



- POSITION PAPER - COVID-19 VACCINATION FOR CHILDREN AND YOUTH UNDER 16 YEARS

The American Food and Drug Administration (FDA) granted [emergency approval](#) (EUA) to Pfizer's COVID-19 vaccine for persons over the age of 16. This means that so far, [the research and safety measures needed for full approval have not yet been completed](#). This emergency approval will probably be extended soon to younger age groups. It is imperative, therefore, already to discuss the implications of vaccinating these age groups. When weighing such a policy, we must take into account the following considerations: risks to children from the COVID-19 virus; potential benefits to children from the vaccine; and possible risks from the vaccine itself.

1. Risks to Children from COVID-19

Fortunately, **the risk to children from COVID-19 is minimal – even less than the risk from “ordinary” winter illnesses**. The vast majority of children who contract the disease are asymptomatic or only very slightly affected. The chances of a child becoming seriously ill and/or dying from COVID-19 are **2-3 times lower than those from ordinary seasonal influenza**. This is also true of a child's chances of being hospitalized. This statistic was validated in both [the UK](#) and [the USA](#); it shows that COVID-19 is [less of a threat to children than the flu](#). Below are the figures relating to morbidity in Israeli children:

- A. Approximately [300,000 children](#) (10% of all Israeli children) have been found to have contracted COVID-19 since the outbreak of the pandemic. Of these, 1000 (0.3%) were taken to the emergency room, and [600](#) (0.2%) were hospitalized. [Eighty percent \(80%\) had a mild](#) reaction to the virus, while 8% ([40-60](#) children) suffered from a moderate or severe infection. An absolute majority of the latter [were not hospitalized because of COVID-19](#) (in other words, [the virus was detected by chance](#) during a routine examination before admission). In actual fact, [there were relatively few cases of pediatric respiratory disease last winter](#). In Israel the number of severely ill children hospitalized during the peak of COVID-19 was about [one quarter \(1/4\) of the number of children with influenza who were admitted in January 2019](#).
- B. [Some 60 children](#) were diagnosed with PIMS (Pediatric Multisystem Inflammatory Syndrome), a rare complication of COVID-19, and [they all recovered](#).
- C. In Israel it was reported that nine children died of COVID-19. [In some of these cases](#), it is clear that the children's death was [not caused by COVID-19](#). Furthermore, this is a [smaller number](#) than that of children who, unfortunately, [die every year](#) from “ordinary” winter illnesses.
- D. Information about the long-term effects of COVID-19 for children (other than the above-mentioned PIMS) is purely anecdotal. [A few dozen children](#) in Israel visited clinics specializing in side-effects from the virus, such as fatigue, pain and difficulty in breathing. Clearly the side-effects are much rarer than was originally anticipated.
- E. Currently, morbidity in children is in recession—even without the vaccine—as is the morbidity in adults. Thus, we can expect that the level of morbidity in children will be even lower than it was last year.
- F. Despite concerns about the British variant (B.1.1.7), [it has had no effect on the level of symptomatic morbidity](#), hospitalization or mortality among children.

Thus, **the odds that a child who contracts COVID-19 will become seriously ill are 1 in 2,500 (0.04%)**. Since only about 10% of children actually contract the disease, **the odds of a child contracting the disease and becoming seriously ill are 1 in 25,000 (0.004%)**.

2. Potential Benefits to Children and Their Surroundings from the Vaccine

The number of Israeli children suffering from significant effects of the disease since the outbreak of COVID-19 is [less than 150](#) (much lower than other diseases against which children are vaccinated, e.g., the Rotavirus, which resulted in [4,400](#) hospitalizations per year, or the pneumococcus, which caused [700 severe infections annually, including meningitis](#)).

Recently the media [covered a report published by Pfizer](#) that presented the results of a clinical trial performed on **1,131 children** aged 12-15; the report claimed 100% success. The study showed that only 18 children in the control group contracted COVID-19 (no details about symptoms were included), so it is impossible to assess the **clinical** efficacy with respect to children, i.e., whether or not the vaccine significantly prevents morbidity. Because the sample in the trial was so small, the results do not provide a reliable accounting of the safety of the vaccine.

Another consideration regarding the vaccination of children is whether or not it helps to protect the adult population. Beyond the ethical difficulties inherent in this argument, it is not clear whether it is medically justified, because studies in Israel [and the world](#) show repeatedly that children [represent only a marginal source of infection in adults](#). Moreover, in light of the reputed efficacy of the vaccine (according to figures published by [Pfizer and the Ministry of Health](#) at the time of this writing), the COVID-19 vaccine offers nearly absolute protection, and risk to adults of a serious illness becomes extremely unlikely—[even less likely than the risk from routine seasonal respiratory illnesses](#).



3. Possible Risks from the Vaccine

[Pfizer's findings mentioned](#) slight, passing side-effects, and the report of Bell's palsy was not attributed to the vaccine. The vaccine received emergency approval (EUA) from the FDA—and immediately following its distribution, the risk of anaphylactic shock was discovered. Since then, a great deal of information about side-effects has been gathered by American, European and other agencies.

In Israel, data about the frequency of side-effects are not made public; information is based primarily on [reports in the press](#). Most worrying is the report of [dozens of cases of pericarditis and myocarditis \(inflammation of the membrane and muscle of the heart\)—including death](#)—shortly after administration of the vaccine. The Ministry of Health announced that it would look into this issue, but it has not yet published its conclusions. [The report on side-effects](#) published by the Ministry of Health presents an odd picture: The number of incidents thought of as side-effects is significantly lower than during a parallel period, e.g., **a reduction of myocardial infarction by a factor of 1,000**. According to the report, this means that the vaccine itself protects one not only against COVID-19, but also against a host of other serious medical conditions. Since this contention is medically absurd, it raises **grave doubts with respect to the reliability of the report**—whether because of the way the data were gathered, or because of the way they were analyzed.

Members of PECC, therefore, analyzed an American database regarding the side-effects of vaccines ([VAERS](#)), as reported in the February 2021 statistics. The team examined the number of reports of peri/myocarditis according to different age groups. Their findings showed that reports of such cases were higher in the younger age groups. This **raises the possibility that children are at a higher risk of these serious side effects, which could even lead to their death**. To illustrate the response we would expect from our health officials, we can look at two examples:

- A. The AstraZeneca vaccine, which received emergency approval from the European Medicines Agency (EMA), was suspected of having caused 31 cases of thrombosis in Germany, and was, therefore, [suspended for use](#) in persons under the age of 60; it was also limited to high-risk populations only. In Germany, the ratio of thrombosis to vaccinated persons was 1:87,000. In Israel there have been at least [74 known cases of peri/myocarditis](#), a ratio of 1:70,000 (i.e., **higher than the ratio that led to the suspension in Germany**).
- B. In 1999, the FDA recommended the suspension of RotaShield, an anti-Rotavirus vaccine, in the wake of reports of a [few dozen cases of pediatric intussusception](#) (bowel obstruction) all across the United States. And, indeed, use of the vaccine was discontinued.

As noted previously, the size of Pfizer's clinical trial (**1,131 children**) **was not sufficient to gain a clear enough picture regarding side-effects** at a rate lower than 1:1,000. Furthermore, it should be emphasized that, at this stage, **there is no information about long-term effects of the vaccine**. This fact is particularly significant with respect to children, who are still growing and developing.

4. Summary and Recommendations Regarding the Vaccination of Children

While the vaccine has played a vital role in reducing morbidity among adults, severe morbidity among children has been extremely rare, even at the peak of the outbreak of the disease—and certainly now, when morbidity (including among children) is declining. Furthermore, the data **raise reasonable concerns about the vaccine's short- and mid-term safety (especially among children)**. **As for the long term, there is no information at all about its safety (or its efficacy)**. In light of these facts, our position is as follows:

1. **The Ministry of Health should conduct an in-depth study of the possible connection between the vaccine and peri/myocarditis.** Its findings should be made public and should include a weekly comparison of incidents of peri/myocarditis among vaccinated and non-vaccinated persons (including cases where COVID-19 was also present), divided according to age groups. This should be done as well with respect to all other significant side effects, e.g., facialis (Bell's palsy), etc.
2. **Extension of the vaccination to children should not be authorized.** This is because of the vaccine's limited value, and because of genuine, unresolved questions regarding the safety of the vaccine for this age group. Arguments in favor of vaccinating children in order to protect other segments of the population are unfounded and immoral.
3. **Children in danger of severe damage from COVID-19 should be clearly defined.** We recommend that such children should be vaccinated, after the potential risks to them and their parents have been explained. Despite the reservations outlined in paragraph 4b, given the sensitivity of the subject—and out of respect for parents—those parents who wish to vaccinate their children should be allowed to do so, but only after they have received a **comprehensive explanation and an informative booklet** (as is done in many other countries), and have given their **signed informed consent**.
4. **A trustworthy public agency should be established to report on side-effects**, similar to those in the United States and Europe, and citizens should be encouraged to refer to it. Such a move would expand our knowledge about risks from the vaccine. In addition, we recommend cooperation with health authorities in other countries that have already established reporting agencies.



5. **Vaccination of groups at risk should be continued and promoted** wherever the balance between risk and benefit points clearly to the fact that, despite gaps in our current knowledge, the risks from COVID-19 are significantly higher. Emphasis should be placed on populations that are less inclined to receive the vaccine, with all the cultural sensitivity, patience and self-restraint that this entails. Coercion and sanctions should never be invoked.

THE BOTTOM LINE

All of the research findings, in both Israel and the world, show that, unlike adults, children are at a very low risk of contracting COVID-19—lower than the risk from ordinary winter viruses. The information available shows that children are a very minor risk to adults (certainly to those adults who have been vaccinated). On the other hand, there are serious gaps in our knowledge regarding the safety of the vaccine, especially over the long term.

Given this situation, **the professional position of the Public Emergency Council is that the use of the vaccine should not be extended to children under the age of 16, at least until sufficient solid information about its safety—including long-term safety—has accumulated.** Exceptions to this rule should be clearly defined (e.g., children at risk or parents who choose to vaccinate their children (and have received both a comprehensive explanation and an informative leaflet and have given their signed informed consent).



The Members of the Council* (in alphabetical order)



Dr. Yifat Abdi-Kork

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, the Gertner Institute.



Prof. Zvika Granot

Professor of Immunology in the Faculty of Medicine at the Hebrew University. An international expert in the field of neutrophil research, is developing new approaches to immunotherapy.



Dr. Bruria Adini

PhD in Health Systems Management, serves as head of the Department of Emergency and Disaster Management at Tel Aviv University. Former Head of the IDF Emergency Preparedness Division (Lt. Col.) and Senior Consultant to the Ministry of Health's Emergency Division.



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 Prime Minister's special Award for her contribution to children.



Prof. Amos Adler

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.



Prof. Asa Kasher

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. 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. Retsef Levi

Professor of Operations Management at the MIT Sloan School of Management. An international expert in safety, risk management and analytics-driven design and optimization of health systems and biologic 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.



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

Chair of the Department of Clinical Microbiology and Immunology at Tel Aviv University. Expert in T cells, mucosal vaccines, genetic engineering of bacterial viruses, and CRISPR. Published in Science, Nature and Cell and has won prestigious research grants including the ERC. Partner in the establishment of the SARS-CoV-2 testing laboratories.



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 at the Faculty of Medicine in the Technion-Israel Institute of Technology. Awarded with the chemistry Nobel Prize, as well as the Lasker Award, the Israel Prize, and the EMET Prize. He is a 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, Director of Health Systems and Ethics in Medicine. He served as Surgeon General of the IDF, as Director of the Internal Medicine Department, and as Chairman of the Ethics Bureau of the Medical Association 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.



Prof. Asher Elhayany

Professor of Medicine, Specialist in Family Medicine and Public Administration. He served as the CEO of Meir Hospital, the director of the Central District at Clalit Medical Centre, and as the director of the United Health Fund. He served as chairman of the National Council for Health in the Community. Family doctor in the Negev.



Dr. Yoav Yehezkeili

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.



Prof. Eitan Friedman

Professor of Medicine in the Department of Genetics and Biochemistry, Specialist in Internal Medicine and Medical Genetics, PhD from the Karolinska Institute in Sweden. Established the Ontogenetic Unit and Clinic for High-Risk Women at Sheba Hospital, serves as chair of the Ministry of Health's Supreme Helsinki Committee.

*The opinions expressed are the individual opinions of the members, and do not necessarily represent the opinions of the institutions to which the members are affiliated.