

Coronavirus Singapore



Systems design engineer Melvin Ng from Pathnova Laboratories @ LKCMedicine loading samples into a machine for polymerase chain reaction (PCR) testing last week. PCR tests look for genetic sequences specific to Covid-19, and the turnaround time for such tests is usually within 24 to 48 hours. ST PHOTO: ONG WEE JIN

Covid-19 • Labs here beef up ops

Some laboratories here have hired more staff to cope with the surge in Covid-19 cases.

The Health Promotion Board has also hired and trained 200 additional swabbers, and another 600 swab assistants and support staff have joined. This brings its total strength to 2,600 operational staff.

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Labs ramp up operations to cope with surge in cases

They are hiring more staff, using technology to process samples faster and more accurately

Jessie Lim

Laboratories in Singapore have ramped up operations to cope with the surge in Covid-19 cases, which number in the thousands daily.

Medical technology firm Acumen Diagnostics told The Sunday Times it opened a second lab in Science Park Road this month, doubling its capacity to process polymerase chain reaction (PCR) tests from 3,000 to 7,000 daily.

Its staff strength, including lab staff and senior managers, has also doubled from 40 to 80.

Dr Ong Siew Hwa, its chief executive and chief scientist, said: "We have expanded our lab's physical space, added automation and grown our team, including our in-house logistics team that brings the samples back from test sites islandwide."

Half of the samples it receives are from migrant worker dormitories, while the rest are from regional screening centres, Swab and Send Home clinics and special testing operations.

These PCR tests are then processed by labs such as Acumen Diagnostics.

Noting how there is no room for any delay and mistakes especially when handling swabs for Covid-19 clusters, Dr Ong said: "When the hawkers centres or markets are involved, these people are waiting to know if they can go back to open their stalls.

"People need to know (if) they can return to school to sit an exam, or board that flight."

PCR tests look for genetic sequences specific to Covid-19.

In most labs, viral RNA from the samples is extracted and converted to DNA in a method known as reverse transcription. This genetic material is then processed within a PCR machine, which will amplify the DNA until lab technicians can identify whether they have found Sars-CoV-2, the virus that causes Covid-19.

While self-administered antigen rapid tests (ART) will take only 20 minutes to complete, the turnaround time for a PCR test is usually within 24 to 48 hours.

The Health Promotion Board told The Sunday Times that, since May, to meet the increased demand for testing operations, it has hired and trained 200 additional swabbers.

Another 600 swab assistants and support staff have joined, bringing its total strength to 2,600 operational staff.

Some labs, like Pathnova Laboratories @ LKCMedicine, are able to deliver results for clinically urgent

swabs in three hours with the help of technology.

Since last month, the lab has been using a robotic arm to transfer Covid-19 samples for testing, ensuring speed and accuracy.

Set up in March, the lab is operated by Pathnova Laboratories with Nanyang Technological University's Lee Kong Chian School of Medicine supporting and hosting it.

Associate Professor Eric Yap, the lab's medical director, said big data is used extensively to ensure every Covid-19 result it processes is accurate and fast.

He said: "We track some 60 parameters for every sample that comes in, such as who receives the sample, what time the sample is processed and every staff member who handles the sample. This is all for traceability."

Pathnova's chief scientist, Dr Ian Cheong, added that the lab will soon fully automate the way it reports results so these are uploaded into the national healthcare records in real time, reducing turnaround time for the samples.

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BOOSTING CAPACITY

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DR ONG SIEW HWA, chief executive and chief scientist of medical technology firm Acumen Diagnostics.

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