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Managing critical supply chain *issues* in Indian healthcare

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Abstract

This exploratory study proposes a new approach that utilized pre-built issues libraries in healthcare supply chain. Supply chain related issues are collected and deduced from the literature to build issues libraries. This is followed by application of group decision-making for their prioritization and defining solution requirements from doctors' perspectives. A new approach of shared decision-making is proposed by utilizing literature for developing pre-built issues libraries as an input to shared decision-making. Quick identification and resolution mean that an organisation is continually learning and moving towards excellence. It can be used as a checklist for comparison within and across organisations. Usage of open source applications such as Google Sheets and WhatsApp was utilized for geographically dispersed experts.

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1. Introduction

Healthcare systems and processes play a critical role in supporting the healthcare needs of any society. In the functioning of hospitals, it is usually observed that some resources get wasted and delays occur at different levels and at different times due to patients seeing multiple-providers spread across multiple-locations. Developed countries have a different set of health concerns, in this study termed as *issues*, when compared to the developing countries. Foremost *issues* in the developed markets are ageing populations and increasing incidence of chronic diseases whereas for the developing countries it is the management of greater incidence of chronic diseases with the lack of apt infrastructure say at hospitals, clinics, and healthcare [1]. Healthcare providers and healthcare seekers have to manage uncertainty that could be due to factors including changes in lifestyles, demographics, expectations, technology and new facilities [2]. In order to eliminate waste, minimize delays and create value for patient, there is a need to look into the full cycle of care [3]. This study researches

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the supply chain *issues* as applicable to Indian Hospitals and suggests an approach towards their resolution as well as contribution to the Value Agenda.

Literature Review

2.1 Value and supply chain management in Healthcare

Value in healthcare has been defined [4, 5] as “health outcomes achieved per dollar spent”. The goal of healthcare delivery should focus on providing high value to patients around which all actors in the system should be united. When measuring value for primary care and preventive care, the emphasis should be on the definition of patient groups having similar needs [5]. Again, when measuring value there should be consideration of all services and activities that together achieve success when meeting the needs of patients [5].

In literature, supply chain management has been studied from different perspectives by different authors. Here, we are aiming from the perspectives of the healthcare providers with focus on doctors. The definition of supply chain management here is based as “information, supplies and finances involved with the acquisition and movement of goods and services from the supplier to the end user in order to enhance clinical outcomes while controlling costs” [6].

2.2 Issues Identification in Hospital Supply chain

Oxford dictionary defined an ‘issues’ as both noun and verb. The defined meanings are many but for the purpose of this investigation the meanings at Table 1 are being considered:

Table 1: The meaning of issues as both noun and verb

Connotation	Noun	Verb
1	An important topic or problem for debate or discussion	Result or be derived from
2	The action of flowing or coming out	Come, go, or flow out from
3	A result or outcome of something	Formally send out or make known
4	Personal problems or difficulties	
5	Problems or difficulties, especially with a service or facility	

In an analysis carried out on the operations and supply chain management in healthcare for period 1982-2011 [7], the leading topics of study include service operations strategies and objectives and planning, scheduling, and control of services, the five topics that emerged to be most prevalent were information technology and new technology in services, general aspects of strategy and objectives of operations in services, selection and design of the service delivery system, strategic quality issues in services, and lastly capacity planning, scheduling, and control. These issues can be looked up or deduced directly for research papers and they can also be ascertained through focused discussions on the opportunities and/or mention of certain ideas that lead to certain effects. While going through an improvement case study of a hospital [8], a few of the issues were identified from the text as different employees working in the same role performs the same tasks in different ways, employees have superficial understanding of their work requirements, lack of knowledge and understanding regarding how their work affects the requirements of quality outcomes, lack of understanding regarding what constitutes satisfactory performance, lack of accountability, lack of shared understanding, blind adherence to the inherited processes, processes inherited orally and not through institutional processes etc.

There are also a number of other issues and frequently observed in healthcare supply chains [9] such as correctly forecasting patient arrival frequency, accurately envisaging duration of visit, calculating product requirements, and lack of education in supply chain management [10].

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