
Medical Equipment Deficit and Provision During Pandemic



With nearly 355,000 confirmed COVID-19 cases globally (as of 23 March), hospitals are struggling to continue operations with limited or unavailable supplies, such as personal protective equipment (PPE) or ventilators.

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'rescEU' Stockpiling

On 19 March, the European Commission [made](#) an unprecedented decision to create a strategic rescEU stockpile of medical equipment to help EU countries in the context of the COVID-19 pandemic – the “first ever common European reserve of emergency medical equipment” as President Ursula von der Leyen put it.

Medical equipment part of the stockpile will include items such as:

- intensive care medical equipment (ventilators)
- PPE such as reusable masks
- vaccines and therapeutics
- laboratory supplies.

The stockpile will be hosted by one or several member states and the EU will finance 90% of the cost. The initial EU budget of the stockpile is €50 million. The equipment's distribution will be managed by the [Emergency Response Coordination Centre](#). According to the [Financial Times](#), the EU's decision was made after member states, such as Spain and Italy, complained of shortages and lack of support from Brussels.

In addition to this, steps are being taken to stimulate the domestic production by existing manufacturers, facilitate imports and activate alternative ways of producing equipment. To achieve these, the Commission made an agreement with the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC) to make available a number of European standards for certain medical devices and personal protective equipment. This should help both EU and third-country companies to swiftly start production and place products on the internal market. The standards that are made available cover common filtering masks, medical gloves and protective clothing.

The standards are available for free download from the [websites of CEN national members](#).

Around the World

The U.S. has the third highest count of COVID-19 cases globally, behind only China and Italy: 35,530 confirmed cases with 473 deaths as of 23 March. President Trump on 20 March invoked the Defense Production Act, which could be used to increase the supply of protective gear. New York is the [epicentre](#) of the disease in the country, with half of the cases nationally and 5% globally. The situation with PPE and medical equipment in some U.S. hospitals is [dire](#). On 22 March, the Food and Drug Administration (FDA) [announced](#) that hospitals can repurpose machines they already have to serve as ventilators, ie allowing ventilators to be used beyond their shelf life and the long-term use of ventilators intended for other environments. Earlier, the Centers for Disease Control and Prevention [outlined](#) its 'Strategies for optimising the supply of PPE.'

China and India are two of the main global suppliers of PPE and medical equipment. India [banned](#) exports of certain masks, ventilators, raw material for masks and coveralls on 19 March. This added to the previous ban on exports of all personal protection equipment including clothing and masks used in healthcare activities, such as N-95 masks. At the same time, measures to stimulate domestic production of medical devices were [announced](#).

Similar bans are in place in [Taiwan](#), [Malaysia](#) and [elsewhere](#).

In the meantime, [China](#) is restarting the production of medical supplies. Although the exports from there are not [officially](#) banned, issues with shipping to other destinations [persist](#).

As part of goodwill packages, the Chinese government has begun some shipments to destinations such as [Iran](#), [Serbia](#), [Lithuania](#) and [Italy](#). It also sent a team of medical experts who handled the COVID-19 outbreak in China, to [Italy](#). There are, however, opinions that China is choosing the recipients of its help [carefully](#), in a way that has already been dubbed as ' [coronavirus diplomacy](#)' (not without its embarrassing [episodes](#)).

Help from the Industry

Industry and research groups are looking into ways of increasing or switching to the production of necessary equipment. In the U.S., President Donald Trump [entitled](#) Ford, GM and Tesla to [make](#) ventilators to help alleviate a shortage amid the COVID-19 pandemic. There are about 160,000 ventilators in the country and another 12,700 in the National Strategic Supply, the New York Times [reported](#).

Similar pledges are made in the EU. Automotive manufacturers in hard-hit Italy, which owns a large share of global automotive production, such as Ferrari and Fiat, [stated](#) that they can produce important medical devices such as the ventilator equipment.

The 3D printing community have already [begun](#) to respond to the global crisis by volunteering their respective skills to ease the pressure on supply chains and governments. In one recent [example](#), Michigan Tech Open Sustainability Technology (MOST) Lab has joined the Michigan Tech Open Source Initiative in an attempt to create 3D-printed, open-source ventilators and other medical hardware to overcome COVID-19.

Big and smaller businesses are donating money and resources to support healthcare in its fight with the coronavirus. Thus, Facebook has [donated](#) 720,000 masks from the company's emergency reserve to US health workers, Jack Ma and Alibaba Foundations have [pledged](#) to donate COVID-19 Medical Equipment to African Union Member States, and Christian Siriano, a famous New York fashion designer, [said](#) his company would be making masks "instead of cocktail dresses and evening gowns."

As of 23 March, there were 354,677 confirmed COVID-19 cases with 15,436 deaths. 100,436 people have recovered from the illness. South Korea has reported its lowest number of new cases in weeks, and in Germany, with 22,672 cases and 86 deaths, there may be signs of the infection curve's flattening, [according](#) to the Robert Koch Institute.

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