CLASSROOM DEBATE: "COVID 19 VACCINATION SHOULD BE GIVEN TO PRIMARY SCHOOL CHILDREN IN MALAYSIA"

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ABSTRACT

A classroom Debate on "Covid 19 vaccination should be given to primary school children in Malaysia" had been conducted as a Teaching learning activity at a University in Malaysia. The activity had been organized by the 13 students of the rotation 1, Year 3 students (09/2019), during the Paediatrics posting of 8 weeks' duration in addition to other teaching learning activities. The aim of this activity is to foster learning with a unique learning strategy; to enable students to develop constructive arguments to support opposing views of the given topic. The students had been briefed on day 1 of the posting and the topic given by the Course Coordinator. The rules and regulations had been presented at start of the Debate session held in 4th week of posting, by the Chairperson. The speakers were allocated a total of 35 minutes per group strictly managed by the two timers. The 3 speakers each from the proposition and the opposition groups spoke, in alternate turns, to put across the message for or against the motion. A panel of 5 adjudicators scored the performances according to marking scheme template. The other students did the photography and video documentation. The Best speaker and the Best group were awarded prizes. all prizes being sponsored by principal author.

Keywords: Covid 19 vaccination, Classroom Debate, Primary schoolchildren, Malaysia.

INTRODUCTION

In Malaysia, the recent statements by the Minister and the Director-General of Health regarding COVID-19 infections and severity in children had worried many parents. It was reported that 82,341 children had been infected with COVID-19 from 25th January 2020 till 30th May 2021; the vast majority happening in 2021. Infections had happened to children of all ages, including 19,851 in those under the age of 5 years.

While we take every protective measure to prevent children from getting infected, we need to ask ourselves if we should consider vaccinating young children against COVID-19. Since the start of the COVID-19 pandemic, there has been conflicting evidence on SARS-CoV-2 infection and transmission in children (Stawicki et al. 2020; Bialek et al. 2020). Some issues to consider , the risk and the benefit are discussed by the Speakers at the Debate session.

LITERATURE REVIEW

All the students and the faculty did the literature review relating to topic. Please refer to the List of the References

OBJECTIVE

The objective of this paper is to showcase the presentations made on the Debate topic by the 3 speakers each for Proposition and Opposition groups and highlight the Introduction, Remarks and Conclusions made upon the Debate session by the faculty.

METHODOLOGY

All the 13 Year 3 students MBBS Program (09/2019) posted to the Paediatrics posting in rotation 1 for 8 weeks, participated in the conduct of the classroom Debate session introduced as one of the Teaching Learning activities at this University, Malaysia. The aim of this activity is to foster learning with a unique learning strategy; to enable students to develop constructive arguments to support opposing views of the given topic; to encourage critical thinking; to raise students' awareness that most issues are not straightforward and that students should learn to form opinions about their position that they can explain or defend with factual evidence. The students elected their own Chairperson and Timer for the session and 3 speakers each for PROPOSITION and OPPOSITION Team of the topic given by Course coordinator on day 1 of the posting. Each one of them did a Literature review as evidenced by the list of References given. The rules and regulations for conduct of the Debate session and the marking scheme for grading of their performances are given in the students' guidebook.

FINDINGS (PRESENTATIONS)

The speakers spoke in turns, one from each group alternating with speaker from other group. However, the 3 presentations from each group are collated and given as below.

A. PROPOSITION TEAM

1ST SPEAKER: MS ABBERAAMI

First and foremost, I would like to express my sincere appreciation and to convey my gratitude to Prof Soe- Soe- Aye for giving me this opportunity to speak today. With the emergency use authorization for the Pfizer-BioNTech Covid which was newly approved for children 7-12 years, this has triggered many parents to ask the question—should we vaccinate our children? To be fair, many parents may have already made up their mind on this topic with the majority not rushing to get their kids vaccinated. Much of the argument against vaccinating this younger age group is that COVID-19 just doesn't seem highly likely to cause a significantly serious illness among immunocompetent children. To date, covid-19 infections among children in Malaysia averaged at about 2760 cases per day from August 1 until September 30, compared to an average of 1381 cases in adolescents aged between 12-17 according to newly released data by the Ministry of Health (MOH). The low rates of complications and severe illness from COVID-19 in children is the exact data needed to justify a swift return to normalcy for many kids. Yet, the argument that kids are, for the most part, unaffected medically by COVID-19 ignores a simple, yet essential, premise. Children are not supposed to die. We vaccinate children to prevent severe illness and death, not to prevent mild disease. It is the same reason that paediatricians emphasize influenza vaccination—not to prevent all kids from getting the flu—but to protect children who should not be hospitalized and die. This remains true for the other 16 paediatric immunizations that are recommended by CDC and nearly every state requires. The goal is to prevent severe disease in children, keeping children alive and healthy.

If let's say a medication existed today that would prevent children from ever developing and dying of cancer, would we be discussing whether we should use it or not? Of course, as parents, we would line up for such a medication. Or in another scenario, if we had an injection that can ensure your child would never suffer from mental illness or commit suicide, for sure all the parents in the world will fight to get it. If a treatment existed in this world to ensure a child would never die from any congenital anomaly or heart disease, it would be a crime not to incorporate it as the standard management and care.

COVID-19 vaccines have now been given out to more than 6.6 billion people worldwide, with clear data on safety. Furthermore, the vaccine prevented 90.7% of COVID-19 infections in children. The episodes of myocarditis seen more commonly with the mRNA vaccine after the second dose in males are rare, mild and easily treated. We tend to forget that this is the same demographic that has developed myocarditis associated with the actual viral infection, oftentimes developing profound illness requiring intensive care. Yet, minimizing the risk of this rare adverse effect is the exact reason for the lower 10 microgram dose deliberately decided upon by Pfizer in June of 2021. With this, I strongly support the motion today which is 'Covid 19 vaccination should be given to primary school children in Malaysia'. Thank you

2ND SPEAKER: MS PURANEMA
I strongly believe in today's debate's motion. As per what the first speaker Miss Abberaami have asked, should we vaccinate our child?

Yes, we should vaccinate our kids because from their academic success to their social skills and mental, the pandemic is a crisis for today's children and fallout may follow them for the rest of their lives. Where today's children will see themselves as a lost generation, whose lives will forever fall in the shadow of a global pandemic.

As everyone already know that the school closures were one of the most visible and controversial means on how Covid-19 has been affecting these kids. There has been much debate over the exact role that school closures have played containing overall spread of the virus.
At present, the government have already made the decision to re-open the schools, stage by stage and it was the happiest news for most of the kids across the country. According to the school's and government's protocol, only students who have completed vaccination were allowed to attend and moreover this protocol have also been applied to other departments for the children' too. I believe that everyone who are present here today in this debate have also completed their vaccination and that is why we are all here now. For many parents, the development is a highly welcoming news, because when their kids receive their complete doses of vaccination, parents are hoping that their children's childhood life may return back or at least be closer to what it was in the years before the coronavirus pandemic.

Playdates, having real birthday parties, eating in restaurants vicinity, going for vacation, meeting friends and teachers back at school, playing at the playgrounds! Honestly, can you just imagine how much memories, fun, joy and laughter are hidden in such an imagined scenario. On the one hand, if the parents do not agree for their children to take the covid 19 vaccinations, then it is very unfortunate for the child, who will be losing his or her opportunity to be doing what other normal children will be doing in normal circumstances.

According to WHO Disease Control and Prevention (CDC), The Covid 19 vaccine helps children from getting infected. Although COVID-19 in children is sometimes milder than in adults, some kids infected with the coronavirus can get severe lung infections, become very sick and require hospitalization. This is very important especially when there is the existence of the new delta variant, which is more contagious than other coronavirus variants. "The current vaccine Pfizer Bio-tech is still effective in preventing severe illness from the delta variant of the virus. Like adults, children also can transmit the coronavirus to others if they're infected, even when they are asymptomatic. Getting the COVID-19 vaccine can protect the child and others, reducing the chance that they transmit the virus to others, including family members and friends who may be more susceptible to severe consequences of the infection**.** Getting vaccinated for COVID-19 can help stop other variants from emerging as well.

Cases of COVID-19 are increasing among children, and the delta variant appears to be playing a big role in the rise of number of cases. Reducing viral transmission by getting vaccinated also reduces the virus' chance to mutate into new variants that may be even more dangerous. However, the virus can transmit easily between unvaccinated children and adults, giving new variants a chance to emerge.

Last but not least, COVID-19 vaccination hesitancy by parents may limit the successful dissemination and implementation of public health strategies to mitigate the global pandemic. Since children comprise approximately one-fifth of the Malaysian population, it is essential to include children and their parents in efforts to achieve herd immunity and eventually disease eradication, which are the goals of every vaccination programme.

3RD SPEAKER: MR JAYKISHEN SAKATHAVEN

Is Covid 19 vaccine safe to use and what are the safety concerns regarding the COVID vaccines? The CDC and FDA have always actively monitored and are continuing to monitor possible safety issues with the COVID-19 vaccines. All those concerned have always been thorough and transparent about COVID-19 vaccine side effects since day 1. All the information about the covid-19 vaccination is l being published to the public via various mediums interactively and information given graphically to ensure that everyone is aware of the requirement to get vaccination, what are the type of vaccination one should get, and the potential side effects and severe effect that may arise along with it. The public can find all this information with a click of a button by browsing the clinical guidelines on covid-19 vaccination in Malaysia, World Health Organization,CDC (centre of disease control and prevention.) Besides that, many FAQ forums and hotlines have been setup to encourage public to obtain reliable and accurate answers from trusted sources for their doubts and to instil clarity amongst the population at large.

Based on Centres for Disease Control and Prevention (CDC) data-All COVID-19 vaccine contents are safe. All COVID-19 vaccines are manufactured with as few ingredients as possible and with very small amounts of each ingredient. Each ingredient in the vaccine serves a specific purpose. Nearly all of the ingredients in COVID-19 vaccines are ingredients found in many foods. For example, Pfizer-BioNTech COVID-19 vaccine (COMIRNATY) contains a harmless piece of messenger RNA (mRNA). It provides instructions to the body to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID19 in the future. The possible allergens of

concern that may contribute to the immediate allergic reactions after vaccination are polyethylene glycol (PEG) and polysorbate-80 r2b found in the mRNA. However, according to the CDC US/MHRA-UK and NPRA-MY data updated on the 16th January 2021, the incidence of allergic reactions due to PEG are 14 in a million doses, 4 in a million and 6 in a million. It has been concluded that the importance of PEG outweighs the risk involved. Moreover, this vaccine contains Potassium, less than 39mg/dose essentially 'potassium free'. This vaccine contains less than (23mg)/dose to help freezing and shipment, i.e. essentially 'sodium free'

Rates of vaccination induced myocarditis in 7-12-year-olds is unknown and remains low. Some studies showed, Myocarditis after vaccine in the 7-12 years old population is likely less than rates seen in younger adolescent. In accordance to briefing document and amendment to EUA submitted to FDA on 9th April 2021 to support emergency use as a two dose primary series in individuals more than 12-year-old, no cases occurred during clinical trials which included more than 3,000 children with at least 7 days follow-up after their second dose. On June 23, 2021, after reviewing available evidence including that for risks of myocarditis, Advisory Committee on Immunization Practice (A CIP) determined that the benefits of using mRNA COVID-19 vaccines under the FDA's EUA clearly outweigh the risks in all populations, including adolescents and young adults. A multicentre study was conducted by the Korean health authority by reviewing retrospective medical records analysis which included frequency, clinical characteristic, etiology, outcome of myocarditis and pericarditis on children and younger adolescent concluded that, underlying epidemiology of myocarditis prior to the COVID-19 pandemic varies greatly between children aged 5-12 and more than 12 years, as it is substantially lower in children 5–12 years of age. Further support to this argument, Dr David W. Kimberlin, paediatrician in Birmingham, Alabama mentioned that Myocarditis after vaccination is "very, very rare," explains Kimberlin. And it's usually short-lived. In most instances, adolescents who have developed myocarditis have improved quickly. "The management of it usually is taking some ibuprofen — some Advil.

Rates of post-vaccination myocarditis are expected to be lower in young kids than those observed in teens. Myocarditis, which can also occur after bacterial and viral infections, including COVID-19, is generally significantly less common among younger children. That's partly because the condition is linked with puberty hormones, explains paediatrician Nicole Baldwin, who practices in Cincinnati.

Also, doses used in 5–11-year-old (10 µg) is a third of the dose used in 12-15-year-old (30 µg). In relation to the theoretical risk of vaccine-associated myocarditis, identified rates of myocarditis reported previously are based on data from adults and adolescents receiving 30µg dose of Pfizer-BioNTech. However, the dose in the paediatric (5–12-years-old) age group is10µg. Dr.Matthew Oster, who studies myocarditis for the CDC and is a paediatric cardiologist at Children's Healthcare of Atlanta, explained: Of 877 reports of vaccine-related myocarditis in people under 30, no deaths have been confirmed let alone in children according to data presented at the CDC's advisory meeting Tuesday. And the smaller dose size for younger kids may also reduce the risk by 3 times, Oster adds. "The physiology behind why they saw some of the post-vaccine myocarditis seems to be related to how the immune system is reacting to the vaccine. It's mounting a protective level of antibody, but maybe a little overzealous in those efforts. she also mentioned that COVID-19 itself can cause myocarditis and other heart-related issues, as well as

MIS-C, which often affects the heart. "The bottom line is getting COVID, I think, is much riskier to the heart than getting this vaccine," Oster said.

Overall, the known risks of Pfizer-BioNTech COVID-19 vaccine for children 5–12 years of age include short-term reactogenicity and possible risks include myocarditis or other rare events after mRNA vaccines can be overlooked as the incidence rate is not sufficient to make us overlook the benefit the vaccine brings

As of October 4, 2021, CDC had received reports of 5,217 cases of MIS-C; 44% of MIS-C cases have occurred in children aged 5-11 years. MIS-C is considered a rare syndrome, not a disease because much is unknown about it, including its cause and risk factors. Most children with MIS-C are between the ages of 3 and 12 years old, with an average age of 8 years old. Some cases have also occurred in older children and in babies. the real cause and its relationship with covid-19 is still unknown as the data are very limited since we are at the initial stage. however, some experts had claimed that the MIS-C is a more of a complication caused by covid-19 infection rather than side effects of the vaccination. Dr. Sick-Samuels who is one of the American Board of Paediatric Infectious Diseases 2019 members, wrote that multisystem inflammatory syndrome in children (MIS-C) was first identified in April 2020, Sick-Samuels explains that MIS-C is triggered by COVID-19 and it can occur in children who have not had any common symptoms of COVID-19. it is very rare to find vaccine induced MIS-C although it is still considered to be a risk factor. post vaccine MIS-C is treatable if it is detected as the symptoms are milder," says Sick-Samuels. Doctors can use medicines such as intravenous immunoglobulin, steroids and other anti-inflammatory drugs to reduce the inflammation and protect the heart, kidneys and other organs from lasting damage.

Children under 12 years of age infected with SARS-CoV-2 are less likely to develop severe illness compared with adults. According to the WHO, children and adolescents account for 1% to 3% of reported coronavirus disease 2019 (COVID-19) cases across 48 countries and an even smaller proportion of severe cases and deaths. Therefore, some studies have shown that children are less susceptible to covid-19 vaccination than adults. However, this is not entirely true as children appear more likely to have asymptomatic infection than adults, and analyses based on symptom-based series underestimate infections in children. Compared with adults, children who are infected with SARS-CoV-2 are more commonly asymptomatic or have mild, non-specific symptoms (e.g., headache, sore throat). Like adults with SARS-CoV-2 infections, children and adolescents can spread SARS-CoV-2 to others when they are asymptomatic & thus might not know that they are infected and infectious.

As of October 16, 2021, there were 94 COVID-19-associated deaths among children 5-11 years of age reported to the National Centre for Health Statistic. In the United States through March 2021, the estimated cumulative rates of SARS-CoV-2 infection and COVID-19 symptomatic illness in children ages 5-12 years were comparable to infection and symptomatic illness rates in adults and higher than rates in adults ages 50 and older. The lower mortality rates may have been due in part to children, when compared to adults, having fewer opportunities for exposure (due to school, day-care, and activity closures) and a lower probability of being tested.

COVID-19 is a serious and potentially fatal or life-threatening infection for children and this without a doubt shows the paediatric population remains vulnerable to COVID-19. the paediatric cases have increased in the US, especially with widespread dissemination of the highly transmissible B.1.617.2 (Delta) variant. CDC have reported, An increase in COVID-19 cases among children less than12 years of age was reported in the US in August and September 2021 compared to June and July 2021.

Although the mortality rate for COVID-19 in children is substantially lower than that in adults, COVID-19 was among the top 10 leading causes of death for children 5 to 14 years of age between January and May 2021 in the US. According to WHO, among children 5 to less than12 years of age there have been approximately 1.8 million confirmed and reported COVID-19 cases and 143 COVID-19-related deaths in the US through 14 October 2021. The pediatric burden of COVID-19 likely exceeds that of seasonal influenza from the global point of view, the mortality rate of children might be low but if we focus on a microscopic level the mortality level is not high but surely exceeds the concerning level.

Children serve as important reservoirs of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission and may become a primary driver of the pandemic soon, particularly given the recent dramatic increases in COVID-19 cases. Even asymptomatic children have been documented to shed virus for a mean of 2 weeks, leading to substantial risk of viral exposure among contacts. Preventing COVID-19 will provide direct health benefits to children and indirect educational and social development benefits can be anticipated based on alleviating the disruption to in-person education caused by COVID-19 outbreaks in school settings.

A population-based cohort study took place between June 1 and December 31, 2020, in Ontario, Canada total of 6280 households had paediatric index cases, and 1717 households (27.3%) experienced secondary transmission. The mean (SD) age of paediatric index case individuals was 10.7 (5.1) years. This study suggests that younger children may be more likely to transmit SARS-CoV-2 infection compared with older children, and the highest odds of transmission was observed for children aged 0 to 3 years.

All the coronavirus vaccines approved or authorized by the U.S. Food and Drug Administration (FDA) and recommended by the Centres for Disease Control and Prevention (CDC) are very safe and also very good at preventing serious or fatal cases of COVID-19. More than 10 months of data show the vaccines are safe and effective at preventing serious disease or death due to COVID-19. Additional shots and boosters are also being authorized for certain groups to make the protection even stronger. On October 29, 2021, the Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) for Pfizer-BioNTech COVID-19 vaccine in persons aged 5-11 years for prevention of COVID-19.

The vaccine was declared safe and met non-inferiority criteria for immunobinding compared with young adults ages 16-25 years in a randomized controlled clinical trial that included 2,268 participants randomized 2:1 to receive either vaccine or placebo

The higher the level of immunity, the larger the benefit. Therefore, it is important to get as many people as possible vaccinated. The very definition of herd immunity is resistance to spread of an

infectious disease w/in a "population of individuals" because of previous infection or vaccination. “Not w/in adults".

To go back to a pre-pandemic lifestyle, we would need at least 70% of the population to be immune to keep the rate of infection down. But this level depends on many factors, including the infectiousness of the virus (variants can evolve that are more infectious) and how people interact with each other. R naught is the basic reproduction number, also known as basic reproduction ratio or rate which is an epidemiological metric used to measure the transmissibility of infectious agents is a derivative of the following variables—the duration of infectivity after the patient gets infected, the likelihood of transmission of infection per contact between a susceptible person and an infectious individual, and the contact rate: R0 of COVID-19 as initially estimated by the World Health Organization (WHO) was between 1.4 and 2.4 according to KKM, R value for Malaysia is estimated with a 7 day moving window=as of 16/11/21 ,1.03 **R value for States is estimated with a 14-day moving window =as of 16/11/, 1-1.5

Hence, according to the simplest calculation, 67% of the population would need to be 100% immune to push SARS-CoV-2 into decline. A clinical trial conducted by Pfizer and BioNTech studied a 10-microgram vaccine dose in children ages 5 to 11. This is a third of the dose given to adults and children 12 and older. The lower dose was chosen to minimize side effects but still prompting a strong immune response, according to the vaccine makers. The data the drug companies presented to the FDA showed that the vaccine was 90.7% effective against symptomatic COVID-19. The antibody response to the vaccine was comparable to the one seen in people 16 to 25 years old.

Do the desirable effects outweigh the undesirable effects? Delta-wave surges of pediatric COVID-19 hospitalizations occurred even with seroprevalence approximately 38%, suggesting acquired immunity alone is not sufficient to provide broad protection. The level of certainty for the benefits of Pfizer-BioNTech COVID-19 vaccination among children aged 5–11 years was type 1 (high certainty) for the prevention of symptomatic laboratory-confirmed COVID-19. Regarding potential harms after vaccination, evidence was type 4 (very low certainty) for serious adverse events and type 2 (moderate certainty) for reactogenicity.

We are well aware of the possible risks and complication but that can't merely deny the benefits it brings to the vast majority of the population like the concept of yin and yang, with every good thing, there comes some bad with it. We have achieved milestones and remarkable progress in this 21st century especially in the medical industry with the aid of mind-blowing technologies. However, the mere idea of creating a 100 % efficient vaccine is just not ideal and rational at this point of evolution as nothing in the world comes with a 100% guarantee. that’s not how life works as nature is subjectively deigned in that manner but, we still manage to produce vaccinations against covid that able to show at least 97% of efficiency towards adults and children, which is still sufficient to speed up the covid eradication process. We cannot solely rely on the principle of actively obtaining natural immunity as it takes a very long time to achieve desired immunity levels among the population and there a higher complications involve which could be fatal.
The main concern towards vaccination are the side effects such as adverse reactions, myocarditis <MIS-C and many more.

We as the government are forced to plead the 5th when it comes to the side effects as we are required to just accept the reality of those complications comes as a package with the immunity but, by taking preventive steps or simply by managing those effects. We are able to cancel out vaccine's disadvantages.

Many other countries such as the USA, Denmark, UK, have started giving vaccination to children aged 7-12 age and had positive reviews.

I would like to end my argument by quoting what Dr Amanda Cohn, chief medical officer of the national centre for immunization and respiratory diseases, mentioned in FDA advisory committee that voted in favour of authorizing the vaccine for younger kids.

"For some clinicians, the argument for vaccination comes down to the idea that no child should ever die from a disease that could have been prevented by simply getting a shot. COVID-19 is now a vaccine-preventable disease from my perspective". The government also stands by this and urge that it should be everybody's perspective as well.

B. OPPOSITION TEAM 1ST SPEAKER: MR HISYAMUDDIN

Should Covid 19 vaccination be given to primary school children? With this question in mind. I would like to express my sincere appreciation and to convey my gratitude to Prof Dr.Soe Soe Aye for giving me this opportunity to speak today.

As of 17 November 2021, data from WHO showed the number of new COVID-19 cases continued to rise to 254,256,432 confirmed cases of COVID-19, including 5,112,461 deaths globally since the start of the Covid19 pandemic1. International data on confirmed COVID-19 disease in children shows less prevalence as compared to adults, contributing to between 1 – 5% of total case numbers. On 8th January 2021, the first covid19 was approved by Drug Control Authority (DCA) and NPRA approved Pfizer-BioNtECH as the first vaccine in Malaysia. Following then, other vaccines have been approved for emergency use in the effort of controlling Covid19 pandemic in Malaysia.

Covid19 vaccines have been administered worldwide to the adults above 18 and 60 years of age and just currently started to be administered to the adolescents, 12 to 17 years of age. However, I have to emphasize that there is no country that has approved Covid19 vaccine to be included in the National vaccination programme. This proves that other countries are also agreed that there still insufficient data to allow vaccination in children at age 5-11 years of age.

By that, I stand strongly with our motion as opposition that Covid19 vaccination should not be given to primary school children until the evidence is sufficient to support the vaccination. Only 1 published paper that was supported by Pfizer and BioNTech to evaluate BNT162b2 vaccine in Children 5 to 11 Years of Age in New England Medical Journal. There is no other published paper that overcome the limitation of the study found during randomized controlled trial of BNT162B2 vaccine in children aged 5 to 11 years old.

The purpose of the paper was to evaluate the safety, immunogenicity and efficacy of BNT162b2 vaccine after being administered to children less than 12 years old to represent this group of age

in the population. The study showed that the vaccine was safe, immunogenic and 90.7% effectiveness when being administered to children 5 to 11 years of age by reducing the doses to be two 10 μg doses of BNT162b2 vaccine with the interval of 21 days.

However, there are three limitations as mentioned in the paper which are the lack of longer-term follow-up to assess and monitor the duration of immune responses, efficacy, and safety of BNT162b2 vaccine in children 5 to 11 years of age and it is suggested that it will take up to two to gain the conclusive clarification. Besides, potential rare side effects of BNT162b2 in children 5 to 11 years of age were not assessed in this study. The study to evaluate the safety, immunogenicity and efficacy of BNT162b2 vaccine after being administered to children less than 12 years old has been assessed accordingly by recommendations, assessment, development, and evaluation (GRADE) of Disease Control and Prevention (CDC) by which3 BNT162b2 vaccine was graded type 1 (high certainty) for the prevention of symptomatic laboratory confirmed Covid-19 in the participants. However, possible serious adverse effects of the vaccine after vaccination were type 4 (very low certainty) due to the study was only conducted in small sample size and insufficient follow-up time. Reactogenicity after vaccination also was graded type 2 (moderate certainty). Besides, no data were available to assess prevention of hospitalization, multisystem inflammatory syndrome in children and asymptomatic of SARS-CoV-2 infection in children 5 to 11 years of age after vaccination.

Moving on to my second argument, an Emergency Use Authorization (EUA) is a medical intervention taken by the authority during public health emergencies such as Covid-19 pandemic by taking into account medical products that may not be approved yet when certain regulations have been obtained and there are no other appropriate, approved and available alternatives1.

When Covid-19 vaccine is only considered as emergency use as pharmacological intervention without sufficient evidence to support its inclusion of national Covid-19 immunisation programme for primary school children, this can induce vaccine hesitancy , particularly among the parents because of their concerns to the children. Besides, according to WHO, vaccine hesitancy is one of the top ten global health threats, therefore, why do we want to induce vaccine hesitancy especially in Malaysia by implementing vaccination that has insufficient evidence to primary school children.

By comparing to the parents' perceptive and knowledge about covid19 vaccine in children study conducted in Saudi Arabia and South Korea, we can see some similarities in these both countries. In South Korea, the study showed 45.6% and 41.2% parents are unlikely to allow their children to be vaccinated with Covid-19 vaccines. There were 58.8% parents agreed that adolescent 16 to 18 years of age must be vaccinated and only 19.5% parents agreed that vaccination should be given to children 4 to 12 years of age. This study showed that parents are still hesitant with COVID-19 vaccines to be given to their children without being properly provided with adequate evidence. In Saudi Arabia, the percentage of parents who willingly and unwillingly to vaccinate their children are not significantly different by the difference of 15.32%. 69% and 60.6% of parents do not want to vaccinate their children with Covid19 vaccine because there are inadequate data regarding safety of the vaccine and the long-term side effects of the vaccine to their children after vaccination. Therefore, vaccine hesitancy must be overcomed by

providing significant and sufficient evidence to increase the confidence among the parents to vaccinate their children with Covid-19 vaccine.

Before I rest my case, I want to emphasize once again that Covid-19 vaccine should not be given to primary school children until there is sufficient evidence to support the vaccination.

2ND SPEAKER: MR SYAFIQ

First and foremost, I would like to say and remind you ladies and gentlemen about the very lack of research and paper published to support the vaccination in younger children especially those who are in primary school. The significant papers that can be found are only directed towards the adult and not the younger children. Therefore, I would like to say that if I were to be a parent, I believe that this is not something that I would do especially with the lack of evidence. So, for the start, I would like to strongly disagree on vaccinating primary school children for covid 19.

Ladies and gentlemen, the few points that I will be making today is about the risks and side effect that must be borne by the parents and the child with the vaccination going on. Of course, we understand that there is no gain without a risk however is it worth taking this risk especially with the lack of significant evidence that could possibly say that the covid 19 vaccine is especially safe to be used among primary school children? Before I elaborate on my points, I would like to inform that all of the side effects that will be explored were cited from "MHRA, Coronavirus Vaccine, weekly Summary of Yellow Card, Jun 2021"

The first point worth considering is that there is what we called as vaccine escape. So, what is it actually? Ladies and gentlemen, vaccine escape is what we can consider as the ability of the virus to mutate and decrease the effectiveness of the vaccine. Truthfully, I believe that was what is happening right now. Cited from "COVID19 vaccine effectiveness with CDC, there is a significant decline from 92% to 77 % for bio n tech's effectiveness as compared to another MRNA vaccine which is Moderna which only had 15% decline. If we consider our country Malaysia, it is most likely that our country is currently leaning towards using BioNTech considering the budget. Is it worth it to take the risk that I will bring up later with the decrease in effectiveness? This is also proven by such a drop in immunity level that forces those who had taken the BioNTech vaccine to take a booster dose. Now put yourself in the kid's spot. Imagine yourself fearing needles and are required to do so again and again with each drop of immunity level?

The second point is about the risk of myocarditis and pericarditis. I believe all of us here are familiar with such term and is also accustomed to the graveness of such ailments, based on the same reference which is "MHRA, Coronavirus Vaccine, weekly Summary of Yellow Card, Jun 2021" in the UK, there are 53 cases reported for myocarditis and 33 for pericarditis for BioNTech with one death and there is 42 myocarditis and 77 pericarditis reported for AZ and 3 myocarditis and 1 Pericarditis reported with Moderna. As of now there are still no papers that brought upon the reasoning behind such occurrence in adults and don't even start dreaming for a result in children. Now put yourself into the shoes of all the parents all around the world. Are u willing to take the risk? Especially with such an ambiguous explanation and vague future? To add oil to the fire, this situation has never been introduced to us when these vaccines were released but cases are being reported until now with something that was not seen in clinical

trials. Let's look back into the typhoon that surrounded AZ back then when blood clotting is not a rare occurrence among the receiver of the vaccine? It caused such a frenzy that the country needs to pull it out from the National Immunization Strategy and need to give it out in the form of volunteer. One more time, would you like to take the risk?

The third point that I will be pointing out is about the anaphylaxis that is caused by the mRNA vaccine ingredient, which is Polyethylene Glycol or much more known as PEG. As of now still cited from the same Journal, it has been reported that this ingredient has caused a fatal anaphylaxis in the receiver and is also one of the main ingredients used in BioNTech to stabilize the lipid nano particles. This however seems to have caused severe anaphylactic reactions in the receivers. Now would you ladies and gentlemen lend your ears and mind just for a moment, now think about all these possibilities about these issues happening not to just anybody but one of your own. Would you be able to accept it? Is it fine if it happens to any of yours? That being said, I would like to stress out once again that I and my teammates strongly disagree with vaccinating the primary school children until significant evidence is there to support such cause is made available. Otherwise, we believe that it is the adults that should be made responsible for stopping the transmission and this point would be continued by our 3rd speaker, Melissa.

3RD SPEAKER: MS MELISSA LEE

I would like to mention again our team's motion which is COVID 19 vaccination should not be given to primary school children until evidence is sufficient to support the vaccination.

We do understand the idea behind the sense of urgency of COVID 19 pandemic and the concept of achieving herd immunity as per mentioned by the second speaker of the government team. However, we still believe that children especially those in primary school and of younger age category should not be put through unnecessary and ambiguous risk to realize this idea.

Let us go deeper into this topic of herd immunity. So, what exactly is herd immunity? According to World Health Organization (WHO), herd immunity occurs when a large portion of a community becomes immune to a disease, making the spread of disease from person to person less. As a result, the whole community becomes protected and not just those who are immune to it. A percentage of the population must be capable of getting a disease for it to spread and this is called the threshold proportion. If the population that is immune to the disease is greater than this threshold, then the spread of disease will decline and is known as the herd immunity threshold. This threshold is generally achievable only with high vaccination rates.

Now, according to our team's research on a journal article from NATURE Titled "5 reasons why COVID herd immunity is probably impossible", it states that it is unclear whether vaccines prevent transmission. The key to herd immunity is that, even if a person becomes infected, there are few susceptible hosts around to maintain transmission. For example, those who have been vaccinated or have already had the infection cannot contract and spread the virus. The COVID-19 vaccines developed are still unclear whether they protect people from becoming infected, or from spreading the virus to others. That poses a problem for herd immunity as herd immunity is only relevant if we have a transmission-blocking vaccine.

COVID 19 vaccine is to reduce the severity of symptoms and not to prevent the transmission of this infectious disease. Even fully vaccinated adults can contract SARS COV leading to COVID 19 due to mutation of Coronavirus spikes. According to **covidnow.moh.gov**, as of now, cases by vaccination status of fully vaccinated individuals who has completed 2nd dose are 19.6% and partially vaccinated individuals who has completed 1st dose are 15.6%. According to Department of statistics Malaysia, the CURRENT POPULATION ESTIMATES, MALAYSIA, released on 15th July 2021, states that individuals from 0-14 years old occupies 23.3% which is 7.6 million people, from 15-64 years old for 69.7%, 22.7 million people and lastly from 65 years and more, a total percentage of 7%, 2.3 million people ergo, the total number of population from the age of more than 15 years old consist of 76.7% which is 25 million of the population in Malaysia.

Not only these, according to **covidnow.moh.gov.my**, we also note that the total population of getting COVID-19 vaccination from the age of more than 12 years old**,** to which we have kept ourselves updated and last retrieved update on 17th November 2021, which is last night, there are currently 78.5% (24,882,008) fully vaccinated individuals, 2.3% (743,672) partially vaccinated individuals and 22.4% (7,317,045) unvaccinated individuals in Malaysia. As claimed by WHO, COVID-19 infection among children causes less severe illness and fewer deaths compared to adult and elderly. This statement can be proven from the website of **https://covidnow.moh.gov.my/deaths/.,** that generally COVID-19 cases by age, above 12 is 86.4% and 0-11 is 13.5% while deaths by age group, we can see from the percentage reported states that for above the age of 12 is 99.8% and below the age of 12 is 0.2%.

With all the evidence and statements put forward, I would like to validate the opposition team's concern of vaccinating young children to slow the spread of the pandemic because it cannot be justified if the adults are choosing not to be vaccinated. My point as the third speaker of the opposition team was phrased in such a way that highlights the importance of immunizing the majority group of population more so than focusing on immunizing the minority group of population.

Please allow me to reiterate the points of my fellow opposition team members. The point of our first speaker is "Limitations of the study of COVID 19 vaccine in children age of 5-11 years and the emergency usage of vaccine that led to vaccine hesitancy among the parents", our second speaker, "Side effects of COVID vaccine" and lastly, my own point as the third speaker which is, "Immunization of the majority group population is more vital than immunization of the minority group population". I would like to rest my case by stressing again on our motion from the opposition team which is, Covid19 Vaccination should not be given to primary school children until the evidence is sufficient to support the vaccination. Thank you.

REMARKS BY FACULTY

The six speakers had spoken with vigour and passion upon the topic given for this debate. The BEST group was won by the Opposition Group and the BEST speaker was won by MELISSA LEE from the Opposition Group. As the saying goes, prepare the umbrella before it rains. Children's wellbeing and good health is all parents' main priority and as a parent, we do not want to take the risk if there is no proper evidence and much studies to prove the efficacy of the vaccine and the side effects of the vaccine. We would like to add a quote by Jada Pinkett Smith,

"Don't take your heath for granted. Don't take your body for granted. Do something today that communicates to your body that you desire to care for it. Tomorrow is not promised."

Since the start of the vaccination program in Canada, SARS-CoV-2 infections have occurred predominately in the unvaccinated population (89.4% versus 0.6% in those who are fully protected). Similarly, of those who were hospitalized or died, unvaccinated individuals accounted for 84.8% and 82.1%, respectively (Goldstein et al. 2020).Now, as Canada enters a fourth wave with a strong resurgence of cases, it is children who are most vulnerable to infection and should be fast tracked for preventing severe symptoms of COVID 19 disease.

Early reports that children don't develop severe symptoms of COVID-19 disease are being surpassed by evidence of long-term effects, some lasting months after the initial infection (Thomson 2021; Buonsenso et al. 2021; Ludvigsson 2020*a*). Serious complications, including multi-system inflammatory syndrome, have also been reported (Riphagen et al. 2020; Waltuch et al. 2020), and there are likely other effects that have yet to be accounted for.

CONCLUSION

As children and adolescents tend to have milder disease compared to adults, unless they are in a group at higher risk of severe COVID-19, it is less urgent to vaccinate them than older people, those with chronic health conditions and health workers. Information is needed given high levels of uncertainty amongst younger children and although it is developmentally appropriate to defer to a parental figure for these types of decisions, there will be an important need to prepare these age ranges, if they are included in vaccination programmes. Furthermore, aligned and coordinated action is needed to achieve the global COVID-19 vaccination targets. Given current global inequity in vaccine access, the decision to vaccinate primary school children must account for prioritization to fully protect the highest risk subgroups through primary vaccination series and as vaccine effectiveness declines with time since vaccination, through booster doses. As such, before considering implementing primary vaccination series in primary school children, attaining high coverage of primary series and booster doses as needed based on evidence of waning and optimizing vaccination impact in highest risk subgroups, such as older adults, must be considered. On other hand there is recommendations by *Roifman and Vong (2021) urging* Health Canada to approve the use of COVID 19 vaccines in school aged children 5-12 years and the recommendations of the American Academy of Pediatrics and Children's Hospital Association in urging the FDA to approve COVID 19 vaccines for school aged children.

In conclusion, nations ought to consider the individual and populace advantages of vaccinating primary school children in their epidemiological and social setting when fostering their COVID-19 immunisation strategies and policies.

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