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IMPROVING EFFICIENCY OF BLOOD SUPPLY CHAINS USING LOGISTIC INFORMATION TECHNOLOGY TOOL

S.M.KHERDE AND A.P.WADEGAONKAR

Abstract

Blood banks are an important and integral part of health services systems. The shortage of right blood whenever desired is resulted because of inadequate information and linkage between various stakeholders such as blood banks, hospitals, patients and donors. Information sharing among partners is a basic enabler for the effective management and regionalization of blood banking system, in the hope of decreasing shortages, outdates and operating costs without sacrificing blood quality, research & education. The solution for these issues lies in Networking of blood banks and other related institutions with a focus on Information exchange. So the Internet portal is the platform for networking. This portal will also serve as a platform for creating a knowledge bank and an information warehouse. The main objective is to even-out the anomaly by applying the logistics and networking the blood banks of any particular region. The study is focused on the sample data collection from the five districts of Maharashtra state. The basic purpose is to have the information of availability of the required blood group at minimum cost. In this paper, the computer program developed for maintaining the database at blood bank level and the solution for the proper integration of various facilities is discussed. The techniques of optimizations are focused to arrive at decision from alternative sources for which shortest distance algorithm of ANN tool is used. The mathematical modeling is developed & suggested to arrive at the proposed solution. The supplementary information desired for decision making to choose amongst the various alternatives is also discussed.

Keywords: Logistics; Blood bank; Information sharing; Networking; Computer program.