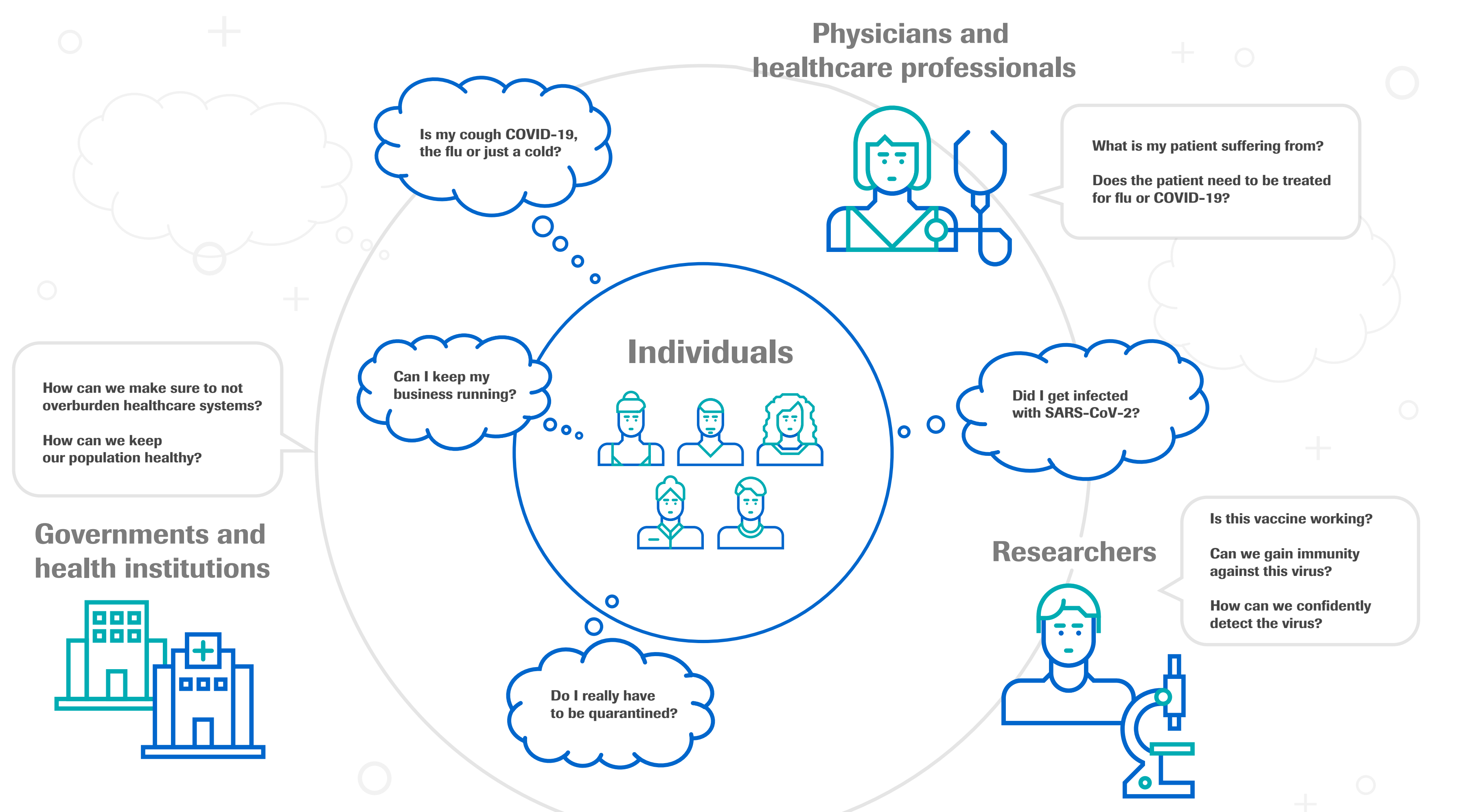
3 FACTORS TO HELP DECIDE ON THE APPROPRIATE SARS-CoV-2 TEST

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.**

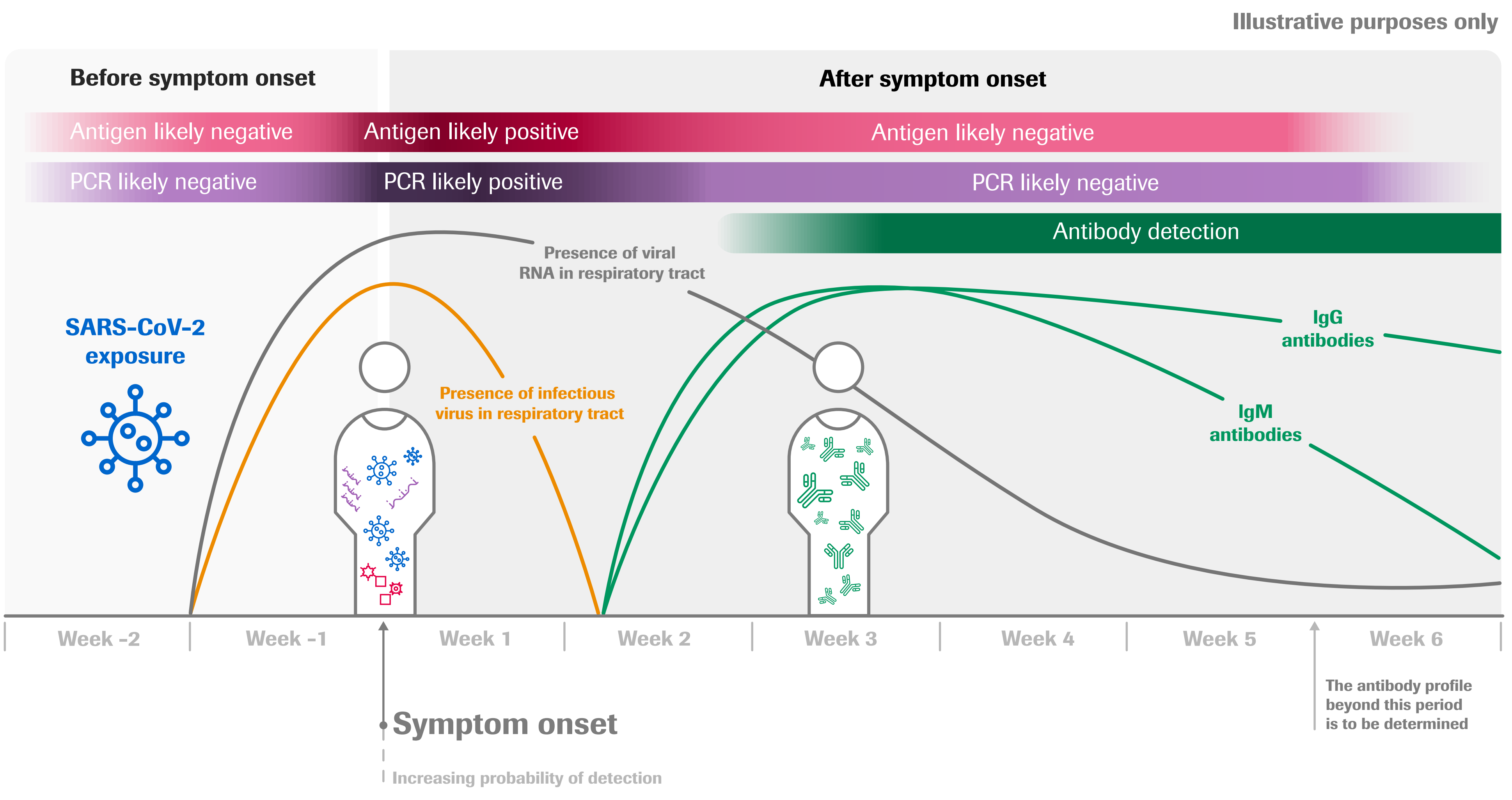


There's a **growing variety and availability** of tests related to SARS-CoV-2. All types of tests can help healthcare providers make more accurate diagnosis, support better management of individual patients and provide better guidance to manage population risk.

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

Factor 1- Disease stage

Diagnosing active infections and managing resolved infections require different technologies.



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

RT-PCR tests detect the presence of SARS-CoV-2 based on its genetic make up (RNA).
High sensitivity useful for detecting infection early.

Antigen tests detect certain proteins of the SARS-CoV-2 virus.
Easy to perform, with very fast results.

Past infection is detected with **antibody tests**

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

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

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.

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

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.

or

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.

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

Fighting **SARS-CoV-2**

Antibody

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

Antigen

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