Supporting Manufacturing, Trade and Equitable Global Access to COVID-19 Vaccines

Equitable distribution was our North Star from day one. In order to ensure that every country that chooses the Pfizer-BioNTech COVID-19 vaccine can have access to it, two conditions had to be met: a price that all countries can afford and reliable manufacturing to enable broad global distribution.

To date (10 February 2022), Pfizer and BioNTech have shipped more than 2.9 billion vaccines to 170 countries and territories around the world, including:

Pfizer and BioNTech produced 3 billion doses worldwide in 2021.

We expect to produce 4 billion doses in 2022.

Pfizer and BioNTech have pledged to provide 2 billion doses of our COVID-19 vaccine to low- and middle-income countries in 2021 and 2022 – at least 1 billion doses each year.

On 29 December 2021, Pfizer and BioNTech fulfilled this pledge for 2021, having delivered more than 1 billion doses to 99 of these countries.

Together with our partner BioNTech, we will continue to partner with governments and the global health community to supply at least another 1 billion doses to these countries in 2022.

Supply Pathways:

- Direct supply agreements to governments.
- Direct supply agreement with COVAX for 40 million doses in 2021.
- Government donation programs – via COVAX & directly.
  - This includes 1 billion doses supplied to the US for donation to low- and lower-middle-income countries and the African Union.
- Targeted humanitarian donation programs.

Tiered Pricing Policy:

During the pandemic we are pricing our vaccine in a way that can help governments ensure that there is little to no out-of-pocket cost for their populations.

- The price for wealthier nations would be equivalent to the cost of a takeaway meal.
- Middle income countries are offered our COVID-19 vaccine at half this price.
- Low and lower-middle income countries are offered doses at a not-for-profit price.

With our industry partners, we also share the five commitments to urgently advance vaccine equity:

- Step up dose sharing
- Continue to optimize production
- Call out trade barriers to be eliminated
- Support country readiness
- Drive innovation
Fundamental to our access strategy is work to globally scale up manufacturing.

From the outset, Pfizer and BioNTech have taken a **relentless focus on efficiency** to enable us to quickly scale up manufacturing. Reducing production timelines has been achieved by:

1. **Doubling** our batch sizes to minimize time between batches and increasing the yield per batch.
2. **Expanding** the supply of raw material from existing suppliers.
3. **Adding** additional formulation rooms to increase formulation capacity by over 3x.
4. **Adding** high-speed packing lines to increase the daily ship rate.
5. **Bringing** on new suppliers.

We are also **partnering to build up scale**. The Pfizer-BioNTech global COVID-19 vaccine supply chain and manufacturing network now spans **four continents** and includes more than **20 facilities**.

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**Puurs**

**Marburg**

**Mainz**

**Grange Castle**

**Zagreb**

**Zavntem**

**Karlsruhe**

**Klosterneuburg**

**Hamelin**

**Frankfurt am Main**

**Laupheim**

**Monza**

**Anagni**

**Saint-Rémy**

**Reinbeck**

**Halle**

**Brehna**

**Swindon**

**Ljubljana**

**Chesterfield, MO**

**Andover, MA**

**Kalamazoo, MI**

**McPherson, KS**

**Pleasant Prairie, WI**

**Exelead, IN**

**Exela, North Carolina**

**The Biovac Institute South Africa**

**Eurofarma Laboratorios Brazil**

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**Key**

- Pfizer-BioNTech network site
- Contract Manufacturing Partner site

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We select partners using a rigorous process based on several factors, including: quality, compliance safety track record, technical capability, capacity availability, highly trained workforce, project management abilities, and prior working relationship.

**Steps involved in a tech transfer** process for a new facility include: on-site development, equipment installation, engineering and process qualification tests, and regulatory approvals.

Together with our partner BioNTech, we will continue to explore and pursue opportunities to bring new partners into our supply chain network to further accelerate access to the COVID-19 vaccine.

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**Recommendations for policymakers:**

**Support open trade.**

The vaccine manufacturing process depends on a complex global network of suppliers, competing for raw materials and equipment. Trade bottlenecks – including export restrictions, regulatory barriers, tariffs, and customs red tape – add uncertainty, cost, and delay to both manufacturing and patient access.

**Invest in country readiness.**

Vaccine deployment requires scale up of ultra-cold chain capacity, trained health care personnel, and more resilient health system infrastructure to broadly support delivery, particularly in low and lower-middle income countries. In addition, issues with demand and vaccine confidence are faced in some countries.

**Enable innovation.**

Manufacturers are engaged in unprecedented collaboration to support R&D and manufacturing, thanks in large part to intellectual property (IP) protections and other pro-innovation policies. R&D continues to be needed for special populations (e.g. children), tackling new variants, developing additional therapeutics, and preparing for future pandemics.

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2. Including plasmid DNA, nucleotides, capping agents, and lipids.
3. V6 10 February 2022