

It's official: Covid-19 vaccine trials rank among the largest



Amy Brown

Drug developers are throwing everything at Covid-19, but it is the vaccine trials that are consuming the most resources. A look at some of the largest clinical trials undertaken with experimental agents in recent years puts these endeavours into context: of phase III trials registered in clinicaltrials.gov, Covid-19 vaccine studies count for five of the 10 most expansive, in terms of enrolment. Vaccines dominate the top 10, largely because these projects require vast pivotal programmes to identify low-frequency safety issues that might occur in broader swathes of the population. Another reason is to bestow sufficient power to detect a significant difference, between control and active arms, in events that happen rarely. For example, Pfizer and Biontech [confirmed only 94 Covid-19 cases](#) among the 43,538 participants enrolled in their trial of BNT162b2. A cardiovascular outcome study also features below. This is another type of trial that requires large numbers of subjects for sufficient statistical power; *Evaluate Vantage* identified 10 further CVOTs with enrolment above 20,000. Of course size does not equal success. Notable failures in this list include the flu vaccine that was canned by Glaxo in 2010, while anacetrapib was Merck's contender in the ill-fated CETP inhibitor class.

Power hungry: the largest clinical trials run with experimental agents

Experimental Agent	Details	Enrolment	NCT ID
Rotateq (Merck & Co)	Rotavirus vaccine	69,274	NCT00090233
Rotarix (GlaxoSmithKline)	Rotavirus vaccine	63,227	NCT00140673
Ad26.COVS-2 (Johnson & Johnson)	Covid-19 vaccine	60,000	NCT04505722
BNT162b2 (Pfizer/Biontech)	Covid-19 vaccine	43,998	NCT04368728
GSK2186877A (Glaxosmithkline)	Influenza vaccine (abandoned)	43,695	NCT00753272
Ad5-nCoV (CanSino Biologics)	Covid-19 vaccine	40,000	NCT04526990
Zostavax (Merck & Co)	Shingles vaccines	38,456	NCT00007501
Anacetrapib (Merck & Co)	CVOT for CETP inhibitor anacetrapib (abandoned)	30,449	NCT01252953
mRNA-1273 (Moderna)	Covid-19 vaccine	30,000	NCT04470427
AZD1222 (Astrazeneca)	Covid-19 vaccine	30,000	NCT04516746

Note: Pre-approval trials only. Excludes phase IV trials or studies conducted with drugs already on the market. Source: clinicaltrials.gov, [EvaluatePharma](#).

[More from Evaluate Vantage](#)

Evaluate HQ
[44-\(0\)20-7377-0800](tel:44-020-7377-0800)

Evaluate Americas
[+1-617-573-9450](tel:+1-617-573-9450)

Evaluate APAC

[+81-\(0\)80-1164-4754](tel:+81-080-1164-4754)

© Copyright 2021 Evaluate Ltd.