

Manufacturing and delivery of pharmaceuticals during the coronavirus pandemic

The spread of the coronavirus has had far-reaching consequences over the past two years. In addition to the direct health consequences for many of those affected worldwide, the pandemic has led to restrictions and consequential forced changes in many areas. The supply of everyday goods was also partially restricted, and delivery problems are still clearly visible in some branches of industry.



Steffen Lang
President, Operations

At Novartis, we provide patients in over 100 countries around the world with medicines that are either produced in one of our more than 50 production facilities or by our manufacturing partner companies. Looking back, we can now say that we were able to completely fulfill our important remit of supplying patients with medicines, even during the pandemic. This result was due to a number of important factors. First and foremost was the tremendous work carried out by our employees.

Key factors for our success

Compliance with stringent occupational safety standards at our production sites is a basic requirement for us to be able to produce pharmaceuticals. This became all the more important, since considerable uncertainty about the appropriate measures prevailed at the beginning of the pandemic. Always compliant with the official regulations that had to be followed in the various countries and regions, suitable protective measures were implemented that allowed the production of medicines to be maintained. In addition to the use of protective clothing and masks, personal contacts in companies were reduced and – where



possible – some activities were also carried out from home. Thanks to such measures we were able to continue producing at almost every production site, even during times of lockdown. This was mainly due to the tremendous efforts of our employees in all areas of production, quality assurance and logistics. I wish to take this opportunity to once again express my great gratitude and my respect.

Over the past two years, there have also been repeated instances of regions or countries sealing off their borders to the movement of persons. On the one hand, this led to bottlenecks in many areas and, on the other hand, it also posed a challenge for our cross-border commuters working at our production sites in border regions. Thanks to the close cooperation with local authorities, this was usually able to be addressed very quickly, and good solutions were able to be found.

The flow of goods, both regionally and internationally, also came to a standstill at times. This also led to delays in some parts of our supply chain. Our employees working in logistics, however, always found expedient solutions in a timely manner, which is why any delays were usually kept at only a few days. This enabled us to maintain our high delivery reliability. Our in-country inventories also contributed to this. We typically retain around three months of stock for each of our products locally in each country. In this way, minor delays in delivery can be well cushioned. This stockpiling in countries has also proven itself to be a very valuable asset during the pandemic. Since the processing time from the start of production to the availability of the finished product often lasts several months in the manufacturing of pharmaceutical products, we also retain stocks of precursor materials and the intermediate stages of our products in our warehouses. This is also an important contribution to ensuring patient care.

The close cooperation with our suppliers of raw materials for production was also a key success factor. All of these companies have similarly had to cope with changed circumstances, yet still ensure that supplies to our manufacturing plants remained unaffected. With a few exceptions, this always worked out well and the stocks in our warehouses were sufficient. Bottlenecks, for example, occurred in the area of precursor materials that were also required for vaccine production worldwide. Even today, bottlenecks in the procurement of some such materials still remain. Nevertheless, we also managed to cope well with this situation through close communication with our suppliers. Our employees





working in planning and materials procurement are worthy of particular praise here.

Advances in the introduction of new manufacturing technologies, digitization and automation also contributed greatly to our ability to maintain our delivery capabilities. This progress has made a considerable contribution, both in the plants themselves, in planning and in the worldwide distribution of our products.

The special circumstances of the past two years have also triggered a great deal of cooperation and support between the production departments of the various pharmaceutical companies. In concrete terms, we were able to make an important contribution here with our production facilities and highly skilled employees to support global vaccine production. I am very proud of our employees who have managed to successfully introduce new manufacturing processes for such novel vaccines into our plants in record time and seamlessly continue to produce these critically important medicines on a large scale. Ultimately, we see ourselves as a company reimagining medicine with advanced therapy platforms, as part of our obligation to use our manufacturing capabilities to help support the supply of COVID-19 vaccines and therapeutics worldwide. In addition to vaccine production, all the necessary preparations are currently underway to facilitate starting the manufacture of a new COVID-19 drug in Stein as quickly as possible.

Summary

In retrospect, the excellent interplay of an entire series of key factors has contributed to Novartis being able to uphold the supply of medicines to patients worldwide on a very high level, even during the ongoing pandemic. Special thanks must go to the employees at Novartis Technical Operations (NTO) who ultimately made all this possible.