

# HOW THE COVID-19 VACCINES WERE DEVELOPED

The vaccines completed all the steps to test them and check for safety.



RESEARCH



CLINICAL STUDIES



REGULATORY REVIEWS



APPROVALS



MANUFACTURING



QUALITY CONTROL

Thanks to advances in medicine, scientists were able to create and test COVID-19 vaccines quickly. The Food & Drug Administration (FDA) requires rigorous safety testing before it will approve any vaccine. Tens of thousands of people — including Oregonians — from many backgrounds, ages and communities of color, participated in vaccine testing. **The COVID-19 vaccines completed all the usual steps for approving a vaccine. Nothing was skipped.**

## WHAT WAS DIFFERENT THIS TIME?

Developing a vaccine can take many years. Yet, the first COVID-19 vaccines came out less than a year from the discovery of the virus that causes COVID-19. How did that happen?



### Scientists had a head start:

The COVID-19 vaccine effort builds on earlier worldwide research on the coronavirus (especially the SARS and MERS viruses) and advances in vaccine technology.



### Funding was available:

Sometimes finding money for vaccine studies can take a lot of time. For the COVID-19 vaccine, the federal government provided a lot of money right away to fund the vaccine effort.

PHASE 1

PHASE 2

PHASE 3

### Studies overlapped:

Researchers recruited people for all three phases of the clinical studies at the same time. Due in part to extra funding, they were able to run all three phases of the study at the same time instead of one after the other.



### Production began early:

Backed by help from the federal government, manufacturers began making and packaging the vaccines while the clinical studies were still happening.



### Less red tape:

The new COVID-19 vaccines are approved with an Emergency Use Authorization (EUA) from the Food and Drug Administration (FDA). This takes much less time than a usual approval process. Groups at the federal level are not letting anything delay them from reviewing vaccines. For example, the FDA added a lot of staff to shorten the review process from months to weeks.



### Study vaccines worked:

Because COVID-19 is so widespread, scientists could see fairly quickly how many vaccinated people got COVID-19 compared to how many got sick without the vaccine.

*Adapted with permission from the Multnomah County Health Department*