

Text from poster presented at the Great Exhibition Road Festival 2022 by the Institute of Infection at Imperial College.

What kind of scientists study infection?

It takes an army of scientists with a huge range of expertise to understand infection and find ways to treat and prevent disease. These are just some of the kinds of scientists who are fighting to keep us healthy.

Biologists: This is a huge grouping of scientists who study:

- The microbes themselves (e.g., **microbiologists, virologists**)
- How our immune system fights infection (**immunologists**)
- How microbes are transmitted (e.g., **entomologist**)

Chemists: Chemists can help develop medicines by figuring out the chemical ingredients and the methods to make them. They need to work out how to make the medicines in large quantities.

Clinicians: Clinicians treat patients, so have a first hand understanding of diseases, what patients need, and what can realistically work in the real world. This is important for scientists to understand as they develop treatments.

Clinical Trialists: When a new medicine or treatment is invented, it must be vigorously tested to make sure it is safe and that it works. New medicines are tested in clinical trials. The number of people being tested can range from just a few to many thousands.

Data Scientists and Statisticians: Research generates lots of data (information). Data scientists and statisticians make sense of the information and can even make predictions based on patterns they find.

Electronic Engineers: Researchers who can design special electrical devices help in the invention of new machines, like ones that can detect if someone has disease.

Epidemiologists: Epidemiologists use population-level information to figure out how many (and which) people have a disease, explain how the infection is being spread, and how to stop further outbreaks.

Material Scientists and Physicists: There are lots of reasons to design new materials: from inventing plastics that prevent the growth of microbes to tiny structures (nanoparticles) which can deliver medicines to specific parts of the body.