

Africa hosts very few clinical trials. Why this is bad for innovation

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Clinical trials are the foundation of any new medicine. They allow scientists to test the efficacy and safety of a drug or therapy.



Clinical trials can bring important benefits to African countries. Good Mood/Shutterstock

The African continent offers many of the best conditions for conducting clinical trials. It has a diverse population of potential patients, and many have not been previously exposed to any kind of pharmaceutical drugs. Importantly, a number of diseases – particularly those defined as [neglected and tropical](#) – are endemic to the developing world, which includes Africa.

So it makes sense to run clinical trials for drugs that would treat such diseases in the areas most affected by them.

Data I collected for a [recently published paper](#) in the Asian Biotechnology and Development Review shows that the number of clinical trials conducted in African countries is rising. But it is still a tiny figure compared to the number of clinical trials that are ongoing or have been completed in recent years in other parts of the world. For instance, in the last week of May there were 11 858 such trials reported in China alone. There were 26 006 for the whole East Asian region.

The study emerged from my research interests, particularly the role of innovation in developing countries and how science and technology can boost economies.

Given what the data shows, it's clear that African countries should be looking to initiate or host more clinical trials. This can have positive outcomes for the continent. For example, it can improve local health care workers' and researchers' knowledge base. It can also improve a country's [research culture](#). And it could contribute to [overall improvements](#) in the continent's health systems.

Countries like Egypt and South Africa, which have the highest numbers of clinical trials, can offer lessons to others about building their capacity to host such trials. These countries have invested more heavily in their overall research and development capacity and developed the infrastructure necessary to host and manage clinical trials.

Collecting and assessing data

The table below shows the number of clinical trials globally from data accessed from [clinicaltrials.gov](#) in the last week of May 2018.

Region	Number of Studies
World	2,74,049
Africa	7,192
Central America	2,651
East Asia	29,006
Japan	5,028
Europe	77,473
Middle East	11,037
North America	1,23,470
North Asia	4,801
Pacifica	6,648
South America	9,037
South Asia	4,133
Southeast Asia	5,498

There are some online databases about African clinical trials. For example, South Africa maintains [a register of clinical trials](#) in that country. There is also a [pan African clinical trials registry](#).

But the data on these sites is not easy to download, so I turned to a [full repository](#) of all the clinical trials currently in various stages of development all over the world. The site is constantly updated. Some of these trials are government funded; others are funded by private companies or research institutions.

Using the data from this site I found that, from 1991 to the end of May 2018, only about 7192 clinical trials had been completed or were ongoing on the African continent. That's around 2.5% of the global total.

The table below shows clinical trials per African country from data accessed from [clinicaltrials.gov](#) in the last week of May 2018.

Region	Country	Number of trials
East	Uganda	431
	Kenya	409
	Tanzania	282
	Malawi	198
	Zambia	171
	Ethiopia	121
	Zimbabwe	107
	Rwanda	69
	Mozambique	65
	Madagascar	14
	Burundi	11
Middle	Djibouti	1
	Cameroon	68
	Congo, The Democratic Republic of the	51
	Gabon	43
	Congo	37
	Chad	7
	Central African Republic	6
	Angola	3
North	Equatorial Guinea	2
	Egypt	2270
	Tunisia	250
	Morocco	94
	Algeria	89
	Sudan	33
	Libyan Arab Jamahiriya	6
South	South Africa	2480
	Botswana	62
	Lesotho	15
	Swaziland	13
	Namibia	3
West	Ghana	136
	Nigeria	133
	Burkina Faso	125
	Mali	125
	Senegal	74
	Gambia	64
	Guinea-Bissau	51
	Côte D'Ivoire	39
	Benin	38
	Niger	25
	Guinea	18
	Sierra Leone	18
	Liberia	16
	Togo	8
	Mauritania	1

As can be seen from the data in Table 2, some countries on the continent do far better than others when it comes to hosting and managing clinical trials. Egypt and South Africa far outstrip other countries, with more than 2000 each completed or ongoing in the last week of May 2018. Large countries like Nigeria and Ghana perform poorly by comparison.

Pan African solutions

If the African continent wishes to increase the number of clinical trials conducted on its soil, some changes will be necessary.

The first step would be to get a set of agreed ethical guidelines for the continent. [Studies](#) conducted by the New Partnership for Africa's Development (NEPAD) [have shown](#) how much ethical guidelines for clinical trials vary across countries. Some, like Egypt, South Africa, Uganda and Ghana have rules that protect participants in a trial; others, among them Ethiopia, Cameroon and Benin don't offer such legislative protection.

Uniform, pan African ethical guidelines may be useful. These could be set out by a representative body like the African Union. This would be a similar approach to what's taken in Europe, where the European Union set up [ethical guidelines](#) for all its member states.

Collaboration will also help to improve countries' capacity to host clinical trials. Those countries with a weak research and development culture can learn from those like Egypt, South Africa and others in the global South which are more advanced.

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