RUNNING HEAD: SOCIAL INFORMATICS

Social Informatics

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Drones in Healthcare Service

# Positive Aspects of Drones in Healthcare Service

The newly acquainted community word "drone" was earlier coined in the 1980s due to the resemblance with the flashy and metrical sound of ancient military unmanned target jet with a male bee. The term is popular among communities but received robust opposition from specialists working in aviation departments. Drones are characteristically made up of an air setting, thrust procedure, and navigation arrangement (Horvath, 2019). They contain a wide diversity of aircraft plan formations and auxiliary apparatuses that enable numerous applications (Krey and Seiler, 2019). Drones in the medical field are useful in various dimensions, however, health applications are additionally challenging due to the requirement of services on available dates, time and location. Important applications of drones in healthcare include public health disaster relief, telemedicine and medical transport.

***Public Health Disaster Relief, Telemedicine and Medical Transport***

Major dimensions under public health disaster relief include disaster forecast and management, and detection of injurious substances, data collection, delivery of emergency drugs, and contagious disease diagnosis and management (Boutilier, 2018). Drones can castoff surveillance of disaster places, zones with radiation and biochemical dangers, and can detect disease spread (Alkhatib, 2019). Drones are also useful for gathering information related to patients in need of care. Drone technology is also used for the detection of hazards of heavy metals, aerosols and radiation (Rosser Jr et al., 2018). Drones are equipped with high-resolution photogrammetry software which precisely predicts and detect risk for cancer, and other diseases (Nentwich and Horváth, 2018). In the classification of telemedicine, drones can help in medical procedures specifically, in the battleground and emergency departments (Krey and Seiler, 2019). Medicinal supply and transportation services of drones intricate numerous subcategories, comprising a distribution of medicinal goods, withdrawal of individuals, and commercial uses for infrastructure (Rosser Jr et al., 2018). Drones are considered as a consistent and reliable source of medical delivery services in biological and laboratory trails (Rosser Jr et al., 2018). The research initiatives in the field of awareness, expansion and contribution. Medical transportation services also include tissue, blood, medication, medical devices and platelets transport.

# Negative Aspects of Drones in Healthcare Service

Drone technology has received significantly both positive and negative feedbacks from patients and workers. The feedback received from the patients and workers for the use of telemedicine drones in healthcare facility was negative. Patients prefer to receive services from the workers and therefore, rate this as negative (Krey and Seiler, 2019). The probable reason for this negative feedback is the direct interaction of the patient with the healthcare provider. Feedback received from the drones includes doubts regarding services and administration of medicines by the drones. Few concerns of the workers and patients were related to safety. The emergency and transport drones have proven to be more effective as compared to the drone services in telemedicine and public health catastrophe relief. Geographical locations were also associated with the drone services. Limited areas were accessible for the use of drones as it requires advanced technology in delivery. Acceptance of drone services in public and communities is essentially important but require awareness and education (Avanesova, 2019). Medical services related to the emergency department are effective and efficient. The most common reason for negative feedback is due to the lack of social interaction (Krey and Seiler, 2019). Social interactions are considered more important for the patients, particularly for older people (Sokullu et al., 2019). Assuming the number of older people and their admission is usually high in hospitals, therefore there is a need for additional research and awareness among communities to promote drone services.

# Framework of Pact Analysis

***People***

Introducing drones in healthcare services is a novel idea. People from different backgrounds, areas and age groups respond differently to drone application. Patients usually visiting hospitals are from different age groups and localities. It is observed that the persons from aviation and governmental entities also opposed the idea. Mostly older people visit hospitals but it does not exclude other age groups (Horvath, 2019). Older people assess drone application more negatively as compared to the other age groups (Lippi and Cadamuro, 2017). The patients from the emergency department respond positively towards drone applications. Drone applications are advantageous for the patients of emergency department most significantly as the service requires timely delivery and efficient service.

***Activities***

Hospital services are more critical concerning workload, peaks, pressure and time. If a healthcare service is to be delivered to the patient in 2 to 3 minutes, it would be very frustrating for the patient to wait for the worker and service. The introduction of the drone in a healthcare facility is more beneficial in this regard (Horvath, 2019). Activities that drone can cover in transportation system includes transportation of media, blood and medicines within the departments. The services in the emergency department that drone can perform include delivering of blood, platelets and emergency drugs efficiently and timely.

***Context***

Healthcare facility environment is very important and should not be noisy, wet and dirty. Another context is to take care of the facility that it must be free from harmful substances and materials (Nentwich and Horváth, 2018). All these contextual requirements can easily be performed by drone technology. Relationship of patients with the facility providers and the effect of hospital services on patient outcomes is also included in good context. Healthcare facility usually involves conditions of pressure, workload, time and pressure.

***Technologies***

Provision of security, commands and effectiveness of critical care services for the healthcare delivery is the significant feature of the drone technology (Balasingam, 2017). Drone technology uses advanced management and communication system (Krey and Seiler, 2019). It is a complex network of the system which uses telecommunication methods for the inputs. This system includes the interaction of technology in delivering sound and effective service (Lippi and Mattiuzzi, 2016). The relevant content is effectively delivered and communicated to patients and workers on time using drone technology.

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