

### **COVID-19 VACCINATION: A NEW HOPE**

A year on from the first known case of COVID-19, the world has been hungry for good news. This month, vaccine makers have provided welcome nourishment.

Large clinical trials of four vaccine candidates are showing remarkable promise, with three exceeding 90% efficacy — an unexpectedly high rate — according to results released so far. None reported worrying safety signals and one has shown promise in older adults, a demographic that is particularly vulnerable to SARS-CoV-2 but which sometimes responds less well to vaccines.

Early studies had shown that these candidate vaccines could stimulate an immune response. The latest trials show that this immune response can protect people against COVID-19 — a major achievement. Vaccine development is fraught with possibilities for failure, and even the most ardent optimist might not have expected to have a highly effective vaccine against a new virus less than a year after its genome was sequenced.

But there is still a vast amount of work for researchers and clinicians to do. First, they need to determine how well the vaccines work in people who are at high risk of COVID-19, including older individuals, people with obesity and those with diabetes. Second, it isn't clear how well some of the vaccines protect against severe COVID-19. Third, it is also not clear to what extent the vaccines prevent those who have been vaccinated from passing the virus on to others.

Regulators should also share their data and analyses with regulatory bodies in other countries, to speed up approval decisions around the world. And regulators and vaccine makers must remember that vaccines will be less effective if people refuse inoculation because of vaccine hesitancy.

It would also be short-sighted, because, as infectious-disease researchers often say, an outbreak anywhere is an outbreak everywhere.

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