

DIABETES DRONE PROVIDES A LIFELINE FOR RURAL COMMUNITIES

New drone technology may be a viable option to ensure Ireland's rural diabetic communities can be provided with lifesaving support during emergency situations, following the world's first drone flight having successfully completed its maiden voyage between Connemara Airport and the Aran Island in delivering diabetes medication to the Island.

D iabetes is a serious chronic disease that occurs when the body cannot properly produce or use insulin, the hormone that moves glucose from the food you eat into your cells where it can be used for energy. Almost one quarter of a million people are living with diabetes in this country, and many of these individuals require insulin to manage the disease, according to Diabetes Ireland.

It is critical that people with diabetes have access to this lifesaving medicine at all times, which is often challenging in remote geographic regions and in times of natural disasters. Severe weather events, including storms Emma and Ophelia, demonstrated a clear need to develop the capability to deliver insulin and other lifesaving medications (e.g. glucagon) in times of crisis.

Novo Nordisk and NUI Galway, in partnership with several industry experts and stakeholders, completed the world's first autonomous beyond visual line of sight (BVLOS), vertical take-off and landing (VTOL) drone delivery of diabetes prescription medications (insulin, glucagon), in addition to the collection of a patient's blood sample between Connemara Airport and the Aran Islands.

Owen Treacy, Country Manager of Novo Nordisk Ireland, said: "For almost 100 years, Novo Nordisk has been bringing innovative solutions for people living with diabetes and other chronic diseases. We are delighted to support the world's first initiative, which offers the potential to deliver lifesaving medications for those patients dependent on insulin, in situations where normal delivery channels are disrupted."

SOLUTION FOR ALL EMERGENCIES

This project was run in partnership with several industry experts and stakeholders including, Skytango, SIS Irl, Wingcopter and Vodafone Ireland. Dr Kevin Johnson University of Limerick provided insight into state-of-the-art drone technology, while Dr



Steven Flynn, Skytango, Prof Derek O'Keefe, NUI Galway, Wayne Floyd, Survey Drone Ireland, Santiago Montenegro UAV Specialist, Wingcopter and Marc Daly, Vodafone Ireland, pictured with the world's first diabetes drone.

Spyridoula Maraka, University of Arkansas for Medical Sciences, outlined the healthcare delivery issues involved in this innovative project.

Derek O'Keefe, Professor of Medical Device Technology at NUI Galway and Consultant Physician and Project Lead, said: "Novo Nordisk saw the importance of planning for an emergency medical situation before the emergency happens to ensure optimum patient care for patients with diabetes at all times.

"It's incumbent to develop a solution for these emergencies, which addresses the clinical, technical and regulatory issues before a sentinel event occurs. Medical drones have demonstrated success for blood, defibrillator and organ delivery. This Diabetes Drone project represents another milestone in the use of drones to improve patient care."

The diabetes drone was given special research permission from the Irish Aviation Authority, and was in contact with air space regulators at all times, showing the possibility of future deliveries of this kind within planned drone corridors.

For more info visit www.diabetesdrone.com