SKYLIFT

ACP-2021-002 Statement of Need

Skylift UAV Limited are undertaking a 12-week trial on behalf of Portsmouth Hospitals University NHS Trust and Isle of Wight NHS Trust to transport packages containing chemotherapy drugs between Queen Alexandra Hospital in Portsmouth and St Mary's Hospital in Newport, Isle of Wight, using unmanned aircraft.

COVID-19 is directly disrupting the ability of Isle of Wight NHS Trust to procure chemotherapy for its cancer patients. As the Trust does not have a Pharmacy Manufacturing Unit (PMU) of its own, it is wholly dependent on Portsmouth Hospitals University NHS Trust for the supply of chemotherapy. Chemotherapy drugs have a short shelf-life (8-24 hours) and since there is a (pre-COVID-19) 3 to 4-hour travel time between the hospitals (2 taxis and a ferry), the chemotherapy must be manufactured before it can be confirmed that the patient is able to attend or receive the treatment. COVID-19 is negatively impacting this issue as it is causing disruption to the ferry companies, who have lost revenue and staff due to illness and furlough, through suspensions, cancellations, delays and changing timetables. This is making it difficult for St Mary's Hospital to organise chemotherapy deliveries and has consequently made chemotherapy sessions challenging to coordinate. The current cut-off time for Isle of Wight NHS Trust placing an order for chemotherapy is noon the day before the patient is due to receive the treatment. This is a fixed cut-off as Portsmouth PMU manufactures over 50,000 doses per month and so it cannot be brought forward. This presents a large time-period between the manufacture of the chemotherapy and the patient receiving it, during which patients are clinically assessed and a significant proportion are found to be unable to receive the treatment. This means that the treatment has already been prepared when the patient is found to be clinically unable to receive it, leading to wastage of compounds which can cost many thousands of pounds per dose. Importantly, if a patient misses a session, it is harder to organise a future session even though there is a greater clinical imperative to provide chemotherapy after a missed session. Additionally, valuable staff time is spent attempting to call Portsmouth PMU in the hope that an order may be cancelled, as well as calling taxis and ferries to reorganise deliveries, when that time could be spent on providing clinical care. This is during a pandemic when staff time has only become more valuable. Moreover, some cancer patients are having to travel across the Solent to Portsmouth to receive treatment. Increased ferry waiting periods in adverse weather conditions make the trip more arduous during a time when the island is one of the worst hit areas in the country for COVID-19. In the seven days up to 3rd January 2021, data showed a rolling rate of 1,654.3 cases per 100,000 for the east side of the island, with 156 cases. As a result, there has been consideration for the Portsmouth PMU to extend its working hours.

Reducing the delivery time to a 32-minute direct flight between the two hospitals would be transformative, as the chemotherapy could be manufactured once the patient is confirmed to be present and able to receive treatment, before the drugs are then delivered on-demand. This would make chemotherapy delivery reliable and so enable Isle of Wight NHS Trust to organise and re-

organise sessions more readily. Additionally, by reducing the delivery time, the cut-off time for placing an order is pushed forward, thereby reducing both chemotherapy waste and staff time spent on non-clinical care. Moreover, using an unmanned aircraft can eliminate unnecessary patient and staff travel that would otherwise put vulnerable individuals and NHS staff at risk during the pandemic. As recent research has shown that the coronavirus can survive for up to 72 hours on common clothing, including three of the most commonly used textiles in healthcare, it is paramount that unnecessary travel is reduced. By flying on-demand, costs can also be reduced as chemotherapy is saved from being wasted, taxis/ferries are bypassed and Portsmouth PMU's working hours need not be extended. Furthermore, a comparison will be made between the delivery methods to establish the benefit of drones to the environment.

Faster, on-demand delivery of chemotherapy to St Mary's Hospital would respond to the Isle of Wight NHS Trust's call for help to mitigate the impacts of COVID-19 on its cancer patients. In addition, there are other time-sensitive items, such as COVID-19 swabs and blood tests, vaccines, personal protective equipment, test kits, testing reagents, tracheostomy tubes, stroke kits, blood units and convalescent plasma that could be transported between the two hospitals via unmanned aircraft. To these ends, beyond visual line of sight unmanned aircraft operations will be required and, in accordance with CAP 1915, such operations must be conducted within segregated airspace. CAP 1915 states that the primary method for achieving this airspace is by application for a Temporary Danger Area (TDA). Skylift UAV Limited therefore requests the establishment of a TDA to segregate their operations accordingly.

Skylift UAV Ltd
1st April 2021