

COVID-19 VACCINATION: SHOULD I GO FOR VACCINATION?

WHO CC Webinar 2022

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INTRODUCTION

• COVID-19 Vaccine

- Is a biologically prepared solution that sensitizes the human system to produces immunity (acquired) against COVID-19 infection.
 - ☐ It typically contains the virus causing the COVID-19 either live attenuated or forms.

• Acceptability of COVID-19 Vaccines

World Health Organization, 2020

- Provided free in most countries
- Some people were still hesitant to accept or take the vaccines due to some factors.
 - ☐ Public enlightenment campaigns.



TYPES OF COVID-19 VACCINES IN HONG KONG

• Pfizer-BioNTech (Comirnaty)

- A vaccine using genetic materials
 - ❑ mRNA technology
- Contains viral materials causing covid-19
 - ❑ Gives our body cells instructions to produce a harmless proteins (i.e., antigen) unique to the virus.

GAVI the Vaccine Alliance, 2022

• SinoVac-CoronaVac

- Inactivated form of COVID-19 virus
- Uses a dead (i.e., genetic materials destroyed) form of coronavirus to avoid replication.
 - ❑ keep proteins intact for triggering bodies immune system for antibodies production.

GAVI the Vaccine Alliance, 2022

BENEFITS OF COVID-19 VACCINES

• Individual level (fully vaccinated)

- ↓ risk of infection 70%-95%.
- ↓ risk of Severe illness 90%.
- ↓ risk of death by the disease
closer to 100%.
- ↓ harmful outcomes of
hospitalization.
- ↓ transmission by 70-95%

• Population level (fully vaccinated)

- Community vaccination =>
reduction in rates of transmission,
hospitalization, and associated
deaths.
- Risk of spread of the coronavirus will
decline => protection to unvaccinated.

Syra & Katelyn, 2021





WHO SHOULD RECEIVE COVID-19 VACCINES

- Depending on the type of vaccines

- Pfizer BioNTech (Comirnaty vaccine)

- Everyone ages 5 years and older
 - Children under 12 years => **Not given the adult's dose**
- Pregnant and lactating mothers
- Subjects with immune deficiencies
- Previous COVID-19 infections
- Persons with comorbidities

- SinoVac-CoronaVac

- Children 3 to 17 years
- People aged ≥ 18 years
- Pregnant and lactating mothers
- Subjects with immune deficiencies
- Previous COVID-19 infections.
- Persons with comorbidities e.g., obesity, respiratory, and cardiovascular diseases .

Department of Health: Centre for Health Protection, 2022; World Health Organization, 2022



ADDITIONAL DOSES (BOOSTER)

- **Individuals with two doses of vaccines are recommended to a third dose.**
 - Aged ≥ 60 years to be taken 90 days after the second dose.
 - 18-59 years between 90-180 days.
 - **12-17 years (adolescents) 90 days after the second dose (SinoVac vaccine)**
 - **12-17 years (adolescent) 150 days after the second dose (BioNTech vaccine)**
 - Children ≤ 12 years
 - ❑ Not recommended **except** in the presence of immune deficiency status.

Department of Health: Centre for Health Protection, 2022

- **Individuals aged ≥ 12 years with immune deficiencies**
 - 28 days from the second dose (**BioNTech vaccine**).
 - 4th dose of either **SinoVac or BioNTech** vaccines taken 90 days after 2nd dose.
 - **Children aged < 12 years with immune deficiencies**
 - 3 doses of either **SinoVac or BioNTech** vaccines were recommended.
 - 4th dose => **not recommended** => immunocompromised subjects
- Note:** Cautiously administer live attenuated vaccine (e.g., **SinoVac**) to subjects with immune deficiencies.

WHAT SHOULD BE PREPARED BEFORE COVID-19 VACCINATION

- **Prepare to arrive the vaccination venue on time.**
 - Make sure that you carry all you were told to bring e.g., HK ID etc.
 - **Do not** take medicines e.g., acetaminophen or Ibuprofen before taking the vaccine.
 - Wear a face mask while going for your appointment.
 - Communicate any medical conditions in prior.
- **Mental health preparation**
 - Counsel vaccine recipients, or their caregivers about expected reactions post-vaccination e.g., headaches, fever, fatigue, or pain at the injection site.
 - mRNA-vaccine recipients
 - ❑ Male 12-39years are at risks of developing rare inflammation of the heart layers (i.e., myocarditis or pericarditis) => need information on how to seek symptoms care.

Programme Management and Vaccination Division, Centre for Health Protection, Department of Health (2022)

WHO SHOULD BE OBSERVED AFTER COVID-19 VACCINATION

- 15-minutes observation post-administration
 - All other people
- 30-minutes observation post-administration
 - Established contraindication to a different type of COVID-19 vaccine e.g., mRNA.
 - Previous history of allergic reactions (non-severe, < 4 hours onset).
 - History of reactions to vaccines (non-COVID-19) or injectable therapies.

Centers for Disease Control and Prevention, 2022

WHAT SHOULD BE OBSERVED AFTER VACCINATION

- **Adverse drug reactions (immediate or delayed).**
 - **Nose:** Sneezing, nasal congestion, difficulties in respiration etc.
 - **Digestive tract:** nausea, vomiting, diarrhoea, abdominal pain etc.
 - **Heart & blood vessels:** dizziness, fainting, fast heart rate etc.
 - **Skin/mucosal:** itching, widespread redness, swelling of eyes, lips etc.
 - **Neurologic:** agitation, convulsions, changes in mental status etc.
 - ❑ If it persist, see a Healthcare Professional.

Centers for Disease Control and Prevention, 2022

PRECAUTIONS/CONTRAINDICATIONS

• Precautions

- Subject with mild illness can be vaccinated
 - Precaution should be taken => **moderate** to **severe** illness
 - Recommended to be delayed => until **acute illness** improved
 - History of inflammation of heart layers after dose of BioNTech-vaccine
 - Contraindication to one type of COVID-19 vaccine is a precaution to another

Centers for Disease Control and Prevention, 2022

• Contraindications

- Severe allergic reactions secondary to previous dose.
- Diagnosed allergy to COVID-19 vaccine component.

World Health Organization, 2022

HOW TO DO ONLINE COVID-19 REGISTRATION

- **Step 1.**

- <https://booking.covidvaccine.gov.hk/forms/index.jsp>

- **Step 2. Select vaccine of choice**

- Sinovac (3years above)
 - BioNTech (5-17years)
 - BioNTech (18years or above)
 - Booking for additional doses (Sinovac or BioNTech)
- Booking management
 - Enquire/change/cancel booking

FACTORS INFLUENCING THE ACCEPTANCE & UTILIZATION OF COVID-19 VACCINES

- **Rumours => contributes to COVID-19 vaccine hesitancy**

Orosz et al., 2016

- People rejected vaccines in the past due to claims that it contains infertility agents.
- COVID-19 was a biological weapon designed in Chinese laboratory emerged after the first report of the coronavirus.

❖ Believers => less likely to support COVID-19 vaccination.

Aylward & Heyman, 2005; Douglas 2021; Sallam et al., 2021

- **Myths associated with COVID-19 Vaccines**

- The COVID-19 vaccine can affect women's fertility

- COVID-19 vaccine will not affect fertility.

- Only sensitizes your body to produce copies of the protein found on the surface of the coronavirus.
- The protein in coronavirus is not similar to that which is responsible for growth & attachment of placenta during pregnancy.

Prasad et al., 2021

- Researchers rushed the process of the development of COVID-19 vaccine, so its effectiveness and safety cannot be trusted.

- Evidence showed that the vaccines was 95% effective with no serious nor life threatening effects.

Prasad et al., 2021

- Getting the COVID-19 vaccine gives you COVID-19.

- COVID-19 vaccine will not give you COVID-19.

- Vaccines only instruct your cells to produce a protein that help fight the disease. Prasad et al., 2021

- Elderlies do not have a greater needs for vaccine

- Elderlies needs COVID-19 vaccines because they are prone to complications & death.

- All elderlies were recommended to be vaccinated as $\geq 81\%$ deaths were seen amongst them.

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- People with chronic diseases do not have a greater need for COVID-19.
 - More prone to complications and death if getting infected.
 - Have greater needs for vaccine
 - ❖ Recommended to receive COVID-19 vaccines.

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• Faith and the COVID-19 vaccines

- Most religious faith supported COVID-19 vaccines.
 - Example: Islam (fatwa councils recommended), and Christianity
- Very few gave doctrinal reasons
 - Example: Dutch Reformed Church, and other people of faiths
 - Cited their religion as a reason why they won't get the COVID-19 vaccine.

Mardian et al., 2021

King, 2021

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