04 Non face-to-face Treatment

Non face-to-face Treatment

4 Procedure

- In case of home treatment request for treatment related to COVID-19 or if persistent fever, shortness of breath, or abnormality in vital signs occur during health monitoring, non face-to-face treatment is linked.
- If it is determined that emergency transportation is necessary after non face-to-face treatment, the emergency transportation system is followed.

5 Quarantine Guidance for Guardians and Cohabitants

Division	sharing bathroom	outing	additional quarantine	PCR test
Fully Vaccinated	Impossible	Partly possible	absolution	2times ① 6-7 days after starting home therapy (The time at which the health monitoring of at-home caregivers ends) ② 13-14 days after starting home treatment (6-7 days after release from joint quarantine)
Not fully Vaccinated		Impossible	necessary	2times ① Days 6 to 7 during quarantine for home therapists ②Before the person's additional quarantine is lifted (9th day)

I·SEOUL·U

About the guardians and cohabitants, they are classified into two groups, according to whether or not they are vaccinated.
Not-fully-vaccinated guardians need an additional quarantine period.

05 End of Quarantine

End of Quarantine

1 Criteria for ending quarantine for confirmed patients based on clinical results

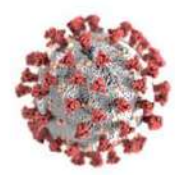
- For asymptomatic confirmed patients, 10 days have elapsed from the date of confirmation (no clinical symptoms occurred during this period)
- In the case of confirmed symptomatic patients, at least 10 days have elapsed since symptom onset (however, there is no fever and clinical symptoms are improving without antipyretic treatment for at least 24 hours

I·SEOUL·U

Releasing period from quarantine depends on the clinical results of the patient.
If the patient has symptoms during the quarantine, it will be at least 10 days since the symptom onset.

VI Vaccination

01 Rate of Vaccination
02 Vaccination in Seoul
03 Vaccine Effect
04 Getting Vaccinated
05 After Vaccinated



COVID-19 Comprehensive Report

Countermeasures to Combat Infectious Diseases in Asia Project
16th Conference on Countermeasures to Combat Infectious Diseases in Asia

I·SEOUL·U

Section 5 introduces vaccination against COVID-19.

01 Rate of Vaccination

Rate of Vaccination

- Vaccinated: 84% of total population
- Third Dose: 25.3% of total population

I·SEOUL·U

As of December 21, 2021, 81.5% of the total population received the second dose of vaccine.
And booster shot is given to 25.3% of the total population.

01 Rate of Vaccination

Rate of Vaccination

Total		
First	Second	Third
43,982,890	42,314,421	15,222,268

First, Second dose						
AZ		Pf		J&J	M	
First dose	Second dose (AZ-Pf included)	First dose	Second dose (no intersection)	First dose	First dose	Second Dose (M-Pf included)
11,148,572	11,081,873	24,551,688	23,130,692	1,508,812	6,773,818	6,593,044

Third dose		
Pf	M	J&J
9,391,842	5,808,013	22,413

I·SEOUL·U

The chart on the following slide shows the rate of vaccinations in Korea by vaccine manufacturers.

02 Vaccination in Seoul

Type of COVID-19 Vaccine in Seoul

Platform	mRNA vaccine		Virus vector vaccine	
Manufacturer	Pfizer	Moderna	Astrazeneca	Johnson & Johnson
Age	12Y~	18Y~	18Y~	18Y~
composition	Multi-dose vials	Multi-dose vials	Multi-dose vials	Multi-dose vials
Number, Interval	2 dose, 21 days	2 dose, 28 days	2 dose, 8~12 weeks	1 dose
injection	Diluted,0.3mL	0.5mL	0.5mL	0.5mL

I·SEOUL·U

There are four types of COVID-19 vaccines available in Korea, including Pfizer and Moderna, which are mRNA vaccines, and AstraZeneca and Johnson & Johnson, which are virus vector vaccines.

02 Vaccination in Seoul

Vaccination Subjects in Seoul

Group	Goal	Target group
A	Prevention of Severity and Death.	• Residents and workers in senior group facilities • Elderly home welfare facility users and residents • 65 years of age or older • Chronic disease patients • Age 50~64
B	Medical and quarantine, maintaining essential social functions	• Workers of medical institutions who treat COVID-19 patients • High-risk medical institution workers (health care workers) • First responder • Medical institutions and pharmacies workers (health care workers) • Soldiers, police officers, firefighters, and social infrastructure workers

I·SEOUL·U

We aim to reduce the infection and death in groups vulnerable to COVID-19, by targeting the following groups.

02 Vaccination in Seoul

Vaccination Subjects in Seoul

Group	Goal	Target group
C	Community spread (population infection) blocking	• People living in group facilities (other than the elderly) and workers • Children and youth education and childcare facilities workers • Ages 18-49
D	Excluding inoculation * Now added, according to clinical results	• Children and adolescents • Pregnant women

I·SEOUL·U

Although all citizens are targets for COVID-19 vaccinations, pregnant women and children under 18 years of age are excluded from the vaccination. However, they can be included depending on the clinical results.

02 Vaccination in Seoul

Vaccinated Groups by Period

January - March	April - June	July - September	October - December
• Nursing hospital · nursing facility admission - resident, worker	• Elderly home welfare facility users and workers • 65 years or older (sequential vaccination from the elderly)	• Adult chronically ill • Adult 50-64 years old	• Secondary inoculation, non-vaccinated or revaccinated (Considering antibody maintenance period)
• Institutional workers treating COVID-19 patients • High-risk medical institution workers (health care workers) • First responders (epidemiological investigations, paramedics, etc.)	• Medical institutions and pharmacies workers (health care workers) (Excluding those subject to inoculation in the first quarter)	• Military, police, fire and infrastructure workers	
• Residents/workers in mental care/rehabilitation facilities, etc.	• Persons living in facilities such as the disabled and the homeless, workers	• Children and youth education, childcare facility workers Adults 18-49 years old	

In terms of vaccinated groups, by period, vaccines are distributed to the population in a certain order, depending on the vaccination supply as shown.

03 Vaccine Effect

Immunization Effect of Vaccine

<2nd week of November Age-standardized incidence rate, seriousness rate, fatality rate and vaccination effect according to vaccination history>

Classification		Non-vaccinated			Fully-Vaccinated			Immunization Effect
		Subject[1]	Patient	Incidence Rate[2]	Subject[1]	Patient	Incidence Rate[2]	
12Y~	Infected	7,194,735	3,590	7.29[3]	35,976,448	8,224	3.12[3]	57.2%
	Severe	7,194,735	56	0.22[3]	35,976,448	52	0.02[3]	92.0%
	Death	7,194,735	11	0.04[3]	35,976,448	21	0.01[3]	82.2%
60Y~74Y	Infected	582,457	378	9.27	8,422,738	3,006	5.10	45.0%
	Severe	582,457	23	0.56	8,422,738	24	0.04	92.8%
	Death	582,457	4	0.10	8,422,738	10	0.02	82.7%
75Y~	Infected	388,109	205	7.55	3,289,807	1,218	5.29	29.9%
	Severe	388,109	17	0.63	3,289,807	24	0.10	83.3%
	Death	388,109	7	0.26	3,289,807	11	0.05	81.5%

1) Weekly average of Non&Fully vaccinated subjects
2) Weekly New confirmed case / Weekly subject 100,000 person-day
3) In order to correct for the age distribution difference, the expected number of confirmed cases was calculated based on the age composition of all vaccinated people, and the standard
※ The status of severe seriousness and death may increase as the follow-up period is extended, and the related effect results may change accordingly.

I·SEOUL·U

This chart indicates the immunization effect of vaccines.
The fully vaccinated group is less likely to be infected with COVID-19.

03 Vaccine Effect

Infection in Seoul

(Population,%))

Classification		Total	Sep~Dec	Before Daily Recovery		After Daily Recovery	
				'21.9.	'21.10.	'21.11.	'21.12. (12.1.-12.18.)
Contactor		831,242	425,747	77,482	72,804	132,946	142,515
Breakthrough infection (Rate)		16,606 (2.0)	14,305 (3.4)	1,472 (1.9)	2,491 (3.4)	6,997 (5.3)	3,345 (2.3)
Breakthrough infection (Total)		16,606 (100.0)	14,305 (100.0)	1,472 (100.0)	2,491 (100.0)	6,997 (100.0)	3,345 (100.0)
Vaccination	AZ	6,398 (38.5)	5,629 (39.3)	630 (42.8)	1,053 (42.3)	2,705 (38.7)	1,241 (37.1)
	Combined	843 (5.1)	706 (4.9)	69 (4.7)	152 (6.1)	317 (4.5)	168 (5.0)
	Moderna	293 (1.8)	261 (1.9)	9 (0.6)	19 (0.7)	152 (2.2)	81 (2.4)
	J&J	1,235 (7.4)	847 (5.9)	189 (12.8)	179 (7.2)	342 (4.9)	137 (4.1)
	Pfizer	7,837 (47.2)	6,862 (48.0)	575 (39.1)	1,088 (43.7)	3,481 (49.7)	1,718 (51.4)

- Total breakthrough Infection rate: 2%.
- After daily recovery, Breakthrough Infection rate increased.

I·SEOUL·U

The following chart shows, the infection and vaccination rates in Seoul.

04 Getting Vaccinated

Getting Vaccinated

1 **How to get Vaccinated in Seoul**

- KDCA Provides information on when and how to make a reservation.
- Citizens can make a reservation online(http://ncvr.kdca.go.kr) through the COVID-19 vaccination reservation website, by phone at the call center (Central 1339 and local governments), or make a reservation at a medical institution.

2 **Where to get Vaccinated in Seoul**

- Vaccination Centre
- Consigned Medical Institution
- Visiting Vaccination

I·SEOUL·U

Korea Disease Control and Prevention Agency provides information on how to get vaccinated for COVID-19.
People can make reservation online through the COVID-19 vaccination reservation website or by phone to the call center, or by reserving at medical institutions.

05 After Vaccination

After Vaccination

1 Quarantine Pass

- 14 days after 2nd dose vaccination, citizens can use quarantine pass
- Quarantine Pass expires in 6 months period and needs 3rd, 4th vaccination for extension
- Uses in all indoor places ; restaurants, cafes, bars, theatre, etc.

2 Non-vaccinated Citizens

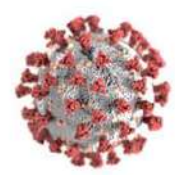
- Only can visit indoor alone

I·SEOUL·U

14 days after second dose of vaccination, citizens can use quarantine pass to visit most facilities.
The COVID-19 vaccination certificate can be issued online through the vaccination assistant website.

VII Adverse Events of Vaccines

01 Adverse Events
02 Rapid Response System
03 Causality Assessment
04 Risk Communication



COVID-19 Comprehensive Report

Countermeasures to Combat Infectious Diseases in Asia Project
16th Conference on Countermeasures to Combat Infectious Diseases in Asia

I·SEOUL·U

Finally, I would like to highlight the following points of adverse events of COVID-19 vaccines.
Seoul City is taking actions in accordance with Adverse Events Guidelines for Vaccination developed by the Korea Centers for Disease Control and Prevention.

01 Adverse Events

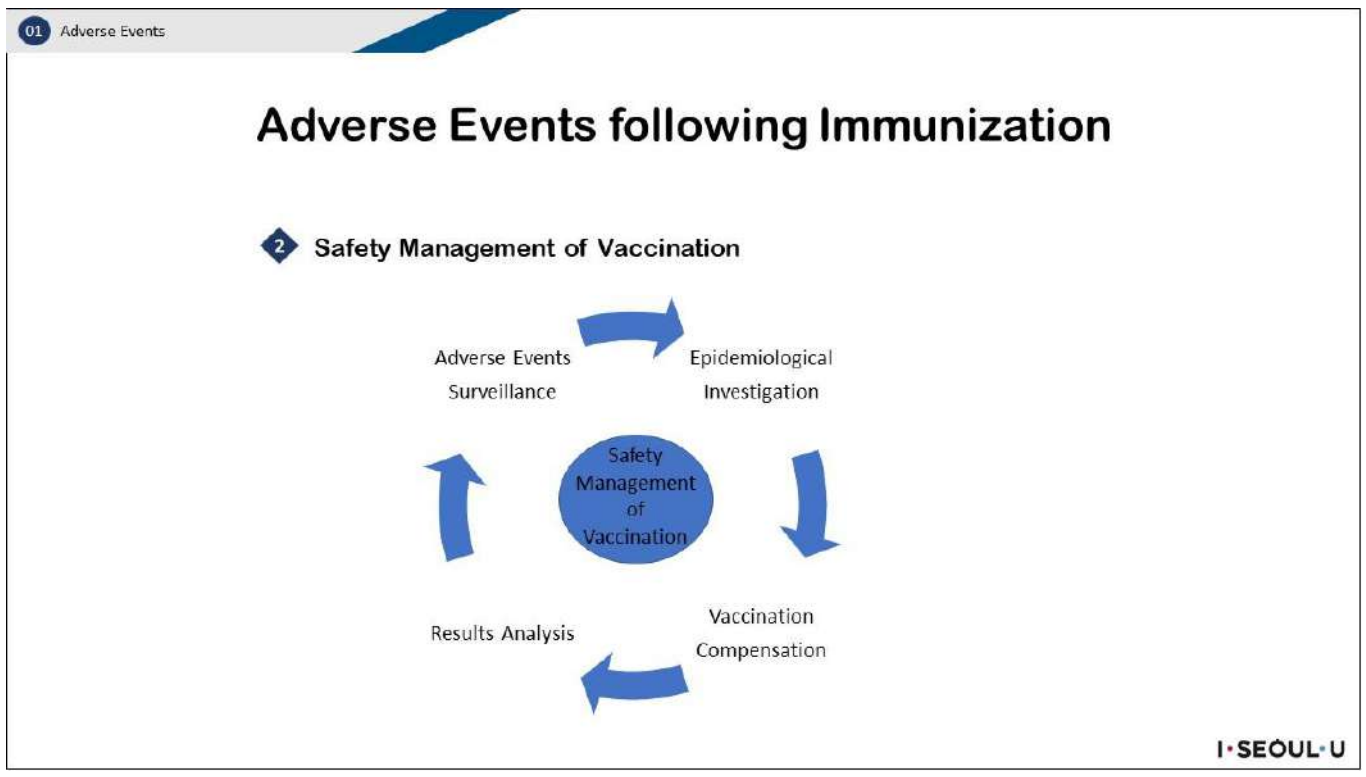
Adverse Events following Immunization

1 Definition of Adverse Event

- **(WHO)** Adverse event following immunization is any untoward medical occurrence which follows immunization and which does not necessarily have a causal relationship with the usage of the vaccine
- **(Infectious Disease Prevention ACT)** Diseases or symptoms that can occur due to vaccination with time association

I·SEOUL·U

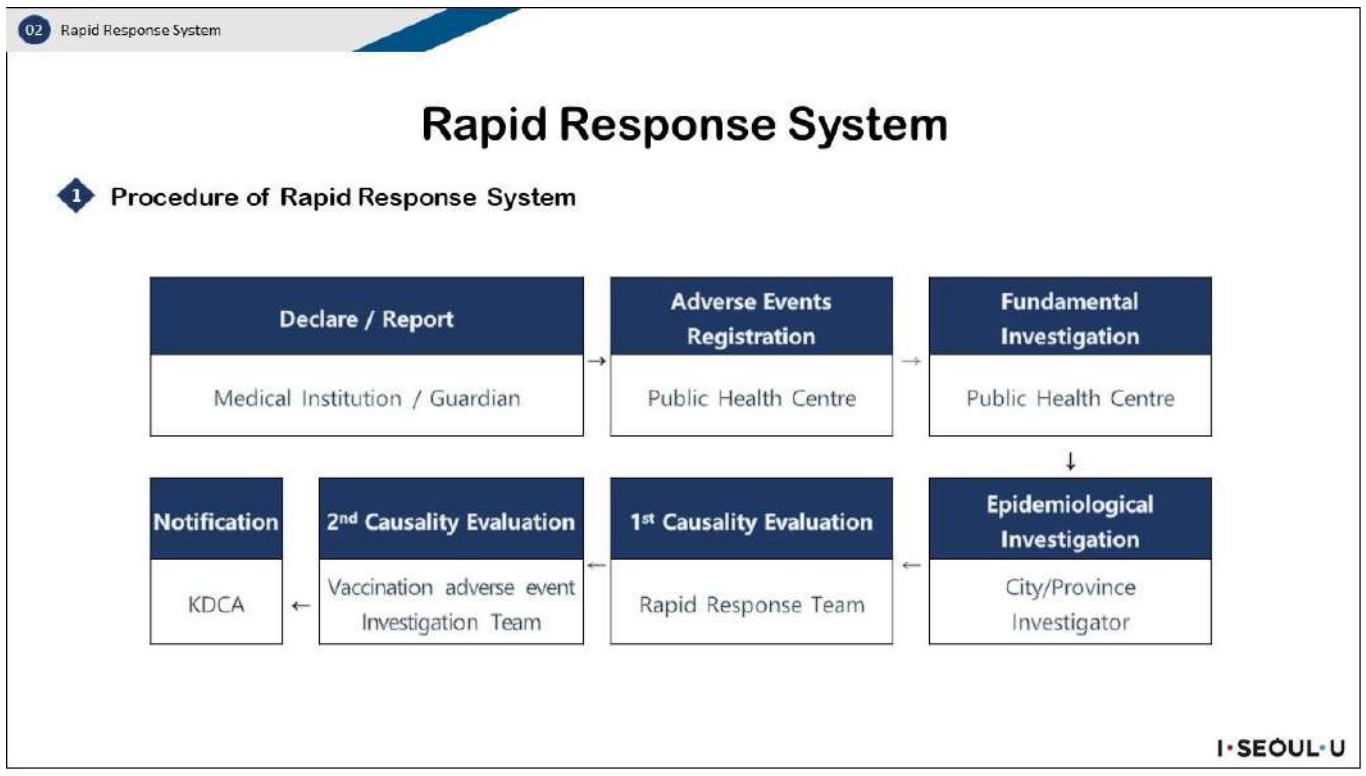
Adverse event is defined by WHO as follows.



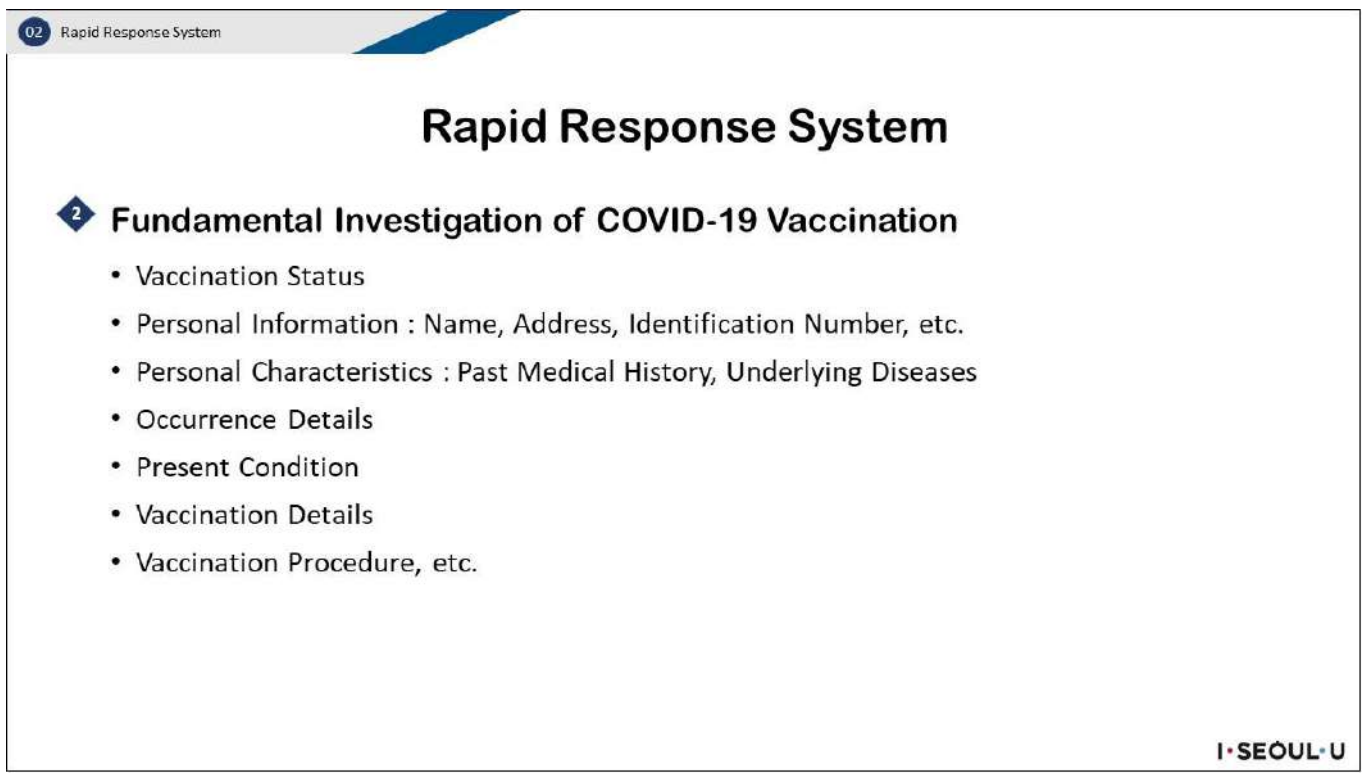
The national operating system for Safety Management of COVID-19 Vaccination is largely composed of four stages as displayed.

Adverse events can be divided into two groups.
First, common adverse events refers to fever, muscle pain, headache and pain at vaccination site, which is accounted for 98% of total reported cases in Seoul.
Second, there are serious adverse events that can be further divided into several adverse events and adverse events of special interests.

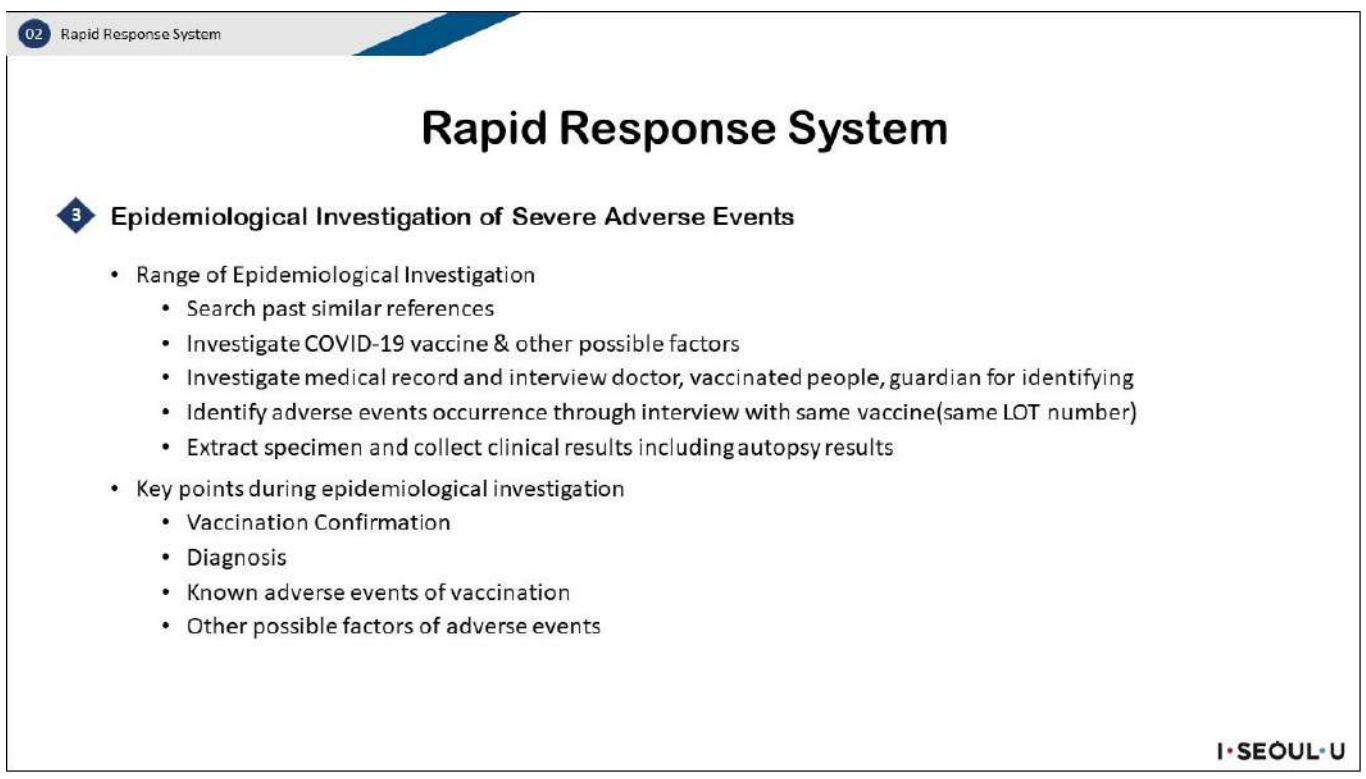
Adverse Event Surveillance System proceeds with two types of reports.
First, it is reported by standard diagnosis by medical doctors to COVID-19 vaccination management system by web or fax.
Second, vaccinated person and their guardian report the adverse events to the vaccination helper website directly.



When the medical institution or the guardian report the adverse events, a relevant Public Health Center conducts the fundamental investigation first. After the epidemiological investigation, the first and second causality evaluations are conducted, finally the evaluation results is notified to KDCA.



Fundamental investigations must contain the following information.



The epidemiological investigation includes displayed scope.

03 Causality Assessment

Causality Assessment

1 Causality Assessment Classification (5 Steps)

Classification	Causality Assessment Criteria
① Definitely related, Definite	• Time Related • Well-known vaccine adverse events
② Probably related, Probable	• Time Related • Well-known vaccine adverse events
③ Possibly related, possible	• Time Related • Possibility of occurrence of adverse events by vaccine is higher than other factors
④ Probably not related, Unlikely	• Time Related ① **Not enough references between vaccine and adverse events (④-1)** ② Possibility of occurrence of adverse events by other factors is higher than vaccine
⑤ Definitely not related	• Time not related • Adverse events occur by other factors not vaccine

I·SEOUL·U

Causality assessment classification has following 5 assessment criteria.
As there is not much accumulated data on adverse events of COVID-19 vaccine, ④-1 clause is created in South Korea, which includes Guillain-Barre syndrome, ITP, TTS, pericarditis, myocarditis, etc.

03 Causality Assessment

Causality Assessment

2 Compensation by result of causality

- Causality Admission : Compensation Policy by Country (definite, probable, possible)
- Causality Indeterminate : Medical expenses Support for patients with insufficient references (unlikely ④-1)
  - Up to 50 million Korean Won per person
- Unlikely Causality : Emergency welfare, Catastrophic medical expenses
- Compensation Legislation
  - Anaphylaxis : less than 24 hour
  - Partial adverse events : less than 7 days
  - TTS : less than 42 days
  - Others : No limit

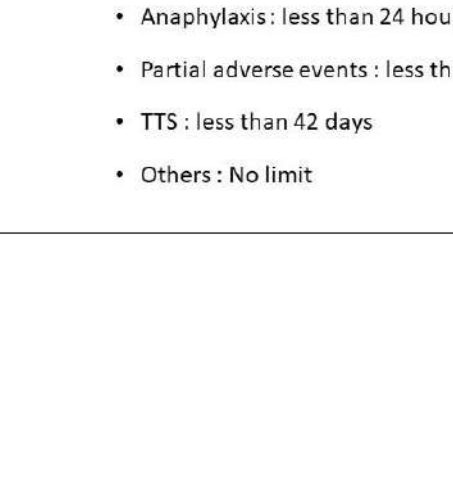
I·SEOUL·U

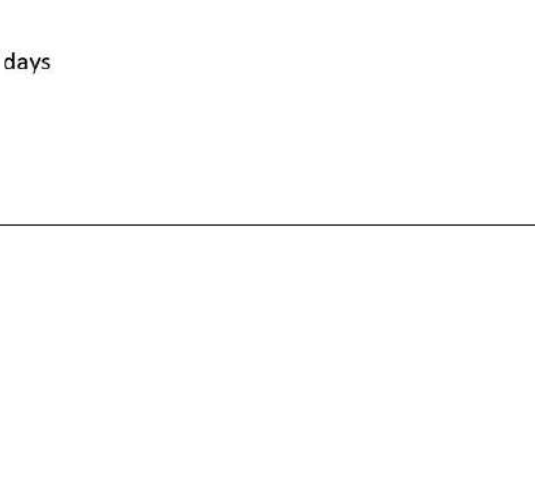
Korea Disease Control and Prevention Agency implemented medical expense support policy.
Under this policy, in the case that a patient was excluded from eligibility for compensation for adverse events because of the lack of data needed for the verification of causal link with a vaccine, a maximum of 50 million won per person was provided as medical expenses to the patient.

03 Causality Assessment

Causality Assessment

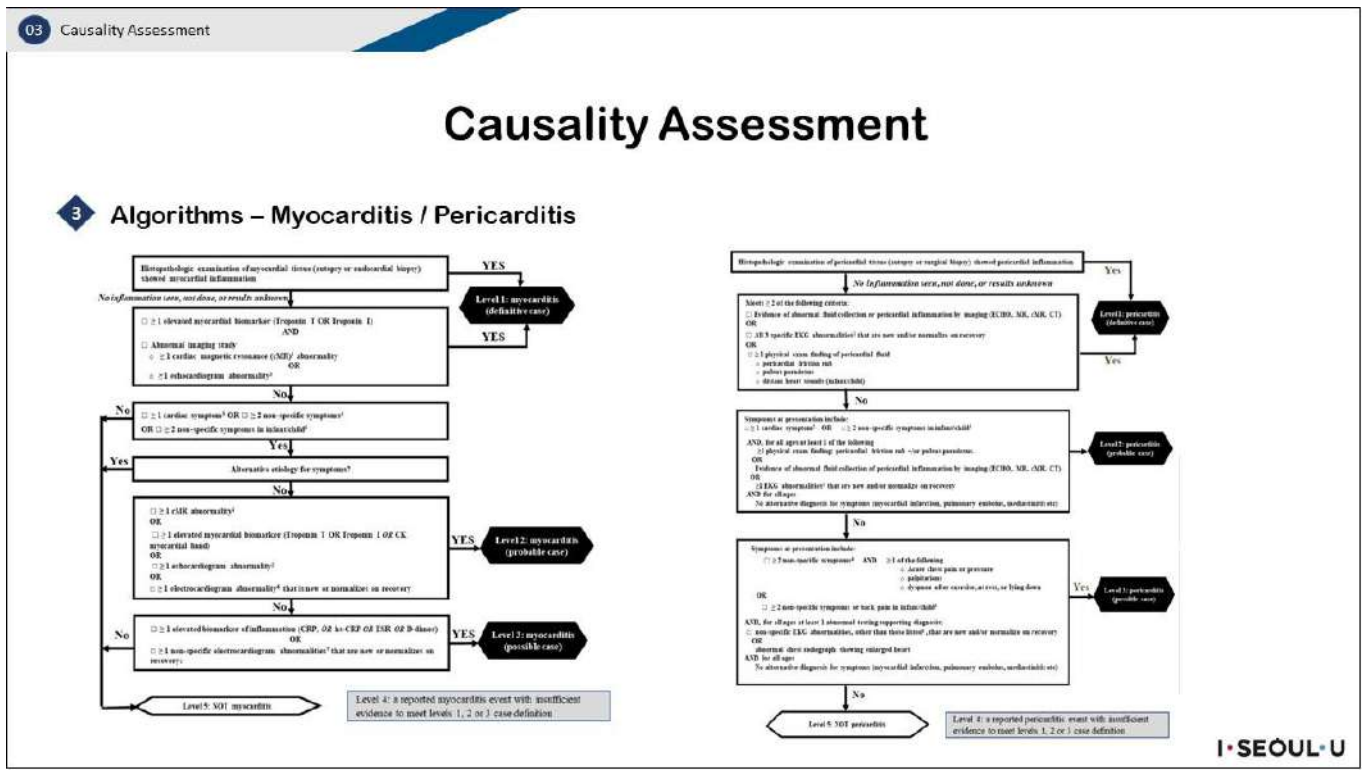
3 Algorithms - Anaphylaxis





I·SEOUL·U

Various data are referred to evaluating serious adverse events to COVID-19 vaccination.
First, the WHO immunization safety surveillance data.
Second, safety data for vaccination.
Third, investigation of incidents of corresponding adverse events to vaccination.
Fourth, other specialized academic journal articles.
That displayed example is causal evaluation of algorithms for anaphylaxis.
Currently only cases of anaphylaxis occurring within 24 hours are recognized in Korea.



Next, causal evaluation algorithm for myocarditis, pericarditis is displayed.
Currently in Seoul, reports of suspected cases of myocarditis or pericarditis are increasing.
To address this issue, several national guidelines have been revised and supplemented.

Since November 2021, concept of living with Corona virus was implemented in Korea.
However, social distancing has been strengthened again.
Due to a decrease in the efficacy of initial vaccination, the continuation of the Delta-variant epidemic, and a decrease in the vaccine effect on Delta-variant.
Anti-vaccination movement is also taking place in Korea.
In order to overcome the current situation, Korea made great efforts for strengthening social distancing and increasing the booster vaccination rate.

I sincerely appreciate your attention today.
If you have any questions or need any further information, you are most welcomed to contact.
Thank you.

Questions and answers (Seoul)

Q1.

The slide shows GPS, CCTV, etc. are being used for contract tracing. How is the public health department getting and using that information?

A1.

1) When conducting epidemiological investigations, GPS is used when the confirmed person's trace is not accurate, the
confirmed person is severely unable to identify the movement path, or when the confirmed person hesitates to inform the movement path, and has important information about the mass outbreak.
In the early days of GPS utilization, the Korea Centers for Disease Control and Preventior.(KCDC) provided tracking data using GPS for cases requested by the Seoul Metropolitan Government, but as the number of confirmed cases increased, it was changed to be performed by a pre-authorized Seoul official.

2) CCTV was used to accurately select close contacts in multi-use facilities, schools, workplaces and so on. The risk of exposure due to contact was evaluated through a monitor of the subjects who contacted during the time the confirmed patient stayed at the place. Through this, close contacts were asked to self-quarantine and PCR tests, and other contacts were not self-isolated, but it was determined whether the test was conducted.

Q2.

Please explain the difference between active monitoring and passive monitoring in further detail. Are we correct in assuming that active monitoring is the process in which the health center or quarantine station where a patient was confirmed to be positive makes a regular call to a person who had close contact with the patient to check on their health? And that passive monitoring is the process in which a person who had close contact with the patient but who has been fully vaccinated and testing negative for COVID-19 reports any changes in their health condition by the isolation app? Additionally, as for the passive monitoring, when the person reports their bad health, do the health center or quarantine station ask after their health directly?

A2.

You are basically correct in your assumptions.

1) Active monitoring is when a person in charge of a public health center checks whether

symptoms related to COVID-19 occur twice a day while a close contact of a confirmed person (family, co-worker, etc.) is in self-quarantine. In this case, a self-quarantine app is naturally provided. Currently, there are many confirmed cases, so if there are two vaccinations, active monitoring is not conducted.
2) The passive monitoring corresponds to cases where even if they stayed in the same space as the confirmed patient, they were far away or had a short exposure of about 5 minutes. For example, they drank tea at the table next to them, more than 2 meters away from the cafe, and there was no conversation at all. In this case, it is judged that there is little possibility of becoming a confirmed patient within the incubation period, so if COVID-19 symptoms occur for 14 days, contact the public health center directly for an examination.

Q3.
The slide says you operate two types of home treatment: local government-led type and medical institution-led type. What are the different roles of local government and medical institutions for home treatment? How do they connect?
A3.
Local -led type is a type of home treatment management when local residents are confirmed in each of the 25 autonomous districts of Seoul and home treatment is performed.
The autonomous district's home treatment promotion team consists of three types: a home treatment support team, an emergency patient management team, and a home treatment management team.

1) The home treatment support team is mainly in charge of the administrative field. The work is the role of the general manager of home treatment support. and performs budget and manpower management, isolation management, kit delivery, goods management, and living support.
2) The emergency patient management team is mainly composed of doctors and nurses under the direction of the head of the health center, and supports 24-hour emergency situations and delivery of medicines.
3) The home treatment management team also works under the direction of the head of the health center. The work supports the emergency patient management team for the allocation of home treatment patients and 2 4 -hour emergency situations and transportation.

Second, it is not led by medical institutions, but rather cooperative with health

administrative agencies in autonomous district s. In other words, there are two to five medical institutions in the autonomous district that voluntarily participate in home caregivers .

What I do is ...
1) Monitoring the health care o: confirmed patients undergoing home treatment twice a day.
2) At night, a confirmed patient undergoing home treatment receives a call first to deal with the worsening symptoms.
3) Inform the health center of the patient's emergency and support the transfer.
4) Prescription for treatment (paxrovid) so that the confirmed person can take it.
5) It is in charge of several medical consultations.
Third, the autonomous district health administrative agency and medical institutions in the autonomous district are separated and manage home care on t wo tracks during the quarantine period, but they are connected by hotline and work closely and
organically. In other words, it can be said that the autonomous district provides overall administrative and support, and the medical institution is in charge of the medical care of the confirmed patient.