No trade? No vaccine.

Which countries do what in vaccine production and distribution?
Top exporters of ingredients

Adjuvants (e.g. aluminium salts)
- Mexico 11.4%
- China 11.1%
- Turkey 9.1%

Stabilisers (e.g. sorbitol)
- France 36.4%
- China 13.3%
- Germany 12.5%

Preservatives (e.g. thimerosal)
- Germany 17.2%
- Argentina 13%
- India 12%

Antibiotics (e.g. neomycin)
- China 23.1%
- Switzerland 17%
- Italy 9.4%

Share in global exports (%), 2018
Source: Using trade to fight COVID-19: Manufacturing and distributing vaccines, Fig. 4, OECD 2021.
Top exporters of syringes and needles

Syringes
- United States 14.5%
- China 11.2%
- Germany 9.6%

Needles
- United States 21.4%
- Ireland 13.5%
- Mexico 11.3%

Share in global exports (%), 2018
Source: Using trade to fight COVID-19: Manufacturing and distributing vaccines, Fig. 4, OECD 2021.
Top exporters of stoppers and vials

**Stoppers**
- Germany: 17%
- China: 11.1%
- Poland: 6.7%

**Vials**
- China: 17%
- Germany: 13%
- Italy: 8.7%

Share in global exports (%), 2018
Source: Using trade to fight COVID-19: Manufacturing and distributing vaccines, Fig. 4, OECD 2021.
## Top exporters of cold chain components

### Freezers
- **China**: 67%
- **Italy**: 3.5%
- **Romania**: 3.5%

### Cold boxes
- **China**: 14.7%
- **Germany**: 12.6%
- **France**: 6.9%

### Vaccine carriers
- **United States**: 17.7%
- **Germany**: 14.2%
- **Mexico**: 11.9%

### Dry ice
- **Netherlands**: 15.4%
- **Israël**: 12%
- **United States**: 8.8%

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Share in global exports (%), 2018

Source: Using trade to fight COVID-19: Manufacturing and distributing vaccines, Fig. 4, OECD 2021.
Top 3 exporters of items needed to make, distribute and administer vaccines

- **China**
  - Freezers: 67%
  - Antibiotics: 23%
  - Vials: 17%
  - Cold boxes: 15%
  - Stabilisers: 13%
  - Syringes: 11%
  - Adjuvants: 11%
  - Stoppers: 11%

- **Germany**
  - Preservatives: 17%
  - Stoppers: 17%
  - Vaccine carriers: 14%
  - Vials: 13%
  - Cold boxes: 13%
  - Syringes: 10%

- **United States**
  - Needles: 21%
  - Vaccine carriers: 18%
  - Syringes: 15%
  - Dry ice: 9%

Share in global exports (%), 2018

Source: Using trade to fight COVID-19: Manufacturing and distributing vaccines, Fig. 4, OECD 2021.