

|                              |                                       |                            |                                   |  |   |
|------------------------------|---------------------------------------|----------------------------|-----------------------------------|--|---|
| 11,2 billion                 | 52                                    | 8.6 billion doses          | 91%                               | 326  | 1.12 billion                              |
| Approved Vaccines Production | Vaccine Producing manufacturing sites | Total signed country deals | Transport Temperature +2 to +8 °C | Ongoing Clinical Trials vaccine candidates | Global population with at least 1 vaccine |

Last updated on 5 May 2021

[Source link](#)

## Welcome










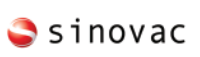


It has been over more than a year now since the world has come to a standstill with global lockdowns arising from the Covid-19 pandemic. In restarting economies and saving lives, we have witnessed vaccine manufacturers around the world speed up their Covid-19 vaccine development, production and distribution so as to inoculate the global population. Air cargo has proven to be the fastest mode of transportation to deliver the vaccines to their distribution centers across, especially across continents.

Back in August 2020, with the key objectives to create transparency between vaccines manufacturers and the global air cargo industry, Pharma.Aero and TIACA collaborated in Project Sunrays, examining the readiness of our air cargo industry for this global logistical mission and identifying best practices in ensuring the safe, reliable and effective handling and transportation of each vaccine shipment. Both organizations realized that staying abreast of new developments and open communication was key to raise preparedness of the industry. To this end, both organisations are announcing our first volume of the VACscene, a regular member newsletter that details an overview of latest Covid-19 vaccine key statistics, as well as news on vaccine production and supply chains, a monthly volume will be available.

Pharma.Aero and TIACA wish you a great reading!

Frank Van Gelder & Glyn Hughes

## Updates on the Covid-19 vaccine global production

| Company name   | Vaccine name         | Production sites | Approved production | Signed deals  | Approved countries | Vaccine type                 |
|--|----------------------|------------------|---------------------|---------------|--------------------|------------------------------|
|  AstraZeneca  | AZD1222              | 16               | 3 Billion           | 2.420.100.000 | 83                 | Non Replicating Viral Vector |
|  BIONTECH Pfizer  | BNT162b2             | 5                | 2,5 Billion         | 1.556.970.075 | 81                 | mRNA                         |
|  moderna  | mRNA - 1273          | 5                | 700 Million         | 803.000.000   | 44                 | mRNA                         |
|  SINOPHARM  | BBIBP-CorV (Beijing) | 2                | 1 Billion           | 147.000.000   | 30                 | Inactivated                  |
|  МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ                      | Sputnik V            | 5                | 390 Million         | 303.987.500   | 59                 | Non Replicating Viral Vector |
|  CanSinoBIO   | Ad5-nCoV             | 3                | 500 Million         | 28.360.000    | 4                  | Non Replicating Viral Vector |
|  SERUM INSTITUTE OF INDIA PVT. LTD. Cytex Pharmaceuticals Group         | Covishield           | 1                | 200 Million         |               | 32                 | Non Replicating Viral Vector |
|  BHARAT BIOTECH   | Covaxin              | 2                | 150 Million         | 26.000.000    | 5                  | Inactivated                  |
|  janssen JOHNSON & JOHNSON  | Ad26.COV2.S          | 7                | 1 Billion           | 1.035.000.000 | 37                 | Non Replicating Viral Vector |
|  sinovac  | Coronavac            | 4                | 1,75 Billion        | 480.220.000   | 20                 | Inactivated                  |
|  Z-FSW INSTITUTE OF MEDICAL BIOLOGY CHINESE ACADEMY OF MEDICAL SCIENCES | RBD-Dimer            | 1                | 1 Million           | 0             | 2                  | Protein Subunit              |
|  BEKTOP   | EpiVacCorona         | 1                | 5 Million           | 0             | 2                  | Protein Subunit              |

[Source link](#)

## Hot from the needle



### A 3rd shot might be needed (NBC News)(link1)(link2)

Both Pfizer-BioNTech and Moderna have announced recently they are studying the need for a third, what is a so-called "booster shot" in order to protect the individual on middle long term against the Covid 19 cov-2-Sars virus. It is necessary in order to multiply the antibody production response in the body and eventually increase the immunization. Pfizer disclosed the information that the new study will monitor the safety and efficacy of a third dose in participants received two doses of the vaccine three weeks apart in a first trial in May 2020. This also suggests that the Covid 19 will stay around requesting a yearly Covid shot similar to the flu shots of today.

### Contracts of Johnson & Johnson and AstraZeneca under discussion within the European Union (Reuters)

More information suggests that the EU Commission might not renew Covid-19 vaccine contracts next year with AstraZeneca and Johnson & Johnson. The European Commission needs to focus on technologies that have proven their worth. The EU was in talks with Pfizer and BioNTech for a new contract for 1.8 billion doses. In the meantime, the European Commission is seeking clarification from Johnson & Johnson about the company's "completely unexpected" announcement of delays in COVID-19 vaccine deliveries to the EU.

Later this week, the EMA (European Medicine Agency) and their Pharmacovigilance Risk Assessment Committee (PRAC) confirmed the overall benefit-risk profile remains positive.

Following the PRAC recommendation, Johnson & Johnson will resume shipments of the Janssen COVID-19 vaccine in the European Union (EU), Norway and Iceland. There will be an updated EMA and Healthcare Professionals guidance available to national healthcare authorities.

### EU allows Pfizer/BioNTech COVID-19 vaccine to be stored at higher temperatures (By Sean Whooley | March 26, 2021)

Pfizer and BioNTech announced today that European authorities approved storage of their COVID-19 vaccine at a new temperature. Based on data showing stability in standard pharmaceutical freezers, the European Medicines Agency (EMA) approved storage of the vaccine at -25°C to -15°C for a total of two weeks. As a result of the approval, vials of the vaccine can be stored in all 27 European Union (EU) member states at the updated temperatures as an alternative to the ultra-low requirements, offering flexibility to distribution and inoculation, according to a news release. Ultra-low temperature storage requirements are intended to protect the mRNA in the vaccines. "We appreciate the collaboration with the EMA and other regulatory agencies around the world as we work to ensure our vaccine can be shipped and stored under increasingly flexible conditions," added Pfizer chairman & CEO Albert Bourla.

## Vaccine clinical trial updates

| Protein Subunit                  |                         |   |                          |                           |                                  |
|----------------------------------|-------------------------|---|--------------------------|---------------------------|----------------------------------|
| FINLAY-FR-1                      | Recombinant Protein     | CIGB-66   | SCB-2019                 | COVAXX                    | FINLAY-FR-2                      |
| Instituto Finlay de Vacunas Cuba | Sonofi/GSK              | Center for Genetic Engineering and Biotechnology (CIGB) | Clover                   | UB-612                    | Instituto Finlay de Vacunas Cuba |
| 5 trials in 1 country            | 4 trials in 2 countries | 5 trials in 1 country                                   | 5 trials in 10 countries | 4 trials in 1 country     | 3 trials in 1 country            |
| Protein Subunit                  | VLP                     | DNA   |                          | RNA                       |                                  |
| NVX-CoV2373                      | Plant-based VLP         | AG0302-COVID19  | INO-4800                 | CVnCoV                    | BNT162b1                         |
| Novavax                          | Medicago                | AnGes   | Inovio                   | Curevac                   | Pfizer/BioNTech                  |
| 5 trials in 6 countries          | 3 trials in 2 countries | 4 trials in 1 country                                   | 6 trials in 3 countries  | 10 trials in 11 countries | 5 trials in 3 countries          |

Last updated on 5 May 2021

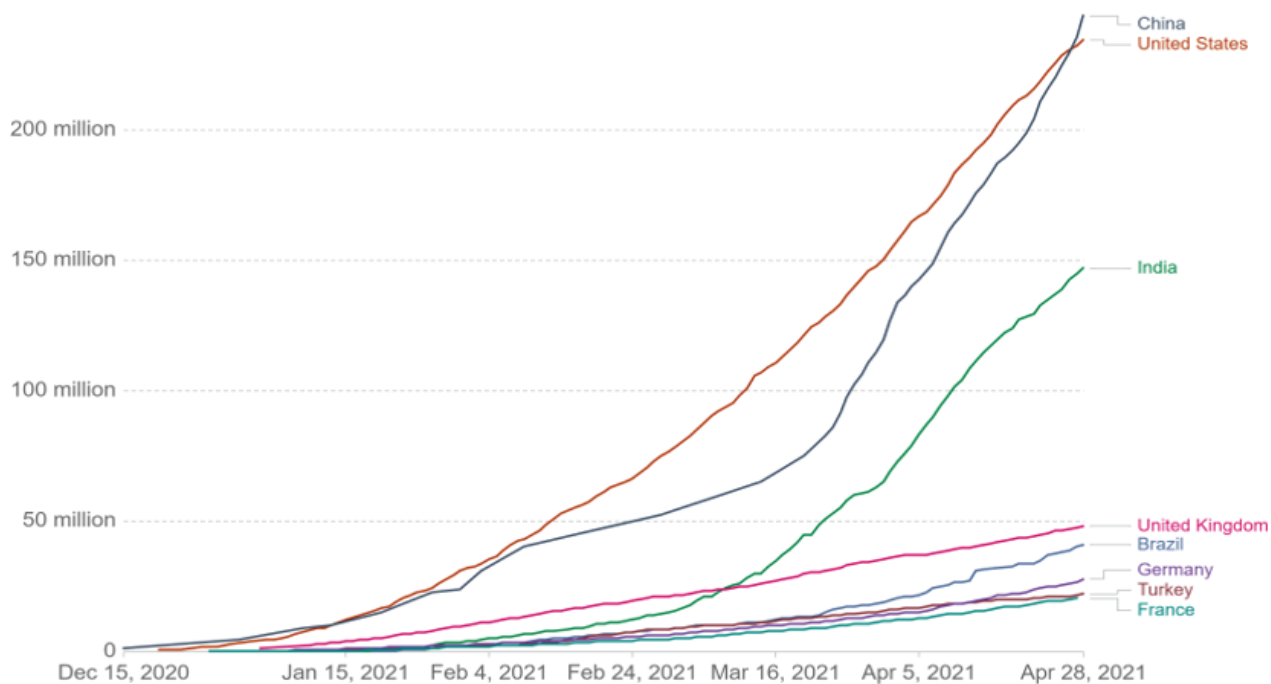
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## Global vaccine administration progress

### COVID-19 vaccine doses administered

Total number of vaccination doses administered. This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).

Our World  
in Data



Source: Official data collated by Our World in Data – Last updated 29 April, 18:10 (London time)

OurWorldInData.org/coronavirus • CC BY

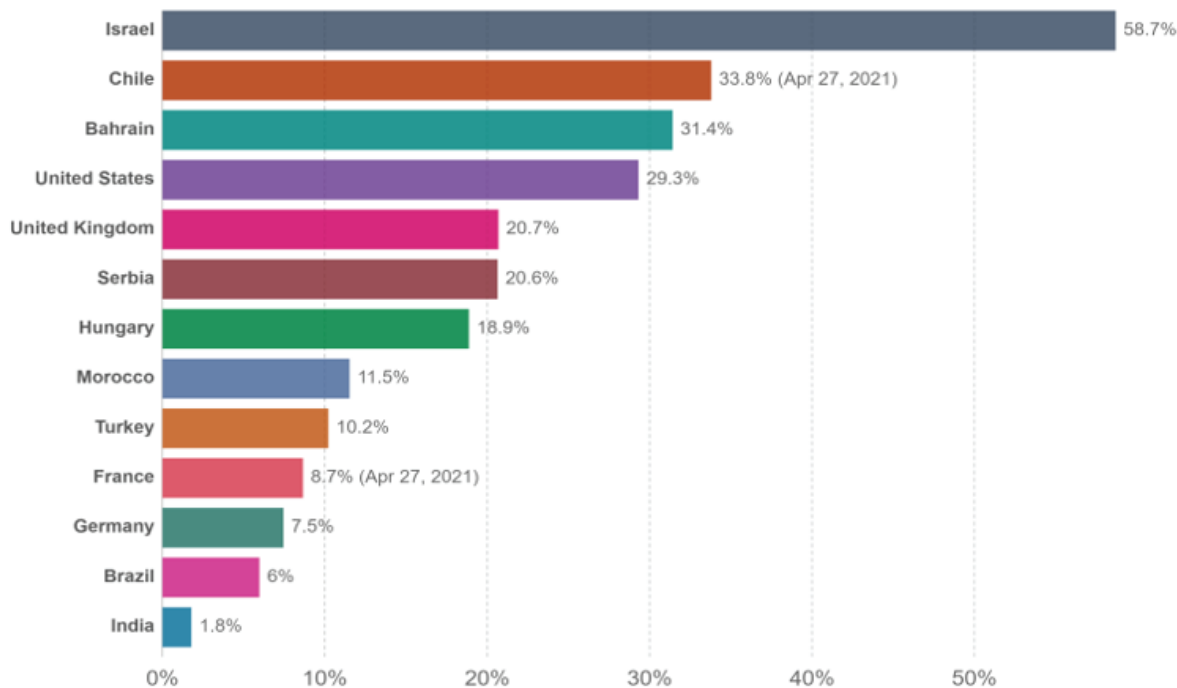
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Total: 1.12 billion

### Share of the population fully vaccinated against COVID-19, Apr 28, 2021

Share of the total population that have received all doses prescribed by the vaccination protocol. This data is only available for countries which report the breakdown of doses administered by first and second doses.

Our World  
in Data

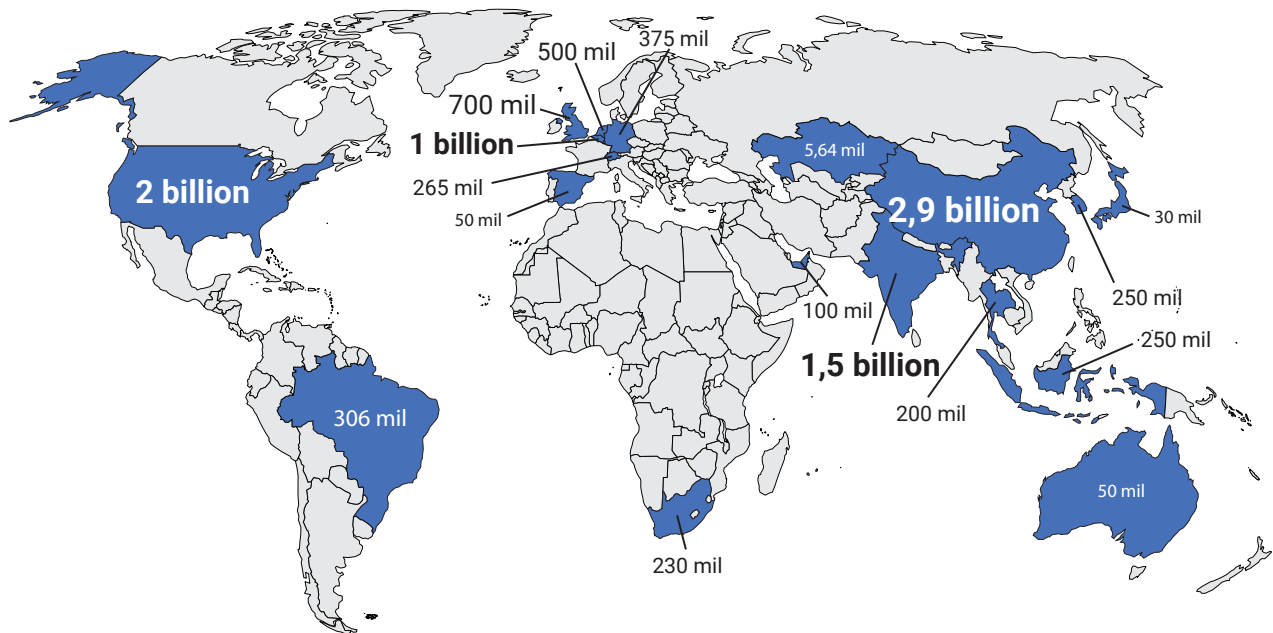


Source: Official data collated by Our World in Data – Last updated 29 April, 18:10 (London time)

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## Production forecast 2021



### China 2.913.000.000

|             |               |
|-------------|---------------|
| Sinovac     | 1.013.000.000 |
| Sinopharm   | 1.000.000.000 |
| CanSinoBio  | 500.000.000   |
| AstraZeneca | 400.000.000   |

### US 1.980.000.000

|                |               |
|----------------|---------------|
| BioTech Pfizer | 1.000.000.000 |
| Moderna        | 460.000.000   |
| AstraZeneca    | 420.000.000   |
| Bharat BioTech | 100.000.000   |

### India 1.526.000.000

|                |               |
|----------------|---------------|
| AstraZeneca    | 1.000.000.000 |
| Bahrat BioTech | 200.000.000   |
| SIOI           | 200.000.000   |
| GNC            | 126.000.000   |

### Belgium 1.000.000.000

|                |               |
|----------------|---------------|
| BioTech Pfizer | 1.000.000.000 |
|----------------|---------------|

### Australia 50.000.000

|             |            |
|-------------|------------|
| AstraZeneca | 50.000.000 |
|-------------|------------|

### Brazil 305.800.000

|             |             |
|-------------|-------------|
| AstraZeneca | 203.800.000 |
| GNC         | 56.000.000  |
| Sinovac     | 46.000.000  |

### Germany 375.000.000

|                |             |
|----------------|-------------|
| BioTech Pfizer | 375.000.000 |
|----------------|-------------|

### Indonesia 250.000.000

|         |             |
|---------|-------------|
| Sinovac | 250.000.000 |
|---------|-------------|

### Japan 30.000.000

|             |            |
|-------------|------------|
| AstraZeneca | 30.000.000 |
|-------------|------------|

### Kazakhstan 5.640.000

|      |           |
|------|-----------|
| GNC: | 5.640.000 |
|------|-----------|

### Netherlands 500.000.000

|                 |             |
|-----------------|-------------|
| Johnson&Johnson | 500.000.000 |
|-----------------|-------------|

### South Africa 230.000.000

|                 |             |
|-----------------|-------------|
| Johnson&Johnson | 230.000.000 |
|-----------------|-------------|

### South Korea 250.000.000

|         |             |
|---------|-------------|
| GNC     | 150.000.000 |
| Moderna | 100.000.000 |

### Spain 50.000.000

|                 |            |
|-----------------|------------|
| Johnson&Johnson | 50.000.000 |
|-----------------|------------|

### Switzerland 265.000.000

|                |             |
|----------------|-------------|
| BioTech Pfizer | 125.000.000 |
| Moderna        | 140.000.000 |

### Thailand 200.000.000

|             |             |
|-------------|-------------|
| AstraZeneca | 200.000.000 |
|-------------|-------------|

### UAE 100.000.000

|           |             |
|-----------|-------------|
| Sinopharm | 100.000.000 |
|-----------|-------------|










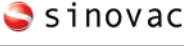


### UK 700.000.000

|             |             |
|-------------|-------------|
| AstraZeneca | 700.000.000 |
|-------------|-------------|

Source link



## Supply chain insights

| Company name  | Vaccine name         | Product temperature | Transport temperature |
|---|----------------------|---------------------|-----------------------|
|  AstraZeneca   | AZD1222              | +2C° to +8C°        | +2C° to +8C°          |
|  BIONTECH Pfizer   | BNT162b2             | -70C°               | +15C° to +25C°        |
|  moderna™<br>messenger therapeutics  | mRNA - 1273          | -20C°               | +2C° to +8C°          |
|  SINOPHARM   | BBIBP-CorV (Beijing) | +2C° to +8C°        | +2C° to +8C°          |
|  МИНИСТЕРСТВО<br>ЗДРАВООХРАНЕНИЯ<br>РОССИЙСКОЙ ФЕДЕРАЦИИ                   | Sputnik V            | +2C° to +8C°        | +2C° to +8C°          |
|  CanSinoBIO  | Ad5-nCoV             | +2C° to +8C°        | +2C° to +8C°          |
|  SERUM INSTITUTE OF INDIA PVT. LTD.<br>Cytex Pharmaceuticals Group         | Covishield           | +2C° to +8C°        | +2C° to +8C°          |
|  BHARAT<br>BIOTECH   | Covaxin              | +2C° to +8C°        | +2C° to +8C°          |
|  janssen   johnson-johnson   | Ad26.COV2.S          | -20C°               | +2C° to +8C°          |
|  sinovac   | Coronavac            | +2C° to +8C°        | +2C° to +8C°          |
|  ZFSW INSTITUTE OF MEDICAL BIOLOGY<br>CHINESE ACADEMY OF MEDICAL SCIENCES | RBD-Dimer            | +2C° to +8C°        | +2C° to +8C°          |
|  BEKTOP  | EpiVacCorona         | +2C° to +8C°        | +2C° to +8C°          |

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## Contact details

www.pharma.aero  
secgen@pharma.aero

www.tiaca.org  
secretariat@tiaca.org

www.4advice.eu  
info@4advice.eu



**Authors:**  
4Advice  
Pharma.Aero  
TIACA



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