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Conceptualization of Logistics Management Knowledge in Healthcare Context

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Abstract

The World Health Organization defines health as the state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity. Hence, healthcare is an essential service which is usually provided through various channels, and involves a number of processes, stakeholders and resources. Delivery of healthcare service consists of core activities and supportive activities, where logistics is considered as a supportive activity, when creating the right value for patients. However, healthcare institutes often face the challenge of utilizing limited resources; supplies, funds, staff, facilities and information under complex logistics conditions. This has directed researchers to investigate healthcare logistics from different perspectives and, by means of various interventions, to enhance the efficiency and effectiveness of the flow of resources to the point of care giving. Various logistics theories, concepts, strategies, and techniques have been employed in this regard to overcome the above challenge. These logistics theories, concepts, strategies, and techniques which exist in literature are considered as logistics knowledge in this research paper. When studying logistics knowledge applied in the healthcare industry to understand the existing research gap, it is found that there are aspects of logistics knowledge which are less applied in healthcare industry when compared to the manufacturing industry. Therefore, this paper intends to find the least-used logistics knowledge in healthcare industry - which is specifically employed in manufacturing industry, and to conceptualize selected logistics knowledge to understand its operationalization in the Sri Lankan public healthcare context. The study develops a conceptual framework based on key themes identified, and further generates a hypothesis based on relationships between improved healthcare logistics conditions and value expected by patients as indicated in the conceptual framework. Though there are many factors which affect the

value created for patients according to the value chain concept, this research only considers logistics. A comprehensive review of the related literature in logistics in manufacturing and healthcare industries is adopted as the main research approach: first, key words of the study were listed to search for related literature; after comparing logistics knowledge applied in manufacturing industry with that in healthcare industry, the least used logistics knowledge was identified; then selected logistics knowledge was conceptualized for the Sri Lankan context, to further explain the application of this knowledge in Outer Patient Department of state hospitals in Sri Lanka. Finally, the conceptual framework was developed based on key themes identified, while generating the hypothesis. It is found that logistics systems approach is the least used logistics knowledge in healthcare logistics research, though this has been widely applied in the manufacturing industry. There is limited research available in literature for integrated logistics planning, where flow of supplies, staff, finance and information through its facilities are being considered as a logistics system when generating the expected value for patients. Hence the conceptual framework describes the application of integrated logistics planning as a system to enhance value for patients. Overall, the paper offers a useful conceptual framework for healthcare decision makers around the world to improve an essential service which has a direct impact on economy of the country. Further, conceptual framework indicates a methodology to study the contribution of logistics knowledge in healthcare service from a broader perspective, to increase the efficiency and effectiveness of different logistics flows associated with patient flow as an integrated system. The review of literature suggests that applications of logistics knowledge in service industry remains comparatively limited, whereas more literature can be found on the manufacturing industry. Therefore, the paper proposes the adoption of a broader approach to study healthcare logistics.

Keywords*: Healthcare Service, Logistics Management, Healthcare Logistics, Healthcare Logistics processes and Healthcare Logistics system*

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