



## Position Paper

### The Science and the Ethics Regarding the Risk Posed by Non-Vaccinated Individuals

Data from Israel and around the world attest to the effectiveness of the Pfizer vaccine in preventing serious illness and death [1, 2]. It seems that the vaccine not only reduces the risk of developing a serious illness requiring hospitalization among those who have contracted the virus, but also improves the rate of recovery and reduces the risk of requiring ventilation [3, 4]. These data highlight the significant protection against COVID19 that the vaccine provides to at-risk populations.

**Nevertheless, a question arises as to the impact of unvaccinated persons on vaccinated persons:** whether, if at all, unvaccinated persons put vaccinated persons at risk, either directly (through contagion) or indirectly (by prolonging the pandemic or by being a burden on the healthcare system).

#### The scientific aspects

- a. **A. The rate of vaccinated individuals among individuals with verified COVID19 cases is close to and even identical to their relative proportion in the population** [5, 6], even when sorted by age group, and even though the regulations of the Ministry of Health encourage a large number of tests among the unvaccinated [7].
- b. A number of studies and publications [8-10], as well as official documents from the U.S. Centers for Disease Control [11] and from Public Health England [12], show that the **viral load in vaccinated and unvaccinated individuals is similar**. Since viral load is the most significant factor in the ability to infect, it seems that there are no significant differences in the chances of infecting others between vaccinated and unvaccinated [13]. Beyond that, it seems that even vaccinated persons can be super-spreaders who infect many other people, among them other vaccinated persons [10, 14, 15].
- c. Studies show that the rate of transmission of asymptomatic persons is 20 times lower than that of symptomatic patients (who are tested and isolated anyway, regardless of their vaccination status), so that the likelihood of an asymptomatic healthy person who does not know that they carry the virus to infect another person is significantly lower than 1% [16]. Considering the rate of verified cases in the population, the chance of being infected from a random encounter (as opposed to contact with household members) is about 1 in tens of thousands (the product of the percentage of contagious patients in the population [6] and the rate of asymptomatic contagion [16]).  
These findings show that despite the apparent effectiveness in protecting against severe illness, **the effectiveness of the vaccination in preventing transmission and contagion is not significant and may even be negligible**.  
From here it follows that an unvaccinated individual is **not fundamentally different when it comes to the direct risk to transmit the virus compared to a vaccinated individual**.
- d. Countries with the highest vaccination rates, up to 80-90% of the population, still experience significant epidemic waves. Iceland, for example, where 81% of the total population have been vaccinated (compared to 67% in Israel), is currently experiencing the highest wave of morbidity it has experienced since the onset of the pandemic [17]. To illustrate, **in order to reach Iceland's vaccination level, Israel would have to vaccinate another 1.4 million citizens**, well over the million of currently unvaccinated citizens (and even then, as mentioned, a new wave of the pandemic could not be prevented.)  
These data show that the vaccination of the remaining population will not prevent the next wave, as it seems that these waves continue to occur despite high rates of vaccination. Therefore, unvaccinated persons **are not what causes the pandemic to continue**, nor do they endanger the vaccinated in that aspect. In fact, it seems that the hope of eradicating COVID19 by achieving "herd immunity" through vaccination of a high-enough percentage of the population has been proven to be unrealistic.
- e. At the time of writing this, COVID19 hospital beds make up about 3% of hospital beds in Israel [6], and about 30% of patients in critical condition are unvaccinated [6]. In addition, the **lion's share of those**



**who have not been vaccinated are young persons** [6], whose likelihood of creating excessive burdens on the system are extremely low. The number of unvaccinated individuals in Israel is significantly lower than one million, as this population includes many who cannot or should not get vaccinated:

1. "Hidden" recovered patients (according to serological studies [18], the number of recovered patients seems to be significantly higher than what has been previously estimated.)
2. Citizens who are unable to receive the vaccine due to medical reasons.
3. Population groups about whom there are fundamental questions regarding the need to vaccinate—namely children and youth, about whose vaccination there are reservations in a number of countries such as Germany and England.
4. Citizens who do not reside in Israel.

Therefore, given the combination of a lower-than-reported number of "unvaccinated individuals" and good protection factors, **the indirect risk of overload or "collapse" of hospitals is extremely low.**

**There is no scientific evidence whatsoever supporting the claim that non-vaccinated individuals are risking the public's health in any way more than vaccinated people** or that their lack of being vaccinated is a factor that facilitates the continuation of the pandemic or that causes a threat of collapse to the healthcare system. **Vaccination should be treated as a primary means for providing personal protection** against severe illness or death, especially for persons at high risk.

Again, it should be emphasized that even in the face of the risk of contagion, from vaccinated or from non-vaccinated individuals, the vaccinated individuals have their own umbrella of protection, which continues to protect them from **severe illness** regardless of the person who transmitted the virus to them.

### The ethical aspects

Unfortunately, despite the clear scientific data indicating a lack of increased risk caused by those who have chosen to not be vaccinated, there has been an aggressive public discourse in Israel in recent weeks, with the blatant encouragement of public personalities [20] and elected officials [21, 22], blaming unvaccinated individuals as a group perpetuating the pandemic and endangering others, calling for them to be "labelled" and segregated and even for taking harsh measures against them, including the proposed confinement of law-abiding civilians to their homes, depriving children of education or even financial penalties.

That discourse, in addition to lacking scientific or factual basis, is ethically, morally and socially flawed, and also has inherent immediate and long-term risks to public health and to the social fabric in Israel.

First, the unrestrained attack and incitement against a citizenry that includes children and law-abiding young persons **stands in unprecedented ethical contradiction to the fundamental values of medicine** regarding freedom of choice in anything concerning medical treatments, and might lead to a dangerous and slippery slope. Physicians are well acquainted with cases in which patients who, immediately following hospitalization due to respiratory exacerbation of chronic lung disease, go out to smoke, or who continue to gain weight after a heart attack, or who do not get the seasonal flu vaccine (about 80% of the public) even though they have significant risk factors. The mission of the healthcare system is to serve the public, and it must not exercise any consideration that would restrict individual liberty with regard to any matter.

Second, the accumulated experience over decades in public-health management has shown that coercion and threats do not serve as a motivating factor for fostering healthy behaviours, and that **public-health policy is effective only when it is based on education and dialogue.** Aggressive discourse might result in the loss of trust of significant sectors of the public, and lead to lowering the rates of other routine vaccinations that are of crucial importance.

And third, the implicit message that emerges from the existing discourse, suggesting that unvaccinated people, unlike vaccinated people, pose a risk to others, is actually most dangerous to the vaccinated persons themselves, as it **fosters the illusion that vaccination protects against contagion**, and thus encourages careless behaviors of vaccinated persons in public spaces shared with high-risk populations.



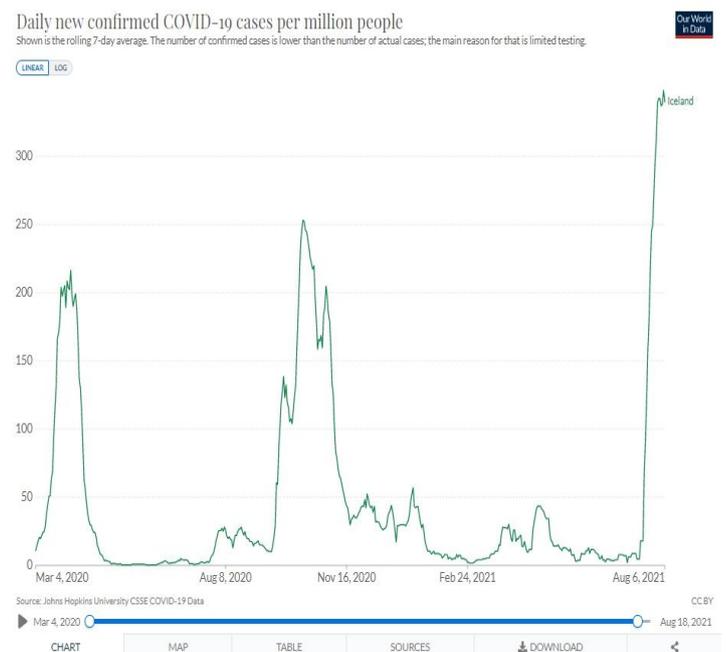
**Medicine is not only a science; it is also intertwined into the social, ethical and moral fabric.** The aforementioned discourse that has been taking place carries tremendous ethical significance. The cries against those who have not yet been vaccinated sometimes amount to incitement and encouragement of physical violence. We should be able to expect that in the twenty-first century, the ugly phenomena that accompanied pandemics in the middle ages, such as blaming minorities for the spread of the illness, shall be avoided.

In a democracy, in whose core are human dignity and human rights, there is no room for calls and incitement of this kind. **The right of society to protection prevails over the right of the individual to freedom only when there is a real danger** (as is done in the case of violent psychotic patients, or in the very different case of prisoners). **It is wrong to restrict a person's liberty due to a remote potential risk** (for example, the case of an AIDS patient, a person returning from a country with a high rate of tuberculosis or tropical diseases, or, to give a very different example, a released prisoner with a high chance of reoffending).

### Summary

**We call for continued effort to persuade and make information accessible to members of the elderly population or those who are at high risk but have not yet been vaccinated** with the first two doses—and for engaging in that effort while using the accepted and proper tools of medicine: transparency, dialogue on even terms, and respect for the patients, their culture and their beliefs. We are opposed to any attempt to exert pressure through “benefits” or sanctions imposed on unvaccinated individuals, especially among young people or children, who are not at high risk of COVID19 and for whom the safety of the vaccine is still under examination—all in the light of evidence indicating absence of higher risk caused by non-vaccinated individuals. **The choice of whether to get vaccinated should remain in the hands of every person, according to their understanding and values.**

We urge the government **to immediately call for an end to the aforementioned aggressive discourse** while giving explanations to the public that are scientific and accessible that highlight that individuals who have not yet been vaccinated **are not a factor that perpetuates the pandemic and endangers the public.** The government must prepare for the long-term engagement with COVID19 as an endemic phenomenon, and strengthen the healthcare system in hospitals and in the community to succeed in this task.





1. Effectiveness of Covid-19 Vaccines against the B.1.617.2 (Delta) Variant. <https://www.nejm.org/doi/full/10.1056/NEJMoa2108891>
2. Ministry of Health, centralized immunization data. [https://www.gov.il/BlobFolder/reports/vaccine-efficacy-safety-follow-up-committee/he/files\\_publications\\_corona\\_two-dose-vaccination-data.pdf](https://www.gov.il/BlobFolder/reports/vaccine-efficacy-safety-follow-up-committee/he/files_publications_corona_two-dose-vaccination-data.pdf)
3. Virological and serological kinetics of SARS-CoV-2 Delta variant vaccine-breakthrough infections: a multi-center cohort study. <https://www.medrxiv.org/content/10.1101/2021.07.28.21261295v1>
4. Reduction in COVID-19 Patients Requiring Mechanical Ventilation Following Implementation of a National COVID-19 Vaccination Program - Israel, December 2020 – February 2021. <https://www.cdc.gov/mmwr/volumes/70/wr/pdfs/mm7009e3-H.pdf> 5.
5. Verification table following vaccination. <https://data.gov.il/dataset/covid-19/resource/9b623a64-f7df-4d0c-9f57-09bd99a88880>
6. Ministry of Health, Data dashboard. <https://datadashboard.health.gov.il/COVID-19/general>
7. All the information about isolation—who should be isolating, shortening of isolation, appeals, isolation fees and leaving isolation exceptionally.
8. Vaccinated and unvaccinated individuals have similar viral loads in communities with a high prevalence of the SARS-CoV-2 delta variant. <https://www.medrxiv.org/content/10.1101/2021.07.31.21261387v1>
9. Dane County COVID-19 Data. [https://publichealthmdc.com/documents/2021-07-29\\_data\\_snapshot.pdf](https://publichealthmdc.com/documents/2021-07-29_data_snapshot.pdf)
10. Covid clusters among the vaccinated are killing our back-to-normal dreams. <https://www.technologyreview.com/2021/07/30/1030390/vaccinated-getting-covid-delta-mask-mandate-superspreaders/>
11. Improving communications around vaccine breakthrough and vaccine effectiveness, CDC. [https://fm.cnb.com/applications/cnb.com/resources/editorialfiles/2021/07/30/CDC\\_slides.pdf](https://fm.cnb.com/applications/cnb.com/resources/editorialfiles/2021/07/30/CDC_slides.pdf)
12. SARS-CoV-2 variant s of concern and variants under investigation in England. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1009243/Technical\\_Briefing\\_20.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009243/Technical_Briefing_20.pdf)
13. CDC: Delta Variant Infections in Vaccinated People May Be as Transmissible as in Unvaccinated. <https://www.voanews.com/covid-19-pandemic/cdc-delta-variant-infections-vaccinated-people-may-be-transmissible-unvaccinated>
14. The committee for third dose of COVID19 vaccinations elderly patients. [https://www.gov.il/BlobFolder/reports/vaccine-priorities-board/he/files\\_publications\\_corona\\_vaccine-priorities-board-22072021.pdf](https://www.gov.il/BlobFolder/reports/vaccine-priorities-board/he/files_publications_corona_vaccine-priorities-board-22072021.pdf)
15. From International Reports – cases among immunized medical teams and risk factors for immunization/serious illness. [https://www.gov.il/BlobFolder/reports/vpb-02082021/he/files\\_publications\\_corona\\_vaccine-priorities-board-02082021-1.pdf](https://www.gov.il/BlobFolder/reports/vpb-02082021/he/files_publications_corona_vaccine-priorities-board-02082021-1.pdf)
16. Household Transmission of SARS-CoV-2 A Systematic Review and Meta-analysis. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2774102>
17. Our World In Data. <https://ourworldindata.org/covid-cases>
18. Serological survey for the invention of antibodies against corona in children January 2020 - March 2021
19. 2019 Israel Statistical Yearbook. [https://www.cbs.gov.il/he/publications/DocLib/2019/Shnaton70\\_mun.pdf](https://www.cbs.gov.il/he/publications/DocLib/2019/Shnaton70_mun.pdf)
20. Put an end to the submissive attitude toward those who refuse to get vaccinated. <https://news.walla.co.il/item/3453464>
21. Those who refuse the vaccine are a ticking time bomb. <https://www.ynet.co.il/news/article/r10huiffj>
22. Bennett Speech. <https://www.kan.org.il/item/?itemid=110105>



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An expert in epidemiology and molecular biology, served as a consultant to the national health basket public committee and Head of Pharmacoeconomics Department, Israeli Center for Technology Assessment in Health Care at the Gertner Institute.



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### Dr. Michal Hemo Lotem

Pediatrician, Entrepreneur and author on leadership at medical futurism. Served as Vice President of Innovation at the Sheba Medical Center, and as a member of the Prime Minister's Advisory Council. Founded Beterem - Safe Kids Israel and OSHEYA - Women Lead Wellness. Received the Prime Minister's special Award for contribution to children.



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Professor of Medicine in the Department of Epidemiology and Preventive Medicine, Specialist in Pediatrics and Clinical Microbiology. Director of the Microbiological Laboratory at Sourasky Medical Center Tel Aviv, Treasurer of the Israeli Association for Infectious Diseases.



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Professor Emeritus of Professional Ethics and Philosophy at Tel Aviv University. Laureate of the Israel Prize for Philosophy. Member of the European Academy of Sciences and Arts. Wrote dozens of state and public codes of ethics, including the military code of ethics, as well as serving as a member of several national public committees.



### Prof. Elian Alkrinawi

Professor of Social Work, served as president of the Achva College, head of the Department of Social Work at Ben-Gurion University and as dean of the School of Social Work at Memorial University in Canada. Killam Award winner and beacon lighter at the 2013 Independence Day ceremony.



### Prof. Amnon Lahad

Specialist in Family Medicine (ISR) and Public health (US). Head departments of Family Medicine Hebrew University & Clalit Health Services, Jerusalem, Israel. Vice Dean Academia – Family medicine, Hebrew University. Chairman of the National Council for the Health of the Community. Active family physician in Jerusalem.



### Prof. Mira Barak

Professor of Medical Sciences, head of Medical Laboratory Sciences at Zefat Academic College. Managed the R&D division in Carmel Hospital, Director of Haifa and Western Galilee Central Laboratories in Clalit Health Services, founded and managed numerous clinical laboratories, including the central lab of Clalit, the Corona lab in the Northern region, and the designated corona lab at Ben Gurion airport.



### Prof. Retsef Levi

Professor of Operations Management at MIT School of Management. An international expert in safety, risk management, design and optimization of health systems and drugs manufacturing systems. He is leading several large-scale research collaborations across the world with leading industry enterprises and government organizations. He has consulted multiple state governments during the COVID-19 pandemic.



### Prof. Zvi Bentwich

Professor of Medicine, specialist in Clinical Immunology and Infectious Diseases. Served as Chief of Department of Medicine, and pioneered AIDS medicine in Israel. Currently Head of Center for Tropical Diseases and AIDS at Ben-Gurion University. President of NALA Foundation for the Control of Neglected Tropical Diseases in Developing Countries and Board Member of Physicians for Human Rights in Israel.



### Prof. Lechaim Naggan

Professor of public health and epidemiology. Previously served as deputy chief medical officer in the IDF, the dean of the Department of Health Sciences at Ben Gurion University and, subsequently, as Vice President of the University and Dean of Research and Development. Prof. Naggan was awarded a Life Achievement award by the Union of Public Health Doctors



### Dr. Orna Blondheim

Specialist in Pediatrics and Neonatology as well as Director of Health Systems. She served as the director of the Schneider Children's Hospital and served 16 years as CEO of Emek Medical Center.



### Prof. Udi Qimron

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### Prof. Emerita Rivka Carmi

Professor of Medicine, Specialist in Pediatrics, Neonatology and Medical Genetics. Served as Director of the Genetic Institute at Soroka Hospital, Dean of the Faculty of Medical Sciences at Ben-Gurion University, Chairman of the Dean of Medical Schools Association, President of Ben-Gurion University and Chairman of the Board of Universities.



### Dr. Amir Shachar

Specialist in internal medicine, cardiology, emergency medicine and health administration. Established and managed the Department of Emergency Medicine at Sheba Hospital, was deputy director of Meir Hospital and currently heading the ER at Laniado Hospital. Founded the Emergency Medicine department at Tel Aviv University.



### Prof. Aaron Ciechanover

Serves as a Distinguished Professor in the Faculty of Medicine in the Technion-Israel Institute of Technology. Awarded the chemistry Nobel Prize, as well as the Lasker Award, the Israel Prize, and the EMET Prize. Member of the US National Academies of Sciences (NAS) and Medicine (NAM), the Israeli National Academy of Sciences and Humanities, and the Pontifical Academy of Sciences at the Vatican.



### Prof. Mordechai Shani

Professor of Medicine and Medical Management, Specialist in Internal Medicine. Winner of the Israel Prize. Served twice as Director General of the Ministry of Health and Director of Sheba Hospital, as well as Chairman of the Medicines Committee. Founded and managed the School of Public Health at Tel Aviv University, and also established and managed the National Institute for Health Policy Research.



### Prof. Eran Dolev

Professor of Medicine, Military Medicine and Medical History, Specialist in Internal Medicine, Health administration and Ethics in Medicine. He served as Surgeon General of the IDF, Director of Internal Medicine Department, Chairman of the Medical Association's Ethics Bureau and Head of the International Review Board of Tel Aviv University.



### Prof Emerita Zahava Solomon

Lt. Col (ret). Recipient of the Israel Prize, the Emet Prize and The Laufer Award. Her research in Social Work and Psychiatric Epidemiology focuses on man - made trauma. Served as head of research in mental health IDF. Head of the School of Social Work and director of the Trauma I-Core, TAU and DSM-4 (APA) committee.



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Specialist in Internal Medicine and Medical Management. Lecturer in the Department of Emergency and Disaster Management at Tel Aviv University. Lt. Col. Res., One of the founders of the epidemic treatment team and evaluation programs for extreme biological incidents. Served as a hospital's deputy director, district physician, director of the primary care division in the HMOs. Medical consultant to KI research institute.



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\* The opinions expressed are the individual opinions of the members, and do not necessarily represent the opinions of the institutions in which they are affiliated with.