



Skivehus Rotary Klub

District 1440, Denmark



August 2021

REPORT ON OXYGEN FOR NEPAL

A unique international Rotary Project

In the spring of 2020, the first wave of the corona pandemic erupted in India and soon after in Nepal. It was the original Chinese variant, which had been on a trip around in the World before it arrived. The two countries immediately shut down with curfews and closed borders; but since millions of people work as day laborers, they were immediately unpaid, so they swarmed onto the roads on their way home, including from India through the porous border with Nepal. The virus was thoroughly spread - but soon after, it diminished when the popular movements ceased, and the curfew was strictly adhered to.

The two countries reopened, and infection rates remained low, so leaders in the two countries proclaimed, despite prudent health officials, that their religion, and in Nepal the fresh mountain air, had killed the virus. Therefore, very little was done to prepare for the second wave. On the other hand, people traveled around, and large gatherings were held.

In mid-March 2021, infection rates began to rise in India and in mid-April it exploded at a culmination in early May and high mortality rates in late May. In Nepal, nothing really happened, so the incompetent management continued to express that the mountain air was healing; but by mid-April, the infection rate exploded here too. First in the lowlands near the border, and soon after in the capital Kathmandu, and then Nepal also shut down with strict curfews.

A new corona variant was developed. The Indian Variant, B.1.617.1, called Kappa with several mutations that were more contagious than any of the other variants on Earth. Soon after, a new variant called the Delta variant, B.1.617.2, emerged, which is even more contagious, attacks younger age groups, even children, have higher mortality rates, and then it is more resistant to more of the vaccines. Soon there was also a Delta Plus variant which could do it all and even more.

The hospital system was not prepared at all to receive the many thousands of patients. An awful lot of people were turned away at the door. The oxygen bottles were too few and quickly ran empty. Machines for the concentration of air oxygen were also too few. If a patient did not improve in a matter of days, oxygen therapy was stopped and passed on to the next patient. At the smaller district hospitals around in the country, things looked even worse, and the small municipal clinics were largely unaided. So when, in mid-June, the disease crept into the more dispersed populations in the mountains, terrible situations played out, with people travelling to hospitals in the lowlands, where, incidentally, there was little help. Gradually, the sick isolated themselves at home and took their chances without treatment.

Official Nepal woke up asking for help around the world. Some help arrived, but not enough at all. The main import country, India, was shut down and China was shut somewhat out of the good international company. But several private actors were quickly up; in between Rotary and especially the Rotary Club of Kathmandu was very active.

The club purchased and distributed oxygen bottles, PPE equipment, Hand Wash Stations, PCR tests and established PCR laboratories. Over three rounds, they purchased 120 oxygen concentrators of the small 5 liter/minute model, which was distributed between hospitals and clinics in Kathmandu and the immediate area. When the club wanted to buy the larger model

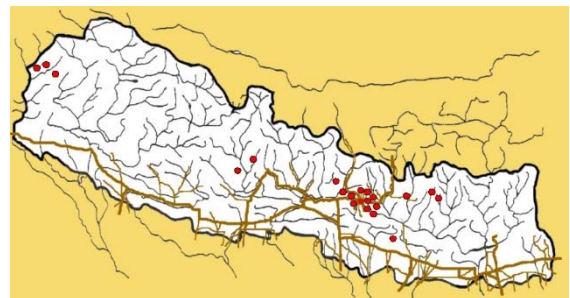
which provides 10 litres/minute, in mid-May they turned to Rotary clubs in their network around World. The club did send a Nepalese resident of China the 600 km to a factory in Jinhua, Zhejiang District, to check credibility and quality. When he said OK, in early June nice amounts were transferred from the following clubs and donors:



- Rotary Club of Newberg, Oregon: USD 10.000
- Rotary Club of Northbridge, Sydney: USD 3.985
- More Australian Rotary Clubs: USD 11.988
- An American Rotary Club: USD 4.985
- Skivehus Rotary Club: USD 17.597 (DKR 108.500)
 - Skivehus Rotary Club: DKR 20.000
 - Winner's Up Rotary Club: DKR 10.000
 - Viborg Asmild Rotary Club: DKR 10.000
 - Viborg Morning Rotary Club DKR 5.000
 - Struer Rotary Club DKR 3.500
 - District 1440: DKR 20.000
 - Rotary Danmark Hjælpefond DKR 40.000
- Flying Aid Nepal, Denmark: USD 16.300 (DKR 100.000)
- Himalayan Project, Denmark: USD 4.200 (DKR 25.000)
- Rotary Club of Kathmandu: USD 1.333
- **TOTAL: USD 70.388 (DKR 431.108)**

In mid-June, 54 oxygen concentrators were ordered, the invoice paid for and on June 22 they were driven the 1,200 km from the factory to a department store near the airport in Guangzhou. On June 30, they were loaded onto a plane that landed the next day in Kathmandu, and after another day they were driven to Rotary Hall. The 54 concentrators were handed over in the week of 4 to 8 July, with the delivery of 1 or 2 concentrators to 34 clinics and hospitals mainly around the capital, but also out in the small local clinics.

An oxygen concentrator is a compressor that sends atmospheric air through ultrafine filters (Zeolite) so fine that they can separate the oxygen and nitrogen of the air so that they can deliver 95% pure oxygen against the air content of 20% oxygen. In practice for clinic use there are two sizes that supply 5 or 10 liters of oxygen per minute. They require 350W or 600W. In a local Nepali context, these electricity requirements can be critical. A 5 l/min machine costs half of a 10 l/min. Therefore, the small machine is popular for most cases of mild respiratory diseases, but COVID patients need the large and then only for mild and moderate attacks. In more severe cases, 4-5 times more oxygen may be needed and under higher pressure than the 10 l concentrator can provide. This requires the use of pressure cylinders that run out and need to be filled again, which can take several days. Therefore, the oxygen concentrator is an indispensable element in the treatment of COVID patients in the smaller clinics far out between the mountains, as long as they have a stable and adequate power supply.

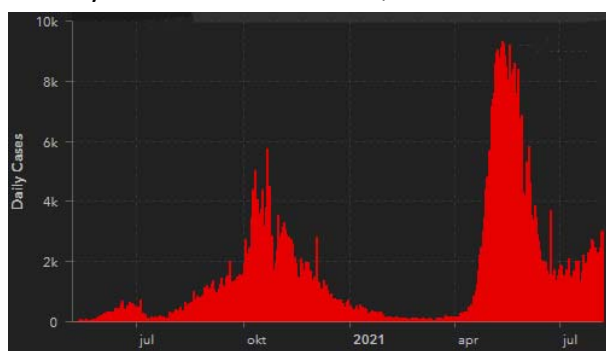


Project costs:

• 54 units Oxygen Concentrator 10 LPM XY-6S-10	USD 36.990	DKR 226.555
• Transport and Warehouse in China - Zhejiang to Guangzhou	USD 432	DKR 2.646
• Airplane Cargo charges - Guangzhou to Kathmandu	USD 6.210	DKR 38.035
• Local Tax, Customs Clearance and Transport In Kathmandu	<u>USD 513</u>	<u>DKR 3.142</u>
TOTAL	USD 44.145	DKR 270.377
TOTAL per UNIT	USD 817,50	DKR 5.007

Our 54 oxygen concentrators are all the great 10 l/min type and of the best quality that we have brought for DKR 5.000 per machine at a market price in Nepal of DKR 9.000 to DKR 11.000, and in Denmark many times more. So, with this project we have succeeded in bringing the concentrators home at half price.

The second wave of corona infection culminated in mid-May, after which it reduced due to the complete shutdown of the country. Since Nepal can hardly afford this shutdown, it was loosened slowly after 1 ½ months, and now at the end of July the infection rate is again increasing now that the monsoon is fading off. It is a hope that the dry and clear weather which is now under way will be able to keep the infection in check until late autumn, when heat and cold change violently, and everyone becomes snotty and cold. In any case, all sensible Nepalis expect that the third corona wave will come either very soon or in 3-4 months.



We are therefore keeping the project open in Rotary. There is still a very strong need to upgrade the local clinics to meet this third wave and this time we want to be at the forefront of development so that we can avoid some of the worst experiences from the second wave in May.

Remaining amounts for continuation of **Rotary covid-19 Response Program 2021:**

• Total donation	USD 70.388	DKR 431.108
• Project cost	<u>USD 44.145</u>	<u>DKR 270.377</u>
Remaining amount	USD 26,243	DKR 160,730

That amount will be used to further improve the treatment of Covid by small hospitals and clinics, and not least in connection with the expected third wave of the epidemic, keeping in mind that we will see more children and young people suffering. We still believe that it is the 10 l/min oxygen concentrators which is the best and strongest option, and especially now we have the experience to import, and we can do at half price. A considerable reduction on price will come after 50 units, and we can further negotiate the more we buy in one order. Rotary Club of Kathmandu are ready, and the same here in Denmark. We have started collecting funds for that next purchase. At least we need 20.000 USD more, but we have no upper limit – only we are limited in time. We shall run the project before third wave really starts and before Nepal is again in lockdown.

Please pass this report on to Rotary clubs in your network and plead them to join for a commitment of support. Send the message to the Rotary Club of Kathmandu by **Rotarian Bishnu Subedi**, subedisane@gmail.com or Skivehus Rotary Klub by **Rotarian Kurt Lomborg**, klomborg@post11.tele.dk