



## To Analyze Opportunities & Market Potential for Hospital Management System/Software in Delhi

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**ABSTRACT:** A comprehensive Hospital Management System (HMS) typically addresses the automation needs of all departments or functionality covering the administrative, clinical back office and peripheral activities of the hospital . So the present work was to analyze this potential in Delhi, India. Structured self-administered questionnaires were sent to hospitals in Delhi to survey the issue and 40 hospitals answered. Data was analyzed by using Windows SPSS 12.0. The results indicate that all bigger size hospitals are computerized and almost everyone is using some HMS (Hospital Management System) while the hospitals of smaller size are rarely computerized and are not using any sort of HMS. In order to develop Hospital Management system, various strategies must be developed and active international support and research was required to provide the appropriate experiences. © 2011 IGJPS. All rights reserved.

**KEYWORDS:** Hospital Management System; Database; Market; Software.

### INTRODUCTION

As the information Age's coming, Indian Hospital managers have to face to the competitive medical service market and try their best to make decision generally and scientific. Healthcare is one of India's largest sectors, in terms of revenue and employment, and the sector is expanding rapidly. Healthcare is being provided by all small, mid and larger size of hospitals. The facilities in the hospitals vary from primary healthcare to tertiary care. As the healthcare industry in India goes through an expansion spree and gears up to become the best in-class, IT is increasingly being embraced and adopted by healthcare organizations. Healthcare is possibly among the most data-critical, information intensive and knowledge driven service sectors. Yet, for long, the industry (particularly in the Indian context) has been one of the slowest adopters of IT. However, there is a silver lining to this – leading market research firms and IT industry experts have projected India among the fastest growing healthcare IT markets in Asia, following China. [1] While the overall healthcare market in India is expected to reach nearly USD 70 billion by 2012, the potential for medical

equipment market over the same time period is pegged at USD 18 billion, while that of health IT market at USD 3 billion. [1] This is enticing the IT players to enter in this lucrative area.

The structure within which healthcare is carried out varies from country to country and sometimes even within national boundaries. As far as India is concerned about healthcare it is far behind to the developed countries. The ratio of number of beds to number of patients in India as of now is very low, with just 0.75 bed per 1000 population which is quite less in comparison to the other developed countries.[2] The most fundamental property affecting the Indian healthcare sector is the multi-faceted demographic and socio-economic profile of the country. Most hospitals would organize their resources and manpower within structures that had evolved rather than been designed. The processes would be structured to ensure multiple points of control rather than patient convenience.

Hospitals could receive tangible as well as intangible benefits if healthcare IT proposal would be there. Tangible benefits like, by the use of HMS productivity of high cost resources such as labs, imaging modalities such as CT Scans, MRIs, Cath Labs, operating theatres is improved - thus giving higher and faster return on investments. Higher satisfaction levels of hospital services by patients and relatives due to correct information being available as and when it is required, more transparency, less waiting and anxiety and fewer errors in services - medicines, diets etc. provided to them would cover intangible benefits.

A comprehensive Hospital Management System (HMS) typically addresses the automation needs of all departments or functionality covering the administrative, clinical back office and peripheral activities of the hospital . Modules covers registration, admission, discharge, transfer, patient consultation(Outpatient and inpatient), Nursing (Inpatient care, Critical Care, Security), Operation theatre, Order communication, Hospital wide scheduling , blood bank, Drug information system, diet kitchen, billing and cash counter, store and purchases, medical records, general accounting, payroll and human resources.

So the objectives of the present work were to understand and compare the functioning and operational management of

various sizes' hospital as well as to understand the role of HMS/HIS in the operational management of the hospital.

**MATERIALS & METHODS**

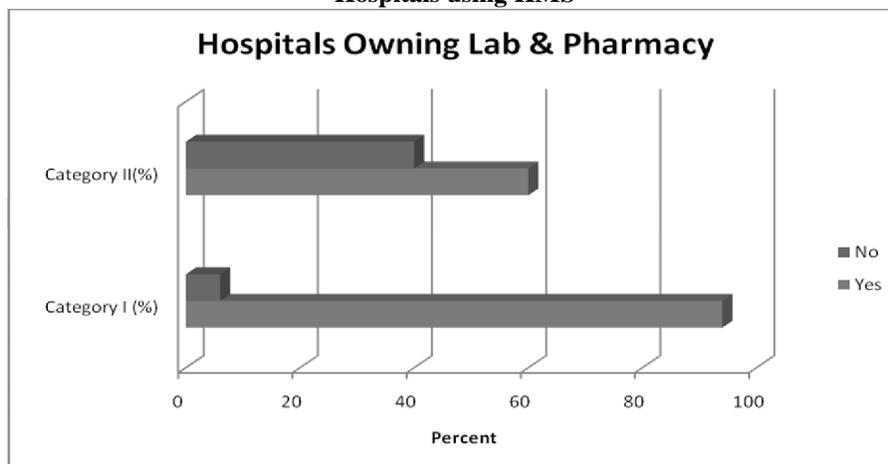
A data set of 40 hospitals was used to do the analysis. A structured and disguised questionnaire was prepared so as to avoid introduction to any bias of the respondents in the survey. Questionnaire contained open and closed ended questions to collect responses. Survey was conducted among the Hospital Administrator or system administrator of the hospitals of Delhi. Data was collected by approaching each hospital's administrator/system administrator and were asked to respond to the questionnaire. The responses were noted down separately for each individual and these responses were analyzed. The analysis of data is totally objective and unbiased of the interviewer.

A set of 40 hospitals were subdivided to two groups. More than 300 bedded hospitals placed under category I whereas the hospitals having 30-100 bedded facility covered under category II. So 17 hospitals comes under category I and 23 hospitals in category II.

The hospitals with HMS were further evaluated for the factors influencing and outcome after having HMS.(Shown in figure 6,7,8,9,10,11).

Category	A		B		C		D		E	
	Y	N	Y	N	Y	N	Y	N	Y	N
I	94	6	96	4	100	0	100	0	96	4
II	60	40	91.3	8.7	91.3	8.7	34.7	65.3	17.4	82.6

**Table 1 Data (In percentage) according to hospitals; Y=Yes; N=No ; A= Hospitals owning Lab & Pharmacy; B= Hospitals taking advance from patients; C= Hospitals empanelled with pvt. Companies; D= Computerization in the hospital; E= Hospitals using HMS**



**Figure 1 Hospitals owning lab & pharmacy (Refer Table 1)**

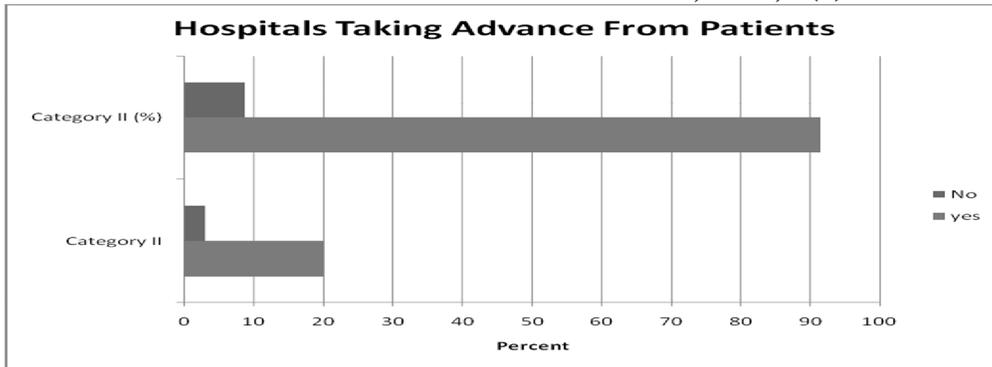


Figure 2 Hospitals taking advance from patients (Refer Table 1)

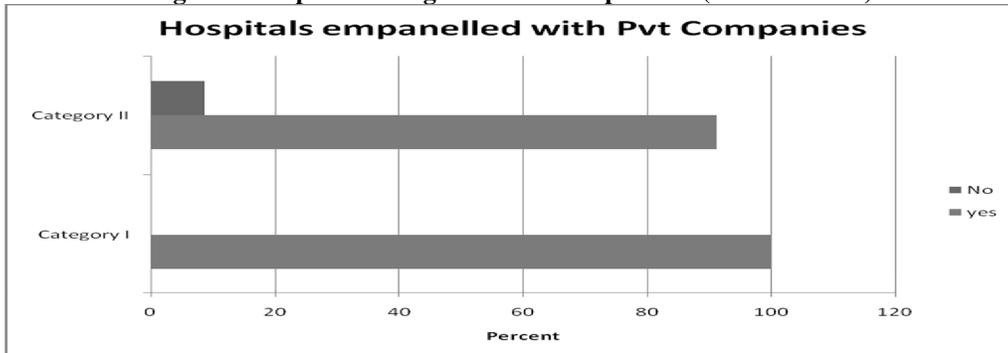


Figure 3 Hospitals empanelled with pvt. companies (Refer Table 1)

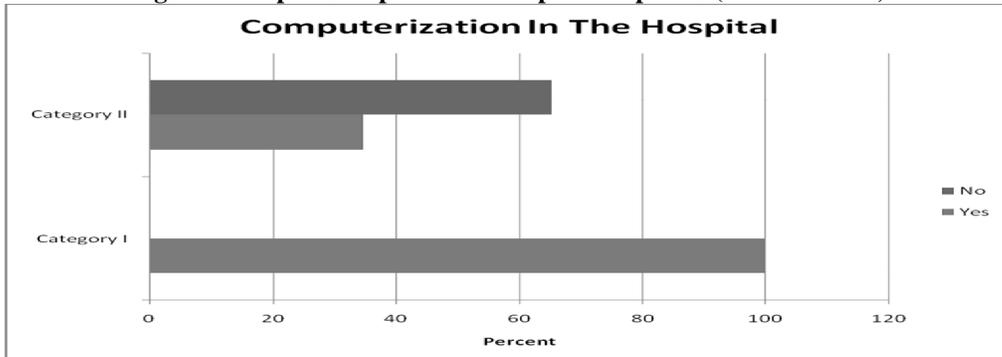


Figure 4 Computerization in the hospital (Refer Table 1)

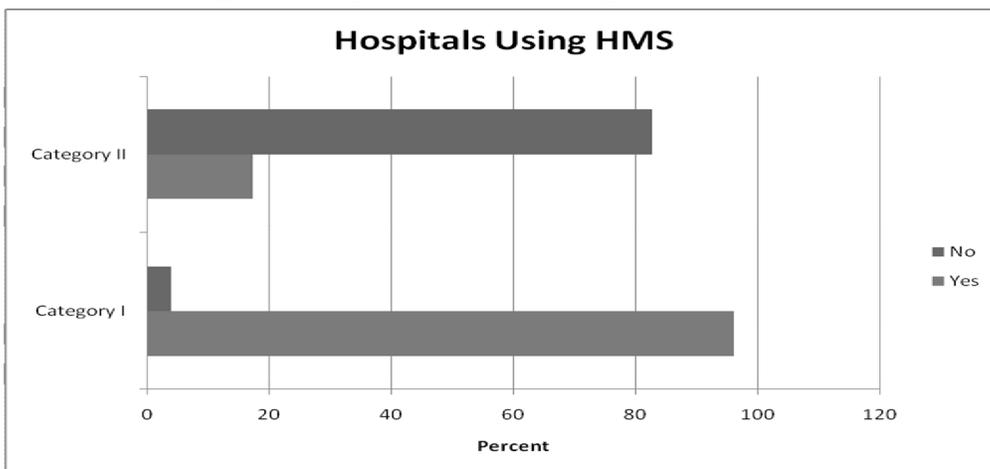


Figure 5 Hospitals using HMS (Refer Table 1)

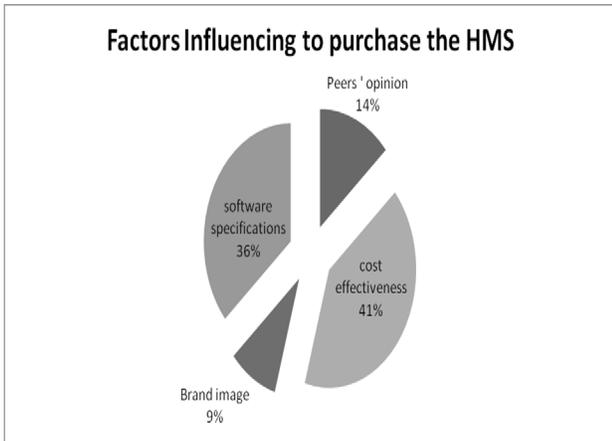


Figure 6 Factors influencing purchase of HMS

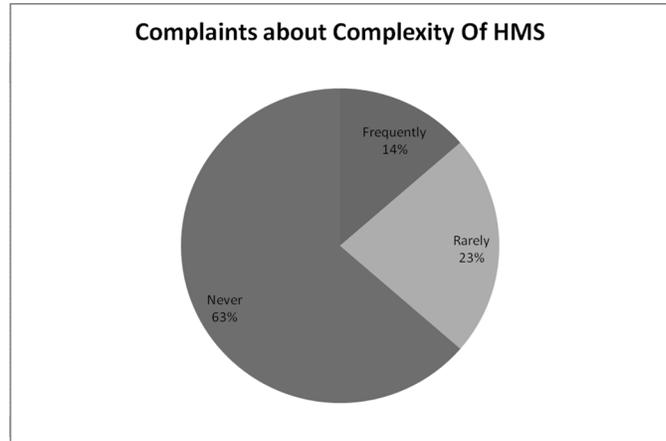


Figure 7 Complaints about complexity of HMS

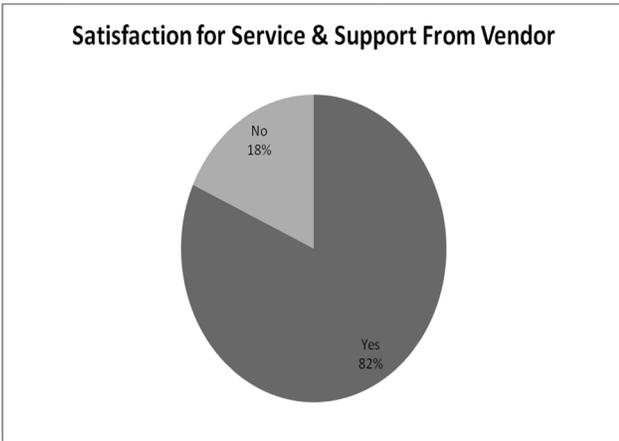


Figure 8 Satisfaction For service & support from vendor

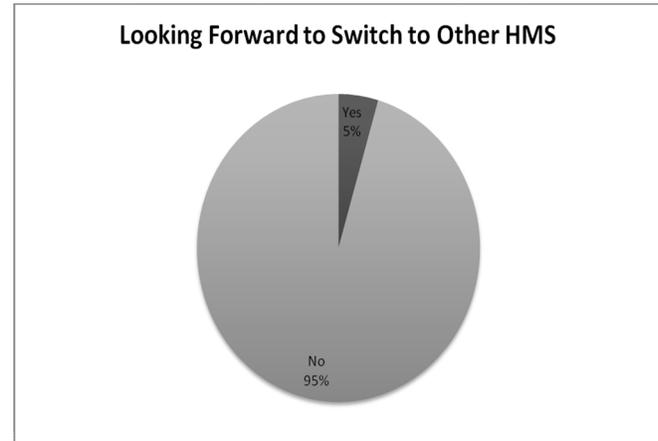


Figure 9 Looking forward to switch to other HMS

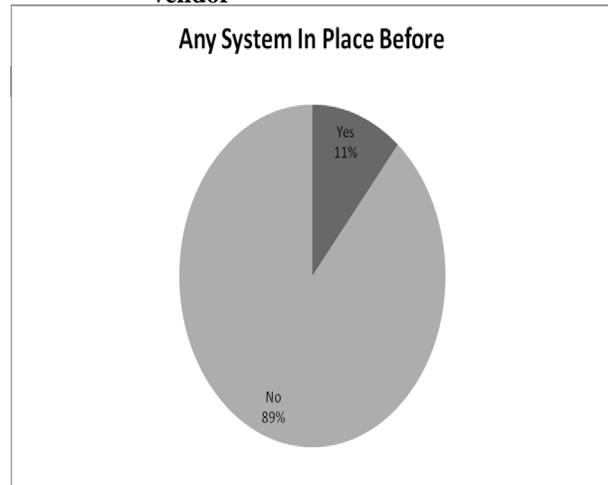


Figure 10 Representing whether any system was there before HMS

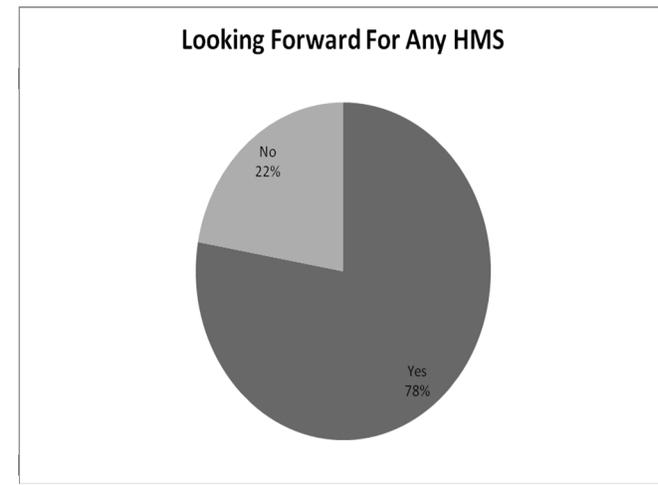


Figure 11 Representing opinion of hospitals seeking for any HMS

## RESULTS & DISCUSSION

It reflects that almost every hospital having more that 100 beds (category I) owns lab & pharmacy while only a few hospitals having less than 100 beds (category II) own the

same. The survey reflects that almost every Pvt. Hospital takes advance from the patient before admitting him to safeguard their money upfront to avoid any dispute with the patients while collecting the final bill for the treatment. Almost every Pvt. Hospital is empanelled with some Pvt. Companies and a

few only are empanelled with CGHS (central Govt. Health Scheme) which shows that the hospitals are seeking for the empanelment with the Pvt. companies to expand their business. It was found that all bigger size hospitals are computerized and almost everyone is using some HMS (Hospital Management System) while the hospitals of smaller size are rarely computerized and are not using any sort of HMS.

There are only a few no. of vendors in Delhi that are dealing in HMS out of which Akhil System, Accurate Solutions Pvt Ltd – Administrator Plus, Karishma solutions Pvt. Ltd Jeeva, Wipro, Thytech Solutions, Nexgen Pvt. Ltd, Data Men Solutions Pvt Ltd. have some brand equity. Every vendor has its own target segment. The vendors like Akil System, Wipro, Karishma target only the hospitals having more than 100-150 beds (bigger hospitals). Other vendors like Accurate solutions, Thytech, Data Men, Nexgen target the mid size hospitals and rarely bigger size hospitals.

The study reveals that the operational needs and management of various hospitals in Delhi varies. Hence it is concluded by the survey that the hospitals of bigger size have more integrated facilities and infrastructure resulting into high transaction load in the hospital. The survey also reveals that a large chunk of smaller size hospitals are not computerized and not using any HMS but they are looking forward for such kind of solutions. The HMS market in Delhi is quite potential and a lot of hospitals are looking forward for IT solutions for their operational needs so it is the right time to enter in Delhi market. It is suggested to conduct the survey in other regions

also to find the true potential. However it provides important information to devise proper marketing strategy to launch the HMS in the market.

## ACKNOWLEDGEMENT

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