

Essential Medicines by Drones in Hospital-to-Hospital Use

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Abstract: In this project, the use of current drone technologies is reviewed, optimized, and used to demonstrate the feasibility of medical supply delivery hospital to hospital use via UAV (unmanned aerial vehicle). This project focuses on the design of a biocompatible payload and a modified drone to accomplish medical supply delivery hospital to hospital use. The design of the payload and UAV arm mechanism must consider the safety of medical supplies, medical equipment and blood biocompatibility throughout the duration of the delivery. Multiple drone and payload design iterations were created to address the lack of medical attention in hospital-to-hospital use. Various designs were implemented in a prototype to create a demonstration of concept feasibility. Each design has its own parameters and components that collectively make up the payload and drone delivery system. This research paper describes, analyzes and reports experimental results of the final drone delivery and payload design, as well as the steps taken throughout the duration of the project. This study is aimed to provide medical assistance to people through the delivery of medical supplies by unmanned drones. The use of unmanned drones is reinforced through an application that has the potential to benefit people in distant areas around the world. This study hopes to expand drone technology and the application of drones. The nature of the project and how it was conducted will be explained. Outcomes of this study include a proof of concept, the assembly of a working prototype and the evaluation of the prototype's performance. In order to make the project a success, adequate funding and resources were sought out for prototype assembly.

Keywords: People Safety, Drone (unmanned aerial vehicle), Hospital to Hospital Use, Blood Samples, Medicines, etc.

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