

DISCRIMINATION TODAY -THE DANGERS OF PARIAH-TIZING THE ELDERLY DURING THE COVID-19 PANDEMIC

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Epidemics invite “pariah-tization.” By this, I mean the process of stigmatizing one marginalized and impotent segment of society as being the group most vulnerable to the disease at hand—without reliable scientific basis. Doing so allows those in power, the young, the rich, and the well-educated, to create an artificial cocoon, deluding themselves into believing that they, by virtue of their “superior” hardiness, ethics, social position, are not at risk. It also prevents focus on others truly at risk.

Inaptly labeling the elderly as extremely vulnerable resulted in discriminatory policies or social pressures to restrain the elderly from social intercourse—and caused additional harm to this group. It also bolstered a belief that COVID-19 was not dangerous in the young—resulting in lower vaccine uptake—and hence greater spread of the disease and infections in younger ages. This discriminatory policy against the elderly—increased lockdowns and suggestions that vaccination won’t work in this group—are based on flawed data and misinterpretation of incomplete and irrelevant studies and derive from bias, both social and scientific, of the aging process, illustrating the effects of this pariah-tization. Policy extended against the elderly during the course of the epidemic,—including increased lockdowns, restriction of visitation in nursing homes, and suggestions that vaccination won’t work or be deprioritized, are based on flawed data and misinterpretation of incorrect and incomplete studies, and derive from

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bias, both social and scientific, of the aging process.

To my knowledge, this Article is the first to amalgamate data showing COVID-19 is indeed a disease that causes severe disease in the young, demonstrating that faulty misperception of risk in this group results in low vaccine uptake in this group, who then become prime spreaders (and hosts for mutation). It also demonstrates the dangers of bad science in creating bad law and discriminatory policy arising from innate biases against the aged.

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Part I: Introduction — The Disposable Elderly Mindset

Epidemics invite “pariah-tization.” By this, I mean the process of stigmatizing one marginalized and impotent segment of society as being the group most vulnerable to the disease at hand — without reliable

scientific basis.¹ Doing so allows those in power, the young, the rich, and the well-educated, to create an artificial cocoon, deluding themselves into believing that they, by virtue of their “superior” hardiness, ethics, social position, are not at risk. It also prevents focus on others truly at risk.²

In the early cholera epidemics in the United States (1832, 1849, 1866), those considered most susceptible were the poor, the intemperate, and the sinners.³ During the earlier years, germs were not yet known,⁴ and the contribution of faulty sewage facilities was not considered in the causal analysis.⁵ By 1892, the focus had shifted entirely to immigrants, who were allegedly filthy, likely intemperate, and immoral, even as the scientific cause, a *Bacillus*, had been discovered.⁶ Those considered responsible for importing the disease to the United States were primarily Russian Jews and the Irish.⁷ In the Yellow Fever epidemics, it was the Black population who were so stigmatized.⁸ In the COVID-19 pandemic, I have suggested it is the elderly.⁹ This Article updates previous work I have done.¹⁰

Pariah-tization results from innate prejudices and stereotypes. In the context of COVID-19, it manifested in the commingling of risks faced by the elderly—versus the *number* more likely to sicken or die.¹¹ This farrago led to the initial conclusion that COVID-19 was purely a disease of the elderly, morphing into the mantra that the elderly are

1. See *Pariah*, CAMBRIDGE DICTIONARY, <https://dictionary.cambridge.org/us/dictionary/english/pariah> (last visited Jan. 23, 2023).

2. BARBARA PFEFFER BILLAUER, *HEALTH INEQUITY AND THE ELDERLY, THE IMPACT OF PANDEMIC-POLICY, BIOETHICS, AND THE LAW* 10 (Eliva Press 2021) [hereinafter *HEALTH INEQUITY*].

3. See CHARLES E. ROSENBERG, *THE CHOLERA YEARS: THE UNITED STATES IN 1832, 1849, AND 1866* 5 (The Univ. of Chi. Press 1962).

4. Frank M. Snowden, *EPIDEMICS AND SOCIETY: FROM THE BLACK DEATH TO THE PRESENT* 204–32 (Yale Univ. Press 2019).

5. *Id.*

6. Felice Batlan, *Law in the Time of Cholera: Disease, State, Power and Quarantines Past and Future*, 80 TEMP. L. REV., 60, 68–95 (2007).

7. *Id.*; Howard Markel, “Knocking out the Cholera”: Cholera, Class, and Quarantines in New York City, 1892, 69 BULL. OF THE HIST. OF MED., 420, 422–26 (1985).

8. ALAN M. KRAUT, *SILENT TRAVELERS—GERMS, GENES, AND THE IMMIGRANT MENACE* 27–28 (John Hopkins Univ. Press 1994).

9. See *HEALTH INEQUITY* *supra* note 2; see also Barbara Pfeffer Billauer, *Mental Health and the Aged in the Era of COVID-19*, 2 ARIZ. ST. L.J. ONLINE 108 (2021), <https://arizonastatelawjournal.org/wp-content/uploads/2020/11/Billauer-1-Final.pdf>. [hereinafter *Mental Health*].

10. See *HEALTH INEQUITY* *supra* note 2.

11. *Id.*

more at risk of dying from COVID, predicated on the same false belief.¹² I argue that these misleading conclusions arose from a—perhaps unconscious—desire by a younger cohort (often the very scientists and policy makers addressing the situation) to insulate themselves from a fear of danger, similar to the pariah-tization occurring in the epidemics of yesteryear.¹³ In so doing, they created faulty policy which, in turn, caused more deaths.¹⁴ The tools of the technique involved studies that cemented pre-conceived views or mis-interpreted results in accordance with pre-existing biases.¹⁵

In actuality, the data shows, as I adduce here, that COVID-19 is not a disease of the elderly, as we think of dementia, or cataracts, or osteoarthritis, such that younger folks should have little concern, but rather that the elderly are more like to die of COVID than younger people—just as they would from cancer or heart disease—,¹⁶ because older people are more likely to die than younger people,¹⁷ period.¹⁸ Indeed, one of the greatest risks of dying for the elderly—is from old age, which confounds deciphering the cause of the increased numbers of COVID-

12. Barbara Pfeffer Billauer, *Another COVID Casualty: Pariah-Tizing The Elderly*, AM. COUNCIL ON SCIENCE AND HEALTH (May 19, 2022), <https://www.acsh.org/news/2022/05/19/another-covid-casualty-pariah-tizing-elderly-16318>.

13. HEALTH INEQUITY, *supra* note 2, at 10; *Mental Health*, *supra* note 9.

14. *Id.*

15. *Id.* at 124.

16. See Marian Anne Eure, *Top Health Conditions for Adults Over 65*, VERYWELL HEALTH (last updated Oct. 28, 2022), <https://www.verywellhealth.com/top-causes-of-death-among-adults-over-65-2967470>.

17. *Actuarial Life Table 2019*, SOC. SEC. ADMIN, <https://www.ssa.gov/oact/STATS/table4c6.html> (noting that, indeed, death becomes statistically more likely with each year of age. According to “Social Security Administration actuarial tables, a 50-year-old man in the United States has a 0.48% chance of dying within the next year. An 80-year-old man has a 5.6% chance of death within a year. For a centenarian man, there’s a nearly 35% chance that he won’t ring in the next year.”); see also Stephanie Pappas, *Scientists Find Species That Don’t Seem to Age. What Does it Mean for Humans?*, LIVE SCIENCE (June 27, 2022), <https://www.livescience.com/turtles-dont-age#:~:text=They%20found%20that%20about%2075,slowly%20or%20not%20at%20all>.

18. Stephanie Pappas, *Scientists Find Species That Don’t Seem to Age. What Does it Mean for Humans?*, LIVE SCIENCE (June 27, 2022), <https://www.livescience.com/turtles-dont-age#:~:text=They%20found%20that%20about%2075,slowly%20or%20not%20at%20all>; Fardina B. Ahmad FB, Jodi Cisewski, & Robert N. Anderson, *Provisional Mortality Data—United States, 2021*, CDC (Apr. 29, 2022), <https://www.cdc.gov/mmwr/volumes/71/wr/mm7117e1.htm>; see also Krutika Amin, Jared Ortaliza, Cynthia Cox, Josh Michaud, & Jennifer Kates, *COVID-19 mortality preventable by vaccines*, KFF (Apr. 21, 2022), <https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19-continues-to-be-a-leading-cause-of-death-in-the-u-s/>.

19 related deaths in the elderly.¹⁹ In point of fact, according to the CDC's Provisional Mortality statistics for 2021, the age-adjusted deaths for all COVID deaths increased by 0.7% per hundred thousand,²⁰ with the largest increases in persons *under* seventy-five. COVID-19 death rates in persons over seventy-five actually decreased, with the largest decrease for those over eighty-five.²¹

The anti-aging bias which ingrained the belief that COVID-19 poses an unusual risk to the elderly also affected data interpretation, which was then used to make policy discriminatory to the aged, which in turn bootstrapped the tropism that elders are more likely to die of COVID-19; i.e., 'so let's not treat them, anyway'.²² Even as data went wanting to prove an association between old age and poor outcomes, many continued to hypothesize mechanisms for a supposed connection, but evidence for one has not been shown to exist.²³ The presumption and search for biological plausibility that the elderly were more susceptible to both death and illness, even without verified data indicating so, is illustrative of this mindset.²⁴

The first reports were illustrative. In the early days of COVID-19, one anecdotal report—now removed—involved a North Carolina researcher who proclaimed that COVID-19 was mostly a disease of the elderly, and young, healthy people like him (he was forty) were not at risk.²⁵ These comments assuaged concerns of those under sixty-five—temporarily.²⁶ Statistics discount this, confirming that as a risk factor, age, without attendant co-morbidities, does not present a significant risk, and indeed younger people are quite vulnerable, as I show here.²⁷ Nevertheless, the myth of age, alone, being synonymous with dire consequences continues. On that basis, various dangerous, deleterious, and

19. Ahmad et. al, *supra* note 18.

20. *See id.* (noting COVID-19 was the underlying cause for 13.3% of all deaths in 2021, increasing from 10.4% (350,831 deaths) in 2020. However, death rates in those over 75 decreased).

21. *Id.*

22. *Id.*; *Mental Health*, *supra* note 9, at 120.

23. Annemieke Smorenberg, Edgar JG Peters, Laul LA van Daele, Esther J. Nossent, & Majon Muller, *How Does SARS-COV2 Targets the Elderly Patients? A Review on Potential Mechanisms Increasing Disease Severity*, 83 EUR. J. INTERNAL MED. 1 (2021).

24. *See Mental Health*, *supra* note 9.

25. HEALTH INEQUITY *supra* note 2, at 10.

26. *See id.*

27. *Id.*; *see* Jared Ortaliza, Krutika Amin, & Cynthia Cox, *COVID-19 Leading Cause of Death Ranking*, KFF (Nov. 10, 2022), <https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19-leading-cause-of-death-ranking/>.

illegal policies were enacted, especially in nursing homes.²⁸ This article cautions against the wisdom of continuing this approach.

The COVID-19/age relationship stereotype emerged from early Chinese statistics that were only superficially analyzed.²⁹ True, many more infected older Chinese folks died compared to those who were younger.³⁰ But, perhaps not well-known in the Western world at the outset, was that fewer older people had become sick in the first place.³¹ This suggests that those who did become sick were especially vulnerable—perhaps by virtue of their co-morbidities. And comparing comorbidity response on a population level is the epitome of the ecologic fallacy: Chinese co-morbidities are not necessarily relevant to those sustained by Western oldsters. Further contributing environmental causes such as diet (impacting obesity) may be entirely irrelevant.³²

With only this initial information of elder-vulnerability in China available, the Italians, suddenly overwhelmed with cases, denied ventilators to those over sixty-five—as a matter of policy.³³ This compounded the age-risk correlation.³⁴ Sweden acted similarly, denying elderly COVID patients access to hospitals.³⁵ Ventilators were initially denied older people in some American states for a time until that was ruled illegal.³⁶ Not surprisingly, as a result of these decisions, more older people died—perpetuating the myth that the elderly were the only population of concern.³⁷ Even New York sent elderly ill patients

28. See Kathy Cerminara, Alina M. Perez, & Alexandra Kirby, *Using Therapeutic Jurisprudence to Improve Nursing Home Regulation During Future Pandemics*, 46 NOVA L. REV. 331 (2021).

29. Ariana Eunjung Cha, *Younger Adults are Large Percentage of Coronavirus Hospitalizations in United States, According to new CDC Data*, WASH. POST (Mar. 19, 2020, 8:55 AM), <https://www.washingtonpost.com/health/2020/03/19/younger-adults-are-large-percentage-coronavirus-hospitalizations-united-states-according-new-cdc-data/>.

30. Katharina Fenz & Homi Kharas, *A Mortality Perspective on COVID-19: Time, Location, and Age*, BROOKINGS INST. (Mar. 23, 2020), <https://www.brookings.edu/blog/future-development/2020/03/23/a-mortality-perspective-on-covid-19-time-location-and-age/>.

31. See *id.*

32. *Mental Health*, *supra* note 9, at 12; see *Obesity Rates by Country 2023*, WORLD POPULATION REV., <https://worldpopulationreview.com/country-rankings/obesity-rates-by-country> (last visited Jan. 23, 2023).

33. HEALTH INEQUITY, *supra* note 2, at 10, 58, 62–68.

34. *Id.*

35. *Id.* at 66.

36. *Id.* at 10, 62.

37. *Id.* at 11, 64, 66.

back to the nursing homes from which they came, seeding monstrous spread.³⁸

These early, artificially induced statistics also resulted in international policies instituting lockdowns of the elderly.³⁹ That, in turn, resulted in older people losing hope and dying from loss of will to live, or actively choosing euthanasia,⁴⁰ not being able to bear more isolation. This phenomenon affected even oldsters not diagnosed with COVID-19.⁴¹ The strict restrictions in Nursing Home visitations resulted in more people dying of dementia due to lack of contact.⁴² These dementia-related COVID deaths are highly excessive.⁴³ Sorting out what proportion of dementia-related COVID deaths were due to dementia as a pre-existing co-morbidity or as a consequence of Corona-policy has not been undertaken.⁴⁴ But the increased Alzheimer's death statistics over the period of the pandemic are extreme.⁴⁵

Innate stereotypes and outmoded views of aging apparently resulted in false interpretation of data and consequently, deleterious policy.⁴⁶ Recognition of the present culture of the disposable oldster, which apparently is infecting even the bioethics community, is the first step to

38. *Id.*

39. BARBARA PFEFFER BILLAUER, *HEALTH INEQUITY AND THE ELDERLY, THE IMPACT OF PANDEMIC-POLICY, BIOETHICS, AND THE LAW* (2021).

40. Barbara Pfeffer Billauer, *Euthanasia in the Days of COVID-19*, AM. COUNCIL ON SCI. AND HEALTH (Apr. 8, 2021), <https://www.acsh.org/news/2021/04/08/euthanasia-days-covid-19-15460> [hereinafter *Euthanasia in COVID*].

41. *Id.*

42. Cerminara, *supra* note 28, at 27. Various reasons have been articulated, including transmission by nursing home workers who were not vaccinated at the outset, as well as lockdown and deprivation of contact by loved ones which increased dementia and Alzheimer's.

43. Sheena Meredith, *Accelerated Dementia Deaths Early in Pandemic*, MEDSCAPE UK (Mar. 23, 2022), [medscape.co.uk/viewarticle/accelerated-dementia-deaths-early-pandemic-2022a1000rj9](https://www.medscape.co.uk/viewarticle/accelerated-dementia-deaths-early-pandemic-2022a1000rj9) ("More than a quarter of those who died in England and Wales during the first four months of the pandemic had dementia, and the biggest spike in excess deaths was also in people with dementia. Even without including deaths attributed to coronavirus, twice the number of people with dementia died at the pandemic's peak compared with the number that would normally be expected.").

44. *See id.*

45. *See New ONS data reveals 65% increase in extra dementia and Alzheimer's deaths at home during the pandemic*, ALZHEIMER'S SOC. (Sept. 28, 2021), <https://www.alzheimers.org.uk/news/2021-09-28/new-ons-data-65-percent-increase-dementia-alzheimers-deaths-home-during-coronavirus>.

46. *See Mental Health*, *supra* note 9, at 121.

re-orienting deleterious policy.⁴⁷ The fact is that our society is aging.⁴⁸ In 2019, about 16.5 percent of the American population was sixty-five years old or over; in 2050 it is expected to reach twenty-two percent, doubled from 2012 and eclipsing the under eighteen years old by two percent.⁴⁹ By comparison in 1950, only eight percent of the population was sixty-five or over.⁵⁰

Yet in a parallel universe, bioethicists are disparaging the value of life past seventy-five.⁵¹ Physician and bioethicist Ezekiel Emanuel has “vowed to refuse not only heroic medical interventions once he turned 75, but also antibiotics and vaccinations.”⁵² His argument: older Americans live too long in a diminished state, raising the question of, as he put it, “whether our consumption is worth our contribution.”⁵³ This tendency to regard the aged as disposable and not worthy of protection or preservation has surfaced in various guises during COVID-19.⁵⁴ Early on, bioethicist Julian Savulescu suggested that the “very elderly or infirm” volunteer for risky medical trials.⁵⁵ It surfaced in the rank euthanasia supposedly practiced in Swedish nursing homes, where the elderly suffering COVID were outright refused admission to hospitals and given palliatives in preparation for death.⁵⁶

The pandemic has also unearthed loud advocacy for a triage policy (affecting allocation of resources, such as ventilators) based strictly

47. *Id.* at 125.

48. *Children as a percentage of the population: Persons in selected age groups as a percentage of the total U.S. population, and children ages 0–17 as a percentage of the dependent population, 1950–2020 and projected 2021–2050*, CHILDSTATS, <https://www.childstats.gov/americaschildren/tables/pop2.asp> (last visited Jan. 24, 2023).

49. *Id.*

50. *Id.*

51. Ezekiel Emanuel & Stephen Hall, *An Argument for Why No One Should Live Past 75*, MIT TECH. REV. (Aug. 30, 2019), <https://geneticliteracyproject.org/2019/08/30/making-an-argument-for-why-no-one-should-live-past-75/>.

52. *Id.*

53. *Id.*

54. See Julian Savulescu & Dominic Wilkinson, *Extreme Altruism in a Pandemic*, J. OF MED. ETHICS (Apr. 23, 2020), <https://blogs.bmj.com/medical-ethics/2020/04/23/extreme-altruism-in-a-pandemic/>.

55. See *id.*

56. Barbara Pfeffer Billauer, *Ageism and COVID: First They Lock Us Up, Then They Refuse Ventilators. What’s Next?*, TIMES OF ISRAEL (July 7, 2020), <https://blogs.timesofisrael.com/ageism-and-covid-first-they-lock-us-up-then-they-refuse-ventilators-whats-next/> [hereinafter *Ageism*].

on the fair innings theory.⁵⁷ This argument asserts that those who are younger and have not lived their full lives (whatever cutoff the, mostly young, decision-makers deign it to be), no matter the likelihood of future contribution or even their state of health (mental as well as physical), are entitled to absolute priority in resource allocation, signaling we are quickly reaching the era of the disposable elderly, soon to compose over one-fifth the population.⁵⁸ Unabashed articulations of these demoralizing sentiments puts us on notice that attention must be devoted to protecting the aged as an unusually vulnerable group, not only in terms of health risks, but also in terms of health policy.⁵⁹

This unfortunate focus and scare of the elderly also deflected attention from evaluating the risks to and from the younger population—as to being spreaders, susceptible, and serving as hosts for ensuing mutations.⁶⁰ It delayed making the vaccines available to the younger cohort, and unwittingly caused unnecessary deaths.⁶¹ The purpose of this Article is to prevent future enactments of such policy, which can only be described as rank age-discrimination.

By now it is demonstrably clear that COVID-19 attacks the young as well—and can attack them hard, although the extent and early availability of data enabling this conclusion has not heretofore been tallied and compiled.⁶² Moreover, as I discuss in Part II, notwithstanding clear data that the early focus on age as a determinant of fatality was

57. Matthew D. Adler, Maddalena Ferranna, James K. Hammitt, & Nicolas Treich, *Fair Innings? The Utilitarian and Prioritarian Value of Risk Reduction Over a Whole Lifetime*, 75 J. OF HEALTH ECON. 1 (2021).

58. Michael M. Rivlin, *Why the Fair Innings Argument is Not Persuasive*, 1 BMC MED. ETHICS 2 (2000).

59. *Ageism*, *supra* note 56.

60. *Id.*

61. See Nancy Morrow-Howell, *Why Older People Are Among the First to Get the Vaccine*, WASH. UNIV. IN ST. LOUIS INST. FOR PUB. HEALTH (Dec. 16, 2020), [https://publichealth.wustl.edu/why-older-people-are-among-the-first-to-get-the-vaccine/#:~:text=So%20why%20should%20older%20people,risk%20of%20morbidity%20and%20mortality; Sharon LaFraniere, Vaccines for Young Children Are Being Delayed by Incomplete Data, a Top F.D.A. Official Suggests, N.Y. TIMES \(Apr. 26, 2022\), https://www.nytimes.com/2022/04/26/us/politics/vaccine-children-fda-pfizer-moderna.html](https://publichealth.wustl.edu/why-older-people-are-among-the-first-to-get-the-vaccine/#:~:text=So%20why%20should%20older%20people,risk%20of%20morbidity%20and%20mortality; Sharon LaFraniere, Vaccines for Young Children Are Being Delayed by Incomplete Data, a Top F.D.A. Official Suggests, N.Y. TIMES (Apr. 26, 2022), https://www.nytimes.com/2022/04/26/us/politics/vaccine-children-fda-pfizer-moderna.html).

62. Lisa Lockerd Maragakis, *Coronavirus and COVID-19: Younger Adults Are at Risk, Too*, JOHNS HOPKINS MED. (Dec. 2, 2020), <https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/coronavirus-and-covid-19-younger-adults-are-at-risk-too>.

erroneous, the belief continues to pollute interpretation of recent studies and drives counter-productive policies.⁶³

This Article furthers earlier pieces I have written on the topic, supplying additional hard data in support. In Part II, I demonstrate the flawed statistics on which these flawed policies were based and I analyze the most recent abomination—a May article in a lay newspaper, represented as a “study” which in typical stereotype fashion and without hard data, blames the aged for rise in Omicron cases— even if vaccinated.⁶⁴ These reports demonstrate the rank disregard for actual data in order to support the self-satisfying belief of protection conferred by youth.⁶⁵

In Part III, I identify government policies which devolved from bad studies and resulted in excessive elder-deaths, to remind us of the dangers of pariah-tization, especially based on early, incomplete, and often irrelevant data.⁶⁶ I also exemplify the continuing influence of these policies by discussing its relationship with the lack of vaccine uptake in the young.⁶⁷ Because Israel was one of the earliest countries to achieve some semblance of high levels of vaccination (mostly in the elderly) and amassed a good degree of early data, focus on Israeli statistics is illuminating.⁶⁸ In Part IV, I suggest that even the manner of framing of the conversation contributes to the discrimination and the aura of elder-disposability.⁶⁹

PART II: Faulty Conclusions implicating the elderly

The misinterpretation of data regarding COVID-19 and the elderly surfaced from the get-go. The original claim that the elderly were the most vulnerable to COVID-19 surfaced from the earliest Chinese

63. *Ageism*, *supra* note 56.

64. *See infra* Part II.

65. *See* Emily Henderson, *Children and Adults Have Similar Risks of SARS-CoV-2 Infection, but Kids Do Not Show Symptoms*, NEWS MED. LIFE SCIS. (Oct. 30, 2021), <https://www.news-medical.net/news/20211030/Children-and-adults-have-similar-risks-of-SARS-CoV-2-infection-but-kids-do-not-show-symptoms.aspx>.

66. *See infra* Part III.

67. *Id.*

68. Amos Harel, *Severity of Israel's Omicron Wave Depends on One Metric*, HAARETZ (Dec. 24, 2021), <https://www.haaretz.com/israel-news/2021-12-24/ty-article/.premium/severity-of-israels-omicron-wave-depends-on-one-metric/0000017f-db3b-df9c-a17f-ff3b15680000>.

69. *See infra* Part IV.

reports.⁷⁰ However, recent research puts this claim in its proper light: even in China, the elderly population were no more likely to die of COVID than any other diseases.⁷¹ This original claim was entangled with the truism that elderly are more likely to die, generally speaking, than younger people—from all causes.⁷² Indeed, well known data that increased risk of dying, from anything, increases with age was totally ignored,⁷³ and higher numbers of COVID-19 deaths in the elderly,⁷⁴ which would be normative from any cause, was mistranslated to mean that the elderly were especially vulnerable to COVID-19.⁷⁵ Moreover, even in China, the younger population was at a far greater risk of contracting the disease compared to the elderly.⁷⁶

70. BARBARA PFEFFER BILLAUER, HEALTH INEQUITY AND THE ELDERLY, THE IMPACT OF PANDEMIC-POLICY, BIOETHICS, AND THE LAW 55 (2021).

71. *Id.* at 59.

72. Philip W. Perdue, Dorraine D. Watts, Christoph R. Kaufmann, & Arthur L. Trask, *Differences in Mortality Between Elderly and Younger Adult Trauma Patients: Geriatric Status Increases Risk of Delayed Death*, 45 J. TRAUMA (1998).

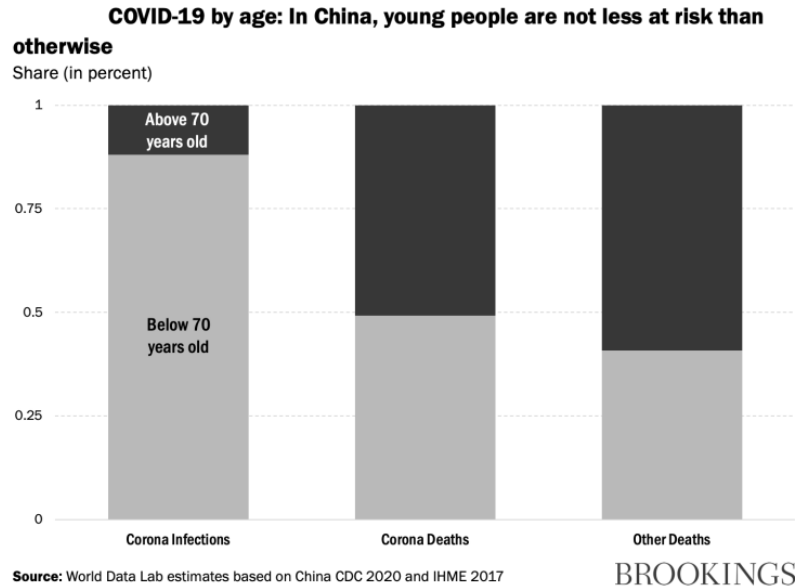
73. Tom Siegfried, *Human Life Span May Have No Limit, Analysis of Supercentenarians Suggests*, GENETIC LITERACY PROJECT (Apr. 27, 2022), https://geneticliteracyproject.org/2022/04/27/human-life-span-may-have-no-limit-analysis-of-supercentenarians-suggests/?mc_cid=ab437e2c95&mc_eid=07feeb8cff (“From age 50 or so onward . . . the risk of death increases year by year [and] death rate rises exponentially over much of the adult life span [regardless of the cause]).

74. Ralph Ellis, *Elderly Still Make Up Most of the COVID-19 Deaths*, WEBMD (2022), <https://www.webmd.com/lung/news/20220526/elderly-still-make-up-most-covid-deaths>.

75. *Id.*

76. *Ageism*, *supra* note 56.

FIGURE 1: COVID-19 BY AGE: IN CHINA, YOUNG PEOPLE ARE NOT LESS AT RISK THAN OTHERWISE⁷⁷



In China, Italy, and elsewhere, deaths from COVID-19 have been concentrated among seniors. In China, more than fifty percent of COVID-19 deaths have been people who are over seventy years old even though most COVID-19 cases are being contracted by people below seventy. Young people have interpreted this as an indication that they do not need to worry about the virus, while old people are being warned to take extreme caution. It is true that young people have a smaller chance than old people of dying from COVID-19, but they have a smaller chance of dying of almost any other health risk as well. In China, the age at which people died from COVID-19 was very similar to the age at which people died normally (Figure [1]). And there are already signs that the age profile of deaths in China may not be the same as the age profile elsewhere, so it is useful for people of all ages to take extreme care.⁷⁸ [emphasis added]

Nevertheless, based on these early Chinese data, the Italians, suddenly overwhelmed with cases, denied ventilators to those over 65—as

77. Katharina Fenz & Homi Kharas, *A mortality perspective on COVID-19: Time, location, and age*, BROOKINGS (Mar. 13, 2020), <https://www.brookings.edu/blog/future-development/2020/03/23/a-mortality-perspective-on-covid-19-time-location-and-age>.

78. *Id.*

a matter of policy.⁷⁹ This compounded the age-risk correlation by artificially causing more older people to die. Sweden acted similarly, denying elderly COVID-19 patients access to hospitals.⁸⁰ Ventilators were initially denied older people in some American states for a time until that was ruled illegal.⁸¹ Not surprisingly, as a result of these decisions more older people died, perpetuating the myth.⁸² Interestingly, identifying whether the increased risk was of contracting the disease, contracting serious disease, or dying was not delineated early on.⁸³

A second early claim infecting the world insinuated that the elderly were more at risk of even contracting the disease (a claim comingled with the increased risk of dying assertion).⁸⁴ This claim was predicated on several factors, including a focus on cases of symptomatic individuals, as the possibility of asymptomatic patients, who were yet capable of spreading the disease, was not then recognized.⁸⁵ Hence, early in the pandemic, raw data suggested that children accounted for the minority of COVID-19 cases.⁸⁶ However, the observation did not distinguish between two scenarios. One was that children were truly less susceptible to infection. Another was that data concerning case rates in children were artificially low because children were often asymptomatic, and therefore were not tested.⁸⁷ When the focus shifted to identifying asymptomatic cases, the conclusion drastically changed:

According to a recent report in *JAMA Pediatrics*, children and adults have similar risks of becoming infected with SARS-CoV-2, but a much larger proportion of infected children do not show symptoms of COVID-19. When one household member is infected, there is a fifty-two percent chance they will transmit it to at least one other person with whom they live. About half of the cases

79. *Ageism*, *supra* note 56; see *Mental Health*, *supra* note 9, at 112.

80. *Ageism*, *supra* note 56. See generally Barbara Pfeffer Billauer, *The Bioethics of CoVid19 Care in the Elderly: Ventilation and Vaccines*, AM. COUNCIL ON HEALTH AND SCI. (July 28, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3647276.

81. See *The Bioethics of CoVid19 Care in the Elderly: Ventilation and Vaccines*, *supra* note 80.

82. See *Ageism*, *supra* note 56.

83. See *id.*

84. See *id.*

85. *Children and Adults Have Similar Risks of SARS-CoV-2 Infection, But Kids Do Not Show Symptoms* (Oct. 30, 2021), <https://www.news-medical.net/news/20211030/Children-and-adults-have-similar-risks-of-SARS-CoV-2-infection-but-kids-do-not-show-symptoms.aspx#:~:text=According%20to%20a%20recent%20report,show%20symptoms%20of%20COVID%2D19>.

86. *Id.*

87. *Id.*

in children were symptomatic, compared with eighty-eight percent of adult cases.⁸⁸

A. COVID-19 is not only a Disease of the Old: The Evidence

Although evidence surfaced as early as March of 2020 that hyping the COVID-19 risk in the aged was becoming an unfortunate and false tropism,⁸⁹ primary focus on preventing disease only in the elderly continued.⁹⁰ This practice had dire ramifications both in over-protecting the elderly⁹¹ and lack of concern for the young, both objectives resulting in policy determinations which actually increased deaths.⁹² Nevertheless, disregard of data continued.

By June 29, 2021, the prevalence of COVID-19 in the young overtook that of the elderly—at least in Israel,⁹³ the first country to achieve

88. *Id.*; Fatimah S. Dawood, Christina A. Porucznik, & Vic Veguilla, *Incidence Rates, Household Infection Risk, and Clinical Characteristics of Sars-Cov-2 Infection Among Children and Adults in Utah and New York City*, *New York, JAMA Pediatrics* (Oct. 8, 2021), <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2785007>.

89. Sharon Begley, *New Analysis Breaks Down Age-Group Risk for Coronavirus—and Shows Millennials Are Not Invincible*, *STAT NEWS* (Mar. 18, 2020), <https://www.statnews.com/2020/03/18/coronavirus-new-age-analysis-of-risk-confirms-young-adults-not-invincible/> (“The new data show that up to one-fifth of infected people ages 20-44 have been hospitalized, including 2%-4% who required treatment in an intensive care unit . . . [In March,] Americans represented 31% of the cases they accounted for 45% of hospitalizations, 53% of ICU admissions, and 80% of deaths, the CDC reported[, rates that which substantially changed as the older population became increasingly vaccinated] . . . In an alarming development, however, scientists in China are now reporting that the new coronavirus does not spare the very young. In the first retrospective study of Covid-19 among children in the country where the pandemic began, they count 2,143 cases in children . . . But 6% of pediatric cases were severe and even critical, compared to 19% of adult cases. And . . . nearly 11% of the Covid-19 cases in infants were severe or critical . . . In South Korea . . . fewer than 4% of cases there have been in people over 80.”).

90. *See Ageism*, *supra* note 56.

91. *Id.*; Cerminara *supra* note 28, at 356.

92. Cerminara *supra* note 28, at 355–60; *see also Ageism*, *supra* note 56.

93. Rossella Tercatin, *Did State Err in Not Immediately Inoculating Teens?*, *THE JERUSALEM POST* (June 29, 2021) (“Of the current 1200 new cases over a third—more than 400—[were] 12 to 15 year olds. At the beginning of the outbreak, the rate [in this age group] was even higher, . . . [with] 68% of 47 new identified cases belonging[ing] to this age group.”). *See* Rossella Tercatin, *Israel Hits Highest Number if COVID Cases in Weeks*, *THE JERUSALEM POST* (Dec. 8, 2021, 10:36 PM) (noting that some six months later in December almost half the cases were in the five to 11 age range); Maayan Hoffman, *Deciding Not to Vaccinate Kids is no Less a Decision*, *THE JERUSALEM POST* (Nov. 7, 2021), at 4; Maayan Hoffman, *Was Israel’s Decision to Approve Coronavirus Booster Shots for All Ages a Shot in the Dark?*, *THE JERUSALEM POST*

some semblance of mass vaccination, and hence often serving as a bell weather for other countries.⁹⁴ It must be noted however, that Israel's vaccine success occurred primarily in the elderly,⁹⁵ reaching as high as seventy percent, including booster shots.⁹⁶ Eventually, ninety percent of the over seventy years old would be fully vaccinated⁹⁷

Prior to its vaccination campaign, Israel registered that eighty percent of its COVID-19 deaths were suffered by those aged seventy and older,⁹⁸ the same statistic was claimed by Senator Susan Collins for the United States.⁹⁹ It bears note however, that ninety-two percent of these Israeli oldsters who died from COVID-19 also had pre-existing chronic conditions.¹⁰⁰ While this eighty percent statistic might sound frightful as an isolated fact as it suggests elders are particularly susceptible to COVID-19, the number is taken out of context.¹⁰¹ Thus, in Israel at least, heat-wave associated deaths are also primarily found in this cohort.¹⁰² Moreover, comparatively speaking, a heat wave is more dangerous to the elderly than COVID-19, accounting for 88.5 percent of deaths.¹⁰³

(Sept. 29, 2021) (noting that, as of September, "some 50% of infection is made up of people 19 and younger") [hereinafter *Shot in the Dark*].

94. See *Shot in the Dark*, *supra* note 93.

95. See *Ageism*, *supra* note 56 (noting Prime Minister Naftali Bennet's fearmongering—warning children not to hug their grandparents or they might kill them).

96. Rossalla Tercatin & Maayan Jaffe-Hoffman, *COVID-19 Boosters Expanded to 40 Years Old and Up*, THE JERUSALEM POST (Nov. 21, 2021), <https://www.jpost.com/health-science/covid-israel-registers-600-serious-patients-3rd-vaccine-to-be-expanded-677144>.

97. *Id.*

98. TOI Staff, *92% of Israel's COVID-19 Fatalities Had Existing Chronic Diseases*, THE TIMES OF ISRAEL (Dec. 16, 2020, 6:46 PM), <https://www.timesofisrael.com/92-of-israels-covid-19-fatalities-had-existing-chronic-diseases-report/> ("Those aged 70 or older account for 80% of the 3,000-plus people who have died, with over a third aged 80-89, according Health Ministry figures reported by Haaretz").

99. *Ageism*, *supra* note 56.

100. TOI Staff, *supra* note 98.

101. *92% of Israel's COVID-19 Fatalities Had Existing Chronic Diseases*, THE TIMES OF ISRAEL (Dec. 16, 2020), <https://www.timesofisrael.com/92-of-israels-covid-19-fatalities-had-existing-chronic-diseases-report/>.

102. Judy Siegel-Itzkovich, *Chief Scientist Urges Israel To Prepare For Heatwaves*, THE JERUSALEM POST (May 31, 1933, 3:59 PM), <https://www.jpost.com/environment-and-climate-change/article-708179>. ("[T]his age group routinely constitutes 70%-73% of the total deaths. The data therefore indicates the high sensitivity of this population to heat waves, according to the study. Reasons for heat-wave related hospitalization include psychiatric and dehydration conditions.").

103. Judy Siegel-Itzkovich, *Chief Scientist Urges Israel To Prepare For Heatwaves*, THE JERUSALEM POST (May 31, 1933, 3:59 PM), <https://www.jpost.com/environment-and-climate-change/article-708179> (noting that, notwithstanding, policy regarding

As of the end of September 2021, Israel had the highest number of COVID-19 cases per capita of any country in the world, due to a rising incidence in the young, unvaccinated cohort.¹⁰⁴ The prevalence of cases effects in the younger population continued to go unheeded, and included not just increased incidence of disease, but a significant prevalence of serious cases in younger folks.¹⁰⁵

- By September 2021, ninety percent of all new Israeli cases were under sixty; fifty percent
- were under nineteen, and forty percent under eleven.¹⁰⁶
- In August and September 2021, thirty percent of serious diseases were under sixty, some as young as six months.¹⁰⁷
- In September 2021, ninety percent of all ECMO¹⁰⁸ cases in Israel were under sixty¹⁰⁹; twenty percent were under forty.¹¹⁰
- During the fourth wave—spread mainly by children who contracted the disease abroad and did not quarantine—some 1400 Israelis died.¹¹¹

lockdowns for seniors retains only a mild advisory—while that pertaining to COVID in Israel was draconian and inflammatory—warning children they could kill their grandparents by hugging them).

104. Maayan Hoffman, *COVID Picture Isn't As Rosy As PM Made It Seem*, THE JERUSALEM POST (Sept. 29, 2021), [https://www.pressreader.com/search?query=COVID picture isn't as rosy as PM made it seem](https://www.pressreader.com/search?query=COVID+picture+isn't+as+rosy+as+PM+made+it+seem).

105. *Israel: 90% of Most Severely Ill Covid Patients Are Unvaccinated and Under the Age of 60*, I24 NEWS (Sept. 2, 2021, 10:19 AM), <https://www.i24news.tv/en/news/israel/1631459615-israel-90-of-most-severely-ill-covid-patients-are-unvaccinated>.

106. Maayan Jaffe-Hoffman, *Bennet Must Learn: Israel Can't be COVID Start-Up Nation*, THE JERUSALEM POST (Sept. 22, 2021), <https://www.jpost.com/israel-news/covid-bennett-must-learn-when-being-the-start-up-nation-could-be-too-risky-679964>; Maayan Jaffe-Hoffman, *Was Israel's Decision to Approve Coronavirus Booster Shots for All Ages a Shot in the Dark?*, THE JERUSALEM POST (Sept. 29, 2021), <https://www.jpost.com/israel-news/was-israels-decision-to-give-everyone-covid-boosters-a-shot-in-the-dark-679821>.

107. *Shot in the Dark*, *supra* note 93.

108. Adir Yanko, *All ECMO-bound COVID patients in Israel below age of 60, data shows*, YNETNEWS (Aug. 23, 2021) (nothing that those on ECMO machines are the most serious cases and likely to die.)

109. I24 NEWS, *supra* note 105 (“All ECMO-bound COVID patients in Israel below age of 60, data shows Israeli ECMO Association says all unvaccinated patients who were on ECMO since start of 4th wave passed away, while older people, some with underlying health conditions, survived because they were fully vaccinated”).

110. Maayan Jaffe-Hoffman, *Unvaccinated 16-year-old Israeli Teen Dies of Post-COVID Syndrome*, THE JERUSALEM POST (Oct. 9, 2021).

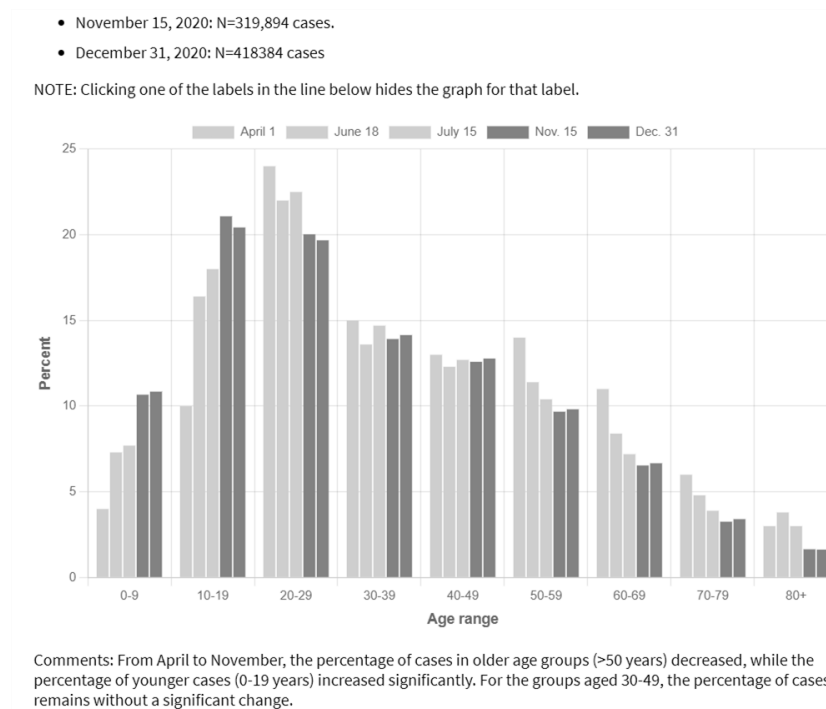
111. Rossella Tercatin, *COVID Jabbed US Tourists to Enter Israel with Personal Health Declaration*, THE JERUSALEM POST, (Oct. 13, 2021, 2:00 PM) <https://www.jpost.com/health-and-wellness/coronavirus/covid-jabbed-us-tourists-to-enter-israel-with-personal-health-declaration-681739>.

The increasing incidence in the younger cohort can be traced to the paucity of vaccine uptake in this group.¹¹² Not only was the incidence of disease greater in the younger cohort, but the severity as well.¹¹³ By August, there could be no doubt, COVID-19 was increasing in children and teenagers—jumping by leaps and bounds.¹¹⁴

112. See generally Maayan Jaffe-Hoffman, *Has Israel Become The COVID-19 'Unvaccinated Nation'?*, THE JERUSALEM POST (Dec. 14, 2021, 2:59 PM) (noting that only 14% of children in the general sector have received at least one shot (compared to about 90% in the over 65 year olds), less than one half the population who have received all three doses). See Rosella Tercatin, *COVID: Booking Opens for Kid's Vaccine as Bennett Warns of 'Children Wave'*, THE JERUSALEM POST (Nov. 21, 2021).

113. Rosella Tercatin, *Omicron is More Contagious, But is Not as Dangerous*, THE JERUSALEM POST (Dec. 5, 2021) (noting that 80% of all hospitalizations were below age 50 over the prior two weeks, between 80 to 90% of severe cases are in the unvaccinated . . . or those who received their vaccination more than five months ago). See Hoffman, *supra* note 106; Hoffman, *supra* note 110.

114. *Id.*; Maayan Jaffe-Hoffman, *40% of New COVID Cases in Israel Among Arabs, 40% Children*, THE JERUSALEM POST (Sept. 20, 2021), <https://www.jpost.com/israel-news/40-percent-of-new-covid-cases-in-israel-among-arabs-40-percent-children-679871> (noting that 20% of the hospitalized and serious cases were in those under 50, with 1/3 under 65). Jen Christensen & Theresa Waldrop, *COVID-19 Cases Jumped 84% Last Week Among U.S. Children and Teenagers, According to One Estimate*, CNN (Aug. 4, 2021, 12:26 PM), <https://www.cnn.com/2021/08/03/us/covid-19-children-teens/index.html>.

GRAPH 1¹¹⁵

The Israeli trend was echoed in the U.S.,¹¹⁶ Germany,¹¹⁷ and Britain.¹¹⁸ A large UK study of the first wave of COVID-19 completed in

115. *Age Distribution of Patients Who Died With COVID-19 Infection*, ISRAEL SCI. AND TECH. DIRECTORY (June 10, 2021), fig. 1, <https://www.science.co.il/medical/covid-19/Death-statistics-2021-06-10.php>.

116. Ariana Eunjun Cha, *Younger Adults are Large Percentage of Coronavirus Hospitalizations in United States, According to New CDC Data*, WASH. POST (Mar. 19, 2020, 8:55 AM), <https://www.washingtonpost.com/health/2020/03/19/younger-adults-are-large-percentage-coronavirus-hospitalizations-united-states-according-new-cdc-data/>.

117. Alison Kuznitz, *New Data Shows Young, Healthy Adults Dying More Often From COVID in Mecklenburg*, THE CHARLOTTE OBSERVER (Feb. 8, 2021), <https://www.charlotteobserver.com/news/coronavirus/article249019270.html>.

118. Priya Venkatesan, *The Changing Demographics of COVID-19*, THE LANCET (Oct. 6, 2020), [https://doi.org/10.1016/S2213-2600\(20\)30461-6](https://doi.org/10.1016/S2213-2600(20)30461-6) (noting that as early as February to July of 2020, the prevalence of those infected ages 15-24 increased from 4.5% to 15% in the UK; in the US between June and August, the age group with the highest number of cases was 20-29, accounting for 20% of the cases. Similar statistics were reported for the UK, and in both countries the prevalence of severe disease increased in the younger cohorts as well); see also Zoe Hyde, *Why we Can't Treat*

July established that younger adults admitted to hospital were almost as likely to suffer from complications as those over fifty.¹¹⁹

“Between June 13 and July 17 [2021], the 30-49 age group represented the highest number of COVID-19 hospitalisations, [in the UK] with ... twenty-six percent of total COVID hospitalisations ... [P]eople aged forty-nine and under [accounted for] thirty-six percent of total ICU admissions, with the youngest just a teenager.”¹²⁰

American data was confirmatory:

Data from the New York Department of Health show the number of pediatric hospitalizations associated with COVID-19 jumped from twenty-two the week of Dec. 5-11 to 109 in the week of Dec. 19-23 in New York City, and from seventy to 184 over the same time period statewide.”¹²¹

The following week saw a sixty-four percent increase in pediatric cases, an almost doubled case count from the two weeks prior.¹²² And those more likely to take up hospital space were between ages of 20-54.¹²³

The focus on the aged was predicated on a pure numbers basis, as, indeed, most deaths were in the elderly whether from COVID-19 or anything else.¹²⁴ Nevertheless, even in the elderly, cancer and heart disease continue to outpace COVID-19 as the leading cause of death.¹²⁵ By comparison, at various and multiple points in the epidemic, COVID-19 was more often the highest causes of death in lower age groups.¹²⁶

COVID-19 Like the Flu, NEWSGP (July 16, 2021, 3:55 PM), <https://www1.racgp.org.au/newsgp/clinical/why-we-can-t-treat-covid-19-like-the-flu>.

119. Zoe Hyde, *Why We Can't Treat COVID-19 Like the Flu*, NEWSGP (July 16, 2021, 3:55 PM), <https://www1.racgp.org.au/newsgp/clinical/why-we-can-t-treat-covid-19-like-the-flu>.

120. Peter Wark, *Younger Adults can get Very Sick and Die From COVID Too. Here's What the Data Tell Us*, THE CONVERSATION (Aug. 6, 2021, 2:50 AM), <https://theconversation.com/younger-adults-can-get-very-sick-and-die-from-covid-too-heres-what-the-data-tell-us-165250>.

121. *Pediatric Hospitalizations up 395% in NYC Amid COVID-19 Surge*, ABC (Dec. 27, 2021), <https://abc7ny.com/covid-in-kids-vaccine-omicron-variant-children-with/11393287/>.

122. See WORLD HEALTH ORG., COVID-19 WEEKLY EPIDEMIOLOGICAL UPDATE 1 (72nd ed. 2021).

123. Pam Belluck, *Younger Adults Make Up Big Portion of Coronavirus Hospitalizations in U.S.*, THE N.Y. TIMES (July 22, 2020), <https://www.nytimes.com/2020/03/18/health/coronavirus-young-people.html> (noting that new C.D.C. data shows that nearly 40 percent of patients sick enough to be hospitalized were age 20 to 54. But the risk of dying was significantly higher in older people. NYT).

124. *Weekly Updates by Select Demographic and Geographic Characteristics*, CDC (Jan. 18, 2023), https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm#Sex-AndAge.

125. Ortaliza, Amin, & Cox, *supra* note 27.

126. *Id.*

[A]mong children age 1-14, who are at relatively low risk of severe illness compared to older adults, COVID-19 was in the top ten leading causes of death from August through October 2021. Among children age 5-14, COVID-19 ranked as the number six leading cause of death in August and the number five leading cause of death in September (and the leading cause of death in those 45-54). Among children ages 1-4, COVID-19's rank rose from number 13 to number 7 among leading causes of death in August 2021 and held there in September.¹²⁷

And in 2021, COVID-19 death rates increased in all ages—except those over seventy-five.¹²⁸ Thus, “[a]lthough COVID-19 death rates decreased for persons aged ≥ 85 years, age groups < 75 years saw large increases from 2020 to 2021.”¹²⁹

The most telling statistics come from KFF's tallies¹³⁰: For half of 2021 (seven months Between January 2021 and January 2022), COVID-19 was the leading cause of death in those 45-54.¹³¹ This is to be compared to COVID-19 as the leading cause of death in four months for ages 55-64; three for those 65-74, two for those 75-84 (the same as those aged 35-44), and only one month for those over 85.¹³² **What this means is that COVID-19 is more far dangerous in the middle aged, than the elderly**, who are much more likely to die of other causes, regardless of how many COVID-19 deaths they sustain.¹³³ The data prompted one professor to note that “[t]he message is that this is not just a disease of the elderly and frail,”¹³⁴ causing leading experts to press for greater vaccination in the younger population.¹³⁵

Indeed, when 2021's statistics were finalized, the elderly were not those at the highest risk of death, not even on an absolute numbers basis.¹³⁶ “In 2021, COVID-19 became the first and second leading cause of

127. *Id.*

128. Farida B. Ahmad, Jodi A. Cisewski, & Robert N. Anderson, *Provisional Mortality Data—United States, 2021*, 71 MORBIDITY & MORTALITY WEEKLY REP. 597, 597–98 (2022).

129. *Id.* at 599–600.

130. See PETERSON–KFF HEALTH SYSTEM Tracker, <https://www.healthsystemtracker.org/about-us/> (last visited Jan. 22, 2023).

131. Ortaliza, Amin, & Cox, *supra* note 27.

132. *Id.*

133. *See id.*

134. Jim Reed, *Covid: Younger Adults Still at Risk of Serious Organ Damage—Study*, BBC (July 16, 2021), <https://www.bbc.com/news/health-57840825>.

135. Jennifer Henderson, *Surge of Kids Hospitalized With COVID-19 in NY*, MEDPAGE TODAY (Dec. 28, 2021), <https://www.medpagetoday.com/special-reports/exclusives/96410>.

136. Ortaliza, Amin, & Cox, *supra* note 27.

death....in those aged 45-54 and 35-44 respectively.”¹³⁷ While this is largely due to vaccination, even in 2020, among those aged eighty-five and older, COVID-19 was not the leading cause of death.¹³⁸

GRAPH 2

Age-specific rank of COVID-19 deaths among leading causes of death in the U.S., January 2021 - January 2022

| Ages | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | 85+ |
|--------------|------|-------|-------|-------|-------|-------|-------|-------|-----|
| January 2021 | 6 | 4 | 3 | 2 | 1 | 1 | 1 | 1 | 1 |
| February | 7 | 5 | 5 | 4 | 3 | 3 | 2 | 2 | 2 |
| March | 9 | 6 | 6 | 5 | 4 | 3 | 3 | 3 | 5 |
| April | 7 | 6 | 6 | 5 | 4 | 3 | 3 | 3 | 5 |
| May | 9 | 6 | 6 | 5 | 4 | 3 | 3 | 5 | 6 |
| June | 11 | 7 | 7 | 7 | 4 | 4 | 6 | 7 | 9 |
| July | 7 | 5 | 6 | 4 | 4 | 4 | 4 | 6 | 7 |
| August | 5 | 4 | 2 | 1 | 1 | 1 | 3 | 3 | 3 |
| September | 5 | 4 | 2 | 1 | 1 | 1 | 1 | 3 | 2 |
| October | 6 | 4 | 2 | 2 | 1 | 2 | 3 | 3 | 3 |
| November | 7 | 4 | 4 | 2 | 1 | 3 | 3 | 3 | 4 |
| December | 6 | 4 | 2 | 2 | 1 | 2 | 3 | 3 | 3 |
| January 2022 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 2 |

Note: COVID-19 deaths in each month are compared to monthly average deaths for other leading causes in the first half of 2021 or the most recent year available.

B. Co-Morbidities Have a Greater Impact on the Young.

While it is recognized the oldsters with pre-existing conditions are at a higher risk of death from COVID-19, the impact of co-morbidities is actually worse for the young, including diabetes¹³⁹ This feature has also led some to re-think the risk to the elderly — as early as Feb. 2021.¹⁴⁰

Additionally, several COVID-19 sequelae appear to uniquely affect the young, even if not fatal.¹⁴¹ For example, severe Long COVID-19 and a Kawasaki-like disease disproportionately appear in younger folks.¹⁴² (Kawasaki disease is a rare inflammatory hyperactive immune

137. Meredith S. Shiels, *COVID-19 was Third Leading Cause of Death in the United States in Both 2020 and 2021*, NAT'L INST. OF HEALTH (July 5, 2022), <https://www.nih.gov/news-events/news-releases/covid-19-was-third-leading-cause-death-united-states-both-2020-2021>.

138. *Id.*

139. Andrew P. McGovern, Nick J. Thomas, Sebastian J. Vollmer, Andrew T. Hattersley, Bilal A. Mateen, & John M. Dennis, *The Disproportionate Excess Mortality Risk of COVID-19 in Younger People with Diabetes Warrants Vaccination Prioritisation*, 64 DIABETOLOGIA 1184, 1184 (2021).

140. Nicola Davis, *Who is Most at Risk of Contracting Coronavirus?*, THE GUARDIAN (Feb. 21, 2020, 8:47 AM), <https://www.theguardian.com/world/2020/feb/21/who-is-most-at-risk-of-contracting-coronavirus>.

141. Jennifer Couzin-Frenkel, *Doctors Race to Understand Rare Inflammatory Condition Associated with Coronavirus in Young People*, SCIENCE (May 21, 2020), <https://www.science.org/doi/10.1126/science.368.6494.923>.

142. *Id.* at 924.

response in children, causing rash, fever, and inflammation in medium-size blood vessels and heart problems.¹⁴³ On occasion, blood pressure plummets and shock sets in.¹⁴⁴ The UK research showed that thirteen percent of nineteen to twenty-nine year olds and seventeen percent of thirty to thirty-nine year olds hospitalized with COVID-19 during the first wave were unable to look after themselves at discharge and had to rely on friends and family.¹⁴⁵

Other factors which influence susceptibility have been disregarded in many assessments, like pregnancy, which renders women more susceptible to infection (e.g., flu) and present a higher risk for developing more severe complications such as respiratory illness resulting in greater,¹⁴⁶ as well as increased danger to the newborn.¹⁴⁷

143. *Id.* at 923.

144. *Id.*

145. *Landmark Study Finds one in two Hospitalized COVID-19 Patients Develop a Complication*, NAT'L INST. FOR HEALTH AND CARE RSCH. (July 16, 2021), <https://www.nihr.ac.uk/news/landmark-study-finds-one-in-two-hospitalised-covid-19-patients-develop-a-complication/28175>.

146. Stephanie Fischinger, Carolyn M. Boudreau, Audrey L. Butler, Hendrick Streeck, & Galit Alter, *Sex Differences in Vaccine-Induced Humoral Immunity*, 41 SEMS. IN IMMUNOPATHOLOGY 239, 243 (2018).

147. *See id.*

The disproportionate excess mortality risk of COVID-19 in younger people with diabetes warrants vaccination prioritization

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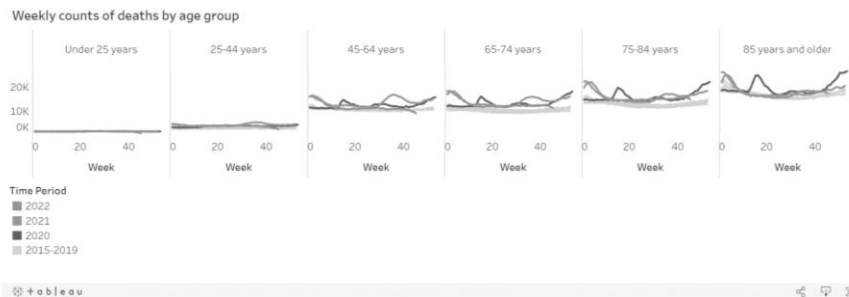
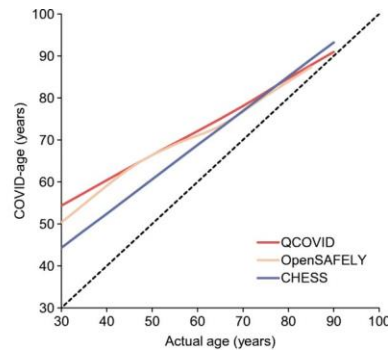


FIGURE NOTES:

Number of deaths reported on this page are the total number of deaths received and coded as of the date of analysis and do not represent all deaths that occurred in that period. Data are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction and cause of death. See <https://www.cdc.gov/nchs/nvss/cvrr/COVID19/index.htm> for more information. Data for New York excludes New York City. Data on all deaths excluding COVID-19 exclude deaths with U07.1 as an underlying or multiple cause of death. Death counts were derived from the National Vital Statistics System database that provides the timeliest access to the vital statistics mortality data and may differ slightly from other sources due to differences in completeness, COVID-19 definitions used,

C. The Presumption Against Vaccine Efficacy in the Elderly

In 2020, the raw number of deaths was certainly higher in the aged.¹⁴⁸ Nevertheless, various commentators advised against prioritizing the elderly for vaccination.¹⁴⁹ The policies were clearly muddled in

148. Farida B. Ahmad, Jodi A. Cisewski, Arialdi Minino, & Robert N. Anderson, *Provisional Mortality Data—United States, 2020*, 70 MORBIDITY AND MORTALITY WEEKLY REPORT 519, 520 (2021).

149. Barbara Pfeffer Billauer, *On the Proposal Not To Vaccinate The Aged For COVID-19*, AM. COUNCIL ON SCIENCE & HEALTH (Sept. 21, 2020), <https://www.>

terms of whether vaccines were initially purposed to prevent death and severe disease—or to prevent spread and achieve herd immunity.¹⁵⁰ As breakthrough infections surfaced and it became clear that persons could contract COVID-19 more than once, achieving herd immunity has become impossible, and hence that objective is futile.¹⁵¹

Those obsessively focused on vaccinating only the youngsters, argue they were more likely to spread the disease,¹⁵² as if only younger people are mobile and interact with others. That the elderly were terrified (due to politically motivated recommendations) and stayed home, due to requirements or voluntarily, was not considered.¹⁵³ This analysis skewed and intermingled two public health questions: are we vaccinating to prevent the spread of the virus or to prevent death (and severe illness, i.e., to reduce hospital burden)?¹⁵⁴

Others focused on early reports that the elderly had lost their immune status shortly after vaccination.¹⁵⁵ They claimed this was due to natural aging of the elder-immune system and argued vaccines would be ineffective or certainly less effective in the elderly based on a pre-print which had not been peer-reviewed.¹⁵⁶ That the vaccine waned in effectiveness in everyone was ignored.¹⁵⁷ Indeed, time since vaccination

acsh.org/news/2020/09/21/proposal-not-vaccinate-aged-covid-19-15034 (discussing article in *The Conversation*).

150. *Id.*

151. Josh Bloom, 'Un-Herd' Immunity: Covid Pulls Another Trick Out of Its Viral Envelope, AM. COUNCIL ON SCIENCE & HEALTH (May 6, 2022), <https://www.acsh.org/news/2022/05/06/un-herd-immunity-covid-pulls-another-trick-out-its-viral-envelope-16300>.

152. Billauer, *supra* note 149.

153. *Id.*

154. *See Ageism, supra* note 56.

155. Yair Goldberg, Micha Mandel, Yinon M. Bar-On, Omri Bodenheimer, Laurence Freedman, Eric J. Haas, Ron Milo, Sharon Alroy-Preis, Nachman Ash, & Amit Huppert, *Waning immunity of the BNT162b2 vaccine: A nationwide study from Israel*, 83 *NEW ENG. J. OF MED.* 1, 9 (2021).

156. *See id.*

157. Kali Coleman, *This Vaccine Drops in Efficacy After 4 Months, New CDC Study Says*, YAHOO! (Sept. 20, 2021) https://www.yahoo.com/now/vaccine-drops-efficacy-4-months-155130029.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAIvZstII_t5OpfhYhluPd1nB2_nDbbrFdiTqeMdvWcmmk7A7nT2RbSXIIQ6O1VdVOHw-DWcpNcN-Nlb2fCEBDPIz6pmBDH9cCtehVWCxCOdgXp5qCrQJPb1fzSskuWE3j9n3yI3TDSvi2ibv_C9pF70YSr0dOIaXOtXFJBap4hR; Caitlyn Stulpin, *Flu Vaccine Effectiveness Declines Around 10% per Month Following Shot*, HEALIO NEWS (Feb. 9, 2021), <https://www.healio.com/news/infectious-disease/20210209/flu-vaccine-effectiveness-declines-around-10-per-month-following-shot>; Jee Hyun Lee, Hye Kyung Cho, Ki Hwan Kim, Jina Lee,

was eventually found to be the key factor explanatory of these findings.¹⁵⁸ That the elderly were the first ones given the vaccine,¹⁵⁹ and hence would be the first to lose immunity, due to the loss of potency of the vaccine, not aging, was overlooked.¹⁶⁰ It was as if any excuse would be found to implicate the elderly as a disposable segment of society. In this case, a conjectured loss of immune fitness due to aging was tagged as the rationale for the finding — without due consideration of other factors.¹⁶¹

In fact, some studies demonstrated that the flu vaccine has the highest level of effectiveness in those over sixty-five, notwithstanding that some flu variants disproportionately affect older individuals.¹⁶² True, this vaccine was formulated differently for oldsters (at four times the dose of standard vaccines),¹⁶³ but nothing says that similar approaches cannot be implemented for COVID-19 vaccines for the use of the elderly. Indeed, a dose (high concentration of antigen) efficacy

Yae-Jean Kim, Byung Wook Eun, Nam Hee Kim, Dong Ho Kim, Dae Sun Jo, Hwang Min Kim, & Yun-Kyung Kim, *Evaluation of Waning Immunity at 6 Months after Both Trivalent and Quadrivalent Influenza Vaccination in Korean Children Aged 6–35 Months*, J. KOREAN MED. SCI. 1, 1–10 (2019).

158. Amin, *supra* note 18.

159. *Id.*

160. Vassilios Vassiliou, Ciaran Grafton-Clarke, & Ranu Baral, *Breakthrough Infections: These Four Factors Can Increase the Risk of Vaccinated People Getting COVID-19* (Sept. 13, 2021), <https://www.firstpost.com/health/breakthrough-infections-these-four-factors-can-increase-the-risk-of-vaccinated-people-getting-covid-19-9960321.html>.

161. Fischinger, et al., *supra* note 146, at *Sex Differences in Vaccine-Induced Humoral Immunity*, 41 SEMINARS IN IMMUNOPATHOLOGY 239, 240 (2019), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6373179/> (describing the significant contribution of sex to modulating vaccine-induced immunity has gained attention over the last years. Specifically, females typically develop higher antibody responses and experience more adverse events following vaccination than males).

162. Kristin Jenkins, Mark W. Tenforde, MD, PhD, IDSA Reading Room | on Prevention of Severe Influenza, | *MedPage Today*, MEDPAGETODAY (Apr. 23, 2021) https://www.medpagetoday.com/reading-room/idsa/general-infectious-diseases/92238?xid=NL_AADRR_2021-09-24&eun=g7507404d39r&trw=no&utm_source=Sailthru&utm_medium=email&utm_campaign=IDSA%20Reading%20Room_092421&utm_term=NL_Partner_IDSA%20_Reading_Room_Active; see also Lisa A. Grohskopf, MD, Elif Alyanak, MPH, Karen R. Broder, MD, Emmanuel B. Walter, MD, Alicia M. Fry, MD, & Daniel B. Jernigan, MD, *Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2019–20 Influenza Season Recommendations and Reports*, CDC (Aug. 23, 2019), https://www.cdc.gov/mmwr/volumes/68/rr/rr6803a1.htm?s_cid=rr6803a1_w#suggestedcitation.

163. *High-Dose Flu Vaccine*, CDC, https://www.cdc.gov/flu/prevent/qa_flu-zone.htm (last viewed Aug. 25, 2022).

relationship has been shown for COVID-19; Moderna's vaccine, with higher mRNA content (100 micrograms versus Pfizer's thirty micrograms), confers longer lasting protection than Pfizer's.¹⁶⁴ That effectiveness lasts a year, unrelated to age, seemingly tracking the heavier mRNA content.¹⁶⁵

Some studies confirm that vaccine effectiveness against long-Covid symptoms was actually highest in people aged sixty years and over.¹⁶⁶ Other reports indicate it isn't all or nothing—that some reduction in immunity occurs with age, but it isn't huge.¹⁶⁷ "Vaccination appears to be nearly as effective against for the Delta variant, with eighty-four percent protection for people seventy-five and older, and ninety-two percent for people 50-75.¹⁶⁸ And, COVID-19 vaccine effectiveness also varies in younger people.¹⁶⁹ Further, effectiveness of the vaccine for the Omicron variant wasn't particularly robust for children aged five to eleven (thirty-one percent effective)—far lower than for the aged. For adolescents aged twelve to fifteen, the vaccine only reached a fifty-nine percent effectiveness level.¹⁷⁰ As far as the more recent variants, peer-reviewed studies have shown that the vaccine is effective in older individuals, even for Delta.¹⁷¹ Regarding Omicron, short-term effectiveness (one month) was demonstrated for the aged, but longer-term efficiency in preventing severe disease was also shown.¹⁷²

164. Rachel Gutman-Wei, *Is Moderna Really Better Than Pfizer—Or Is It Just a Higher Dose?*, THE ATLANTIC (Oct. 28, 2021), <https://www.theatlantic.com/health/archive/2021/10/pfizer-moderna-dose-which-vaccine-best/620501/>.

165. Allie Hogan, *Moderna Now Says Vaccine Protection Goes Down After This Long*, BESTLIFE (Sept. 16, 2021), <https://bestlifeonline.com/moderna-protection-drop-news/>.

166. IANS, *Vaccinated People Less Likely to Develop Long Covid: Study*, NAT'L HERALD (Feb. 16, 2022, 8:30 PM), <https://www.nationalheraldindia.com/health/vaccinated-people-less-likely-to-develop-long-covid-study>.

167. *Id.*

168. *Massive EU Study Shows Vaccines Prevent Severe COVID Illness, Even From Delta Variant*, YNET (Oct. 11, 2021), https://www.ynetnews.com/health_science/article/syk7kszrt.

169. Bridget M. Kuehn, *COVID-19 Vaccine Effectiveness in Youth Varies by Age, Variant*, JAMA NETWORK (Apr. 26, 2022), <https://jamanetwork.com/journals/jama/fullarticle/2791394>.

170. *Id.*

171. YNET, *supra* note 168.

172. Yinon M. Bar-On, et al., *Protection by a Fourth Dose of BNT162b2 against Omicron in Israel*, 386 NEW ENG. J. MED. 1712, 1715 (2022), <https://www.nejm.org/doi/full/10.1056/NEJMoa2201570> (May 5, 2022) (stating that New England Journal of Medicine Rates of confirmed SARS-CoV-2 infection and severe Covid-19 were

*The Misinterpretation Continues*¹⁷³

1. USING THE SELF-FULFILLING PROPHECY IN DATA ANALYSIS

Notwithstanding data showing that vaccines work in the elderly, the attack on vaccine effectiveness in the elderly continues. An article on May 3, 2022's *Washington Post*, reported that forty-two percent of COVID-19 deaths during January and February were in persons previously vaccinated, and then went on to blame the elderly for this finding.¹⁷⁴

A key explanation for the rise in deaths among the vaccinated is that covid-19 fatalities are again concentrated in the elderly who are overwhelmingly immunized, but vaccines are less effective and their potency wanes over time in older age groups.¹⁷⁵

No data is furnished.¹⁷⁶ However, several links are given, including a "study" done by none other than the *Washington Post*.¹⁷⁷ That "study" is the *Post*'s own self-reported re-analysis of CDC findings.¹⁷⁸ Atypical for valid science reporting, it is short on data, but replete with human interest stories.¹⁷⁹ Unlike accepted formatting for peer-reviewed research, the conclusion is reported before the methodology, which is provided at the end along with a link to a partial data set.¹⁸⁰ The "unbiased" headline sums up the conclusion: *Covid deaths no longer overwhelmingly among the unvaccinated as toll on the elderly grows*, before expounding that the increased rates are due to waning vaccine effectiveness and the elderly, even if vaccinated.¹⁸¹

lower after a fourth dose of BNT162b2 vaccine than after only three doses. Protection against confirmed infection appeared short-lived, whereas protection against severe illness did not wane during the study period.)

173. See Barbara Pfeffer Billauer, *Pariah-tizing the Elderly: Another Casualty of COVID*, ACSH, forthcoming, for a recap of this section.

174. Fenit Nirappil & Dan Keating, *Covid Deaths no Longer Overwhelmingly Among the Unvaccinated as Toll on Elderly Grows*, WASH. POST (Apr. 29, 2022), <https://www.washingtonpost.com/health/2022/04/29/covid-deaths-unvaccinated-boosters/>.

175. *Id.*

176. *Id.*

177. *Id.*

178. See *id.*

179. *Id.*

180. See *id.*

181. *Id.*

2. A JUNK SCIENCE APPROACH

The Post article horribly mangles and comingles statistics regarding vaccination, deaths, and age and improperly equates correlation with causation.¹⁸² Actually, the *Post* “study” links to yet another *Post* article which actually contradicts it,¹⁸³ reporting that vaccine effectiveness declines in *everyone*, citing three studies published by CDC’s MMWR,¹⁸⁴ and confirmed in yet another study published in *The Lancet*.¹⁸⁵

The *Post* study draws its conclusion from three boot-strapped, and unsupported, claims: “Nearly two-thirds of the people who died in the omicron surge were seventy-five and older, according to a *Post* analysis,”¹⁸⁶ and that “seniors are overwhelmingly immunized but vaccines are less effective and their potency wanes over time in older age groups,”¹⁸⁷ were the first two.

It is true that one study did report a correlation between waning effectiveness and age—the second predicate. However, that study used an age cut-off of fifty-five,¹⁸⁸ so it’s not clear how the *Post* compares that with their excess deaths in their seventy-five and older group. It is also unknown whether the deaths in the seventy-five and older group were

182. *Id.*

183. Ben Guarino & Laurie McGinley, *Vaccines Show Declining Effectiveness Against Infection Overall but Strong Protection Against Hospitalization Amid Delta Variant*, WASH. POST (Aug. 18, 2021), <https://www.washingtonpost.com/health/2021/08/18/covid-vaccine-effectiveness/>.

184. See Eli S. Rosenberg, et al., *New COVID-19 Cases and Hospitalizations Among Adults, by Vaccination Status—New York, May 3–July 25, 2021*, 70 MORBIDITY AND MORTALITY WKLY REP. 1306, 1306–1311 (2021); see also Srinivas Nanduri, et al., *Effectiveness of Pfizer-BioNTech and Moderna Vaccines in Preventing SARS-CoV-2 Infection Among Nursing Home Residents Before and During Widespread Circulation of the SARS-CoV-2 B.1.617.2 (Delta) Variant—National Healthcare Safety Network, March 1–August 1, 2021*, 70 MORBIDITY AND MORTALITY WKLY REP. 1163, 1163–1166 (2021); see also Mark W. Tenforde, et al., *Sustained Effectiveness of Pfizer-BioNTech and Moderna Vaccines Against COVID-19 Associated Hospitalizations Among Adults—United States, March–July 2021*, MORBIDITY AND MORTALITY WKLY REP. 1156, 1156–1162 (2021).

185. Hiam Chemaitelly & Laiat J. Abu-Raddad, *Waning Effectiveness of COVID-19 Vaccines*, 399 THE LANCET 771, 772 (2022), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8871492/> (reviewing Nordström P Ballin M Nordström A, Risk of infection, hospitalization, and death up to 9 months after a second dose of COVID-19 vaccine: a retrospective, total population cohort study in Sweden. *Lancet*. 2022 (published online Feb 4.)).

186. See Nirappil, *supra* note 174.

187. See *id.*

188. See *infra* note 217.

part of the overwhelmingly vaccinated group¹⁸⁹ or whether this was a convenient leap of faith.

The *Post* study then added a third claim to their set of givens: in the third wave of the Delta epidemic: one third of deaths were in those over seventy-five.¹⁹⁰ Again, we have no idea how many of this group were vaccinated, or boosted.¹⁹¹ And, of course in the Delta epidemic, the proximity of vaccination to onset of disease was far shorter than during the Omicron wave.¹⁹² Hence, at that earlier point in time, comparatively speaking, the older (mostly vaccinated) cohort would enjoy greater protection than a younger (more unvaccinated) cohort.¹⁹³ The same would hold true for the Omicron surge.

It may well be a truism that, as the *Post* notes, during the Omicron surge twice as many people seventy-five and older died from COVID-19 compared to Delta.¹⁹⁴ The question that remains unanswered from this expose is: were they boosted? Indeed, were they even vaccinated? The key point, of course, is that the populations compared in the *Post* study are not comparable—indeed, the cohorts are not even clearly delineated, as the following graph demonstrates.¹⁹⁵

189. See Nirappil, *supra* note 174.

190. *Id.*

191. *Id.*

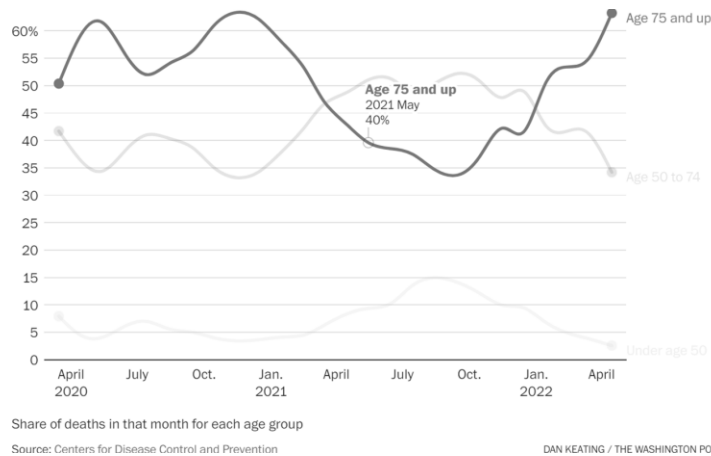
192. Julia Stowe, Nick Andrews, Freja Kirsebom, Mary Ramsay, & Jamie Lopez Bernal, *Effectiveness of COVID-19 Vaccines Against Omicron and Delta Hospitalization, a Test Negative Case-Control Study*, NATURE COMMUNICATIONS 1 (2022).

193. See Daniel R. Feikin, et al., *Duration of Effectiveness of Vaccines Against SARS-CoV-2 Infection and COVID-19 Disease: Results of a Systematic Review and Meta-regression*, 399 THE LANCET 924 (2022).

194. Guarino & McGinley, *supra* note 183.

195. *Id.*

GRAPH 3



Thus, we do not know from this graph what percentage of each age group was vaccinated and whether those who were vaccinated were administered the vaccines more than five to eight months prior, by which point the vaccine's effectiveness would have waned in everyone.¹⁹⁶ The graph also demonstrates that from April through October of 2021, older age was *protective* of COVID-19 deaths.¹⁹⁷ In other words, there was a higher percentage of deaths in the younger cohort, those between fifty and seventy-four, than in those over seventy-five.¹⁹⁸ This fact seems to have eluded the press and evaded considerations in public health policy.

One also must wonder whether the number of deaths evaluated by the *Post* presents a robust enough sample from which to draw valid conclusions. According to the graphically represented data, the number of cases represent a thirty-four per million death rate for the unvaccinated, compared to two per million for the vaccinated cohort. Of that group, some unknown portion are those over seventy-five, as the following the graph from the *Post* "study", selectively copied from the CDC website, demonstrates.¹⁹⁹ The graph does show that the share of deaths amongst the vaccinated has risen, but this graph does not depict the age groups of that increase.²⁰⁰ So, while there is some increase in

196. *Id.*

197. *Id.*

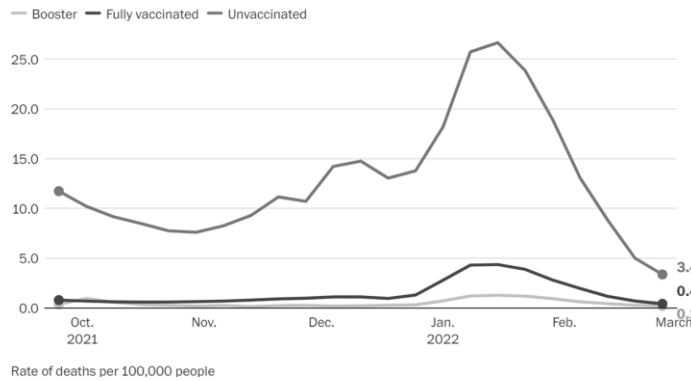
198. *Id.*

199. *Id.*

200. *Id.*

deaths in the vaccinated and boosted, from this graph, we don't know in which age category.²⁰¹

GRAPH 4



Actually, the CDC website does break down this graph by ages²⁰²—which, conspicuous by its absence, does not appear in the *Post* “study.”²⁰³ The age demarcation used by the CDC is sixty-five, not seventy-five, the age the *Post* “study” uses in their initial claim that twice as many elderly are dying from omicron vs. delta, even if vaccinated.²⁰⁴ Indeed, from the CDC data, we see a small spike in the 50-64 years old,²⁰⁵ and a greater one in those over sixty-five.²⁰⁶ But, again, these numbers appear small.

201. COVID Data Tracker: COVID-19 Weekly Cases and Deaths per 100,000 Population by Age, Race/Ethnicity, and Sex, CDC, <https://covid.cdc.gov/COVID-data-tracker/#demographicsovertime> (last visited Jan. 24, 2023).

202. *Id.*

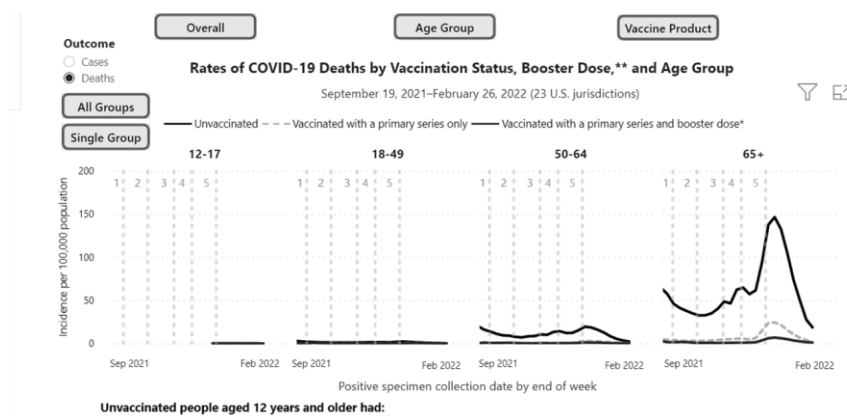
203. Guarino & McGinley, *supra* note 183.

204. Compare CDC, *supra* note 201 (using 65 as the demarcation age), with Guarino & McGinley, *supra* note 183 (using 75 as the demarcation age).

205. CDC, *supra* note 201.

206. *Id.*

GRAPH 5



3. CHRISTMAS PRESENTS

Of perhaps the greatest significance is that spikes in the older groups occurred beginning Christmas, 2021 where those over sixty-five suffered a small uptick in deaths, even in the boosted category.²⁰⁷ By February, however, the numbers reverted to nil.²⁰⁸ From this graph it is impossible to determine if that uptick is statistically significant.

The graphs also suggest a temporal secular trend, meaning something extrinsic to age and vaccination may be accounting for the excess deaths during this time period.²⁰⁹ It is well-known that heart attacks and elder deaths spike in the Christmas period.²¹⁰ Even the Washington Post knows that. Some of these deaths are surely cardiac-related which, decidedly, is influenced by age.²¹¹ The other apparent reason for the normal Christmas spike is an apparent general delay in seeking treatment around this time,²¹² which may have influenced excess deaths in the

207. *Id.*

208. *Id.*

209. *Id.*

210. Ariana Enjung Cha, *Mystery of Spike in Deaths Between Christmas and New Years, Gets Curiouser and Curiouser*, WASH. POST (Dec. 22, 2016), <https://www.washingtonpost.com/news/to-your-health/wp/2016/12/22/mystery-of-spike-in-deaths-between-christmas-and-new-years-gets-curioser-and-curioser/>; David Phillips, Gwendolyn E. Barker, & Kimberly M. Brewer, *Christmas and New Year as Risk Factors for Death*, 71 SOC. SCI. & MED. 1463 (2010).

211. *Id.*

212. See generally David P. Phillips, Jason R. Jarvinen, Ian S. Abramson, & Rosalie R. Phillips, *Cardiac Mortality is Higher Around Christmas and New Year's Than at Any Other Time: The Holidays as a Risk Factor for Death*, 110 CIRCULATION 3781 (Dec. 2004).

elderly in COVID-19 cases, especially among the vaccinated and boosted. This group, believing they are well-protected, may have deferred seeking treatment, as the human interest stories appended to the Washington Post “study” attest, and it was the delay that resulted in the uptick.²¹³

4. BOOSTERING WORKS

We also should recall that waning vaccination in the elderly is amply addressed by boosting.²¹⁴ A very large and well-carried out study recently demonstrated that boosting restores vaccine efficacy, even in the elderly.²¹⁵ The results were confirmed in other studies, with an Israeli study confirming the significant effects of boosting in those over sixty – even regarding Omicron.²¹⁶

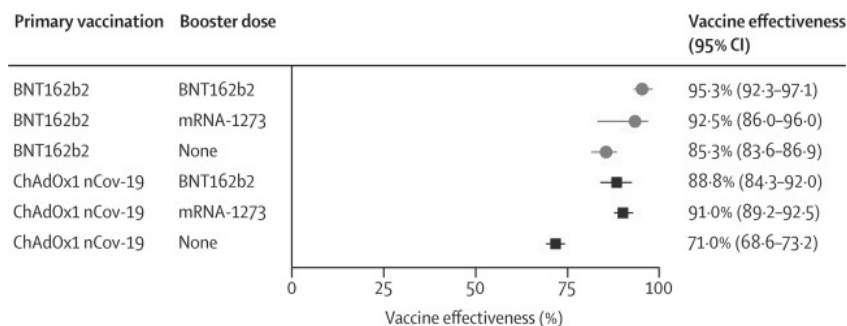
213. *Id.*

214. See Christina Menni, Anna May, Lorenzo Polidori, Panayiotis Louca, Jonathan Wolf, Joan Capdevila, Christina Hu, Sebastien Ourselin, Claire J. Steves, Ana M. Valdes, & Tim D. Spector, *COVID-19 vaccine waning and effectiveness and side-effects of boosters: a prospective study from the ZONE COVID study*, THE LANCET (Apr. 8, 2022), [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(22\)00146-3/fulltext#:~:text=The%20effectiveness%20against%20infection%20of,people%20younger%20than%2055%20years](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00146-3/fulltext#:~:text=The%20effectiveness%20against%20infection%20of,people%20younger%20than%2055%20years).

215. *Id.*

216. Nick Andrews, Julia Stowe, Freja Kirsebom, Charlotte Gower, Mary Ramsay, & Jamie Lopez Bernal, *Effectiveness of BNT162b2 (Comirnaty, Pfizer-BioNTech) COVID-19 Booster Vaccine Against COVID-19 Related Symptoms in England: Test Negative Case-Control Study*, MEDRxIV (Nov. 15, 2021), <https://doi.org/10.1101/2021.11.15.21266341>; Yinon M. Bar-On, Yair Goldberg, Micha Mandel, Omri Bodenheimer, Laurence Freedman, Nir Kalkstein, Barak Mizrahi, Sharon Alroy-Preis, Nachman Ash, Ron Milo, & Amit Huppert, *Protection of BNT162b2 Vaccine Booster Against COVID-19 in Israel*, 385 NEW ENG. J. MED. 1393 (2021).

FIGURE 2: EFFECTIVENESS AGAINST INFECTION OF HOMOLOGOUS AND HETEROLOGOUS BOOSTER DOSES IN INDIVIDUALS AGED FIFTY-FIVE YEARS OR OLDER (BNT162B2=PFIZER; CHADOX1= OXFORD/ASTRAZENEC; MRNA-1273=MODERNA)



The graph shows the efficacy of three primary vaccines through the Delta surge.²¹⁷ Comparing primary doses using the Pfizer vaccines and Oxford Astra Zeneca, the effectiveness registered 92.5 percent and 95.3 percent respectively (for Pfizer), and eighty-nine percent and ninety-one percent for (Oxford/Astra Zeneca) as a primary dose, followed by boosters of Pfizer and Moderna respectively.²¹⁸ When no booster was administered, the effectiveness was 85.3 percent where Pfizer was the initial dose, and seventy-one percent where Oxford/As-tra-Zeneca was the primary vaccine.²¹⁹

PART IV. DISCRIMINATORY POLICY AFFECTS THE ELDERLY—AND THE YOUNG

A. Past Imperfect—The Policy That Caused Excess Deaths

Sadly, these findings and facts have not translated into good policy. Instead, we have continued focus on “protecting” (i.e., paternalizing or patronizing) the elderly, and fodder to support a claim that the risk benefit for younger people provides a basis for choosing not to vaccinate, thereby causing more deaths.²²⁰

217. Menni, *supra* note 214., at 1007.

218. *Id.* at 1006–7.

219. *Id.* at 1006–7.

220. HEALTH INEQUITY, *supra* note 2, at 113. See also *Mental Health*, *supra* note 9.

Shockingly, at the outset of the epidemic, half the states had ventilator policies with age criteria.²²¹ Alabama and Washington²²² had specific age exclusions.²²³ The Alabama policy was created a decade ago during the H1N1 pandemic and allowed conditions like profound intellectual disabilities and severe dementia to be part of the decision-making criteria.²²⁴ These outdated policies were implemented for COVID-19, and were not resolved until late March and early April.²²⁵ Denying ventilators for the first three months of the epidemic arbitrarily based on age, of course, artificially inflated the age-COVID-19 connection²²⁶, feeding the trope that COVID-19 was a disease of the elderly.

Other age-related discriminatory policies were reported in eleven states and the District of Columbia.²²⁷ These included discriminatory crisis standard of care plans, no-visitor policies, and inaccessible testing that violate federal disability rights laws, including the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act (Section

221. Armand H. Matheny Antommarrina, et al., *Ventilator Triage Policies During the COVID-19 Pandemic at U.S. Hospitals*, 173 ANNALS OF INTERNAL MED. 169 (Aug. 2020).

222. Associated Press, *Alabama Resolves Complaint Over Old Ventilator Guidelines*, TUSCALOOSA NEWS (Apr. 8 2020) <https://www.tuscaloosanews.com/story/news/state/2020/04/08/alabama-resolves-complaint-over-old-ventilator-guidelines/1386066007/>; see Sheri Fink, *U.S. Civil Rights Office Rejects Rationing Medical Care Based on Disability, Age*, N.Y. TIMES (Mar. 28, 2020), <https://www.nytimes.com/2020/03/28/us/coronavirus-disabilities-rationing-ventilators-triage.html> (discussing rejecting Alabama and Washington States policies, and noting that “the director of the federal health department’s civil rights office said on Saturday that his office was opening a series of civil rights investigations to ensure that states did not allow medical providers to discriminate on the basis of disabilities, race, age or certain other factors when deciding who would receive lifesaving medical care during the coronavirus emergency.”).

223. See Press Release, U.S. Dep’t of Health and Hum. Serv. (HHS), *OCR Reaches Early Case Resolution with Alabama After It Removes Discriminatory Ventilator Triaging Guideline* (Apr. 8, 2020), <https://www.hhs.gov/about/news/2020/04/08/ocr-reaches-early-case-resolution-alabama-after-it-removes-discriminatory-ventilator-triaging.html> (reviewing that Alabama agreed to remove old ventilator triage guidelines from state websites that advocates said discriminated against the elderly and disabled.” The triage document was not a directive on handing out ventilators but a suggestion for providers in making decisions, state officials said); see also Allen S. Brett, *Rationing Ventilators During the COVID-19 Epidemic*, NEW ENG. J. MED. J. WATCH (May 12, 2020), <https://www.jwatch.org/na51486/2020/05/12/rationing-ventilators-during-covid-19-epidemic>.

224. Associated Press, *supra* note 222.

225. Associated Press, *supra* note 222; HHS, *supra* note 223.

226. Fink, *supra* note 222.

227. *HHS-OCR Complaints Re COVID-19 Medical Discrimination*, THE ARC (Mar. 23, 2020), <https://thearc.org/resource/hhs-ocr-complaint-of-disability-rights-washington-self-advocates-in-leadership-the-arc-of-the-united-states-and-ivanova-smith/>.

504), and Section 1557 of the Affordable Care Act (ACA).²²⁸ ‘No Visitor Complaints’ were raised in Connecticut, Texas, and the District of Columbia,²²⁹ with a focus on shutting up the elderly—those in most need of companionship and stimulation, which in turn caused additional cases of dementia and ultimately death²³⁰ and even requests for euthanasia due to fear of the consequences of another lockdown.²³¹

Deleterious policies were also implemented in nursing homes, old age homes, and venues housing the elderly, again resulting in more harm, as Professor Cerminara brilliantly demonstrates in her recent article.²³² Various governments used the press to fear-monger the elderly, including the scare tactics of former Prime Minister of Israel, Naftali Bennet in “Operation Grandma,” in 2020.²³³ The social pressure on the elderly continued at least into December of 2021.²³⁴ As Bennet advised in designing COVID Policy: “Focus measures on elderly” goes the mantra “and leave the rest of us alone,” said one Israeli politician regarding designing future COVID Policy.²³⁵

We are vaccinated, the children are not dying, so best pensioners self isolate for a month or two until we get herd immunity. They don’t have to get out to earn money, and their lives are at risk so the state should help them self isolate, soldiers can bring them food and medication, doctors can do video calls so they don’t have to hang around.²³⁶

Informal advice and policy of this ilk was pervasive in Israel. The head of the panel of experts that advises the cabinet, “Prof. Ran Balicer . . . proposed considering a recommendation to senior citizens

228. *Id.*

229. *Id.*

230. HEALTH INEQUITY, *supra* note 2; *see also* Cerminara, *supra* note 28.

231. *Euthanasia in COVID*, *supra* note 40.

232. Cerminara, *supra* note 28, at 24–28.

233. Bennett Tells Israelis to Avoid Grandparents to Protect Them from Coronavirus, TIMES OF ISR., (Mar. 17, 2020), https://www.timesofisrael.com/liveblog_entry/bennett-tells-israelis-to-avoid-grandparents-to-protect-them-from-coronavirus/ (“I’m saying cautiously based on the information coming from all over the world. The death rate among older people is very high. Among those 80 years old and up, it is above one in five. One in five grandpas and grandmas who get the virus from their grandchild hugging them could die.”)

234. *See* Amos Harel, *Severity of Israel’s Omicron Wave Depends on One Metric*, HAARETZ (Dec. 24, 2021), <https://www.haaretz.com/srael-news/2021-12-24/ty-article/.premium/severity-of-israels-omicron-wave-depends-on-one-metric/0000017f-db3b-df9c-a17f-ff3b15680000> (noting the month and day of publication).

235. *Israel Reports More Than 700 New Daily Virus Cases, Over 1% Positivity Rate*, YNET, (July 13, 2021, 10:32 PM), https://www.ynetnews.com/health_science/article/hyr00y3qao.

236. *Id.*

not to go out to crowded places. . . Public Security Minister Omer Bar-Lev went one step further: Citizens over the age of 60 should, in his opinion, stay home in light of the new situation.”²³⁷

B. Elder Discrimination Creates Vaccine Aversion in the Young

The emphasis on COVID-19 as a disease of the elderly, and the lack of focus both on the high incidence and significance of serious cases in the young translated into the younger population being far more vaccine averse.²³⁸ Various surveys confirmed that the younger groups are not being vaccinated at rates comparable to Republicans, and White Evangelicals, who have politicized the epidemic.²³⁹

The reasons vary, but all encompass a risk balancing analysis, where because the perception of the risk of disease is so low, that the risks incident to vaccination must be even lower to be tolerable.²⁴⁰ Inaccurately characterizing the risks of disease as inordinately low militates against popular uptake of a vaccine that is feasible and efficient.

237. Harel, *supra* note 234.

238. *Why Millennials and Gen Z Aren't Getting Vaccinated—and What to Do About It*, ADVISORY BOARD (Apr. 26, 2021) [hereinafter *Millennials*], <https://www.advisory.com/daily-briefing/2021/04/26/vaccine-hesitancy> (quoting Kathleen Hall Jamieson, who states that “one reason younger adults may be hesitant about the vaccines is because most public messaging has focused on the coronavirus's threat to older adults, who typically are susceptible to more severe cases of Covid-19 than younger adults.”).

239. See *infra* Figure 3.

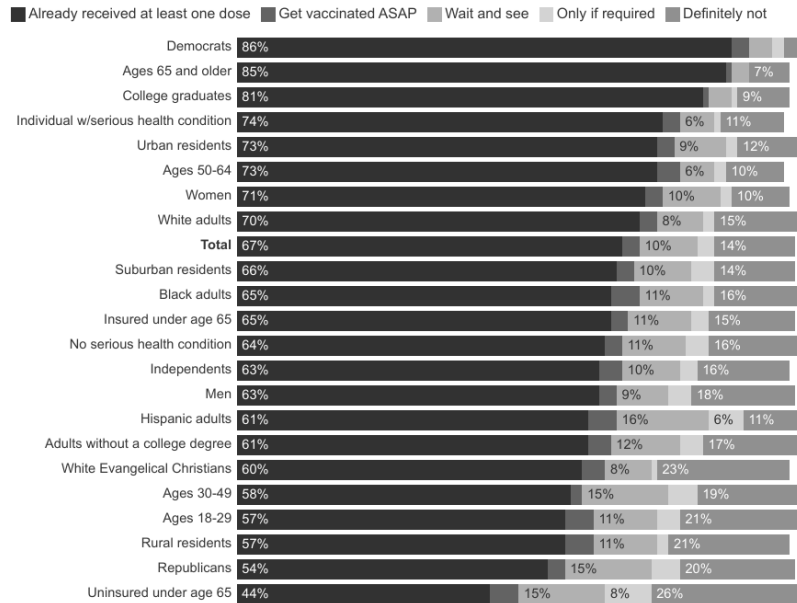
240. See Marta Caserotti, Paolo Girardi, Enrico Rubaltelli, Alessandra Tasso, Lorella Lotto, & Teresa Gavaruzzi, *Associations of COVID-19 Risk Perception with Vaccine Hesitancy Over Time for Italian Residents*, NAT'L CTR. FOR BIOTECH. INFO. (Jan. 7, 2021), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7788320/>.

FIGURE 3²⁴¹, ²⁴²

Figure 3

Republicans, Rural Residents, Younger Adults, And Uninsured Lag In Vaccine Uptake

Have you personally received at least one dose of the COVID-19 vaccine, or not? As you may know, an FDA-authorized vaccine for COVID-19 is now available for free to all adults in the U.S. Do you think you will...?



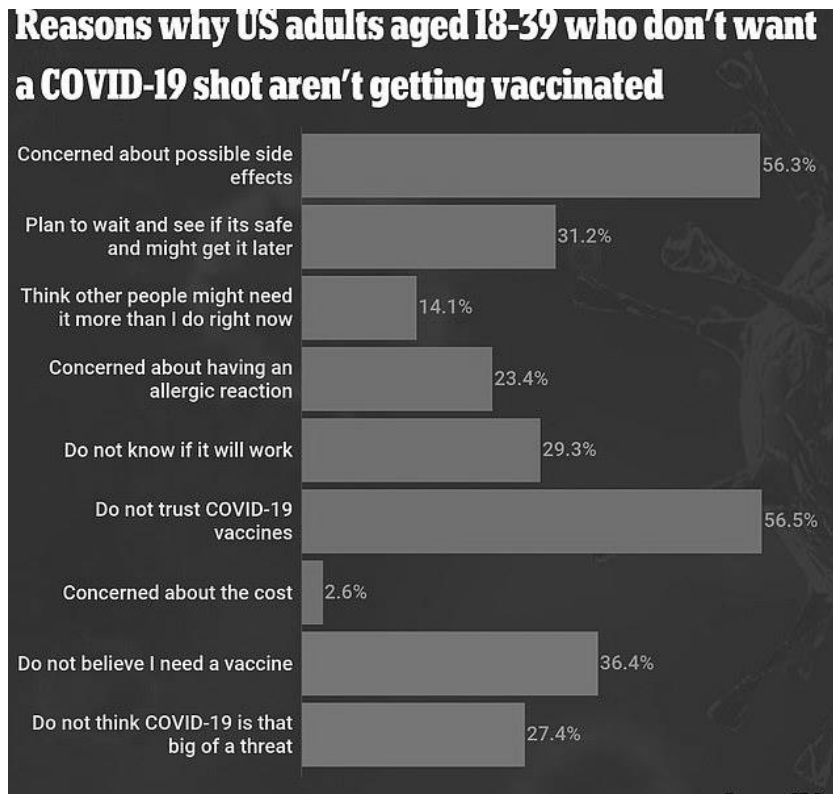
NOTE: See topline for full question wording.

SOURCE: KFF COVID-19 Vaccine Monitor (July 15-27, 2021) • Download PNG

KFF COVID-19
Vaccine Monitor

241. Ashley Kirzinger, Grace Sparks, & Liz Hamel, *Is the COVID vaccine dangerous? Many unvaccinated Americans, mostly Republicans, falsely believe the vaccine is more hazardous than the coronavirus, survey finds*, GENETIC LITERACY PROJECT (Aug. 5, 2021), <https://geneticliteracyproject.org/2021/08/05/is-the-covid-vaccine-dangerous-many-unvaccinated-americans-mostly-republicans-falsely-believe-vaccine-is-more-hazardous-than-the-coronavirus-survey-finds/>.

242. *Id.*

FIGURE 4²⁴³

C. *Impact on the Black Population*

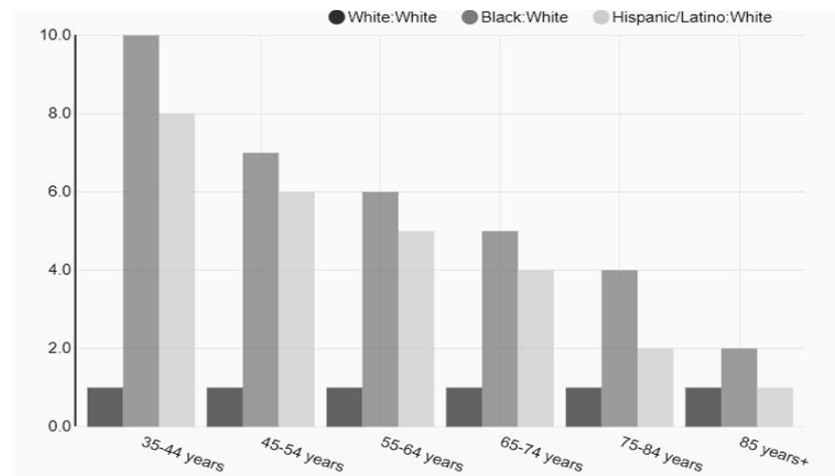
Perhaps this false and self-protective mantra regarding age does most harm to the Black population. One CDC study reported that “Black Americans are most likely to not want the vaccine, per the survey, with nearly a third—32.3 percent—reporting they had no intention of getting the vaccine.”²⁴⁴ And yet it is this cohort that is most endangered at younger ages.²⁴⁵

243. Mansur Shaheen, *A QUARTER of American Adults Under 40 Do Not Plan to Get a COVID-19 Shot Due Lack of Trust in Vaccines and Fears of Potential Side Effects*, DAILY MAIL (June 21, 2021, 9:10 PM) <https://www.dailymail.co.uk/health/article-9709599/Nearly-25-American-adults-40-not-plan-COVID-19-vaccine.html>.

244. *Id.*

245. *Id.*

GRAPH 6



Source: CDC data from 2/1/20–6/6/20 and 2018
 versus Population Estimates for USA

BROOKINGS

According to the Brookings Institute, the mortality disparity between White and Black population over eighty-five is only 1.5 to 1.²⁴⁶ However, between ages 35-44 Blacks are about ten times more likely to die.²⁴⁷

Part V: Conclusion: Maiming by Framing

Various national COVID-19 policies imposed or talked of imposing excessively draconian lockdowns on the elderly, ostensibly on the ground of protecting them.²⁴⁸ Israel tried to use an arbitrary cut off of 67 to restrict the movement of elderly, i.e., to lock them up.²⁴⁹ That age

246. Tiffany N. Ford, Sarah Reber, & Richard V. Reeves, *Race Gaps in COVID-19 Deaths are Even Bigger than They Appear*, BROOKINGS INST. (June 16, 2020), <https://www.brookings.edu/blog/up-front/2020/06/16/race-gaps-in-covid-19-deaths-are-even-bigger-than-they-appear/>.

247. *Id.*

248. Elfriede Derrer-Merk, Maria-Fernanda Reyes-Rodriguez, Ana-Maria Salazar, Marisol Guevara, Gabriela Rodríguez, Ana-Maria Fonseca, Nicolas Camacho, Scott Ferson, Adam Mannis, Richard P. Bentall, & Kate M. Bennett, *Is Protecting Older Adults from COVID-19 Ageism?*, 78 J. SOC. ISSUES 900, 900 (2022).

249. *Israel may order elderly into full lockdown—report*, TIMES OF ISR. (Mar. 23, 2020, 4:19 PM), <https://www.timesofisrael.com/israel-may-order-just-elderly-to-stay-at-home-instead-of-full-lockdown-report/>.

has no epidemiological significance.²⁵⁰ Statistics are analyzed in five-year increments. Interestingly, and obviously not coincidentally, sixty-seven is the Israeli mandatory retirement age;²⁵¹ the age of people who generally don't contribute to the economy. This kind of attitude fostered the dementia-related deaths discussed above.²⁵² It also evidences a clear lack of foresight. In the next thirty years, this age group will comprise a significant portion of the demographics.²⁵³

COVID epidemic's pariah-tization of the elderly subjected them to greater restrictions and fear-mongering.²⁵⁴ This adverse policy included, denying resources, including ventilators and possibly vaccines, imposing lockdowns of first resort on this group.²⁵⁵ It would seem that these responses were based on a youthful sense of invulnerability, a need for control in the younger group, a biased interpretation of vaccine-efficacy data based on the stereotype of reduced immune function in the young, and a belief that the elderly are disposable.²⁵⁶ These untoward beliefs contributed to COVID deaths, as well as causing increased dementia deaths from those deprived of social contact or fearful future lockdowns.²⁵⁷ Advocacy of the "fair-inning" medical ethics principle, that the aged have already lived a while, so let's give the youngsters a go, manifest in abject discrimination and also contributed to elder

250. See generally S.A. Reijneveld, *Age in Epidemiological Analysis*, 57 J. EPIDEMIOL. CMTY. HEALTH 395, 397 (2003).

251. *Post Retirement Age Service Extension*, GOV. IL: CIVIL SERVICE COMMISSION (Aug. 8, 2015), https://www.gov.il/en/departments/policies/csc_post_retirement_age_service_extension.

252. Meredith, *supra* note 43.

253. *Israel*, AARP International (2019), <https://www.aarpinternational.org/initiatives/aging-readiness-competitiveness-arc/israel>.

254. See Lena K. Makaroun, Rachel L. Bachrach, & Ann-Marie Rosland, *Elder Abuse in the Time of COVID-19—Increased Risks for Older Adults and Their Caregivers*, 28(8) AM. J. GERIATRIC PSYCHIATRY 876–880 (2022).

255. See Patricia Barnes, *Sentencing Older COVID-19 Patients To Death By Triage*, FORBES (July 3, 2020), <https://www.forbes.com/sites/patriciabarnes/2020/07/03/sentencing-older-covid-19-patients-to-death-by-triage/?sh=6f856141276b>.

256. See Jeff Brandt, Natalie Galucia, Nancy Morrow-Howell, & Emma Swinford, *Ageism in the time of coronavirus*, HARVEY A. FRIEDMAN CTR. FOR AGING (Apr. 2, 2020), <https://publichealth.wustl.edu/ageism-in-the-time-of-coronavirus/>.

257. See John L. Hick, Dan Hangling, Matthew K. Wynia, & Eric Toner, *Crisis Standards of Care and COVID-19: What Did We Learn? How Do We Ensure Equity? What Should We Do?*, NAT'L LIBR. OF MED.: NAM PERSP. (Aug. 30, 2021), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8486425/>; Aurora Curelaru, Sarah J. Marzolf, Jean-Claude K.G. Provost, & Helen H.H. Zeon, *Social Isolation in Dementia: The Effects of COVID-19*, NAT'L LIBR. OF MED: J. NURSE PRACTITIONERS (May 24, 2021), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8504102/>.

deaths and younger disease.²⁵⁸ I suggest that stereotyping and bias contributed to governmental policy, which in turn contributed to the death toll.

The statement that older people are more at risk misrepresents the true state of affairs. At risk of what? Disease or death? Hospitalization or increased spread? Older people with underlying disease or healthy older folks? The misrepresentation of data resulted in a misperception of risk in the younger,²⁵⁹ and a reluctance to vaccinate,²⁶⁰ which in turn resulted in additional spread and greater hospitalization.²⁶¹

As infection in the younger unvaccinated cohort mounts, the incidence of serious disease surely follows.²⁶² This group also serves as the major vector of spread.²⁶³ Perhaps worse, is that the younger, unvaccinated cohort, now serves as the laboratory for COVID-19 to mutate.²⁶⁴ Even young, asymptomatic carriers, who may not personally be at risk, provide the breeding ground for the virus to mutate, which it has with increasing rapidity.²⁶⁵ Further, the geometric progression of the disease, threatens to overwhelm the health and hospital system.²⁶⁶

258. See Meredith, *supra* note 43; see generally Rivlin, *supra* note 58.

259. *Millennials*, *supra* note 238.

260. *Id.*

261. Mitch Smith, Guilia Heyward, & Sophie Kasakove, *Why Young Adults Are Among The Biggest Barriers to Mass Immunity*, N.Y. TIMES (June 8, 2021), <https://www.nytimes.com/2021/06/28/us/covid-vaccine-immunity.html>.

262. Laura Cooper & Sabrina Siddiqui, *Young Americans Aren't Getting Vaccinated, Jeopardizing COVID-19 Fight*, WALL ST. J. (July 11, 2021, 5:31 AM), <https://www.wsj.com/articles/young-americans-arent-getting-vaccinated-jeopardizing-covid-19-fight-11625995802>.

263. See Meridith Deliso, *What's Fueling COVID-19 Vaccine Hesitancy on Young Adults?*, ABC NEWS (July 16, 2021, 4:00 AM), <https://abcnews.go.com/Health/young-adults-remain-hesitant-covid-19-vaccine/story?id=78828317>.

264. *Id.*

265. *Id.*

266. Harel, *supra* note 234; see Hallie Miller & Bryn Stole, *Maryland Gov. Hogan issues executive orders to fight COVID surge, stops short of mask, vaccine mandates*, BALTIMORE SUN (Jan 4, 2022, 6:48 PM), <https://www.baltimoresun.com/coronavirus/bs-md-hogan-state-of-emergency-30-days-20220104-q7aqvfhrzaivhcks3gpgdnopy-story.html> ("As patient volumes surge at Maryland hospitals amid soaring COVID-19 infections statewide, Gov. Larry Hogan implemented a temporary state of emergency Tuesday as well as other executive orders designed to give the state government more powers and tools to combat the health crisis."); Judy George, *CDC Doubles Down on Guidance; Kids' COVID Cases Jump 64%; Outbreak in Antarctica*, MEDPAGE (Jan. 5, 2022), <https://www.medpagetoday.com/infectiousdisease/covid19/96502> (quoting an American Academy of Pediatrics report that state that more than 325,000 child COVID-19 cases were reported for the week ending December 30, 2021, a 64% increase over the previous week and almost double the counts from 2 weeks earlier).

Linguistics change biases. So, rather than saying the aged are especially vulnerable, we might say that [all] underlying risk factors increase risk of disease. This would include age, but not highlight it. Rather than calling higher-vaccine dose, “high-dose vaccine”, let’s call that “regular” vaccine and label vaccines for the younger group “low dose.” Instead of calling for boosters for the aged, let’s call for stage I and stage II level vaccination. And while we are at it, instead of saying that the immunity of the aged is waning (a normal consequence of aging), why don’t we make COVID status in the aged the new normal, and call the younger group “hyper-immune?”²⁶⁷

267. Indeed, the cytokine storms that precipitated treatment by dexamethasone and supported use of hydroxychloroquine and ivermectin—were generated by these aberrant responses, a characteristic of the “hyper-immune” young. *See generally, All Things Considered, How Ivermectin Ended Up In The Middle Of A COVID-19 Controversy*, NPR (Sept. 21, 2021, 4:41 PM), <https://www.npr.org/2021/09/21/1039393874/how-ivermectin-ended-up-in-the-middle-of-a-covid-19-controversy>.

