

Comparative Assessment of Discharge Procedure of Tertiary Hospitals with Respect to Guidelines of NABH

Dr. Akanksha Agrawal¹, Dr. Piyush Kant Pandey²

¹Health and Hospital Administration, IIHMR University, Sanganer Road, Jaipur, Rajasthan, India

²Professor and as Chairperson (New Initiatives and Development), IIHMR University, Sanganer Road, Jaipur, Rajasthan, India

Abstract: NABH defines discharge as a process by which a patient is shifted out from the hospital with all concerned medical summaries ensuring stability. Discharge process in hospital is one of the protracted procedures. Time taken in discharge procedure by various hospitals is an important indicator of quality of care and patient satisfaction. The study was observed by total number of 60% and 40% patient that are taken from the General medicine and General surgery department side comparing with NABH AAC 13 & 14. In time motion study as we know it is a straight and steady observation of a task, using a various parameter like stopwatch, video so that we can record time taken for the procedure. Study was implemented in a hospital of 300 bedded in Pune city, in which 300 are the patient's number for studying discharge process in it. Also, the study has been managed on 270 patients admitted at a multispecialty hospital, Ludhiana to compare flow of discharge process with NABH criteria or standards. Shows that the time taken for procedure when we compared to NABH standards are much larger than it. We recommended an appropriate change should be considered for the further improvement.

Keywords: Discharge process, NABH standards, Comparative assessment, TAT, Patient Satisfaction.

1. Introduction

Discharge Procedures can be defined as, “the process of activities that involves the patient and the team of individuals from various discipline working together to facilitate the transfer of patient from one environment to another”. The patient and their relatives or family member are anxious to restart their routine life as soon as possible. This is very important to know that this procedure is directly related to patient satisfaction level, any type of delay will no doubt have direct effect on it and will also effect the hospital value, even if there is fortunate treatment.

As per NABH (National Accreditation Board for Hospitals and Healthcare Providers), “Discharge is a process by which a patient is shifted out from the hospital with all concerned medical summaries ensuring stability. The discharge process is deemed to have started when the consultant formally approves discharge and ends with the patient leaving the clinical unit [1].

As we came up with this, India is continuously focusing in medical tourism and what we get that there is only one percent of total hospital in country that has come ahead to accept NABH standards.

After gone through an article by Dr. KK kalra CEO of NABH, we observe that from 79000 hospital (private and public) about 1000 hospital are there those are applied for NABH and are under reviewed for it. There is a website of NABH, and the Constituent board of quality council of India made to run the programmed of accreditation in healthcare field. This is not a good response; we should take

a step on this and NABH said that it was the time that we should move from optional to compulsory [2].

This is important to know for all that this standard will help us to improvising the hospital process. This will qualify the health care industry and signifying guarantee to good control.

Discharge planning is regular, necessary, or compulsive feature in hospitals. Discharge procedure should be done in proper time without any delay in their process to achieve a patient satisfaction. Because this procedure was an important tool of quality control and reduce patient dissatisfaction.

NABH standards is a QCI that was organized by Ministry of Health to give an accreditation programs for healthcare systems in India. It is established because of optimum standards & professional accountability. This standard has a strong focus on patient rights and benefits, patient safety, satisfaction and so on. It is a very helpful tool to ensure patient safety and quality care.

For Discharge procedure in hospitals NABH has some guidelines for documentation and time taken for the procedure. They have a set of standards of One eighty minutes for competing process of discharge. Therefore, if we maintain this level of time, we achieve better patient satisfaction or made a well-organized hospital system.

The main purpose of study is to notice the time of procedure and then compare it with NABH standards AAC 13 & 14 by observing there following objective element of NABH.

And secondly, we also measure the turnaround time by the data and then find their average for analysis and to identify the outcome of it. As we know the time motion study mainly used when there is monotonous cycle for short or long period.

Now, the study is taken out by using following consideration:

- To examine and record the time taken by whole process.
- To compare the average time taken in process with NABH standards.
- To recommendations on findings.

1.1 Aim

To compare Discharge procedure of various hospitals by analyzing TAT through NABH standards to improvise or increase patient satisfaction.

1.2 Objective

- To study the existing system of discharge process of patients.
- To compare the process with NABH standard and evaluate it.
- To recommend suitable suggestion for improving patient satisfaction.

2. Methodology

2.1 Study design

Study 1 - Type of study is observational carried in a general medicine and surgery department in Hyderabad, Srinagar hospitals.

Study 2 - Cross sectional descriptive type of study of 300 bedded hospital of Pune city.

Study 3 - Observational type of study taken in 250 bedded multispeciality hospital of Ludhiana.

2.2 Period of study

Study 1 - Three months duration (from 1st Nov 2017 to 31 Jan 2018).

Study 2 - One-month duration 4th June 2012 to 4th July 2012.

Study 3 - The data was collected from May -June 2017.

2.3 Sampling

Study 1 - Sample has been taken of total 700 cases for study. Out of which 60% of patients are under General Surgery and 40% patients are under General Medicine. The study of patient was taken without regard for their gender, all will be included, and the time take in and was between 9am to 5pm except Sunday. Since Sunday has not planned for discharging patient.

Study 2 - Total 300 patients are taken for a study of all types, like Insurance patients, self-payment patients & discharges against medical advice (DAMA) and then their record will be maintained for further study.

Study 3 - Randomly data is collected by observing 270 discharged patients from different wards to record their process for further study.

2.4 Data Collection

Study 1 - Qualitative and quantitative data then differentiate it with NABH Standards, NABH criteria (AAC.13), (AAC.14) (AAC- Access, Assessment, Continuity of care).

Study 2 - Quantitative data in which time will be record for all type of procedure by using stopwatch with help of nurse staff in every department with all type of patients.

Study 3 - Evaluate timings including discharge intimation time, billing card submission time, drugs clearance time, pharmacy clearance time, final bill intimation time, final bill clearance time, final summary time, handover time, vacancy of room and time taken for preparation of room for next patient were recorded for each patient to study actual time taken at each step from discharge order to the physical room vacancy by the patient.

3. Data Analysis

There is existing qualitative and quantitative data on which we are going to analyses by comparing it with NABH then interpret that is following the NABH standards were give improvement in Patient satisfaction or not.

3.1 Analysis of "qualitative" information (Study 1)

The data will be observed as follow in table 1, by the patient in given time-period. This procedure in hospital undergoes a step wise process in comparison with NABH Standards (AAC. 13), (ACC.14) are depicted as shown in table 1[3].

Table 1: Documentary Comparison with NABH standard of discharge process

<i>NABH Guideline ACC 13</i>	<i>Protocol in hospital</i>	<i>NABH Guideline ACC 14</i>	<i>Protocol in hospital</i>
1. The patient's discharge process is planned in consultation with the patient and/or family.	Complete followed.	1. Discharge summary is provided to the patients at the time of discharge.	Completely followed.
2. Documented procedures exist for	Partial followed, they	2. Discharge summary contains the patient	Completely followed.

coordination of various departments and agencies involved in the discharge process	are not documented properly.	's name, unique identification number, date of admission and date of discharge	
3. Documented policies and procedures are in place for patients leaving against medical advice and patients being discharged on request.	No documented policy and no separate format for it. Following partially	3. Discharge summary contains the reasons for admission, significant findings and diagnosis and the patient 's condition at the time of discharge	Partial followed, for patient condition there is no specific time.
4. A discharge summary is given to all the patients leaving the organization (including patients leaving against medical advice and on request)	Complete followed.	4. Discharge summary contains information regarding investigation results, any procedure performed, medication administered and other treatments.	Completely followed.
5. The organization defines the time taken for discharge and monitors the same.	No define time for procedure.	5. Discharge summary contains follow-up advice, medication and other instructions in an understandable manner	Not followed.
		6. Discharge summary incorporates instructions about when and how to obtain urgent care	Not followed.

Various comparative observation study was also taken by Shobitha Sunil [6], the study was coming with a result that 50.9% of patient's discharge procedure take more than standardized time of NABH. On more by Seema Ajabi [10], that shows the average time for patient in completion of their process of discharging is 4.93 hours that is 295.8 minutes much larger than NABH standards. Another study taken by Alladi [11] that shows Self payment patient take 412 minutes, Insured patient takes 386 minutes of Hyderabad hospital.

Overall interpretation -

The data collected; Time taken for the discharge procedure will take more time when not done with proper organized guidelines of NABH. So, it is important to do the procedure under guideline to improve patient satisfaction.

3.2 Analysis of "quantitative" information (Study 2)

The graph shows distinguishing time between the procedure steps for all type of patient with NABH standards as shown in fig.1.

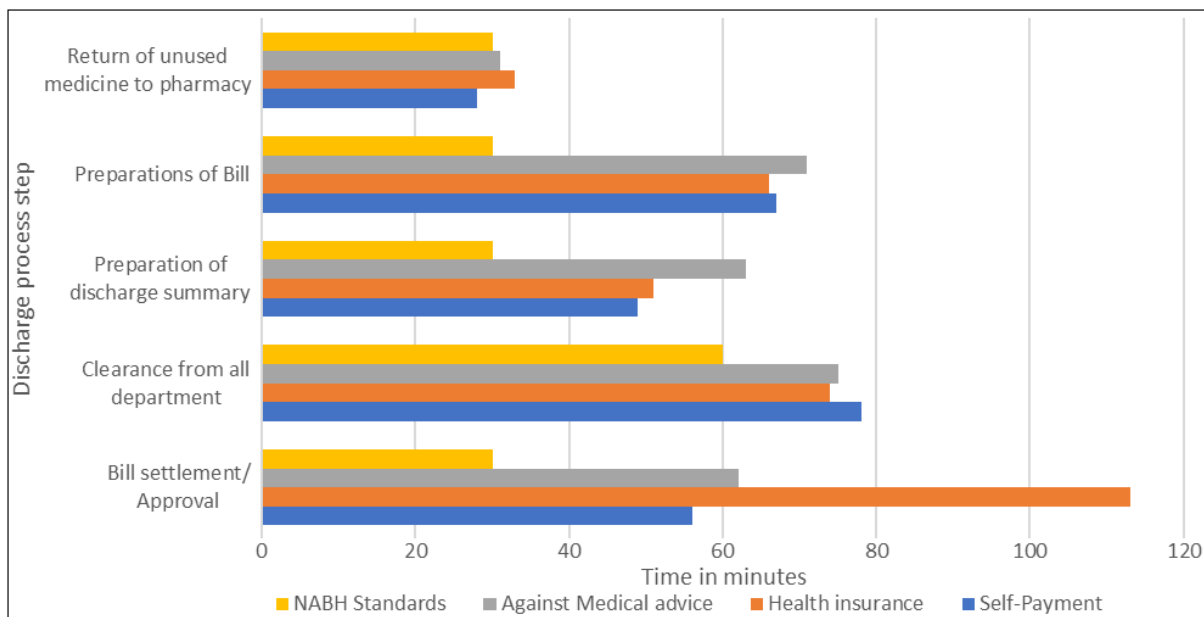


Figure 1: Showing time taken with 3 type of patient in discharge process

Overall interpretation

This graph of data clearly depicts that the average time for each step of all type of patients are much larger than the NABH standards. AS we know the NABH standards has the time of about 180 minutes. And here an individual patient takes 278 minutes, Insured patients take 337 minutes, DAMA takes 302 minutes of Pune hospital. Also, one more

observation was that the time taken for insured patients is the highest one.

3.3 Analysis of "quantitative" information (Study 3)

In this we have analyzing the data of time taken with the patient type of self-payment in the discharge process as shown in fig.2

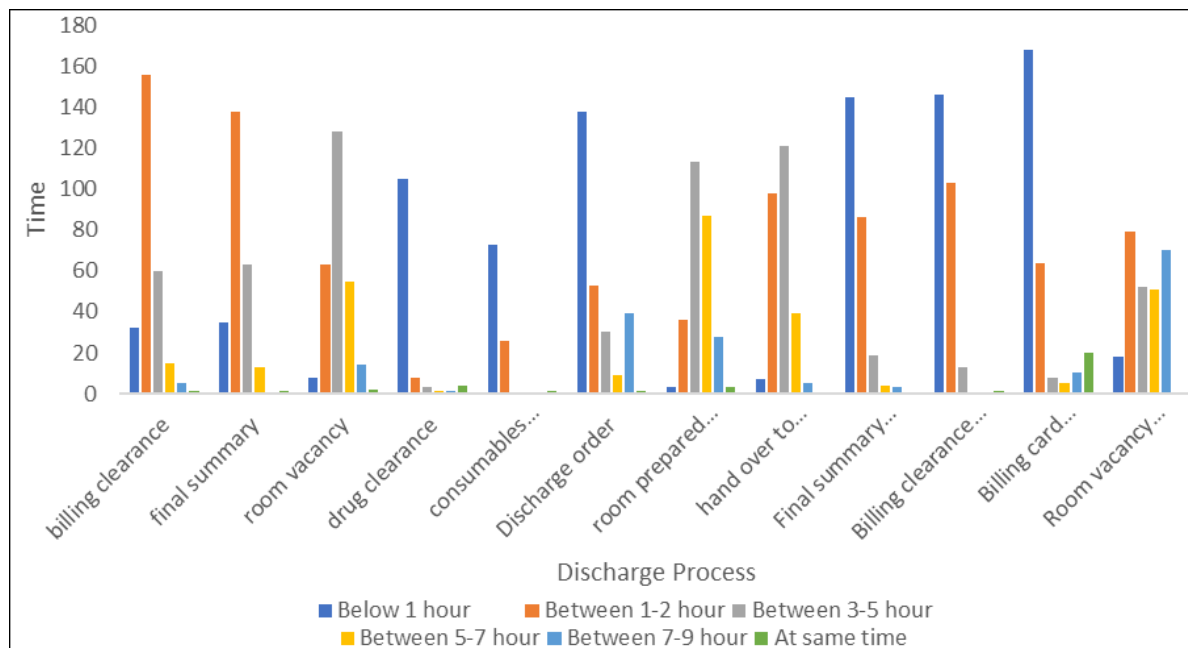


Figure 2: Showing time taken in discharge process

By observing above data, we calculate the Average Turnaround time.

Turnaround time = Competition time - Arrival time

Here, the completion time is the time taken from start to end of the process. And the time at which the process start is an arrival time. After calculating the TAT for each we will take average of it that is average turnaround time, as shown in table 2.

Table 2: Average Turnaround time

TAT (T1-T12)	Discharge Process Parameter	Average time
T1	Discharge intimation to billing clearance	02:30 h
T2	Discharge intimation to final summary	02:29 h
T3	Discharge intimation to room vacancy	04:05 h
T4	Discharge intimation to drug clearance	00:37 m
T5	Discharge intimation to consumables clearance	00:44 m
T6	Discharge order to discharge intimation	00:28 m
T7	Discharge intimation to room prepared for next	05:07 h
T8	Discharge intimation to hand over to patient	09:07 h
T9	Final summary signed to hand over to patient	01:17 h
T10	Billing clearance to hand over to patient	01:06 h
T11	Billing card updated on floor to receive at IP billing	00:18 m
T12	Room vacancy to room prepared for next patient	01:02 h

Overall Intervention -

The data shows that there is increased average TAT in discharge intimation to hand over to patient and in discharge intimation to room vacancy, and after calculation we find the complete process takes about 3.50 hour. So, if

they are followed by NABH guideline there is proper documentation and thus reduction in TAT and improve patient satisfaction will be seen. In which the major step overall takes 389 minutes of hospital in Ludhiana.

The next step what we do is to compare the all above mentioned study that will help us to understand better result and help to identify factor causing an overall effect.

We have taken a 5 major step of discharge procedure for comparison these are-

- Preparation of discharge summary.
- Return of unused medicine to Pharmacy.
- Clearance from all the department.
- Preparation of Bill.
- Settlement/Approval of Bill.

Study 1 is Hospital (H1) with 2 patient type (PT) -

- PT1 (Self payment patient).
- PT2 (Insured patient)

Study 2 is Hospital (H2) with 3 Patient type (PT) -

- PT1 (Self payment patient)
- PT2 (Insured patient)
- PT3 (Against medical device)

Study 3 is Hospital(H3) with one patient type (PT) -

- PT1 (Self Payment patient)

Based on these available data we see the time taken in type of patient in various hospital in the process of discharge process and compare it with NABH Standards. As shown in fig 3.

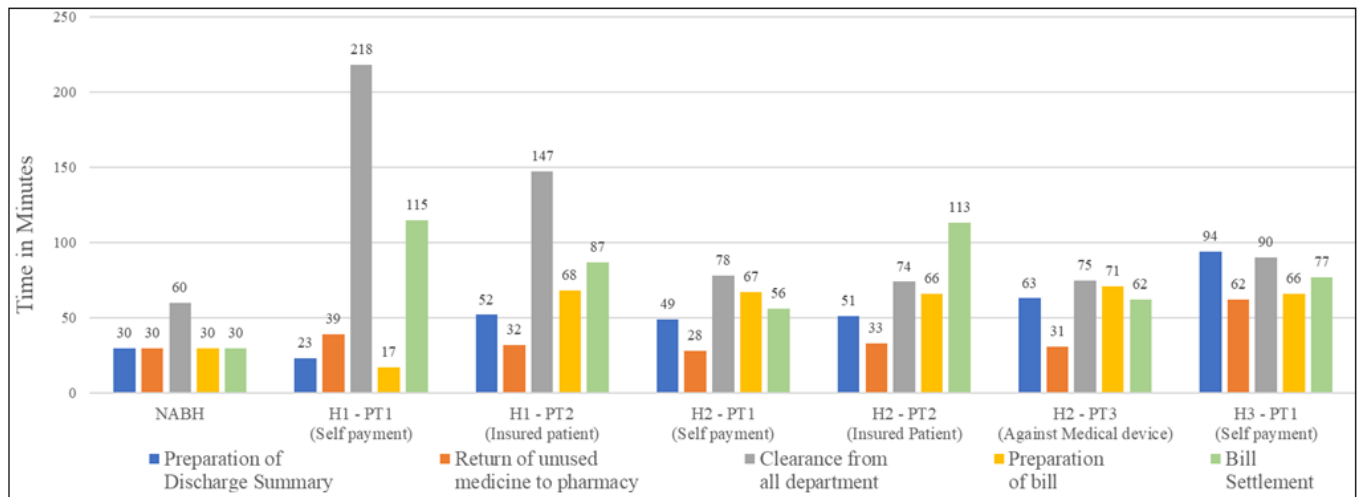


Figure 3: showing comparison of all three study with NABH Standard

After analyzing these studies, we evaluate the data by this diagram.

To show the cause of a delay in Discharge process and to identify the factor causing an overall effect we are came with this tool to describe cause and effect as shown in Fig 4.

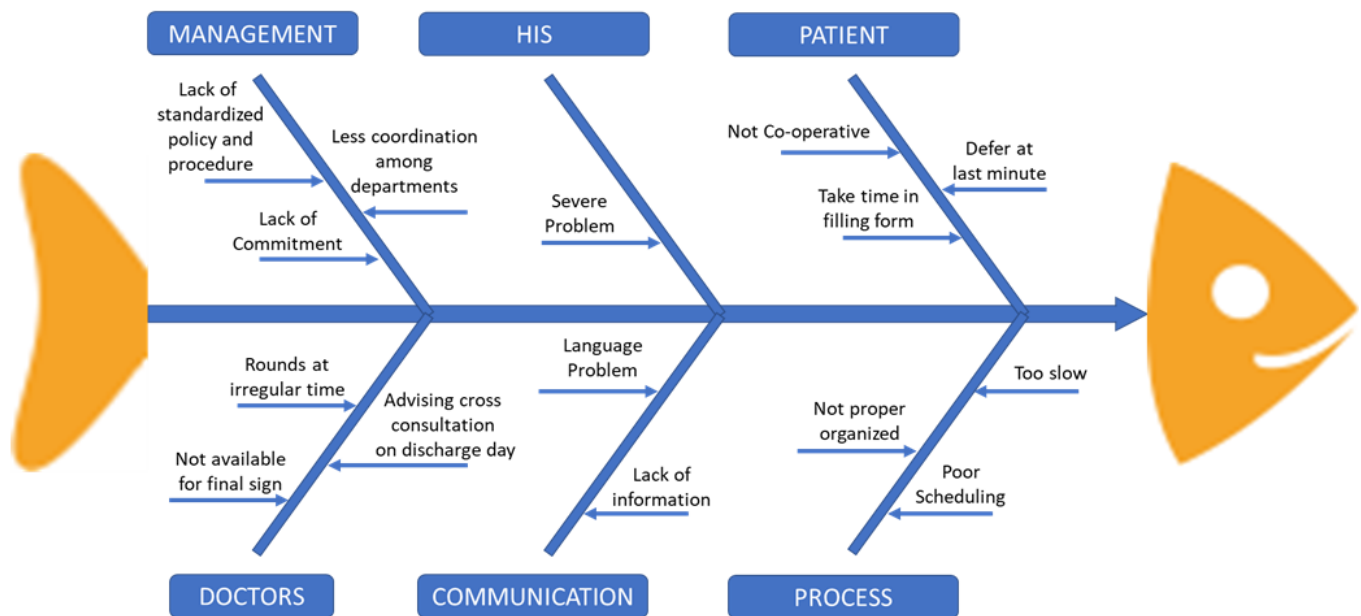


Figure 4. Ishikawa diagram

4. Result

The studies intelligible gives indication delay in all steps of procedure of discharging especially in Billing process, room preparation with a type of insured patient when compared to NABH standards. This is important to note for the healthcare since, a well monotonous with proper time in process of discharging have great role in reducing patient dissatisfaction and improve the hospital’s future business. Delay in process of discharging has also direct effect in increasing the risk for hospital acquired infection for patient. So, it is important to take a step forward for solving all these types of issue. As we know, National Accreditation Board for Hospitals and Health Care Industry and Quality council of India has set a standard of 180 minutes for the completion of process of discharging. Only by following NABH standards we can achieve goal of

hospital that is always a Patient satisfaction.

5. Recommendation

- All departments of hospital should make a well-organized plan for distribution of staff patient ratio.
- All the member must be aware of NABH standards.
- There should be enough strict environment for following the NABH standards.
- All healthcare should make organized way plan for training of all the health workers.
- Should take patient feedback, their family member feedback and then go through the issue.
- An administrator of hospital themselves undergone with the time motion study to understand, implement the procedure for further improvement.

- Late rounds by the doctors is a concern too, so in that case a reminder should be sent to the doctors about the rounds with full detail to speed up the work.
- Vigorously IT system should work to manage the system functioning smoothly.
- There should be individual billing counter in every floor.
- For a day after holiday pre-preparation should be done to avoid crowd.
- There should be an electronic health record to avoid duplication of data for save time.
- Discharge summary should be written prior to one day of discharge.

6. Conclusion

The discharge process is complex process and the main process. It is “the process of activities that involves the patient and the team of individuals from various discipline working together to facilitate the transfer of patient from one environment to another”. The patient and their relatives are impatiently waiting for the time to go to home or discharge from hospital to start their normal life without any due delay in this. Therefore, we should take this step as soon as possible and increase the number of hospitals to be standardized by NABH to improve the patient satisfaction and make our health care better.

The process of discharging has administrative type, clinical type, economical, legal parameters that are started from the procedure and goes up to the end of it. Yes accepted many of the process are time consuming like bill process, room vacancy or preparation, pharmacy department but if they all done with a well-organized way and under trained medical staff than it can be completed easily under standardized time of NABH and give better result.

As the studies are clearly indicate the delay in discharge process, we should go through the issue and came up with solution and must follow the NABH standards for improving our patient satisfaction as early as possible.

References

- [1] <https://www.nabh.co/standard.aspx>
- [2] <https://www.dailypioneer.com/2017/india/1-per-cent-of-indias-hospitals--apply-for-nabh-accreditation.html>
- [3] https://www.nabh.co/Images/PDF/HomoeopathyStandards_2ndEdition.pdf
- [4] Hendrich, A., Chow, M.P., Bafana, S., Choudhary, R., Heo, Y., & Skierczynski, B. (2009). Unit-related factors that affect nursing time with patients: Spatial analysis of the Time and Motion Study. *Health Environments Research & Design Journal*2(2): p5-20
- [5] Janita Vinaya Kumari, A Study on Time Management of Discharge and Billing Process in Tertiary Care Teaching Hospital. *Elixir International Journal Mgmt. Arts.* 2012.52(A): p11533-11535.
- [6] Shobitha Sunil, et al. Analysis of Time Taken for the Discharge Process in a Selected Tertiary Care

- Hospital. *International Journal of Management and Applied Science* 2016;2, Issue-10.
- [7] Agboado G, Peters J, Donkin L. Factors influencing the length of hospital stay among patient’s resident in Blackpool admitted with COPD: A cross-sectional study. *BMJ Open* 2012;2. pii: e000869
 - [8] Ministry of Health and Long-Term Care, Discharge of Hospital Patients. Ch. 3-Section 3. 02 Available from: www.auditor.on.ca/en/reports_en/en10/302en10.pdf [Last accessed on 2013 Nov 11].
 - [9] National Accreditation Board for Hospitals and Healthcare Providers (NABH) Standards: A Review Samuel N. J. David, Sonia Valas Department of Hospital Management Studies, Staff Training and Development, Christian Medical College, Vellore, Tamil Nadu, India.
 - [10] Ajami, S. and Ketabi, S., 2007. An analysis of the average waiting time during the patient discharge process at Kashani Hospital in Esfahan, Iran: a case study. *Health Information Management Journal*, 36(2), pp.37-42
 - [11] http://121.243.17.136:1001/other/IIHMRJaipur%20Library/sp-dis/spa_files/HM17-HO_files/Poster/Alladi.pdf