.3%
FDA Approval	75	26	0.2%	17	0.1%	3	1.4%	21	0.6%	8	0.8%
Boosters	362	188	1.3%	89	0.7%	5	2.3%	57	1.6%	23	2.2%
Employees	103	65	0.4%	21	0.2%	1	0.5%	12	0.3%	4	0.4%
"Experimental"	107	54	0.4%	21	0.2%	1	0.5%	25	0.7%	6	0.6%
Children	757	377	2.6%	167	1.3%	10	4.6%	158	4.3%	45	4.3%
Myocarditis	88	48	0.3%	18	0.1%	1	0.5%	19	0.5%	2	0.2%
Heart	228	157	1.1%	46	0.4%	1	0.5%	19	0.5%	5	0.5%
Masks	818	402	2.8%	247	1.9%	10	4.6%	77	2.1%	82	7.8%
Thrombosis/VITT	48	26	0.2%	15	0.1%			7	0.2%		
Mandates	1045	611	4.2%	203	1.6%	14	6.5%	161	4.4%	56	5.3%
Natural Immunity	105	77	0.5%	14	0.1%			10	0.3%	4	0.4%
Efficacy	181	89	0.6%	50	0.4%	1	0.5%	30	0.8%	11	1.0%
Omicron	151	71	0.5%	37	0.3%	3	1.4%	30	0.8%	10	0.9%
Delta Variant	58	28	0.2%	9	0.1%	2	0.9%	5	0.1%	14	1.3%
Race	427	174	1.2%	207	1.6%			32	0.9%	14	1.3%
Ivermectin	15	4	0.0%	6	0.0%			4	0.1%	1	0.1%
Military	64	28	0.2%	25	0.2%			7	0.2%	4	0.4%
Breakthrough	21	10	0.1%	4	0.0%			6	0.2%	1	0.1%

7/12/2022



- Conversation topics trending this week over last
 - FDA Approval
 - Thrombosis
 - Efficacy

High Level View by County July 1– July 7

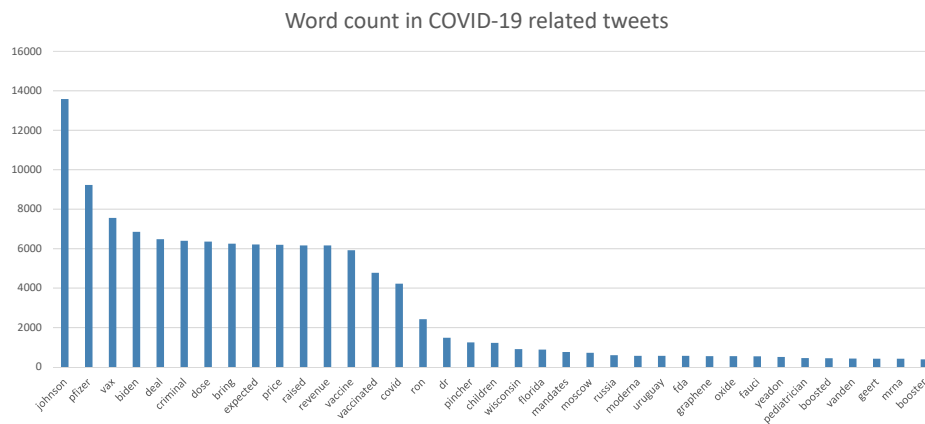
County	Allegheny	Beaver	Butler	Cambria	Fayette	Indiana	Somerset	Westmoreland
Overall Vaccine	13203	12	15	2	9	2	2	40
Vaccine Passports	22					1		
FDA	17							
Boosters	93							
Employees	22							1
"Experimental"	22							
Children	174	1	2					
Myocarditis	18							
Heart	46							
Masks	256		1					4
Thrombosis/VITT	15							
Mandates	208		1			1		4
Natural Immunity	14							
Efficacy	51		1					2
Omicron	41							1
Delta Variant	13				1			1
Race	209							
Ivermectin	6							
Military	25							
Breakthrough	4							

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

7/12/2022



Top Words Used per Week July 1– July 7



7/12/2022



Top Hashtags by County July 1– July 7

- ❑ 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	Fayette	Indiana	West Moreland
corruptronjohnson (186)	corruptronjohnson (1)	corruptronjohnson (1)	novaccinepassports (1)	pfizer (1)
pfizer (115)	enoughisenough (1)			
covid19 (69)	stopkillingus (1)			
vaccine (40)				
vaccineinjuries (27)				

7/12/2022



Top Hashtags by City July 1– July 7

- ❑ 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
corruptronjohnson (211)	pfizer (478)	corruptronjohnson (50)	corruptronjohnson (186)	corruptronjohnson (8)	corruptronjohnson (89)	corruptronjohnson (25)
pfizer (166)	abortion (17)	notmovingon (33)	pfizer (115)	billsmafia (3)	pfizer (60)	vaccine (21)
vaccine (31)	corruptronjohnson (15)	johnsonout163 (32)	covid19 (69)	covid19 (3)	genocide (29)	pfizer (8)
carriegate (24)	vaccine (8)	pfizer (17)	vaccine (40)	behrend (2)	polio (28)	bigpharma (7)
vaccineinjuries (22)	vaccineinjuries (8)	cardib (16)	vaccineinjuries (27)	cdnpoli (2)	vaccineswork (28)	herewego (7)

7/12/2022



Top URLs by County July 1– July 7

Allegheny	Butler + Beaver	Cambria	West Moreland
theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine Where's the herd immunity? Our research shows why Covid is still wreaking havoc (99)	breitbart.com/politics/2022/07/04/je-h-johnson-concerned-j6-committee-overreached-on-trump-lunge-story-wouldnt-be-admissible-in-a-courtroom Jeh Johnson Concerned J6 Committee 'Overreached' on Trump-Lunge Story: Wouldn't Be 'Admissible in a Courtroom' (1)	reut.rs/3nrDwcp Pfizer signs new \$3.2 billion COVID vaccine deal with U.S. government (1)	6abc.com/fluorona-influenza-covid-19-flu-and-covid/12011539 With breakthrough COVID cases commonplace, experts set expectations about 'vaccine efficacy' (1)
journaltimes.com/news/ron-johnson-doesnt-support-alabama-law-says-abortion-issue-should-be-up-to-states/article/8f5f0d8a-53d9-5a88-9661-033e61ddea72.html Ron Johnson doesn't support Alabama law, says abortion issue should be up to states (67)	businesswire.com/news/home/2022062905833/en Pfizer and BioNTech Announce New Agreement with U.S. Government to Provide Additional Doses of COVID-19 Vaccine (1)		cnn.com/2022/06/29/politics/pfizer-vaccine-biden-purchase/index.html Biden administration reaches agreement to purchase 105 million doses of Pfizer Covid-19 vaccine (1)
wsi.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines? (46)	occupydemocrats.com/2022/07/02/florida-silencing-pediatrician-fired-after-criticizing-desantis-for-blocking-vaccine-access FLORIDA SILENCING: Pediatrician FIRED after criticizing DeSantis for blocking vaccine access (1)		thenationalpulse.com/2022/06/30/vaccine-mandates-were-predicated-on-hope-rather-than-science-admits-deborah-birx Vaccine Mandates Were Predicated on "Hope" Rather Than Science, Admits Deborah Birx (1)
cosmicworld.site/johns-hopkins-university-confirms-you-can-be-vaccinated-with-a-pcr-test-even-without-knowing Johns Hopkins University confirms: You can be vaccinated with a PCR test, even without knowing (31)	twitter.com/rebeccakatz/status/1544081731074068480 McConnell wants to do just little enough to make suburban voters feel good about voting Republican (1)		
icandecide.org/pfizer Pfizer Documents Produced by the FDA in FOIA Litigation (29)			

7/12/2022

15

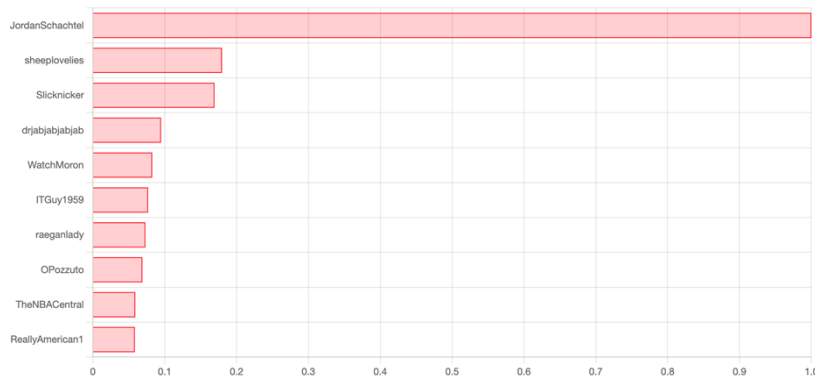


Top URLs by City July 1– July 7

Philadelphia	Chester	Norristown	Pittsburgh	Erie	Allentown/ Bethlehem	Other
palexander.substack.com/p/it-is-a-pandemic-of-the-vaccinated It is a 'pandemic of the VACCINATED', we told you this! Geert Vanden Bosche said this, Mike Yeadon said this, I, Dr. Paul Alexander said this, bad attitude (el gato malo) leaned in hard (eloquent)... (284)	palexander.substack.com/p/it-is-a-pandemic-of-the-vaccinated It is a 'pandemic of the VACCINATED', we told you this! Geert Vanden Bosche said this, Mike Yeadon said this, I, Dr. Paul Alexander said this, bad attitude (el gato malo) leaned in hard (eloquent)... (109)	pubmed.ncbi.nlm.nih.gov/35229080/ Incentives for COVID-19 vaccination (24)	theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine Where's the herd immunity? Our research shows why Covid is still wreaking havoc (99)	tcchealth.org COVID-19 Vaccinations (3)	twitter.com/LeviNathan55/status/1543622501300948994 #WeThePeople know that they are the real #virus. & #Elected #officials betrayed our #TRUST! #Nuremberg2 (22)	6abc.com/fluorona-influenza-covid-19-flu-and-covid/12011539 With breakthrough COVID cases commonplace, experts set expectations about 'vaccine efficacy' (4)
childrenshealthdefense.org/defender/fauci-covid-rebound-pfizer-paxlovid-taxpayers Fauci Gets COVID Again After Taking Pfizer's Treatment — the Drug That Cost Taxpayers \$10.5 Billion (198)	wsi.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines? (8)	theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine Where's the herd immunity? Our research shows why Covid is still wreaking havoc (15)	journaltimes.com/news/ron-johnson-doesnt-support-alabama-law-says-abortion-issue-should-be-up-to-states/article/8f5f0d8a-53d9-5a88-9661-033e61ddea72.html Ron Johnson doesn't support Alabama law, says abortion issue should be up to states (67)	voiceforscienceandsolidarity.org/videos-and-interviews/dont-vaccinate-your-children-with-covid-vaccines-ever Don't vaccinate your children with covid-vaccines! Ever! (3)	voiceforscienceandsolidarity.org/videos-and-interviews/dont-vaccinate-your-children-with-covid-vaccines-ever Don't vaccinate your children with covid-vaccines! Ever! (17)	elohservador.com.uy/nota/ju-48-horas-toda-la-informacion-sobre-las-vacunas-contra-el-covid-19-20227219938 Uruguay: Judge ordered the government and Pfizer to present all the information on vaccines against covid-19 within 48 hours (4)
journaltimes.com/news/ron-johnson-doesnt-support-alabama-law-says-abortion-issue-should-be-up-to-states/article/8f5f0d8a-53d9-5a88-9661-033e61ddea72.html Ron Johnson doesn't support Alabama law, says abortion issue should be up to states (69)	childrenshealthdefense.org/defender/fauci-covid-rebound-pfizer-paxlovid-taxpayers Fauci Gets COVID Again After Taking Pfizer's Treatment — the Drug That Cost Taxpayers \$10.5 Billion (7)	link.thepoettimes.com/mkt-app/40000-army-national-guard-troops-face-pay-loss-discharge-as-covid-vaccine-deadline-kicks-in-4571563.html 40,000 Army National Guard Troops Face Pay Loss, Discharge as COVID Vaccine Deadline Kicks In (12)	wsi.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines? (46)	chagov.com/public-health/covid-19-vaccination-clinics COVID-19 Vaccination Clinics (2)	wsi.com/articles/why-the-rush-for-toddler-vaccines-covid-pandemic-children-fda-pfizer-moderna-medicine-evidence-11656951993 Why the Rush for Toddler Vaccines? (16)	evanhospital.com/virus Coronavirus Update (4)
theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine Where's the herd immunity? Our research shows why Covid is still wreaking havoc (64)	voiceforscienceandsolidarity.org/videos-and-interviews/dont-vaccinate-your-children-with-covid-vaccines-ever Don't vaccinate your children with covid-vaccines! Ever! (7)	spytalk.co/p/italygate-conspiracy-pusher-was-fired 'Italygate' Conspiracy Pusher Was Fired by CIA (8)	cosmicworld.site/johns-hopkins-university-confirms-you-can-be-vaccinated-with-a-pcr-test-even-without-knowing Johns Hopkins University confirms: You can be vaccinated with a PCR test, even without knowing (31)	icandecide.org/pfizer Pfizer Documents Produced by the FDA in FOIA Litigation (2)	dailysceptic.org/2022/07/03/read-the-urgent-letter-from-76-doctors-telling-the-government-why-the-u-s-decision-to-vaccinate-infants-must-not-happen-here Read the Urgent Letter From 76 Doctors Telling the Government Why the U.S. Decision to Vaccinate Infants Must Not Happen Here (15)	occupydemocrats.com/2022/07/02/florida-silencing-pediatrician-fired-after-criticizing-desantis-for-blocking-vaccine-access FLORIDA SILENCING: Pediatrician FIRED after criticizing DeSantis for blocking vaccine access (4)
abc7ne.ws/3yI0VTI With breakthrough COVID cases commonplace, experts set expectations about 'vaccine efficacy' (56)	icandecide.org/pfizer Pfizer Documents Produced by the FDA in FOIA Litigation (5)	washingtonpost.com/opinion/2022/06/29/uh-oh-has-ron-johnson-gotten-into-ivermectin/ Uh-oh. Has Ron Johnson gotten into the ivermectin? (8)	icandecide.org/pfizer Pfizer Documents Produced by the FDA in FOIA Litigation (29)	zerohedge.com/covid-19/us-marines-ask-court-relief-covid-19-vaccine-mandate US Marines Ask Court For Relief From COVID-19 Vaccine Mandate (2)	theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine Where's the herd immunity? Our research shows why Covid is still wreaking havoc (12)	on.pfizer.com/30ChNBU Pfizer Announces Submission of New Drug Application to the U.S. FDA for PAXLOVID (4)

Analysis of Tweeters - Super Spreaders

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

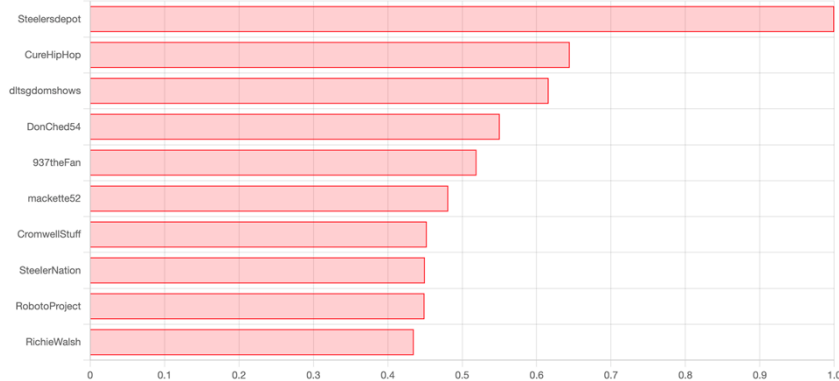


7/12/2022



Analysis of Tweeters - Super Friends

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

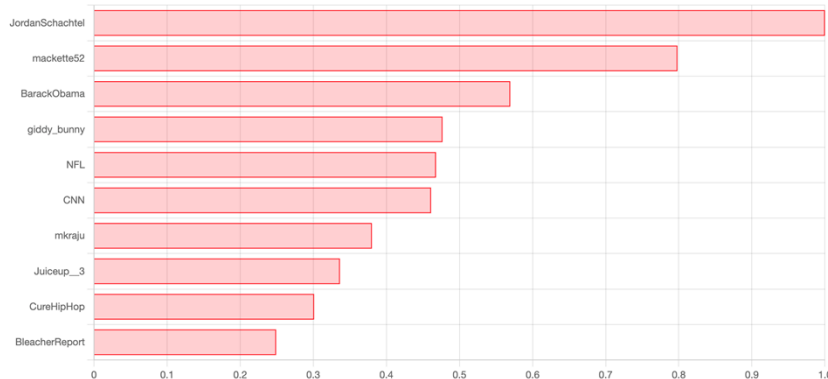


7/12/2022



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.



7/12/2022



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
JordanSchachtel	6154
WatchMoron	476
drjabjabjabjab	407
OPozzuto	386
NBCNews	346
RobertKennedyJr	275
AvengerResister	253
ReallyAmerican1	242
pfizer	225
supertanskiii	184
JordanSchachtel	6154
WatchMoron	476
drjabjabjabjab	407

7/12/2022



Trending Tweets July 1– July 7

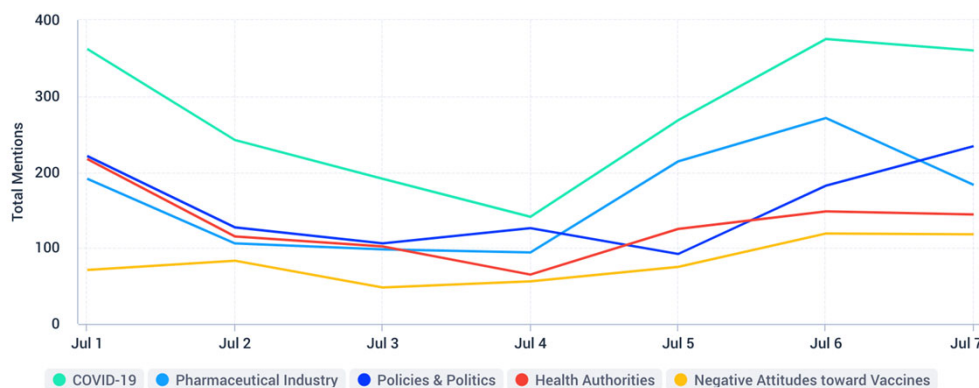
Tweets that are the most forwarded, either by retweet, reply, or quote:

- ❑ Just ran the numbers on Biden Admin's new vax deal w Pfizer. The old deal gave Pfizer \$19.50 a dose. They're now paying > \$30. Pfizer raised price by over 50%. The deal will bring Pfizer \$9.5 billion. Their expected revenue is > \$100B this year, shattering records. Criminal.
- ❑ Uruguay demanded #pfizer state if graphene oxide was in the jab and what else is in it. Pfizer withdraws from Uruguay.
- ❑ It is a 'pandemic of the VACCINATED', we told you this! Geert Vanden Bosche said this, Mike Yeadon said this, I, Dr. Paul Alexander said this, bad cattitude (el gato malo) leaned in hard (eloquent)... <https://t.co/v2knyY6kFi>
- ❑ Is This Why Pfizer Wanted Trial Data Buried for 75 Years?
- ❑ NBC News confirms: Dr. Lisa Gwynn, a pediatrician with the University of Miami Health System, has been removed from a state-appointed board for publicly criticizing Florida's decision to delay access to the COVID vaccine for children under 5. @NBCNews
- ❑ The Vaccinated <https://t.co/kyKlihqHsE>
- ❑ Fauci gets COVID again after taking Pfizer's treatment — the drug that cost taxpayers \$10.5 Billion <https://t.co/a20tsBMVRW>
- ❑ Dr. Malone - inventor of the mRNA tech that was used by Pfizer and Moderna to develop their covid injections: "The more DOSES you receive..., the HIGHER your RISK for INFECTIONS, DISEASE and DEATH compared to the unvaccinated." <https://t.co/ZWHyVsND7I>
- ❑ Pfizer Stopped Testing their COVID Vaccine on Animals Because they Kept Dying. Share!! <https://t.co/uPolaWZh0y>
- ❑ So "the government" CAN'T check if you're vaccinated before you attend a large public gathering, but the government CAN check if I'm pregnant before I leave the state to visit grandma.... Oh.
- ❑ Jair Bolsonaro explains why he didn't get the COVID vaccine and his approach to the virus. <https://t.co/mpzCYk4Oht>
- ❑ Remember when they told you the "vaccine" stopped the spread of coronavirus so they mandated it but then that turned out to be a lie but they left all the mandates there anyway?

7/12/2022



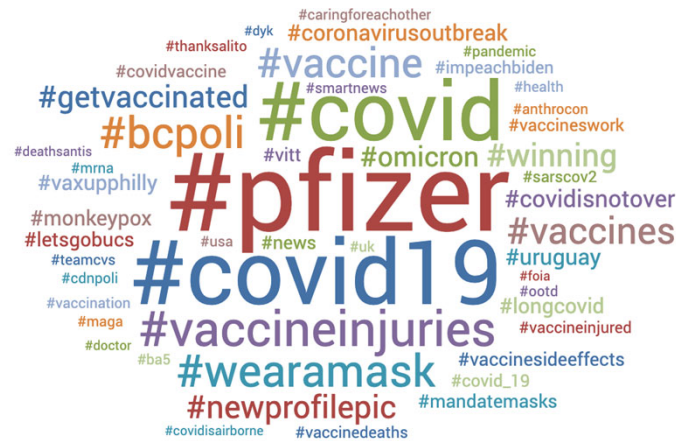
General PA Conversation July 1– July 7



7/12/2022



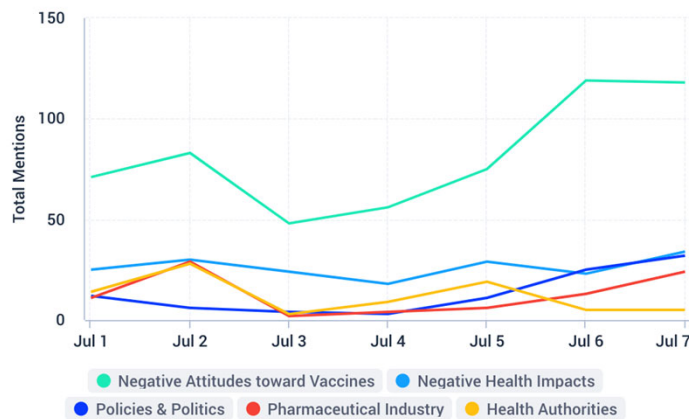
PA Hashtag Cloud July 1– July 7



7/12/2022



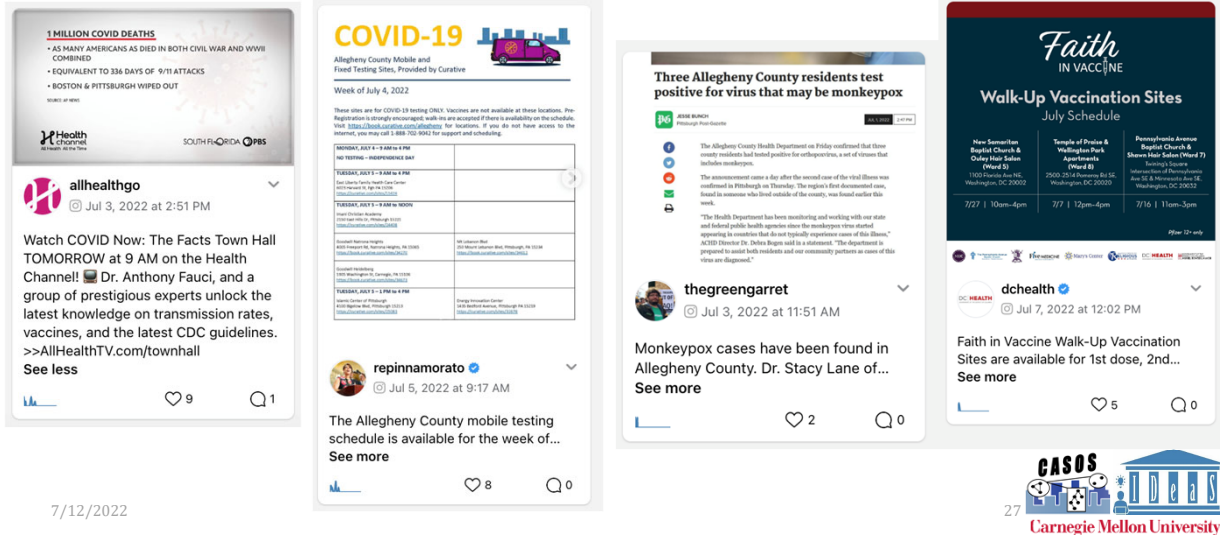
Negative Attitudes July 1– July 7



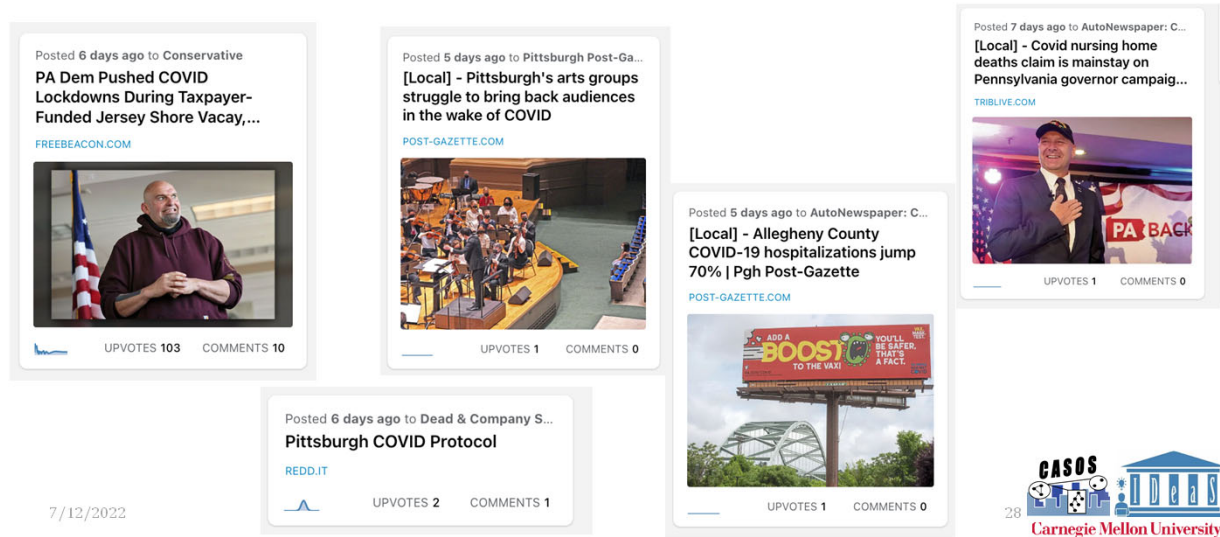
7/12/2022



Trending Posts on Instagram July 1– July 7



Trending Posts on Reddit July 1– July 7



For More Information

- ❑ Director Kathleen M. Carley - 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

7/12/2022

Copyright © 2021 Kathleen M. Carley



29