Why Collegiate Covid-19 Vaccine Mandates Are Lysenkoist Anti-Science Andrew Bostom, MD, MS

United States covid-19 infection, hospitalization, and mortality rates continue to plummet nationally (i). These positive trends are consistent with the expansion of natural herd immunity conferred by those who have recovered from their infections, augmented by vaccination of vulnerable [especially elderly] populations (ii,iii). Under such conditions, as I will elaborate, mandating covid-19 vaccination of collegiate undergraduate and graduate students (iv) is an exercise in totalitarian control that recalls Stalin-era Lysenkoist anti-science, what Dr. Julian Huxley (in <u>Nature</u>, 1949) aptly described **as "the appeal to doctrine and authority instead of observational and experimental verification. (v)"**

"College/Graduate Students Comprise A Very Low Risk Population For Serious Covid-19 Illness

Mercifully, despite a high frequency of SARS-CoV-2 infections, as determined (primarily) by reverse transcriptase polymerase chain reaction (rtPCR) testing, serious covid-19 disease, among college and graduate students is an exceedingly rare event.(1-10) For example, I compiled data from 100 major university and college covid-19 data dashboards, in conjunction with national and local news reports of campus-related hospitalizations, August, 2020, through the November 2020, Thanksgiving holiday break [11/22/20] (2-10). As depicted in Table-1, below, among students on campus (primarily) during this period, from 100 U.S. universities, notwithstanding 139,000 "covid-19 positive tests", there were a mere 17, typically short-term, reported covid-19 hospitalizations (2-10)—driven by a cluster of seven from Dayton University (3), i.e., only 0.012% of total positive tests resulting in hospitalization. Within this large sample, there were zero medically confirmed (4), albeit one possible, covid-19 death. These very reassuring data accrued in the absence of any covid-19 vaccination of the college/graduate student population.

University	Reported C19+, "Cases" (N)*	Reported Hospitalizations (N)**	Reported C19 Deaths (N)***
(1) U of Alabama sys	3624	0	0
(2) U of Georgia	3637	0	0
(3) U of Kentucky	2842	0	0
(4) Ohio State U	4516	0	0
(5) U of Dayton	1477	7	1***
(6) Miami U of OH	2330	0	0
(7) Illinois State U	1717	0	0
(8) U of Iowa	2549	0	0
(9) Missouri State U	1294	0	0
(10) U of Kansas	1249	0	0
(11) Kansas State U	1183	0	0
(12) Penn State U	4473	0	0
(13) U of Wisconsin	3340	1	0
(14) U of Miami	1005	0	0
(15) U of S Carolina	2781	0	0
(16) U of Arizona	2661	1	0
(17) Notre Dame U	1516	0	0
(18) Temple University	797	0	0
(19) James Madison U	1653	0	0
(20) Texas Tech U	2282	0	0
(21) U of Texas	1531	0	0
(22) Texas Christian U	1512	0	0
(23) Texas A & M U (incl staff)	2947	0	0
(24) U of Illinois	3786	0	0
(25) Iowa State U	1845	0	0
(26) East Carolina U	1397	0	0
(27) U of N Carolina	1273	2	0
(28) N Carolina State U	1268	0	0
(29) Auburn U (incl staff)	2031	0	0
(30) Arizona State U	2758	0	0
(31) San Diego State U	1475	1	0
(32) Ball State U	1331	0	0
(33) U of N. Dakota	1514	0	0
(34) U of Cent Florida	1916	0	0
(35) U of Florida (+s since 3/18/20)	3879	0	0
(36) Oklahoma State U	2015	0	0
(37) SUNY-Oneonta	740	0	0

Table1. Covid-19 positive tests and related hospitalizations from 100 universities/colleges, August-November, 2020

University (cont'd)	Reported C19+, "Cases" (N)*	Reported Hospitalizations (N)**	Reported C19 Deaths (N)***
(38) U of Missouri	2350	2	0
(39) SUNY-Buffalo	940	0	0
(40) U of Michigan (+s since 3/8/20)	2264	0	0
(41) Michigan St (incl staff)	2029	0	0
(42) U of Nebraska (incl staff)	1619	0	0
(43) U of Tenn -Knoxville (incl staff)	1869	2	0
(44) Florida St U	1691	0	0
(45) Indiana U (incl staff)	2412	1	0
(46) U of Arkansas (incl staff)	2032	0	0
(47) Louisiana St U	1281	0	0
(48) U of Louisville (incl staff)	1313	0	0
(49) Arkansas St U (incl staff)	873	0	0
(50) Liberty U	800	0	0
(51) N Arizona U	1283	0	0
(52) Florida Int U (+s since 3/12/20)	368	0	0
(53) Florida Atlantic U	326	0	0
(54) U of Houston (+s since 3/20, incl faculty)	402	0	0
(55) U N. Texas	810	0	0
(56) Texas St U (+s since 3/1/20)	955	0	0
(57) GA Tech (+s since 3/20)	1310	0	0
(58) U N. Georgia	559	0	0
(59) Northeastern U	276	0	0
(60) U Mass Amherst	401	0	0
(61) U Conn	381	0	0
(62) U Maryland	1249	0	0
(63) U Rhode Island (+s since 1/22/20)	681	0	0
(64) Boise St	816	0	0
(65) Colorado St (incl staff; +s since May)	1351	0	0
(66) U of Utah	1639	0	0
(67) Utah St (68) Marquette U	1554 830	0	0
(69) U of Pittsburgh	587	0	0
(70) Rutgers U	497	0	0
(71) Idaho St	497	0	0
(72) Villanova U	379	0	0
(73) U of Virginia	1069	0	0
(74) Virginia CU	403	0	0
(75) U of Delaware (incl staff)	732	0	0
(76) Western Kentucky U (incl staff)	928	0	0
(77) East Tenn St	451	0	0
(78) U of Toledo	565	0	0
(79) Purdue U	2694	0	0
(80) Rutgers U	497	0	0
(81) U of Mississippi (incl staff)	924	0	0
(82) Tulane U	1332	0	0
(83) Providence Coll	363	0	0
(84) Seton Hall U	165	0	0
(85) Brigham Young U (incl faculty)	3032	0	0
(86) Boston College	332	0	0
(87) Duke U	152	0	0
(88) Weber State U	312	0	0
(89) Lehigh U	535	0	0
(90) U of New Hampshire	357	0	0
(91) St. Louis U	431	0	0
(92) Georgetown U	145	0	0
(93) George Wash U	133	0	0
(94) Vanderbilt U	736	0	0
(95) U of Penn	633	0	0
(96) U of West Virginia (Morgantown)	874	0	0
(97) Coll of Charleston	518	0	0
(98) Monmouth U (NJ)	462	0	0
(99) N Carolina A & T	468	0	0
(100) Bowling Green St U	741	0	0
Totals	138,703	17	1?

College/Graduate Students Play A Limited Role in Surrounding Community Covid-19 Transmission

Arnold and colleagues (12) reported the results of a longitudinal serosurvey (blood sampling) of community residents in Centre County, Pennsylvania, also home to The Pennsylvania State University, University Park campus. The return of some 35,000 students to the campus in August 2020 increased the county population size by nearly 20%. Over 4,500 cases of SARS-CoV-2 infections were detected among the student population during the Fall 2020 term (before and just after student return). Between August 7th and October 2nd 2020, these investigators enrolled a cohort of community residents and tested their serum for the presence of anti-Spike Receptor Binding Domain (S/RBD) IgG (a class of immunoglobulin "antibodies"), to confirm prior SARS-CoV-2 exposure. This was repeated in the same community cohort during December 2020 (after the departure of students), and seroprevalence for both sampling waves was recorded and analyzed. Moreover, returning students were enrolled in a longitudinal cohort, and IgG seroprevalence results were reported from the first wave of sampling (between October and November 2020, prior to the end of the term). Here is how Arnold and colleagues (12) summarized their findings:

"Of 345 community participants, 19 (5.5%) were positive for SARS-CoV-2 IgG antibodies at their first visit between 7 August and 2 October. Of 625 returning student participants, 195 (31.2%) were positive for SARS-CoV-2 antibodies between 26 October and 23 November. 28 (8.1%) of the community participants had returned a positive result by 9 December. Only contact with known SARS-CoV-2-positive individuals and attendance at small gatherings (20-50 individuals) were significant predictors of IgG antibodies among returning students (adjusted odds ratio, 95% Confidence Interval: 3.24, 2.14-4.91, p<0.001; and 1.62, 1.08-2.44, p<0.05; respectively)."

They concluded (12):

"Despite high seroprevalence observed within the student population, seroprevalence in a longitudinal cohort of community residents was low and stable from before student arrival for the Fall 2020 term to after student departure, implying limited transmission between these cohorts...The demographic shift associated with student return to campus was not associated with increased SARS-CoV-2 seroprevalence in this cohort of community residents."

College/Graduate Students Are At Low Risk For Serious Covid-19 Illness, And Do Not Spread The Disease To The Surrounding Community. What Is Their Experimental "Emergency Use Authorization," Only Covid-19 Vaccine -Associated Risk, Versus Their Vaccination-Associated Risk From Established Influenza Vaccines?

The Vaccine Adverse Event Reporting System [VAERS] (13) is a passive or "spontaneous" Centers For Disease Control and Prevention [CDC] and U.S. Food and Drug Administration [FDA] vaccine safety and monitoring system (14). Designed primarily for "safety signal detection," VAERS describes potential associations between vaccine administration and adverse events, "hypothesis generation," that could merit formal investigation (14). A recent example, which appears increasingly germane to covid-19 vaccination, in particular with mRNA covid-19 vaccines available in the U.S. [i.e., from Pfizer and Moderna] (15), was the relationship between smallpox vaccination and the development of myopericarditis in military personnel, especially young men (16-20). Although not "hypothesis generating," per se, a subsequent VAERS analysis (19), utilizing influenza vaccination (and other vaccinations) as a control, independently validated the association between smallpox vaccination and myopericarditis, as well as the lack of association, described earlier (20), with influenza vaccination. Granted understandable caveats about attributing "causality" to VAERS adverse events associations (14), if anything, the system chronically under reports adverse events of possible interest (21). Bearing in mind these prior data, and their limitations, the data in Table 2, for the U.S., clearly indicate VAERS "safety signals" unique to emergency use authorization only covid-19 vaccinations (22,23) for college/ graduate student aged adults, already detected in less than 6 months, which far exceed the 20 plus year experience with fully licensed influenza vaccines.

Table 2. Vaccine Adverse Event Reporting System (VAERS) Data for United States 18 to 29 Year Olds, Comparing Covid-19 and Influenza Vaccines

Vaccine-Associated	Covid-19 Vaccines	Influenza Vaccines
Adverse Events Among	Given in <6 Months.	Given in >20 Years
18 to 29 Year Olds	(Feb 1-June 4, 2021) ^a	(2000-2021) ^b
Hospitalizations	1315	685
Life Threatening Events	391	179
Myocarditis/Myopericarditis	343	31
Anaphylaxis/Severe Allergic Reaction	388	90
Bell's Palsy (Facial Paralysis)	179	84
Pulmonary Embolus	17	0
Venous Thrombosis	26	1
Thrombocytopenia/Low Platelets	57	13
Deaths	55	35

^{a,b} Using a very conservative comparison, the denominator for the number of persons given influenza vaccines over 20 years would be at least 10-fold the denominator for the number of persons receiving covid-19 vaccines in the past < 6 months. Data accessed at the VAERS weblink, <u>https://wonder.cdc.gov/vaers.html</u> 6/18/21.

Naturally Acquired Immunity To SARS-CoV-2 Confers At Least As Robust Protection From Covid-19 Re-infection And Serious Covid-19 Disease, As Covid-19 Vaccine-Acquired Immunity

The following very understated, self-explanatory comment is from a CDC document entitled, "Questions & Answers: Vaccine Against 2009 H1N1 Influenza Virus":

"If you have had 2009 H1N1 flu, as confirmed by an RT-PCR test, you should have some immunity against 2009 H1N1 flu and CAN CHOOSE NOT (emphasis added) to get the 2009 H1N1 vaccine." (24)

Fast forward just over a decade later, and after intensive investigation for the past 16-months, both laboratory and real world clinical data demonstrate convalescent, unvaccinated covid-19 immunity is just as robust as vaccine-acquired covid-19 immunity. Indeed multiple laboratory studies conducted by highly respected U.S. and European academic research groups have reported that convalescent mildly or severely infected SARS-CoV-2 (covid-19) patients, who are unvaccinated, can have greater virus neutralizing immunity-especially more versatile, long-enduring T-cell immunity-relative to vaccinated individuals who were never infected (25-30). An enormous real world Israeli national follow-up study of ~6.4 million individuals, demonstrated clearly that naturally-acquired covid-19 convalescence immunity was equivalent to vaccine-acquired immunity in preventing covid-19 infection, morbidity, and mortality. Faring at least as well as those vaccinated, 187,549 unvaccinated covid-19 positive persons who tested positive between June 1, 2020 to September 30, 2020, and were followed through March 20, 2021, revealed 894 [0.48%] were reinfected; 38 [0.02%] were hospitalized, a mere 16 [0.008%] hospitalized with severe disease, and only 1 [one]/187,549 died—an individual over 80 years old (31). The Israeli investigators concluded, "Our results question the need to vaccinate previously infected individuals" (31). Cleveland Clinic investigators have confirmed the Israeli findings in a study of their own employees (32). They found zero SARS-CoV-2 reinfections during 5-month follow-up among n=1359 infected employees who remained unvaccinated and concluded such persons are "unlikely to benefit from covid-19 vaccination (32)."

Pooled with vaccine-acquired immunity, i.e., unvaccinated with natural immunity, plus vaccinated, the U.S. has achieved de facto herd immunity (ii,33,34) in terms of clinical covid-19 disease: covid-19 hospitalizations and deaths are at low background rates (i) consistent with a very manageable endemic disease, like seasonal influenza (35,36).

Punitive Covid-19 Testing and Mask Mandates For Unvaccinated Students Must Not Be Allowed: Asymptomatic Spread Of SARS-CoV-2 Is Relatively Trivial Which Obviates The Need For Asymptomatic Mass Testing, While Community Randomized Controlled Trials Have Demonstrated Masking Does Not Reduce Respiratory Viral, Including SARS-CoV-2 Infections, Highlighting The Inappropriateness of Mask Mandates Epidemic spread of covid-19, like all other respiratory viruses, again notably influenza (37), is driven by symptomatic persons; asymptomatic spread is trivial, and inconsequential. A meta-analysis of contact tracing studies published in The Journal of the American Medical Association showed asymptomatic covid-19 spread was 0.7% (38). Accordingly, a rational, ethical true prevention model alternative to "vaccine mandates" would be simple notifications, as part of formal policies, by public university systems that persons with active symptomatic, febrile (feverish) respiratory illnesses isolate themselves. Indeed during the H1N1 influenza A pandemic, fully open, unmasked college campuses were advised by federal health officials, *"Flu-stricken college students should stay out of circulation"* and *"if they can't avoid contact they need to wear surgical masks (39)."*

Lastly, "mask mandates" are also unwarranted, regardless of immune status, given the **established**, randomized controlled-trial futility of community masking for the prevention of respiratory viral infections, including SARS-CoV-2 infection, or covid-19 disease (40-42).

Last May, 2020, the U.S. Centers for Disease Control and Prevention's (CDC's) own "house journal" *Emerging Infectious Diseases* published a pooled (so-called "meta"-) analysis of 10 controlled trials which revealed nonmedical setting masks did not reduce the rate of laboratory-proven infections with the respiratory virus influenza (40). The findings from this unique report (40) are directly germane to the question of masking to prevent covid-19 infection, and merit some elaboration.

Ten randomized, controlled trials reporting estimates of face mask effectiveness in lowering rates of laboratoryconfirmed influenza within the community, published between 2008 and 2016, were analyzed, and pooled, applying a standardized, rigorous methodology. One study evaluated mask usage by Hajj pilgrims to Mecca, two university setting studies assessed the efficacy of face masks for prevention of confirmed influenza among student campus residents over 5-months of surveillance, and seven household studies examined the impact of masking infected persons, only (one), household contacts of infected persons, only (one), or both groups (five). None of these studies, individually, or their aggregated, pooled analysis, which enhanced the overall "statistical power" to detect smaller effects, demonstrated a significant benefit of masking for the reduction of confirmed influenza infection. The authors further concluded with a caution that using face masks improperly might, *"increase the risk for (viral) transmission (40)."*

Independently validating these pooled findings are the results from a single large randomized controlled trial of masking among another cohort of Hajj pilgrims (41) whose enrollment (n=6338) equaled the sum enrollment of all the ten studies in the May, 2020 "meta-analysis." Published online in mid-October, 2020, this "cluster randomized" (i.e., by tent) controlled trial confirmed mask usage did **not** reduce the incidence of clinically defined, or laboratory-confirmed respiratory viral infections, primarily influenza and/or rhinovirus. Indeed, there was a suggestion masking increased laboratory-confirmed infections by 40%, although this trend was not "statistically significant. (40)"

Finally, Danish investigators published the results during mid-November, 2020 of a randomized, controlled study conducted in 4862 persons which found that masking did not reduce SARS-CoV-2 (covid-19) infection rates to a statistically significant, or clinically relevant extent. Covid-19 infections (detected by laboratory testing or hospital diagnosis) occurred among 1.8% of those assigned masks, versus 2.1% in control participants. Moreover, a secondary analysis including only participants who reported wearing face masks "exactly as instructed," revealed a further narrowing of this non-significant, clinically meaningless infection rate "difference" to 0.1%, i.e., 2.0% in mask wearers versus 2.1% in controls.

University and college settings should never have employed mass, asymptomatic SARS-CoV-2 testing, nor imposed mask mandates. These institutions most certainly should not be allowed to impose these ineffective procedures selectively—and punitively—on students who choose not to receive covid-19 vaccines.

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 iii) Anderson R., May R. "Vaccination and herd immunity to infectious diseases. *Nature* 1985; 318: 323–329 <u>https://www.nature.com/articles/318323a0</u>

iv) "Here's a List of Colleges That Will Require Students or Employees to Be Vaccinated Against Covid-19." The Chronicle of Higher Education, June 16, 2021 <u>https://www.chronicle.com/blogs/live-coronavirus-updates/heres-a-list-of-colleges-that-will-require-students-to-be-vaccinated-against-covid-19</u>

v) Huxley, J. "Soviet Genetics: The Real Issue". 1949; *Nature* 163, 935–942 https://doi.org/10.1038/163935a0
1) * Per data accessed 11/15-22/20: testing ostensibly by reverse transcriptase polymerase chain reaction

amplification and detection of covid-19 viral RNA [primarily], or covid-19 nucleocapsid protein antigen detection by immunofluorescent assay(s).

2) **As originally noted here: <u>https://twitter.com/andrewbostom/status/1302438825063591936</u>; "Kansas college student hospitalized with suspected case of multisystem inflammatory syndrome", but the Kansas college was unidentified. <u>https://bit.ly/3mHD3Be</u>

3) Seven University of Dayton students/1477 positive tests: "According to the public health department for Dayton and Montgomery counties, seven University of Dayton students were hospitalized in the campus's outbreak. <u>https://spectrumnews1.com/oh/dayton/news/2020/10/06/at-least-a-dozen-ohio-college-students-suffered-medical-emergencies-from-covid-19</u>

4) ***Dayton University student Michael Lang <u>may</u> have had a myocarditis related to SARSCoV2, which precipitated a cardiac arrest <u>https://www.kake.com/story/43106955/wrecked-our-lives-families-of-3-young-adults-who-died-from-covid19-share-heartbreaking-stories</u>

5) Two of 1869 University of Tennessee-Knoxville covid-19 positive students were hospitalized https://www.wvlt.tv/2020/09/16/at-least-2-ut-students-hospitalized-with-covid-19/;

6) One of the 1475 covid-19 positive students at San Diego State University (SDSU) was hospitalized "1st SDSU Student Among COVID-19 Surge Hospitalized as Cases Reach 440."

https://www.nbcsandiego.com/news/investigations/1st-sdsu-student-among-covid-19-surge-hospitalized-ascases-reach-440/2402332/;

7) One University of Wisconsin-Madison student was hospitalized out of 3340 who were covid-19 positive <u>https://wkow.com/2020/09/16/first-known-uw-madison-student-hospitalized-with-covid-19/</u>. Regarding this student: "the actual time in the hospital was very limited' and the student has returned home to recover. The hospitalization was reported on September 16, and the school has not learned of any additional hospitalizations."

8) One Indiana University hospitalization out of 2412 covid-19 positive tests was reported https://www.idsnews.com/article/2020/09/iu-first-coronavirus-hospitalization-flu-isolations

9) University of Arizona one hospitalization/2661 covid-19 positive "Only one UA student has been hospitalized with COVID-19 symptoms, although the person was treated for dehydration and released, a UA spokesperson said last week" <u>https://www.azcentral.com/story/news/local/arizona-health/2020/10/06/asu-ua-nau-decrease-number-active-positive-covid-cases/3633764001/</u>

10) A CDC/MMWR report "Multiple COVID-19 Clusters on a University Campus — North Carolina, August 2020", reported zero hospitalizations: <u>https://www.cdc.gov/mmwr/volumes/69/wr/mm6939e3.htm</u>

Subsequently, from 10/5/20, regarding North Carolina: "UNC-Chapel Hill reported two known hospitalizations. Both cases involved students who were hospitalized in June and July. The cases were 'noncritical: Campus Health is aware of two students who were tested at Campus Health and then treated and released from a nearby hospital in June and July. Both were noncritical. These are the only instances we're aware of.' Seven schools said they had no reported hospitalizations." https://www.jamesgmartin.center/2020/10/how-many-students-are-hospitalized-with-covid-19-nc-colleges-dont-know/

11) U of Missouri: "The Maneater is aware of at least two students [note: out of 2350 who tested positive] who have recently recovered after hospitalization. To protect their privacy, those students are not named." <u>https://www.themaneater.com/stories/campus/impossible-for-the-university-to-know-mu-struggles-to-track-student-covid-19-hospitalizations</u>

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