PRESS RELEASE

ICMR Delivers Medications via Drone in Tough Terrains of Himachal Pradesh for a Test Run

The drone successfully transported more than 100 units of essential medications for 20 kilometres in Lahaul & Spiti district and reduced time from 120 minutes to 26 minutes.

19 October, Keylong, Himachal Pradesh: In line with the national mission to advance India's drone ecosystem, the Indian Council of Medical Research (ICMR) is presently conducting a feasibility study in Lahaul & Spiti district, Himachal Pradesh, to explore the transportation of vital medical resources, including medications, diagnostic blood samples, and sputum, via drones. Drones are playing an increasingly critical role in healthcare, particularly in emergency response scenarios, where they facilitate the swift delivery of vaccines, medications, and other essential supplies to remote and inaccessible areas.

ICMR's endeavour aims to streamline the distribution of essential medical provisions from regional hospitals in Keylong to more than eight Primary Health Centers (PHCs) in the region, encompassing locations such as Sissu, Gondhal, Thiort, Tholang, Jahalma, Gemur, Darcha, Shansha, among others. The protocol's development, execution, and overall coordination have been entrusted to a dedicated team of scientists, hailing from both the ICMR-Headquarters, New Delhi, and the ICMR-Regional Medical Research Centre-Gorakhpur, (Field Station Keylong).

During the inaugural flight, the drone successfully transported more than 100 units of essential medications including Antibiotics, Antipyretics, and Multivitamins from the Police grounds in Keylong to the Tholang PHC, which is approximately 20 kilometres away from the district hospital. The flight took off from 11500 ft ASL (Altitude above mean Sea Level) and went up to 14500 ft ASL and recorded a temperature of -15 degrees Celsius at height. On its return journey, the drone carried TB sputum samples, blood samples, and various diagnostic specimens back to the Keylong Centre for thorough analysis. The round trip, which takes 2 hours by road and is often delayed due to snowfall, took around 26 minutes in total with the drone.

ICMR, which has consistently led the way in delivering vital medical supplies via drones to challenging-to-access regions such as Manipur and Nagaland, will conduct several test flights to different PHCs in the upcoming days.

To highlight the significance of the event, Dr. Rajiv Bahl, Secretary DHR and Director-General, ICMR quoted "This 'i-DRONE' was first used during Covid-19 pandemic by ICMR for distributing vaccines to unreachable areas. Earlier this year, we were able to successfully complete the trials for the delivery of blood and blood-related products, which are supposed to be kept at a low temperature. In the present study, we are aiming to deliver the medications and diagnostic samples at subzero temperature areas and difficult regions with altitudes over 12,000 ft. This is an initiative towards making an impact in the lives of people residing in remote areas."

Ms. Anu Nagar, Joint Secretary, DHR also highlighted the importance of drone-based delivery in the healthcare sector. She emphasized that these feasibility trials and projects will be game

changers and will lay the foundation for future activities and strengthen the Indian healthcare sector.

Dr. Ajay Thakur, Medical Officer, Lahaul & Spiti, stated "This is one of the most important studies for the regions of Lahul and Spiti. Delivery of healthcare essentials via drone during emergency situations will be helpful in saving many human lives and can be used in various difficult geographical areas for both Indian civilian and military personnel".

Throughout the comprehensive testing period, scientists have identified numerous technical and operational hurdles that local communities encounter when trying to deliver essential medical items, particularly in remote and challenging geographical landscapes. The study's findings will provide valuable scientific insights and will lay down the foundation for further exploration of the utility of drones in these areas. Additionally, the research will determine whether drones can serve as a support for conventional medical supplies in the difficult geographical conditions prevalent in these regions.

The current research project was conducted with the help of state health authorities and Keylong administrative support. District administrative and health authorities Mr Mayank Chaudhary, Dr. Ajay Thakur, and Dr Kunal Rawat supported in execution of this first successful trial. This activity was technically supported by the TSAW drone company for trials in the Lahaul area.

About ICMR: *The Indian Council of Medical Research (ICMR), New Delhi, is the apex body in India for the formulation, coordination and promotion of biomedical research. It is one of the oldest medical research bodies in the world. ICMR's research priorities align with the National health priorities. These efforts are undertaken with a view to reduce the total burden of disease and to promote health and well-being of the population. ICMR promotes biomedical research in the country through intramural as well as extramural research. Visit us at https://www.icmr.gov.in/*

Contacts

Dr. Anup Anvikar
Director, ICMR-National Institute of Malaria Research
Head, Division of Policy and Communication,
Indian Council of Medical Research
anvikar@gmail.com

Subject Experts

Dr Manoj Vasant Murhekar,
Scientist G & Director, ICMR-National Institute of Epidemiology, Chennai
Additional charge of Director, ICMR-Regional Medical Research Centre, Gorakhpur

admin-rmrcgkp@gov.in

Dr Sumit Aggarwal
Scientist and Program Officer,
Div. Of Epidemiology and Communicable Diseases,
Indian Council of Medical Research
drsumiticmr@gmail.com