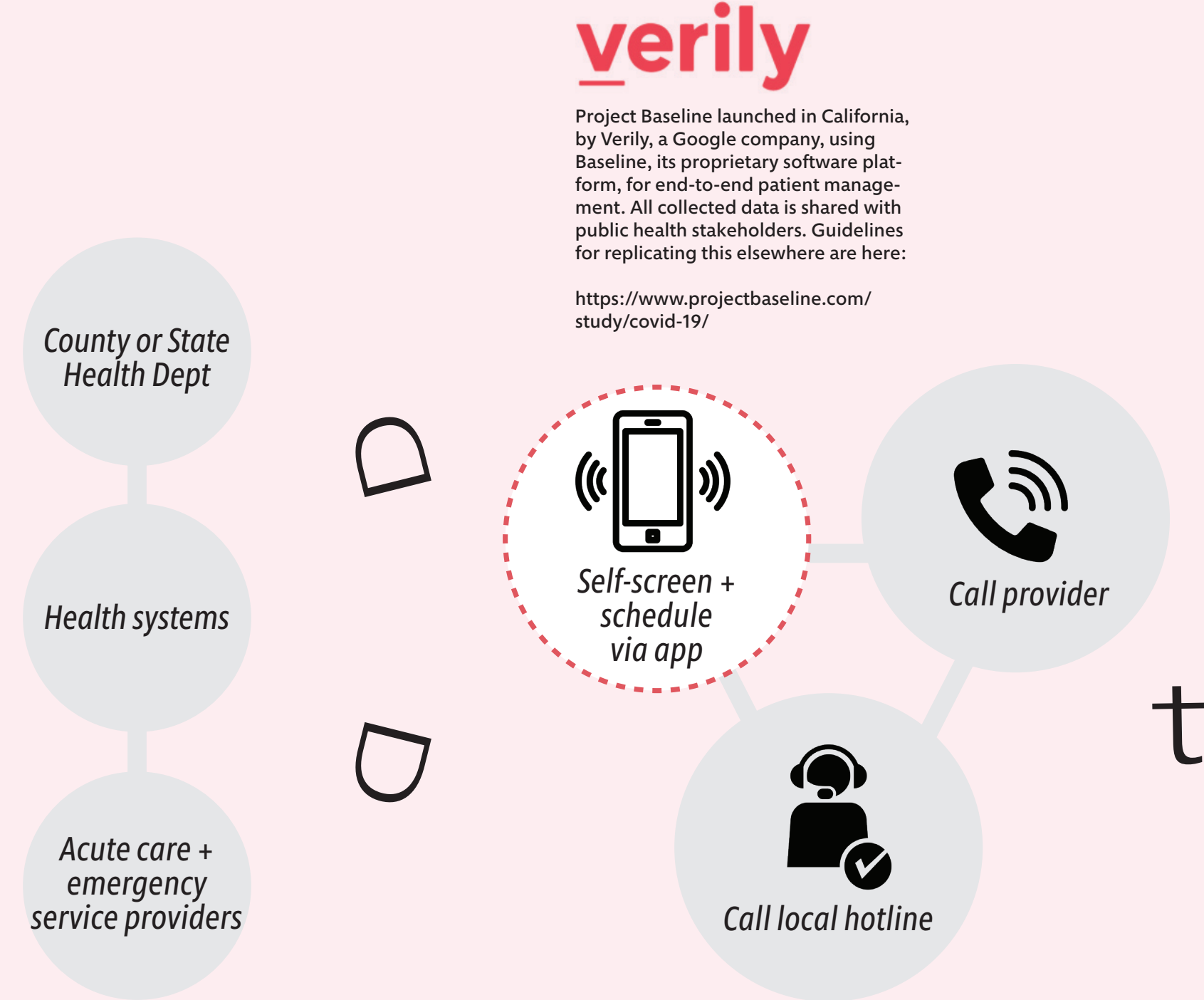
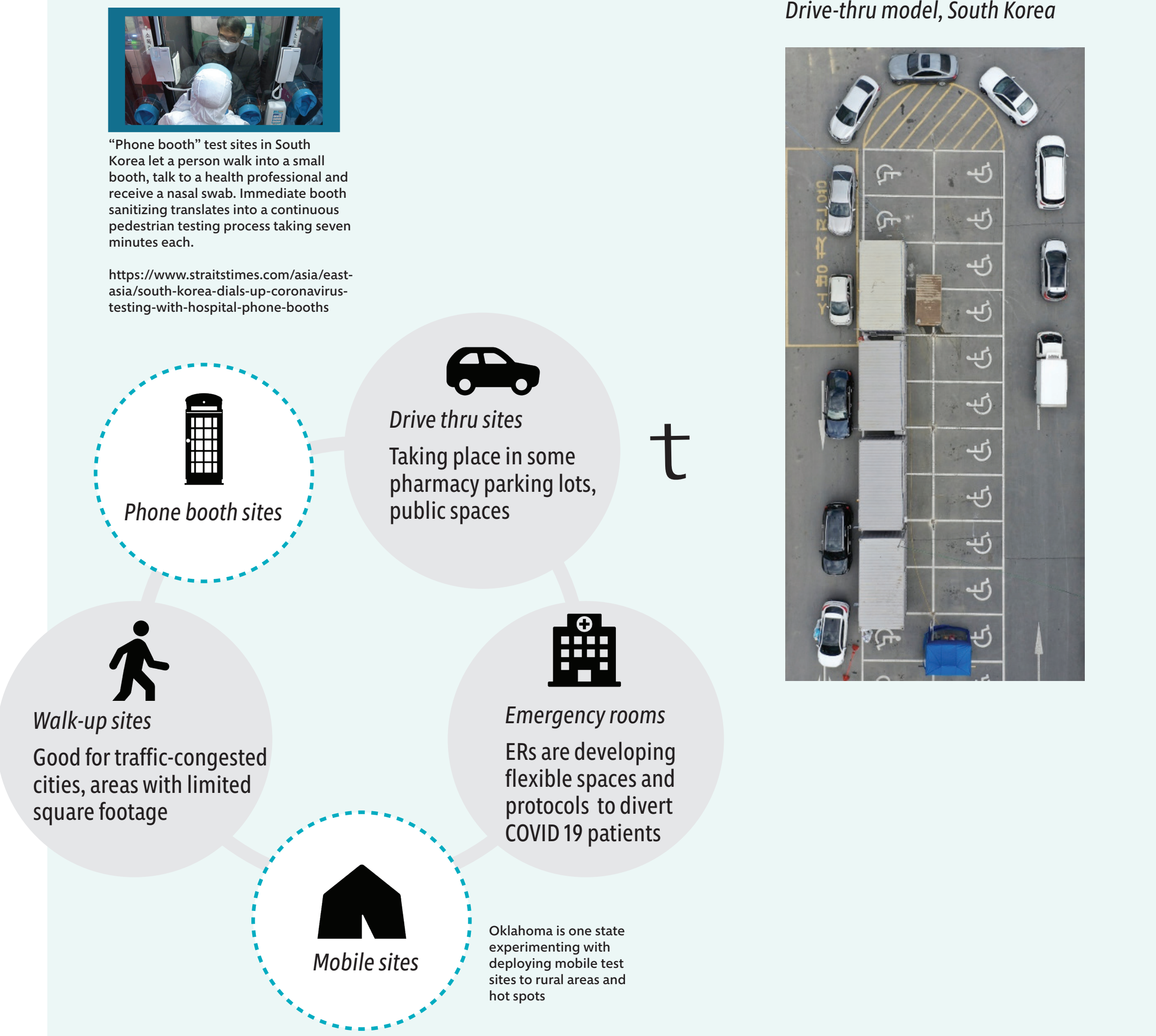


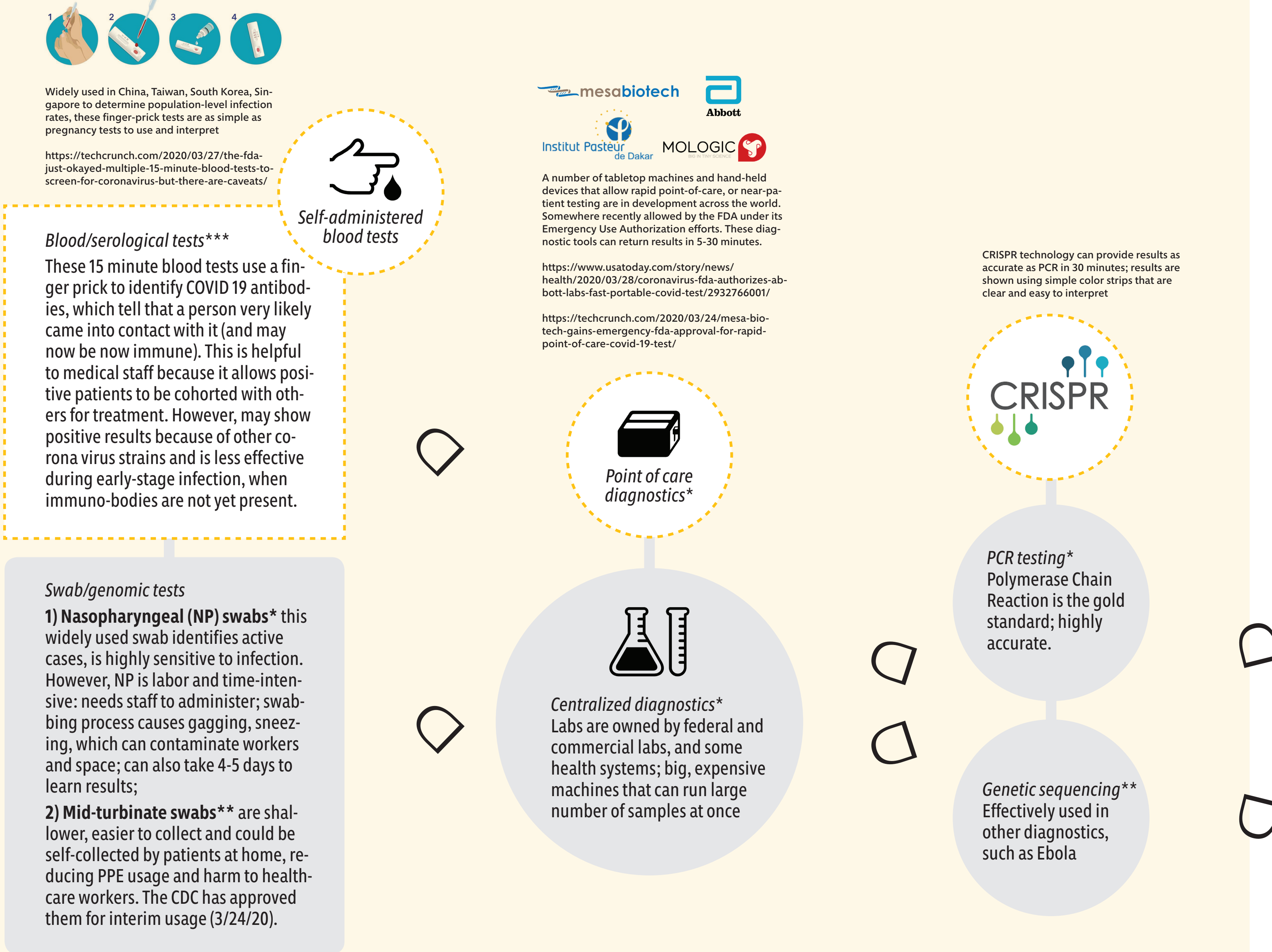
PLANNING



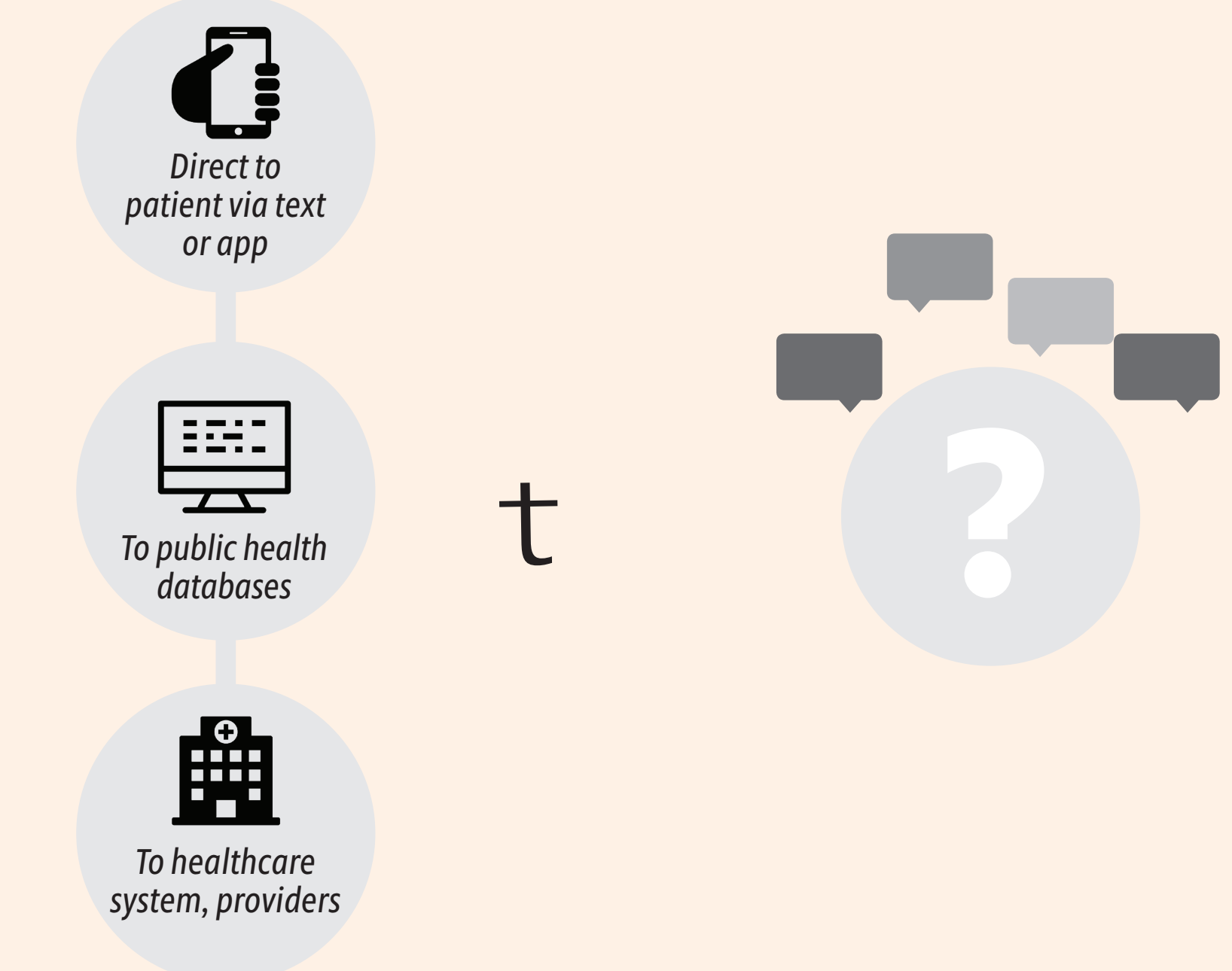
ACCESSING



DIAGNOSING



COMMUNICATING



1 Where is testing available?

City, county and state testing use testing data differently than health systems. Public health testing share findings with tested individuals and government databases to track community prevalence. They do not share findings with health systems or doctors. Healthcare systems and outpatient providers also need these findings to safely cluster patients (put all the positive people in one setting, for example) and inform their treatments.

2 Who is eligible? How to get screened? How to get an appointment?

First comes screening to see if individuals qualify for testing: public health guidelines ask about symptoms, age, exposure to COVID 19 positive individuals and underlying health conditions. Many health systems then require appointments and doctor referrals before testing is allowed, and many test sites are limiting appointments to first responders, healthcare workers and people deemed especially vulnerable.

3 How to access testing sites?

Testing sites are selected and designed to maximize flow-through and testing speed, to minimize contact between staff and patients, to avoid traffic jams and to ensure access to infrastructure, such as cell service. Drive-thru models are experiencing rapid growth and deployment, as health systems and communities try to maintain social-distancing while identifying sick and infectious citizens.

4 What are safe testing site designs?

The physical design of sites affects logistics, such as check-in, specimen collection; placement of signage, equipment, IT and supplies; clean and dirty materials; third party vendors; and all operations and oversight procedures. Site designs must be tailored to local conditions.

5 How are specimens collected?

While nasal swabs are the gold standard for identifying COVID 19, they require multiple steps to return results, adding days and labor to the diagnostic process. The FDA and the private sector are rapidly exploring alternative collection and diagnostic processes that deliver accurate results in less time and with less labor.

6 Where do specimens go?

The US has an established centralized diagnostic system that uses fewer but larger labs, such as Quest and LabCorp, to process samples. Some larger hospitals also have lab equipment. There is pressure on the FDA to allow and/or approve of point-of-care diagnostics that can be used quickly at home or at bedside.

*FDA-approved or allowed via EUA (Emergency Use Authorization)
** in FDA review
*** not yet FDA-approved

7 How are tests processed?

While PCR testing is the preferred method for peering into the genetic material collected in samples, other techniques are emerging that can be performed more quickly. Private-public partnership is accelerating their development and approval processes.

8 Who gets the results?

Test results are aggregated and reported differently based on who is collecting the specimens. In all cases, patients can expect to be informed of their results. However, public health testing does not reach health systems or providers.

9 What about follow-up instructions and care?

There are few standards about what to tell patients who are waiting for testing, who test positive or who test negative.

Design challenges:

- How might we clarify and communicate different processes?
- How might we develop identity system to help people know which "system" they are entering and how that affects information flow, cost and eligibility?

Design challenges:

- How to manage increased data entry, reduce time for testing?
- How might we include low-income, homeless, elderly patients, others who are less likely to have cars, technology?
- What are all the ways to design for regional differences in space, weather, cellular infrastructure?
- How might we design protocols that minimize PPE usage, protect social distancing?
- How to manage retesting versus first testing

Design challenges:

- How might we plan for bedside or at-home testing?
- How do testing kits get to individuals?
- How to include hard-to-reach individuals, including elderly, rural populations, homeless?
- Which patient should get which type of test? Should some get both?

Design challenges:

- How do we close the loop on results? How might we create simultaneity in reporting?
- Direct to patients isn't reaching providers;
- Direct to provider is slow to reach patients;
- Outpatient providers and services aren't informed at all;
- How might individuals report back their findings?
- How might patients think about retesting?
- How are patients advised when positive? When negative?