DRAFT INTERNATIONAL STANDARD ISO/DIS 5258

ISO/TC **304** Secretariat: **ANSI**

Voting begins on: Voting terminates on:

2021-06-10 2021-09-02

Pandemic response (respiratory) — Drive-through screening station

ICS: 11.020.01

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.



Reference number ISO/DIS 5258:2021(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Contents			
Fore	eword		iv
Intr	oductio	on	v
1	Scop	oe	1
2	Nori	mative references	1
3	Tern	ns and definitions	1
4	Ove : 4.1	Purpose 4.1.1 Early diagnosis 4.1.2 Minimizing contact	
	4.2 4.3 4.4	4.1.3 Saving time Planning 4.2.1 Site selection criteria 4.2.2 Site Components Principles Staffing	
5	Scre 5.1 5.2 5.3 5.4 5.5	Reservation Registration Examination Specimen collection Education	
6	Notification of test results		
Ann	ex A (in	nformative) Example of DTSSs	8
Rihl	iogranl	hv	12

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by ISO/TC 304, Healthcare Organization Management.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Pandemics demand swift, decisive, and sustained action by governments and public health authorities. The following abbreviated World Health Organization (WHO) chronology summarizes the early unfolding of the most recent pandemic:

- 31 Dec 19 WHO learns informally of an outbreak of viral pneumonia in Wuhan, China
- 3 Jan 20 China provides WHO with information on the outbreak
- 5 Jan 20 WHO issues its first Disease Outbreak News report
- 11 Jan 20 Chinese media report first death due to the novel coronavirus
- 14 Jan 20 WHO confirms human-to-human transmission, but doubts remain
- 30 Jan 20 WHO declares the outbreak a PHEIC (public health emergency of international concern)
- 11 Feb 20 WHO designates the disease caused by the novel coronavirus COVID-19 (the virus is designated SARS-CoV-2)
- 24 Feb 20 WHO-China mission warns that "much of the global community is not yet ready, in mindset and materially, to implement the measures that have been employed to contain COVID-19 in China"
- 7 Mar 20 Globally, confirmed COVID-19 cases surpass 100,000
- 11 Mar 20 WHO characterizes COVID-19 as a pandemic
- 4 Apr 20 Globally, confirmed COVID-19 cases surpass 1 million (in less than 100 days after WHO first learns of the outbreak)
- 1 May 20 WHO declares COVID-19 continues to constitute a PHEIC.

In response to the unfolding pandemic, South Korea took swift action that can be summarized according to 3Ts: 1) widespread Testing, 2) contact Tracing and 3) rigorous Treating. The country confirmed its first COVID-19 case on 27 Jan 20. One week later, government officials met with representatives from several medical companies. In late January, South Korea approved a diagnostic testing set; approval of another company's test followed soon afterwards. On 2 Feb 20, the first Drive-through Screening Station (DTSS) began operation; by 16 Mar 20, 70 were in operation. In February 2020, news headlines worldwide announced that South Korea had the ability to test thousands of people each day, including in DTSS. On 16 Mar 20, G7 leaders issued a joint statement "acknowledging that the COVID-19 pandemic is a human tragedy and a global health crisis, which also poses major risks for the world economy." South Korea became a sign of hope and a model to follow: "South Korea took rapid, intrusive measures against COVID-19 and they worked" (Guardian, 2 Mar 20); "South Korea has the highest rate of testing and the most comprehensive data for coronavirus in the world" (Fortune, 19 Mar 20). On 29 Feb 20, the number of new cases reported on a single day surged to 909; on 23 Apr 20, the daily number had dropped to eight cases. South Korea had apparently succeeded in slowing the spread of the virus (socalled flattening of the curve) without shutting down the country and without imposing extreme restrictions on people's movement.

As a result of its early success in controlling COVID-19, the South Korean government received many inquiries about the country's pandemic response management, including its use of DTSS. These DTSS can screen large numbers of people for the presence of the novel coronavirus, with those testing positive told to self-isolate or referred for treatment; those who had been in contact with an infected person, to self-quarantine. People presenting for screening at DTSS never left the comfort of their car. The government developed a standard protocol for operating a DTSS that included such process as medical interview, temperature check, and specimen collection through a car window. Use of DTSS reduced the risk of transmission of the disease (including in hospital waiting rooms), relieved pressure on hospitals, which would otherwise have likely been inundated with requests for testing, and freed hospital resources for treating people with COVID-19 (including those that would otherwise have been

ISO/DIS 5258:2021(E)

necessary to disinfect areas used for specimen-taking). In order to encapsulate the experience, the South Korean government decided to promote the development of this specification to facilitate the use of DTSS in future epidemic and pandemics.

Pandemic response (respiratory) — Drive-through screening station

1 Scope

This document describes the operation of a Drive-through Screening Station (DTSS) for mass testing as part of pandemic response management (PRM).

NOTE COVID-19 is an exemplary disease for which such a station is developed.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at https://www.electropedia.org/

3.1

confirmed case

A person confirmed to be infected with the pathogen of the infectious disease according to the testing criteria for diagnosis, irrespective of clinical signs and symptoms

[SOURCE: Standard Operating Model of Drive-thru Screening Station, Central Disaster and Safety Countermeasures Headquarters (CDSCHQ), South Korea]

3.2

Coronavirus

Coronaviruses are a large family of viruses that may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19.

[SOURCE: WHO, Q&A on coronaviruses (COVID-19), https://www.who.int/news-room/q-a-detail/q-a-coronaviruses]

3.3

COVID-19

COVID-19 is an infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. [SOURCE: WHO, Q&A on coronaviruses (COVID-19), https://www.who.int/news-room/q-a-detail/q-a-coronaviruses].

3 4

Drive-through Screening Station or Drive-thru Screening Station DTSS

A screening station is where a test subject goes through screening processes such as a medical interview, fever check, and specimen collection through a car window without leaving the car.

[SOURCE: Standard operation model for COVID-19 Drive-through Screening Station, Central Disaster and Safety Countermeasures Headquarters (CDSCHQ), South Korea]

Note 1 to entry: The "Drive-thru" model provides a one-stop service that "registration – examination – specimen collection – disinfection and education", all carried out while the person resides in the car. It is a screening station specialized in *large-scale sample collection* and exclusively dedicated to the function of specimen collection.

SOURCE: Standard Operating Model of Drive-thru Screening Station, Central Disaster and Safety Countermeasures Headquarters (CDSCHQ), South Koreal

3.5

epidemic

A disease that affects a large number of people within a community, population, or region.

[SOURCE: Intermountain Healthcare, https://intermountainhealthcare.org/blogs/topics/live-well/2020/04/whats-the-difference-between-a-pandemic-an-epidemic-endemic-and-an-outbreak/]

3.6

pandemic

(adjective) Occurring over a wide geographic area and affecting an exceptionally high proportion of the population.(noun) An outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population.

[SOURCE: Merriam-Webster, https://www.merriam-webster.com/dictionary/pandemic]

3.7

personal protect equipment

PPE

Equipment that can include, but is not limited to, clothing, gloves, helmets, footwear and face protection[

[SOURCE: ISO/TR 21808:2009, 2.1]

4 Overview of DTSS

The DTSS is a temporary testing facility where a test subject goes through a series of screening processes – a medical interview, examination, and specimen collection - through a car window without leaving the car. An infectious agent can be transmitted by direct contact, droplet spread, or airborne. Therefore, effective ways to minimize contact between test subjects and testers are indispensable. The DTSS mitigates contact between test subjects and healthcare workers. Test reservations are available through mobile apps, which minimizes on-site waiting time. A mobile preliminary questionnaire allows for obtaining sufficient information in advance, enabling the medical staff to conduct necessary tests quickly. The DTSS model is applicable to any endemic or pandemic in that it helps expand testing capabilities massively at once.

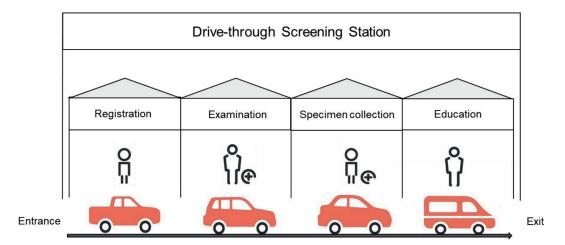


Figure 1 — Typical process of DTSS

Figure 1 — Typical process of DTSS

4.1 Purpose

4.1.1 Early diagnosis

The purpose of the DTSS is to rapidly identify and isolate infected people, such as in a pandemic in its early stages. The world faces challenges due to novel infectious diseases without undeveloped vaccines and treatments. It is vitally important to test as many suspected cases as possible to respond to the pandemic quickly.

4.1.2 Minimizing contact

The DTSS mitigates contact among test subjects and healthcare workers. Avoiding direct contact is a top priority when a large number of potentially-infected test subjects can occur due to population high density and/or potential risk of close contact. People are very likely to wait for testing in indoor testing facilities, increasing the risk of contagion among healthcare workers and test subjects.

4.1.3 Saving time

In contrast to other testing approaches, the DTSS is dedicated to sampling within 5-10 minutes per person. For a disease where the percentage of asymptomatic and pre-symptomatic test subjects is high, it is impossible to identify subjects without testing. For massive testing, it is necessary to minimize testing time for each person. Prior to DTSS, the time taken for disinfection after each testing was 30 to 60 minutes. In contrast, at least six tests per hour are possible in the DTSS.

4.2 Planning

DTSS installation and operation should make pertinent provision for space setting: 1) establishing e the station's operating rules, such as infection control;2) providing required equipment and supplies; 3) task instructions for healthcare workers and other personnel; 4) documenting the roles and tasks of staff; and 5) specification of a standardized interview and testing process.

A lack of resources, including PPE and medical personnel, is inevitable during a pandemic. For instance, PPE might be sufficient in some areas where high-degrees of protection, even in Level-D, are afforded

ISO/DIS 5258:2021(E)

to healthcare workers, whereas in others, PPE is limited to the degree that only masks and face shields are available to them.

In addition, a DTSS can install more than one lane, depending on the urgency and demand for testing as well as the space assigned to the DTSS. The DTSS comes in various types such as container type and open-tent type, choice of which should take into consideration the circumstances of the community. Thus, planning for DTSS requires flexibility, considering the specific requirements and situations of each community and country.

4.2.1 Site selection criteria

A potential site should consider multiple factors, such as weather conditions, in order to give access to other services and protect staff from severe weather.

- 1) Size and space appropriate for a standard screening station
- 2) A site that is separated from residential areas as much as possible, with proper natural ventilation
- 3) A site accessible by residents
- 4) A site that is properly equipped with a storage warehouse, electrical installation, communication system, water supply, etc.
- 5) A site that is immediately available for use.
- 6) A site that is with enough space to store medical wastes.
- 7) A site where it is not cumbersome to drive-through and park.

4.2.2 Site Components

1) Personal protective equipment

PPE (Level D protection\mask (medical/surgical mask), face shield (goggles, etc.), disposable gown, disposable gloves, etc.) should be prepared. However, levels of protection against transmission should follow national guidelines.

2) Supplies and utensils

It is essential to secure a sufficient power supply available for refrigeration of specimens and laboratory supplies, printer usage for specimen labelling, electronic health record using computers/tablets, and an adjustable temperature setting to ensure heating/cooling systems for staff adjustable based on weather conditions.

3) Public notice

Explanations or instructional videos should be in place by way of a relatively large monitor for high visibility. A notice (banner, poster, etc.) should be put up in the screening station.

4.3 Principles

- 1) A Drive-thru Screening Station shall target an individual who drives alone to the screening site (without family members on board).
- 2) In this model, the healthcare workers should wear PPE and perform registration, examination, specimen collection, and so forth, standing inside or outside the booth. The distance between the car and the booth needs to be short enough for the purpose of easy specimen collection.)
- 3) Two healthcare workers should take turns if necessary, and only one healthcare worker should occupy a booth at a time as a rule.
- 4) An appointment should be made prior to the visit to minimize waiting time.

- 5) A DTSS operating team should clearly define roles and responsibilities, and relevant personnel should be trained in advance.
- 6) A drive-through screening station allows for disinfection by minimizing contact between test subjects, which lowers the risk of infection.
- 7) Use of personal vehicles should be recommended.
- 8) An isolated examination area shall be used for a suspected case to prevent the virus spreading.
- 9) When healthcare workers examine a test subject exposed to the virus, they shall comply with the general guidelines of WHO and CDC.
- 10) Health workers' rotation should consider the amount of time they are in standing position, adequate breaks for rest, and hydration and nourishment.

4.4 Staffing

The DTSS requires less staff than other traditional models. A DTSS can be operated by four to eight healthcare workers, which includes one to three administrative workers (registration, facility management, vehicle control, etc.), one or two doctors (examination), one or two nurses (specimen collection), and one healthcare worker or trained lay person (education). Skilful workers for specimen collection should be available.

Table 1 — Minimum required staff

	Minimum required staff			
Process	Staff	Number of staff	Role	Responsibility
Registration, Interview	— Administration— Facility management— Vehicle control	1-3	Test subject registration, questionnaire (directly filled out by driver or through question/an- swer), check for symptoms for fever	Have test subjects fill out the questionnaire. (It could be omitted if an electronic questionnaire was submitted via mobile app in advance)
Medical exami- nation	Physician	1-2	Check symptoms with questionnaire Determine collection method (for example, whether to sample from lower respiratory tract)	Questionnaire review Triage and screening exam
Specimen collection	Registered nurse, Trained lay health workers (LHWs), or Licensed Practical Nurses (LPNs).	1-2	Performing test	In the case of sputum collection, it is recommended to close the window and check it.
Education	Registered nurses, healthcare workers, trained lay (health) workers, or licensed practicing nurses.	1	Education for infection prevention	

5 Screening process

5.1 Reservation

An appointment should be made prior to the visit to reduce waiting time, and, if possible, online questionnaires or interviews can be used before the visit.

5.2 Registration

A test subject should present proper identification as well as contact information, symptoms, and travel histories. The subject is to fill out a questionnaire. Also, personal information should be obtained such as name, address, and contact number for registration. It is also recommended that the car ventilation mode be kept in AC internal circulation during registration.



Registration staff(one person)

- · Coordinate DTSS patient registration
- · Check ID, contact information
- · Check contact history with confirmed case
- · Check the questionnaire
- Keep the car ventilation mode in AC internal circulation

Figure 2 — Registration

5.3 Examination

Medical staff interview and exam individuals in order to determine who should be tested, and decide test methods and types of specimen to collect at this stage.



Healthcare worker(one person)

- Triage
- · Medical screening exam
- Determine whether to test

Figure 3 — Examination

5.4 Specimen collection

Specimen collection methods and guidelines vary. Healthcare workers should follow manufacturers' instructions and CDC guidelines.

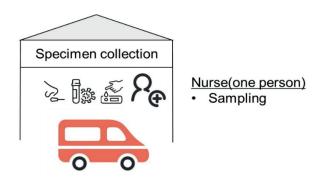


Figure 4 — Specimen-taking

5.5 Education

A test subject should be instructed to stay in self-quarantine **until** he/she receives the test result and to make sure that family members or other individuals do not use the same car when leaving the site.



Nurse or trained lay person(one person)

- Instruction on self-quarantine until test result comes out
- Instruct to maintain safe distance

Figure 5 — Education

6 Notification of test results

1) Test subject

The test result shall be delivered directly to the test subject.

2) CDC

If a person tests positive for the infectious disease, it shall be immediately notified to the CDC Emergency Operation Centre and the corresponding public health centre that has jurisdiction over the healthcare organization.

Annex A

(informative)

Example of DTSSs

A.1 Approaches to DTSS

Healthcare organizations or public health centers may consider two approaches to DTSS while considering available resources.

A.1.1 Approach A: Four steps

When operating a separate booth for each of four steps, Registration \rightarrow Examination \rightarrow Specimen Collection \rightarrow Education and Disinfection", it takes approximately two to five minutes at each booth for carrying tasks pertinent to it. This can reduce waiting time and allow for a large-scale specimen collection. Sufficient space and staff to install and operate four separate booths should be available.

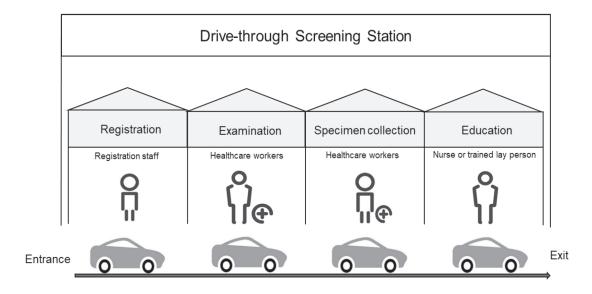


Figure A.1 — Typical layout of DTSS Approach A

A.1.2 Approach B: Two steps

Operating a streamlined process of two steps, Registration and Waiting \rightarrow Examination, Specimen Collection, Education and Disinfection", simplifies the work and uses two booths. This enables efficient use of space and staff. One booth manages multiple steps, incurring some waiting time for individuals in cars. Advance appointment, through preferably a hotline, is highly recommended in this approach in order to streamline the work process.

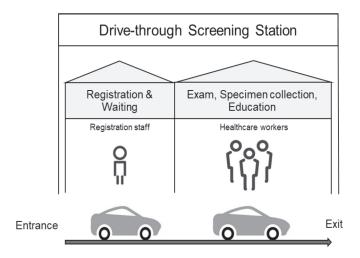


Figure A.2 — Typical layout of DTSS Approach B

A.2 Current state of Drive-thru Screening Stations in South Korea

Table A.1 — DTSS Examples in South Korea

Station	Operating method	Photo
Goyang-si Public Health Center (Feb. 26, 2020 -)	①Interview→②Examination→③Specimen collection *①-③ use separate tents. ** It takes less than 10 minutes + (waiting time) for each person.	① 문 진 생물건물소 선발 진료소
Yeungnam Univ. Hos- pital (Feb. 26, 2020 -)	①Registration→②Examination→③Payment→④Specimen collection *①-④ use separate containers. ** It takes less than 10 minutes + (waiting time) for each person.	

 Table A.1 (continued)

Station	Operating method	Photo
Sejong-si Public Health Center (Feb. 26, 2020 -)	①Confirmation of reservation→②Registration, Examination, Specimen collection *①-② use separate tents. ** It takes less than 10 minutes + for each person (appointment necessary) ** Appointment: Five hotlines in the public health center are in service.	
Jinju-si Pub- lic Health Center (Feb. 28, 2020 -)	①Registration and Examination→②Specimen Collection *① uses separate tents. ② does not have a separate facility, and people drive through the site. ** It takes less than 10 minutes + (waiting time) for each person.	CHENENA CONSTRUCTION OF THE ACCOUNTY OF THE AC

A.3 Drive-thru testing countries

 ${\bf Table~A.2-Global~examples~of~Drive-through~Screening~Station}$

Country	Headline	URL
United States(1)	Coronavirus: Drive-thru testing starts in New Rochelle, site of major outbreak	https://www.lohud.com/story/news/local/westchester/new-rochelle/2020/03/13/coronavirus-drive-through-testing-starts-glen-island-park-new-rochelle/5040315002/
United States(2)	Drive-through testing centers are opening around the US — photos show how the makeshift operations check people for coronavirus	https://www.businessinsider.com/coronavirus-covid19-testing-drive-through-centers-united-states-2020-3
United States(3)	America's ER Covid-19 Drive-through testing	https://americaser.com/covid19/
United States(4)	Covid-19 Free Drive-through Screening	https://co.maverick.tx.us/2020/ 04/23/covid-19-free-drive-thru -screening/
United States(5)	Covid-19 Drive-thru testing	http://walton.floridahealth.gov/events/2020/05/covid-drive-thru.html
United States(6)	COVID-19 Testing Available for Seattle Residents, Workers and Visitors	https://education.seattle.gov/covid -19-testing-available-for-seattle -residents-workers-and-visitors/

Table A.2 (continued)

Country	Headline	URL
Canada(1)	Drive-thru coronavirus testing pondered as Ontario ramps up screening	https://www.thestar.com/news/gta/2020/03/10/drive-thru-coronavirus-testing-pondered-as-ontario-ramps-up-screening.html
Canada(2)	New drive-thru coronavirus testing site opens in Richmond near airport	https://bc.ctvnews.ca/new-drive -thru-coronavirus-testing-site -opens-in-richmond-near-airport -1.5199361
United Kingdom(1)	Coronavirus: Drive-through testing centre launched in Wales	https://www.bbc.com/news/uk -wales-51766298
United Kingdom(2)	Covid in Scotland: First screening site opens at Edinburgh airport	https://www.bbc.com/news/uk -scotland-edinburgh-east-fife -55075376
Egypt(1)	Egypt to open its first drive-through coronavirus testing site	https://english.ahram.org.eg/ NewsContent/1/64/372177/ Egypt/Politics-/Egypt-to-open -its-first-drivethrough-coronavirus -t.aspx#
Egypt(2)	Egypt prepares drive-thru coronavirus testing clinics	https://www.sis.gov.eg/Story/ 147625/Egypt-prepares-drive-thru- coronavirus-testing-clinics?lang =en-us
India	METROPOLIS Launches Drive Through Centres Testing in Mumba	https://labs.metropolisindia .com/metropolis-healthcare-ltd -diagnostic-centre-govandi-west -mumbai-84978/Home
Japan(1)	Drive-through PCR test introduced in Niigata Expected to prevent infection and improve efficiency New corona	https://mainichi.jp/articles/ 20200319/k00/00m/040/182000c
Japan(2)	Tottori) Trial to introduce PCR test drive-through method	https://www.asahi.com/articles/ ASN4K6SWCN4JPUUB00M.html
Japan(3)	Drive-through PCR opened in Fukuoka and Kitakyushu	https://www.nishinippon.co.jp/ item/n/605567/
Japan(4)	Kochi Prefecture introduces drive-through PCR test No positive person	https://www.nikkei.com/ article/DGXMZ058878430Y0A50 0C2LA0000/
Japan(5)	《FUKUSHIMA PCR TEST FOLLOW-UP》 ALTHOUGH FUKUSHIMA CITY INTRODUCED A DRIVE-THROUGH PCR TEST FROM MAY 19, THE HURDLES FOR THE TEST REMAIN HIGH	http://www.rokusaisha.com/wp/ 2p=35193
Malaysia(1)	PAMTAI Hospital Ampang Covid-19 Drive through screening	https://www.pantai.com.my/ ampang/drive-thru-service-covid -19-test
Malaysia(2)	ALPS Medical Center Covid-19 Test Drive through	https://alpsmedical.com/covid-19 -drive-thru-appointment/
Malaysia(3)	Avisena Drive-Thru Covid-19 Test	http://avisena.com.my/avisena -drive-thru-covid-19-test/
Netherlands(1)	Dutch use ice rink for drive-in coronavirus testing	https://www.reuters.com/article/ us-health-coronavirus-netherlands -testin-idUSKCN21Q2TB
Netherlands(2)	Minister opens GGD corona test location in Nootdorp: 'An even bigger facility'	https://www.omroepwest.nl/ nieuws/4053573/Minister -opent-coronatestlocatie-GGD -in-Nootdorp-Een-nog-grotere -faciliteit

Bibliography

- [1] World Health Organization, Global Surveillance for human infection with coronavirus disease (COVID-19): interim guidance, 2020
- [2] DISASTER Central, HEADQUARTERS Safety Countermeasures, KOREA South, Standard operation model for COVID-19 Drive-through screening station, Mar 2020.
- [3] KCDC, Ministry Health and Welfare, South Korea, Guideline for operation and management of COVID-19 Drive-through screening station, Feb 2020.
- [4] Santa Clara Valley Health and Hospital System, Drive-through Medicine: Drive-through Triage Template, 2009.
- [5] WEISS E.A., NGO J., GILBERT G.H., QUINN J.V., Drive-through medicine: a novel proposal for rapid evaluation of patients during an influenza pandemic. Ann. Emerg. Med. 2010, **55** (3) pp. 268–273
- [6] Ki Tae Kwon, Jae-Hoon Ko, Heejun Shin, Minki Sung, and Jin Yong Kim., Drive-through Screening Center for COVID-19: a Safe and Efficient Screening System against Massive Community Outbreak. J. Korean Med. Sci. 2020 Mar 23, **35** (11) p. e123
- [7] Ahn, Sunju · Park, Haepum · Song, Seungyoug · Ryu, Jiyoung · Kim, Suhwa, Non-pharmaceutical Standard Models for Managing Pandemic, JOURNAL OF STANDARDS, CERTIFICATION AND SAFETY, 2021