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UC San Diego Health Launches Drone Transport Program with UPS, Matternet

Drone service slated to begin February 2020, with goals of enhancing efficacy, reliability and predictability of delivering medical products between hospitals and laboratories

In February, UC San Diego Health will launch a pilot project to test the use of unmanned aerial vehicles to transport medical samples, supplies and documents between Jacobs Medical Center and Moores Cancer Center and the Center for Advanced Laboratory Medicine (CALM), speeding delivery of services and patient care currently managed through ground transport.

Trained professionals will load and operate the drones, which will follow predetermined, low-risk flight paths and will carry no cameras.

The program is a collaboration with UPS, which received in September 2019 the Federal Aviation Administration's (FAA) Part 135 Standard certification and authorization to use unmanned aircraft systems for a drone delivery program, and Matternet, a Mountain View, California-based drone systems developer for health care institutions. This latest effort builds upon the UPS and Matternet drone project already taking place at WakeMed Health and Hospitals, a private, non-profit health care system based in Raleigh, N.C.

"Currently, medical samples that must be transported between health care sites are carried by courier cars, which are naturally subject to the variabilities of traffic and other ground issues," said Matthew Jenusaitis, chief administrative officer for innovation and transformation at UC San Diego Health. "With drones, we want to demonstrate proof-of-concept for getting vital samples where they need to be for testing or assessment more quickly and simply. It's another way to leverage emerging technologies in a way that can tangibly benefit our patients."

The drones will transport medical samples, such as blood draws, and documents between clinical sites and laboratories, reducing the time necessary for testing, analyses and diagnoses. Currently, such materials are transported by ground courier.

The project calls for medical professionals at Jacobs Medical Center, located on the east health campus of UC San Diego in La Jolla, to pack payloads, such as blood samples or documents, into a secure container that attaches to one of Matternet's M2 rechargeable battery-powered drones.

The drones will follow predetermined, low-risk flight paths, initially between Jacobs Medical Center and special landing sites at Moores Cancer Center, located less than a mile away and within visual line of sight under the FAA's Part 107 rules, and then subsequently at CALM, which is near the Jacobs Medical Center. The flights will take only minutes to complete and will be monitored by remote operators. The drones will carry no cameras.

In May 2018, the FAA designated the city of San Diego as one of nine lead participants in the regulators' Integration Pilot Program. UC San Diego was also approved by the FAA to test the use of drones in transporting lab specimens and pharmaceuticals throughout its health system.

"Right now, most biological samples must travel between sites by courier car, within designated hours," said James Killeen, MD, clinical professor of emergency medicine and director of information technology services at UC San Diego School of Medicine. "That leaves the system vulnerable to the vagaries of road congestion, accidents, construction and more. Travel time can be slow and unpredictable. A drone can fly over such obstacles in a much more direct way, and take just a few minutes to cover the same distance."

About UC San Diego Health

UC San Diego Health provides exceptional, personal care for every member of your family. Primary care for children, adults, and seniors is available at several convenient locations throughout the county. Our specialty care for serious and complex conditions — including heart disease, neurosurgery, pulmonology and geriatrics — is rated among the nation's best. We also offer more

childbirth options than any provider in the San Diego region, including in-hospital birth centers and a Level III Neonatal Intensive Care Unit (NICU). It is an 808-bed medical system with hospitals in Hillcrest and La Jolla, as well as primary care and specialty practices located throughout Southern California. Our advanced specialty care centers, including Moores Cancer Center, Sulpizio Cardiovascular Center, and Shiley Eye Institute, are known throughout the region for research-driven treatment and outstanding outcomes. Our newest hospital, Jacobs Medical Center in La Jolla, offers advanced care for cancer treatment, specialized surgeries, and childbirth. For more information about our care, visit health.ucsd.edu.

About UPS Healthcare and Life Sciences

UPS Healthcare and Life Sciences provides global supply chain solutions and expertise to pharmaceutical, biopharma and medical device companies. UPS has approximately 8 million square feet of cGMP- or cGDP-compliant health care distribution space globally. UPS also maintains one of the world's largest networks of field stocking locations with approximately 900 sites. For parcels requiring strict temperature environments, from CRT to cryogenic, and those requiring around-the-clock monitoring, UPS has solutions such as UPS Temperature True® and UPS Proactive Response® services. UPS is committed to expanding its health care capabilities, including acquisitions of Marken, CEMELOG and Poltraf, to meet the complex and evolving supply chain needs of the health care and life science sectors. Visit ups.com/healthcare.

About Matternet

Matternet has developed best-in-class technology for on-demand, aerial delivery in urban environments. The company provides its technology platform-as-a-service to health care, e-commerce and logistics organizations. In March 2017, Matternet became the first company in the world to be authorized for full operations of drone logistics networks over cities in Switzerland. In March 2019, Matternet and UPS announced a partnership to provide drone delivery services to U.S. health care systems. In October 2019, Matternet's technology enabled the first FAA-Approved Drone Airline, UPS Flight Forward, providing fast expansion to health care facilities across the US. For more information about Matternet, visit mttr.net.

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