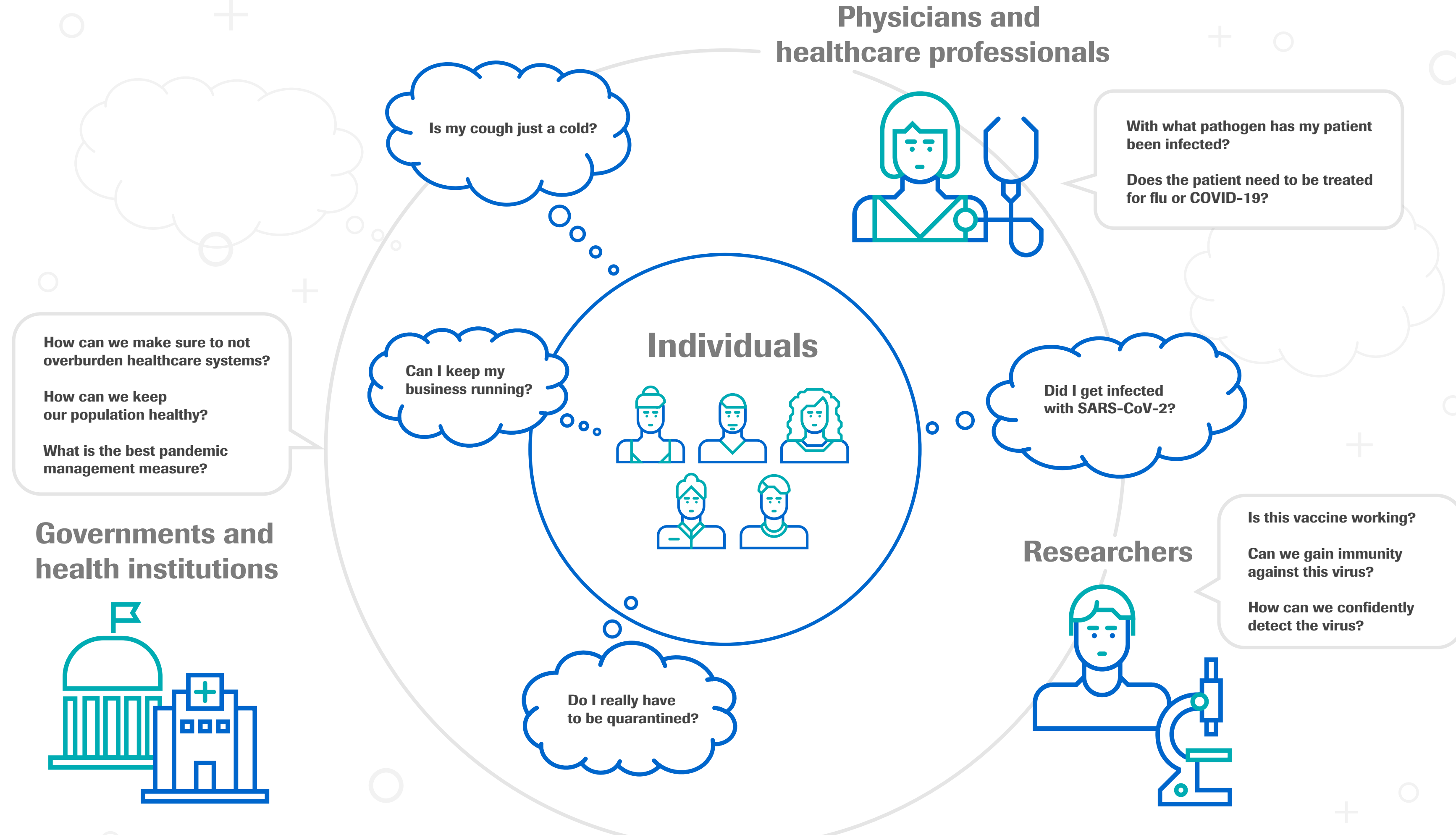


3 FACTORS TO HELP DECIDE ON THE APPROPRIATE SARS-CoV-2 TEST

The outbreak of **SARS-CoV-2**, the virus that causes **COVID-19**, led to a wealth of questions on how to manage the virus. Many of these questions can be answered with **the help of diagnostic tests**.



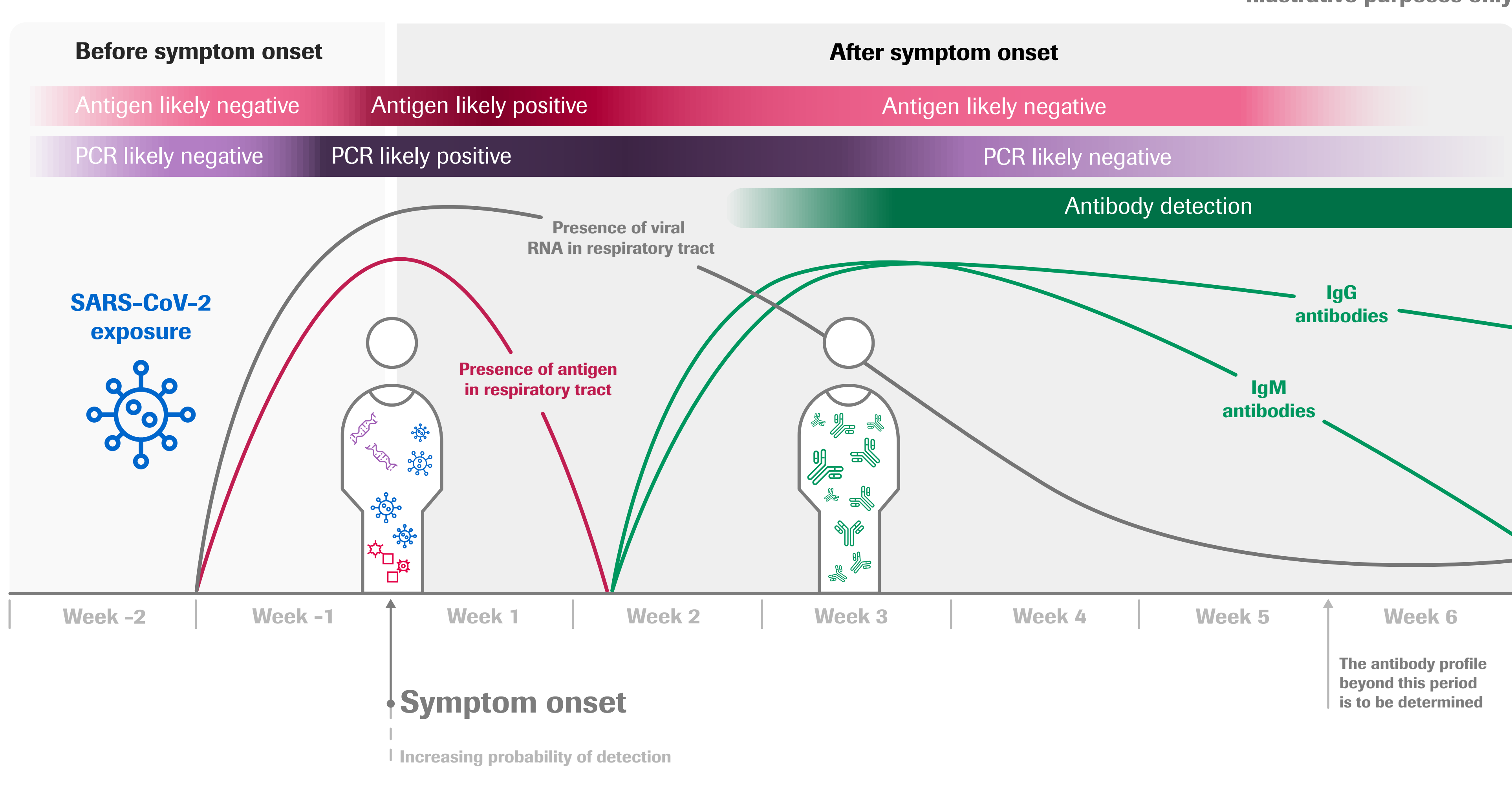
There's a **growing variety and availability** of tests related to SARS-CoV-2. All types of tests can help healthcare providers make more accurate diagnosis, support better management of individual patients and provide better guidance to manage population risk.

Choosing the **appropriate test** depends on the **following factors**:

Factor 1- Disease stage

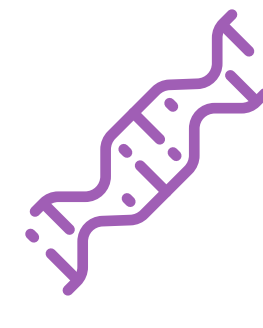
Diagnosing active infections and managing resolved infections require different technologies.

Illustrative purposes only



Active infection is detected with **RT-PCR or antigen tests**

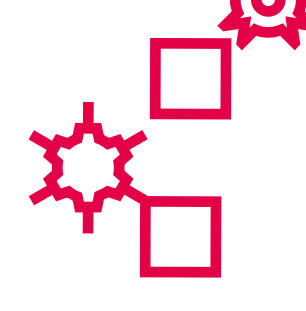
Past infection is detected with **antibody tests**



RT-PCR tests detect the presence of SARS-CoV-2 based on its genetic make up (RNA).



Antibody tests measure the body's immune response to SARS-CoV-2 antigens, for instance the nucleocapsid or the spike protein.



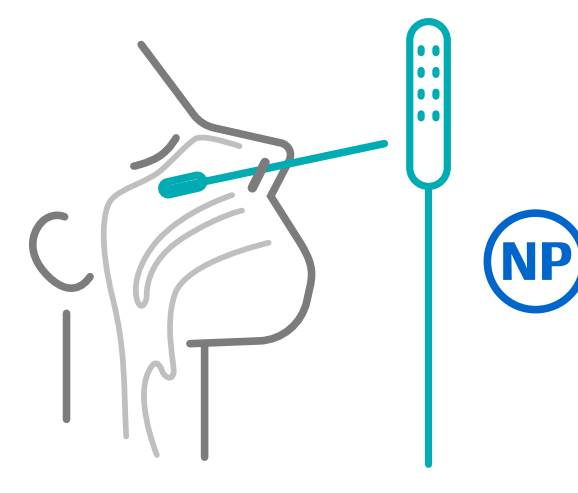
Antigen tests detect certain proteins of SARS-CoV-2.

We distinguish between **qualitative** (providing a yes/no result) and **quantitative** (measure the amount of antibodies) **antibody tests**.



Depending on the technology, different samples may be collected.

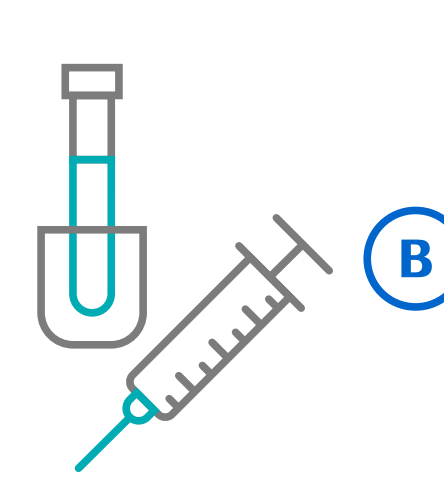
Nasopharyngeal swab (NP)



Nasal swab (N)

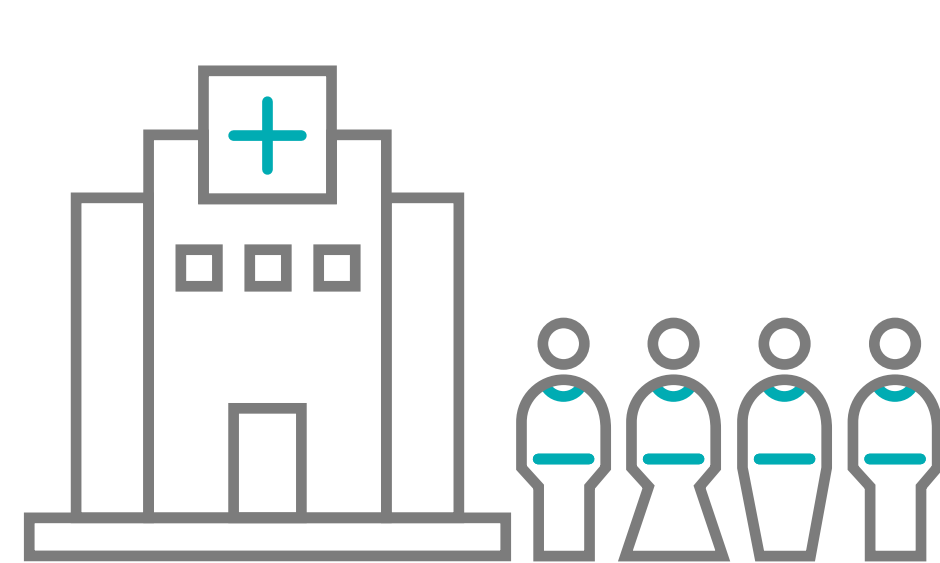


Blood (B)

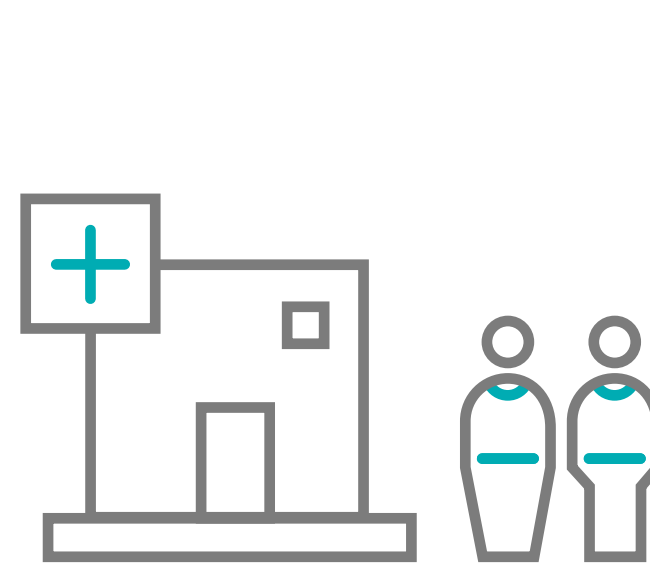


Factor 2 - Testing location

Different healthcare settings require different instruments and tests.



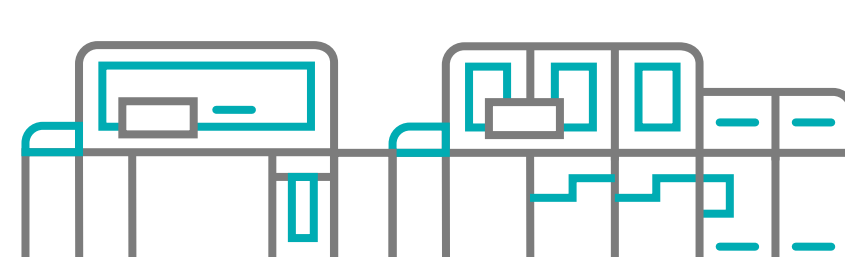
Clinical or medical labs offer a wide range of tests for many patient samples obtained elsewhere and sent to the lab.



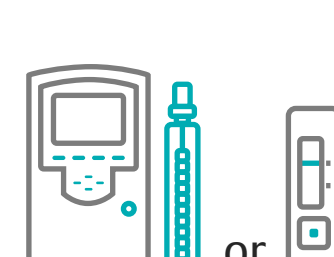
Near-patient or Point of Care (PoC) facilities like doctors' offices or emergency departments usually offer a limited range of tests for individual patients visiting the facility.



Home testing kits, also referred to as patient-self tests, usually can be fully self-administered by individuals. These tests aim to detect the presence of a target causing one specific medical condition.



The **instruments in labs** are usually highly automated and designed to process large numbers of patient samples.



The tests for **PoC** facilities are designed for smaller testing volumes, with shorter time to test results, helping expedite clinical decision making. They can be used in settings around the world.



Home testing kits are designed to test one single patient and provide results quickly. The ease of use allows for more frequent testing.

Factor 3 - Testing purpose

The selection of the appropriate test also depends on the respective question one wants to answer.

Physicians and other healthcare professionals

- Testing for symptomatic patients to potentially guide treatment
- Managing exposed individuals and essential workers
- Testing of asymptomatic individuals to contain disease spread and potentially manage outbreaks

Researchers

- Understanding disease prevalence in order to advise governments, health institutions and healthcare industry
- Identifying recovering patients who could potentially be serum and plasma donors for developing treatments for COVID-19
- Supporting the development of vaccines through tests that measure levels of antibodies to the virus
- Helping with the development of treatments for infected patients

Governments and health institutions

- Identifying active or past infections to support better decision making and pandemic management
- Help facilitate contact tracing and surveillance
- Expand access to testing

Testing types provided by Roche

Meeting the testing needs across the healthcare continuum requires a broad **SARS-CoV-2** diagnostics portfolio.

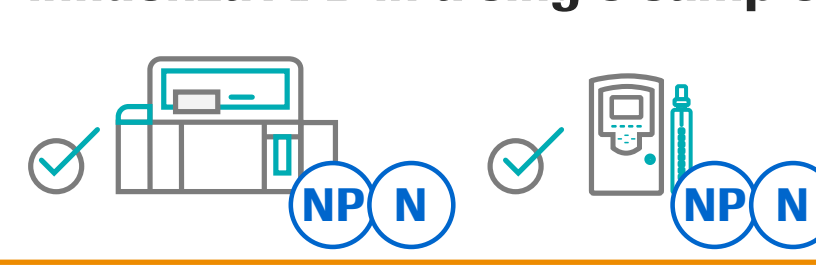
PCR



- **PCR test to detect SARS-CoV-2**

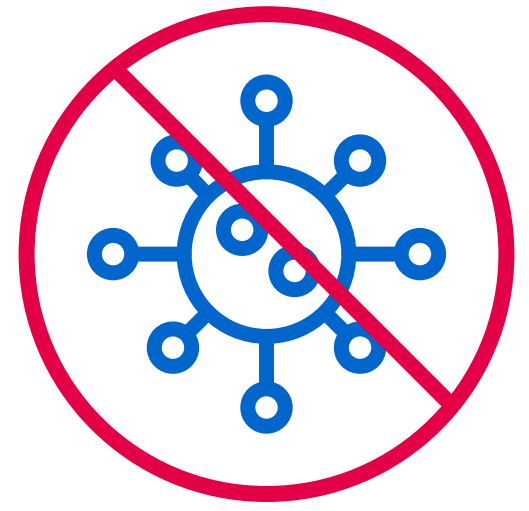


- **PCR test to detect SARS-CoV-2 and influenza A/B in a single sample**



Research only, not to diagnose individuals:

- **PCR test to detect SARS-CoV-2 mutations**



Fighting SARS-CoV-2

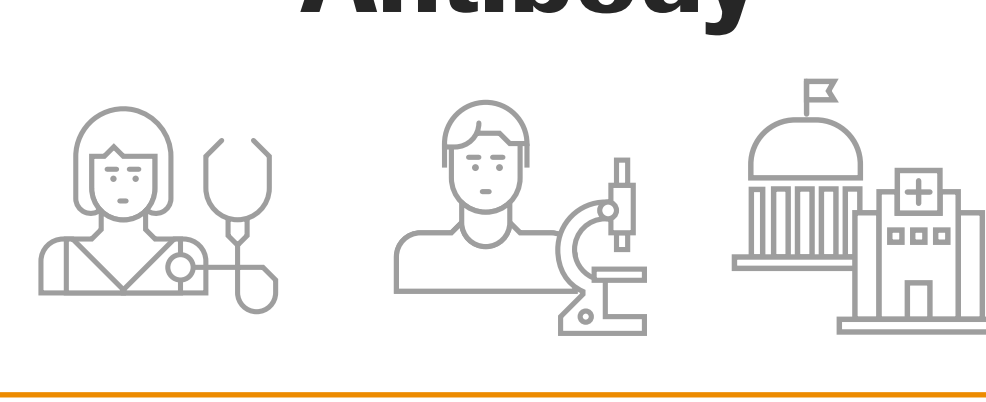
Antigen



- **Antigen tests to detect SARS-CoV-2**



Antibody



- **Tests targeting antibodies against the nucleocapsid protein** (qualitative testing)



- **Test targeting antibodies against the spike protein** (quantitative testing)

