U.S. ARMY - BAYLOR UNIVERSITY
GRADUATE PROGRAM IN HEALTH CARE ADMINISTRATION

BENCHMARKING THE ELECTIVE ACUTE CARE INPATIENT ADMITTING PROCESS: MINIMIZING PATIENT WAITING TIMES

A GRADUATE MANAGEMENT PROJECT
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TABLE OF CONTENTS

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The opinions expressed herein are strictly those of the author and do not reflect the official policy or position of the Department of the Air Force, the Department of Defense, or the United States Government.

ABSTRACT

The Johns Hopkins Hospital (JHH) has more than 41,000 inpatient admissions in a given year, or averaging about 110 admissions per business day (Monday-Friday). Admissions continue to increase as JHH attempts to maintain bed occupancy rates during a period of continual decline in the average length of stay. This sheer volume of daily admissions is very good for JHH but is taking a toll on JHH's number one customer, the patient, as the admission process becomes more congested. Over 26 percent of all JHH admissions are considered to be elective. The elective acute care inpatient admission process includes multiple patient contacts, long waits, and the requirement for the patient to sign numerous forms.

The purpose of this study is to identify functions for performance improvements within the elective acute care (EAC) inpatient admitting process and to provide process alternatives to decrease patient waiting times. A complete analysis of the JHH admitting process was conducted and critical success factors of EAC admitting processes were benchmarked against JHH's.

The study identified that JHH has great opportunity to improve the percentage of patients preadmitted, patient waiting times, and patient contact and interaction. Multiple recommendations are presented to improve JHH's EAC admitting process such as increasing patient contact prior to admission, consolidating forms, and scheduling patients for admission appointment times.

LIST OF ILLUSTRATIONS

BENCHMARKING THE ELECTIVE ACUTE CARE INPATIENT ADMITTING PROCESS: MINIMIZING PATIENT WAITING TIMES

CHAPTER 1

INTRODUCTION

The Johns Hopkins Hospital (JHH) has more than 41,000 inpatient admissions in a given year, or averaging about 110 admissions per business day (Monday-Friday). Admissions continue to increase as JHH attempts to maintain bed occupancy rates during a period of continual decline in the average length of stay. This sheer volume of daily admissions is very good for JHH but is taking a toll on JHH's number one customer, the patient, as the admission process becomes more congested. Over 26 percent of all admissions are considered to be elective. The elective acute care inpatient admission process includes multiple patient contacts, long waits, and the requirement for the patient to sign numerous forms.

Background

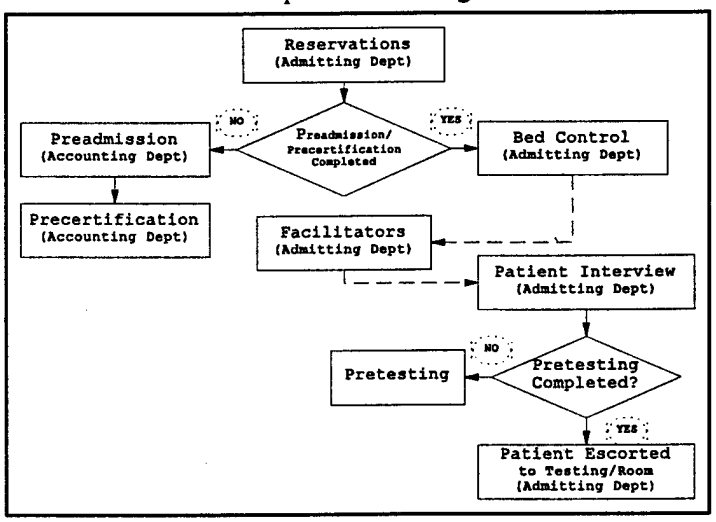
The Johns Hopkins Hospital (JHH) is a nonprofit teaching hospital with 1,036 licensed beds. The entire continuum of care is offered to the JHH patient population through the Johns Hopkins Health System. JHH is known nationally for its quality of care and service excellence as noted by being ranked as the Nation's Number One Hospital for the sixth year in a row (U.S. News & World Reports, 1996). JHH commitment to quality and service excellence does not begin nor stop at the patient's

bedside, but is woven throughout the entire health care process.

JHH continually analyzes its health care delivery process for quality improvement or service enhancement. JHH has seen admissions continually escalating while patient waiting times vary considerably from the period of patient arrival until the patient is escorted to their room. This situation lead to identifying the Inpatient Admitting Process as a crucial area to study for process improvements. The focus of this study was narrowed to the elective acute care (EAC) inpatient admitting process. Elective surgery admissions were excluded from this study because surgery admissions are preadmitted during their pre-op visit and they physically bypass the Admitting Department on the day of admission.

Both the Admitting and Accounting Departments have key rolls in the elective acute care inpatient admitting process at JHH (Figure 1). During the admitting process, the patient may be contacted several times by phone before arrival, may be repeatedly asked the same questions throughout the process, signs numerous forms upon arrival, and may experience long periods of waits before finally being escorted to their room.

FIGURE 1. JHH EAC Inpatient Admitting Process



Reservations (Admitting Department) is the first step in the JHH EAC inpatient admission process. Reservations consists of receiving admission requests, collecting patient demographics, and making reservations for the patient's future admission. Most admission reservation requests are received from the admitting physician's office either by a fax or phone call. Demographics are collected from information provided by the physician's office and any questions are first directed to the physician's office and then to the patient. The outpatient appointment system, EPIC, is also used to update the inpatient admitting system, SMS (System Management Server), with patient demographic information. Some JHH physician offices have direct SMS access and are able to reserve their own admissions. Reservation's final step is to make a reservation for the patient's planned admission in SMS. Reservations also prepare patient name plates and admitting packets prior to preregistered patient arrivals.

JHH Preadmission (Accounting Department) is notified about the future EAC admissions by computer generated Inpatient Reservation Confirmation Cards (IRC). Preadmission responsibilities include the gathering of missing demographic information and insurance identification/verification. Demographic information is again gathered by downloading EPIC into SMS. Additional patient demographics can be collected by calling the patient if required. Preadmission contacts the appropriate insurance carrier for insurance verification to include the gathering of insurance coverages for the given admission type. If the insurance company requires precertification or if the admission is

a Medical Assistance account (e.g., Medicaid), Preadmission forwards their Admission Registration Sheet or Patient Face Sheet with patient information to Precertification (Accounting Department). Preadmission completes its responsibilities by transferring patient demographics and insurance information from SMS into the Accounting Department's Patient Health System (PHS). This final transaction includes the status of the preadmission precertification.

JHH Precertification (Accounting Department) contacts the insurance companies for preauthorization for the admission, if required, and verifies eligibility and insurance coverage for Medical Assistance accounts. Once the insurance is verified and the care is precertified, the patient is authorized for admission on the prescheduled date. Precertification sends precertified account information back to Preadmission on the Preadmission Registration Sheet.

JHH Reservations sends Bed Control (Admitting Department) a computer generated list of admissions along with Inpatient Reservation Confirmation Cards the day prior to the patients' scheduled arrivals. Short notice admissions (i.e., less than 24 hour notice) are registered in SMS and added to an Expected Admissions List by Bed Control. Short notice admissions are processed through preadmission and precertification on a prioritized basis. Bed Control sends out census sheets to the inpatient floors by around 9:00 p.m. before the next day's admissions. The census sheets are returned to Bed Control by around 5:30 a.m. on the day of the planned admissions. Nurse coordinators

assign the EAC patients to their particular floors by about 9:30 a.m.. Bed Control then keeps contact with nurse coordinators on the assigned floors to identify specific rooms for the planned admissions.

The JHH Admitting Facilitator (Admitting Department) is the liaison between the Patient Interviewers and Bed Control, and expedites any required research with Preadmission/Precertification. Facilitators monitor and coordinate the patient flow on the day of admission. This includes assigning face-to-face interviewers to EAC inpatients being admitted and working with Bed Control for the patients' specific room numbers.

During the JHH patient interview (Admitting Department) process, the patient's demographic and insurance information are confirmed and/or collected; the patient signs required forms; payment arrangements are discussed; telephone and television services are offered; and insurance and identification cards are copied. The Interviewer also escorts the patient to any required pretreatment testing and finally to their assigned room.

All JHH EAC patient activity is tracked on the Admitting Patient Activity Report (PARS Folder) from the time of their arrival until bed escort (Appendix 1). This PARS Folder was designed to capture important inpatient admitting process information which could be used for management analysis. The folder identifies any previous preadmission activity and also tracks the amount of time the patient was at each step of the admission process. The PARS folder is an important source of information as for this study attempts to identify areas of opportunity to decrease patient waiting times.

Problem Statement

JHH patient waiting periods during the EAC inpatient admission process vary greatly and are believed to be excessive. Are there steps or processes in the EAC inpatient admitting process which can be changed to decrease patient waiting times?

Literature Review

Federal Express, the overnight delivery service, has become well known for its quality and "on time" service. Federal Express understands the psychology behind being timely and not being timely, as expressed in one of its memorable advertisements: "Waiting is frustrating, demoralizing, agonizing, aggravating, annoying, time consuming and incredibly expensive" (Fortune, 1980). The point behind this advertisement cannot be denied: while waiting for some type of service, at one time or another, most people feel some if not all of the emotions expressed in this advertisement. Even more important, people who can recall such incidents, can also support "the fact that the waiting-line experience in a service facility significantly affected our overall perceptions of the quality of service provided" (Czepiel, 1984). The final quality of care or service received may be the best in the world, but the long intermittent waits to get the service may severely harm the customer's final judgements on the overall quality of service received (Gil and Phillips, 1985).

Czepiel discusses two important laws of waiting. His first law is expressed as a

formula: "Satisfaction Equals Perception Minus Expectation" (Czepiel, 1984). If a customer expects a given level of service, and perceives they received a higher level of service, then that customer will be satisfied. If on the other hand, the customer's perceived service is lower than the service expected, the customer will become disappointed and therefore dissatisfied. Thus, a customer with waits can be influenced in two different directions: "by working on what the customer expects and what the customer perceives" (Czepiel, 1984).

Several good examples of influencing a customer's perceptions and expectations on waiting times are provided by Sasser, Olsen, and Wyckoff. A hotel group continued to receive complaints concerning elevator waiting times. After an elevator operation analysis, mirrors were installed near the elevators to help manage the customer's perceptions on waiting times. "The natural tendency of people to check their personal appearance substantially reduced complaints, although the actual wait for the elevators was unchanged" (Sasser, Olsen, and Wyckoff, 1979). Sasser, Olsen, and Wyckoff also discuss how expectations can be managed by providing an illustration of common restaurant practices. Restaurants often provide guests a suggested waiting time in excess of the time which is actually expected. "If people are willing to agree to wait this length of time, they are quite pleased to be seated earlier, thus starting the meal with a more positive feeling" (Sasser, Olsen, and Wyckoff, 1979).

Czepiel's second law of service is "It's hard to play catch-up ball" (Czepiel, 1984).

The customer's first impressions are lasting impressions (Shields, 1980) and once the patient becomes disgruntled, it is very difficult to change their perceptions. "There is a halo effect created by the early stages of any service encounter" (Czepiel, 1984). If more time, money, and attention to detail are focused on improving the experience of service, "then the largest payback may well occur in the early stages of the service encounter" (Czepiel, 1984) which often includes a waiting experience. Now that the importance of perceptions and expectations of waiting has been established, Czepiel (1984) listed eight propositions about the psychology of waiting which can be used to influence the customer's perceptions with waiting:

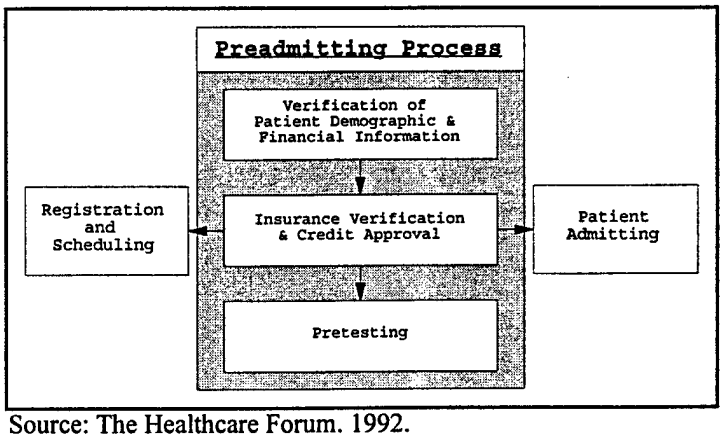
1. Unoccupied Time Feels Longer than Occupied Time
2. Pre-Process Waits Feel Longer than In-Process Waits
3. Anxiety Makes Waits Seem Longer
4. Uncertain Waits are Longer than Known, Finite Waits
5. Unexplained Waits are Longer than Explained Waits
6. Unfair Waits are Longer than Equitable Waits
7. The More Valuable the Service, The Longer I will Wait
8. Solo Waiting Feels Longer Than Group Waiting

Therefore, the admission process must be modified to center services around the customer's perspective. Showing empathy with the patient's anxiety may also eliminate

some of the stress normally seen with a hospital admission (Gil and Phillips, 1984).

The Healthcare Forum (1992) completed a benchmarking study using best practices from 28 hospitals.

FIGURE 2. EAC Inpatient Admitting Process



Source: The Healthcare Forum. 1992.

The benchmarking study divided the admitting process into three important processes (Figure 2): (1) registration and scheduling; (2) pre-admitting; and (3) patient admitting. This study included common procedures and improvement opportunities for each process. *Registration and scheduling* begins the elective inpatient admitting process when the physician's office contacts the JHH Reservations to request a patient admission. This contact can come in various forms to include fax, phone, computer or even in person (i.e., patient phone call). At this point, demographic and insurance information can begin to be collected directly from the provider's office. The key area to focus on during this stage is to improve the ease of the initial hospital contact.

Pre-admitting is the second important EAC inpatient admitting process which consists of three significant sub-components (Figure 2): (1) verification of demographic and financial data; (2) insurance verification and credit approval; and (3) pre-testing. Four opportunities which may improve the verification of demographic and financial

information are as follows:

- Requesting the referral physician's office to provide required information on a specially designed form
- Deciding what time frame current system information can be accepted as accurate (e.g., 30 days, 6 months, etc.) and collect required information from existing data sources
- Mailing patient a form to complete with a postage paid return envelope or card
- Sending the patient a welcome packet which includes a patient information form

The suggested preadmission patient mailers have been found to be successful. These mailers are not only used to collect information but they are also used to help alleviate any anxiety the patient may be having about the hospital stay. Mailing time can be found to be a problem when the admission is scheduled within seven days. Short notice admissions and other patients still missing information can be phoned prior to the admission. The only admitting requirements the patient would then have on the day of admission is to verify their identity, sign required forms, pay deposits, and be escorted to their room (Hospital Admitting Monthly, 1990).

Insurance verification and credit approval processing on the day of admission can be very time consuming and unpleasant for the patient. Most patients do experience some level of anxiety when they are admitted to a hospital and waiting until the day of admission for financial concerns will just add to their preexisting anxiety (Reeves, 1979).

Three opportunities to collect this information prior to the day of admission are as follows:

- Provide information request with the above mentioned welcoming packet which requests copies of their insurance cards and identification
- Discuss any coverage and benefit discrepancies with the physician prior to patient contact
- Call patient during this stage to verify collected data and to arrange an appointment for discussion of financial matters, and or to answer questions

EAC patients often require some pretesting before admission which often includes lab work or x-rays. The benchmarking study found a patient focused approach was the key factor during this process. The following are several pre-testing improvement opportunities:

- Determine physician's office ability to perform any pre-testing during the patient's office visit and forward results to the hospital for the patient's chart
- Arrange for bedside or patient room testing
- Minimize the number of staff/patient interactions in this process
- Use staggered shifts to distribute workload and to decrease waiting time

Patient admitting is the final EAC inpatient admitting process which may be very quick or require long waits for the patient depending on whether the patient was preadmitted or not. Preadmitted patients normally only require a review of their

demographics and financial data, and the signing of forms. If the patient was not preadmitted, all demographics and insurance information must be collected and verified with the insurance company on the day of admission. The insurance company may also require precertification which is normally already completed for preadmitted patients. The patient may also require some testing on the day of admission adding more waits and employee contacts to the complete process.

The benchmarking study identified "ease of flow" during the EAC inpatient admitting process as a key success factor. Several patient admitting improvement opportunities are as follows:

- Schedule patients for specific admitting time blocks which are designated as inpatient admitting periods giving these patients priority throughout the process (staff each process location to meet projected demands)
- Utilize bedside or patient room testing after admission
- Preadmit in advance and directly escort patient to room upon arrival
- Use staggered shifts to distribute workload and decrease waiting time
- Automate the admitting process to include any redundancy in filling out forms (consolidate forms)

The Healthcare Forum (1992) benchmarking study identified five critical success factors for elective acute care admitting processes. These factors are from a patient's perspective and were developed by using an advisory group from hospitals participating

in the benchmarking study. The five critical success factors of EAC admitting processes are as follows:

- Percentage of patients preadmitted
- Patient waiting times
- Accuracy and completeness of information
- Information and forms redundancy
- Patient contact and interaction

One of the primary goals of hospitals surveyed in the benchmarking study is to increase the *percentage of patients preadmitted.* There are numerous reasons that account for this finding. Preadmission not only helps the admitting department but it also benefits the ancillary departments, hospital, patients, and physicians. The benefits primarily center around the patient with a decrease in patient processing time on the day of admission. Particularly, preadmission enables the initiation of the time consuming insurance verification and precertification requirements (Senters, 1993).

Increased collections is an additional benefit for the hospital when the preadmission rate increases. Employee work schedules can also be managed better when patients are preadmitted. Some preadmission activities can be accomplished by the evening shift and patients can be given admission appointment times (Senters, 1993).

Ancillary departments can benefit by the preadmission process when they are

notified of planned admissions with projected arrival times. This allows these departments to control their staffing requirements to meet the patient's needs. Ancillary department frustrations with workflow are decreased while waiting times are also less for the patient (Senters, 1993). Preadmission allows the patient accounting department time to collect patient and insurance information. Much of accounting's time is spent researching, therefore this saves time for both patient and accounting. (Senters, 1993).

Along with a decrease in admission waiting time, the patient's anxiety about the admission can be reduced by contacting the patient during the preadmitting process. Contact with the patient prior to arrival provides the patient with facts about the admission process while also collecting information and answering patient concerns. While conversing with the patient, delays and cancellations may be avoided by identifying conflicts or problems. Solving such problems before the day of admission provides immense benefits to the physician. "By easing the apprehension of the patient prior to admission through the preadmission function, patient satisfaction is enhanced, creating better physician, patient, and hospital relations" (Senters, 1993).

Decreased patient waiting is of course one of the most important success factors in elective acute care inpatient services. "The relationship to patient satisfaction is simple: the longer the patient waits, the more dissatisfied he or she becomes" (The Healthcare Forum, 1992). Delays in the entire admitting process may occur at many locations, some of these delays are within the control of admitting, and some are not.

Accuracy and completeness of patient information is critical to the entire admission process. Long delays and unfunded care can arise due to inaccurate or incomplete information. Inaccurate information can enter the process at numerous stages of the admission process as follows:

- Collection of incorrect demographics and insurance information
- Misinformation received from the physician's office
- Incorrect entry of reservations or physician's orders
- Inappropriate bed assignment
- Inaccurate patient ID number received

Most hospitals track the accuracy and completeness of patient face sheets. Other areas were normally not tracked despite the importance of accuracy and completeness (The Healthcare Forum, 1992).

The benchmarking study found patients are consistently *asked the same set of questions* during preadmitting which are then verified on the day of admission. Patients dislike this procedure of repeatedly asking them same questions throughout the admitting process. *Numerous forms* are also required to be individually completed and then signed by the patient. The most common forms requiring separate signature included: (1) general consent; (2) financial responsibility; (3) insurance related; and (4) "letter from Medicare".

Patient contact and interaction was identified as a critical elective acute care (EAC) inpatient admitting process. Contact and interaction is found to be important because "Customers like to be familiar with staff members that they interact with, and do not enjoy being 'passed around' from person to person" The Healthcare Forum (1992). Patients desire minimum, familiar, and friendly contact and interaction throughout the EAC inpatient admitting process.

Given the knowledge of these five critical success factors, managers can employ these factors to develop important reports for analysis and improvement opportunities. The process used to collect this information must therefore be accurate. Routine audits and continual staff training are important to a successful EAC inpatient admitting process. The audits should focus on streamlining the entire registration process. The streamlining will reduce the potential for errors and a quality process will be developed. Benefits of an audit include (Daskalakis, 1992): 1) reduction of paper work; 2) decreased number of questions for the patient; 3) increased efficiency with data collection; 4) patient satisfaction; and 5) registration time reduced.

The foundation to having a successful EAC inpatient admitting process starts with a well designed and managed Customer Satisfaction Survey. A satisfaction survey can provide an understanding of the patient and procedures can be established which will focus on the patients' needs and requirements (The Healthcare Forum, 1992).

Purpose

The purpose of this study is to identify functions for performance improvements within the elective acute care (EAC) inpatient admitting process and to provide process alternatives to decrease patient waiting times.

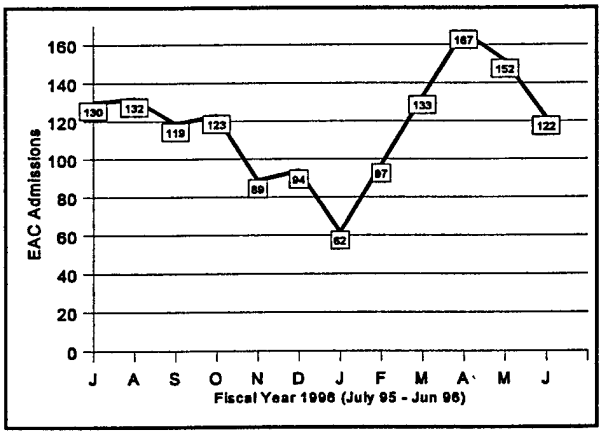
CHAPTER 2

METHODS AND PROCEDURES

This is an exploratory study. Both qualitative and quantitative research techniques are utilized (Cooper and Emory, 1995). A complete analysis of the JHH admitting process was conducted by reading all job procedures, interviewing the staff, and participating in the daily work process at each level of the JHH EAC inpatient admitting process.

Figure 3 shows the distribution of EAC inpatient admissions for Fiscal Year 1996. EAC admissions average 118 per month with a standard deviation (S.D.) of 28.9. EAC inpatient admission waiting/processing times were collected retrospectively for the month of August 1996 using the Admitting Patient Activity Report (PARS Folder) (Appendix 1). The admissions were categorized as 54 being fully preadmitted and 73 as not preadmitted (i.e., partially preadmitted or no preadmission activity) upon arrival on the day of admission (n=127). Patient activity times are recorded on the PARS Folder from the arrival time through the patient being escorted to their room. All data procured was

FIGURE 3. Elective Acute Care (EAC) Admissions



devoid of patient identifying data, thereby eliminating any confidentiality concern. Patient waiting time variables are used in this study along with other qualitative measures such as whether there is an active audit program for the JHH Admitting Department PARS Folder.

Validity and reliability are two important criteria which must be considered when evaluating the PARS folder as an important tool. Validity is the degree to which an instrument has the ability to measure what is being studied. Reliability is the instrument's accuracy and consistency in measuring what is being studied (Cooper and Emory, 1995). The instrument must be reliable to be valid but reliability alone will not make the instrument valid. The instrument must consistently measure what is being studied in order to be reliable and valid (Polit and Hungler, 1985). A reliable and valid PARS Folder would consistently measure the time it takes patients to go through each step in the EAC admission.

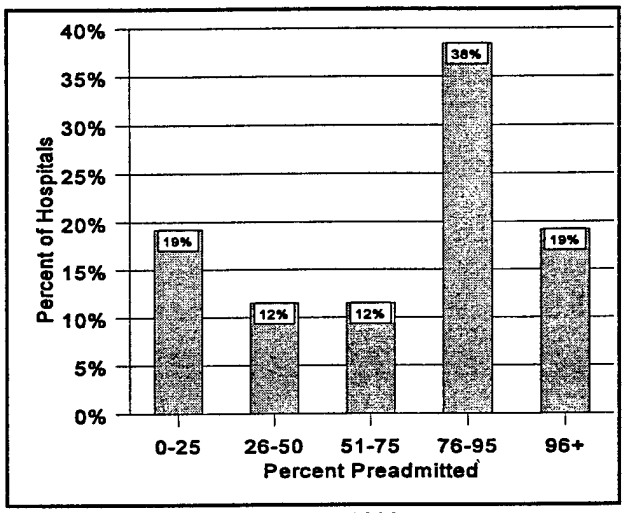
Benchmarking analysis is used to find and adapt best practices to improve an operation's performance (Air Force Quality Institute, 1994). This study utilizes benchmarking to identify improvement opportunities for the JHH EAC inpatient admission process. The EAC inpatient admission process waiting times are compared to The Healthcare Forum benchmarking study. Other critical areas are also compared and discussed to include percent of patients preadmitted, accuracy and completeness, information and form redundancy, and patient contact and interaction.

CHAPTER 3

FINDINGS AND DISCUSSION

A complete analysis of the JHH EAC inpatient admitting process was accomplished. The focus of the analysis was on the five critical success factors (e.g., percentage of patients preadmitted, patient waiting time, accuracy and completeness of information, information and form redundancy, and patient contact and interaction) of the EAC inpatient admitting process as identified by The Healthcare Forum. *Percentage of patients preadmitted* is very important to decreasing patient waiting times. Figure 4 shows the normal percentage of preadmitted EAC inpatients for a group of 26 hospitals. As seen, the greatest number of hospitals (38.4 percent) regularly preadmit 76 to 95 percent of their EAC inpatients. JHH preadmits about 42.5 percent of their EAC inpatient admissions which is considerably less than the norm. Approximately 19 percent of the hospitals preadmit 96 percent or more of their EAC inpatients but the same percent of hospitals also preadmit 25 percent or less of their EAC inpatients. JHH

FIGURE 4. Percent of EAC Inpatients Preadmitted

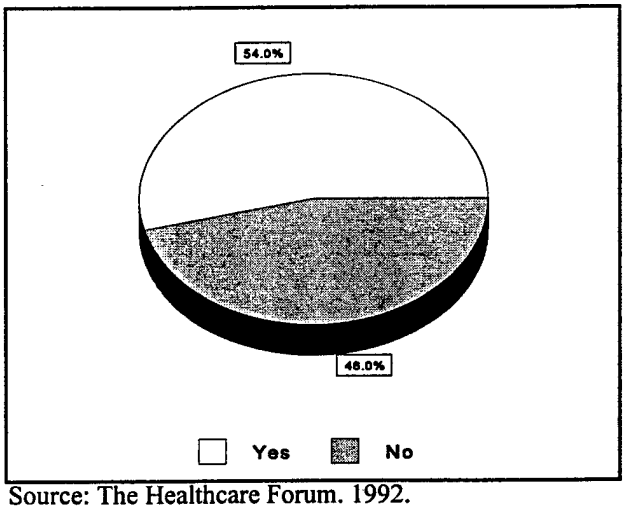


Source: The Healthcare Forum. 1992.

should experience reduced patient waiting times as a greater number of EAC patients are identified and preregistered before arriving for admission.

Patient waiting times are perhaps the most critical indicator to a successful EAC inpatient admitting process. The longer patients wait, the more dissatisfied they will become. Decreasing patient waiting time is a significant goal of the JHH Admitting Department as it is for many other hospitals. Accurate measurement is the first and most important step to identifying the nature of excessive waiting times. Problem areas can be identified and solutions sought through the tracking and monitoring of patient waiting times. What is alarming is that 46 percent of the hospitals in The Healthcare Forum benchmarking study did not audit nor monitor their patient logs (Figure 5). JHH's Admitting Department also does not audit or monitor the information from their patient activity report.

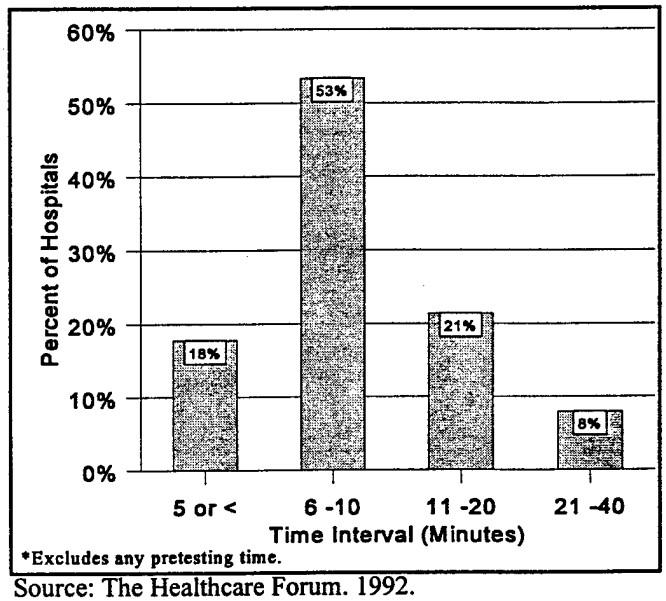
FIGURE 5. Are Patient Logs Audited to Monitor Patient Waiting



Source: The Healthcare Forum. 1992.

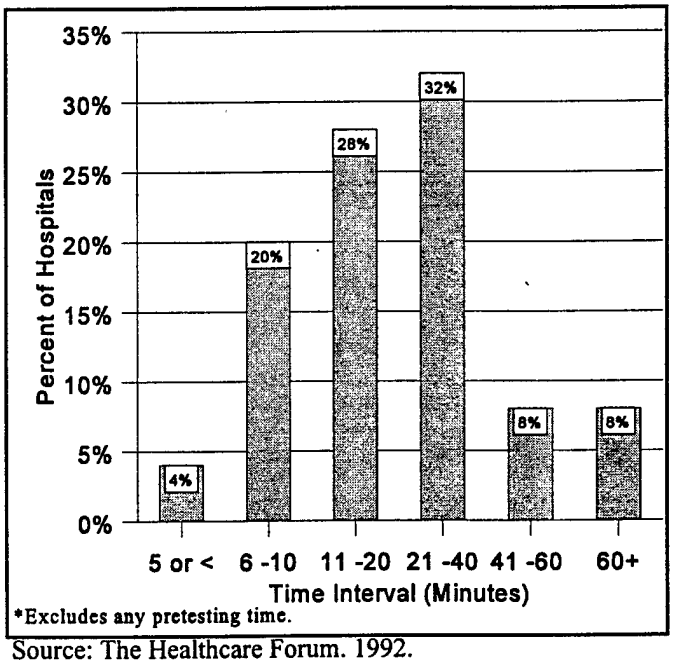
Figures 6 and 7 summarize patient waiting times from arrival to room escort for both preadmitted and patients not preadmitted. This analysis clearly shows that patients not preadmitted have longer waits. For preadmitted patients (Figure 6), the majority (53.4 percent) of the hospitals reported EAC inpatient admitting waiting times of 6-10 minutes. JHH admitting process for preadmitted EAC inpatients averages 89 minutes (S.D. of 55 minutes) which more than doubles the longest waiting time range in Figure 6. For patients not preadmitted (Figure 7), 32 percent of the hospitals reported EAC inpatient admitting waiting times of 21-40 minutes. JHH admitting process for EAC inpatients not preadmitted averages 113

FIGURE 6. Preadmitted Patients: Average Time from Arrival to Room Escort*



Source: The Healthcare Forum. 1992.

FIGURE 7. Patients Not Preadmitted: Average Time from Arrival to Room Escort*

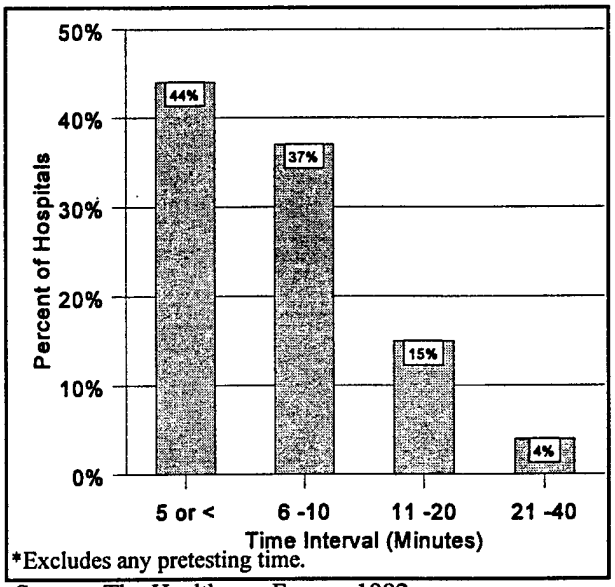


Source: The Healthcare Forum. 1992.

minutes (S.D. of 60 minutes) which again greatly extends beyond the normal wait for hospitals represented in the benchmarking study.

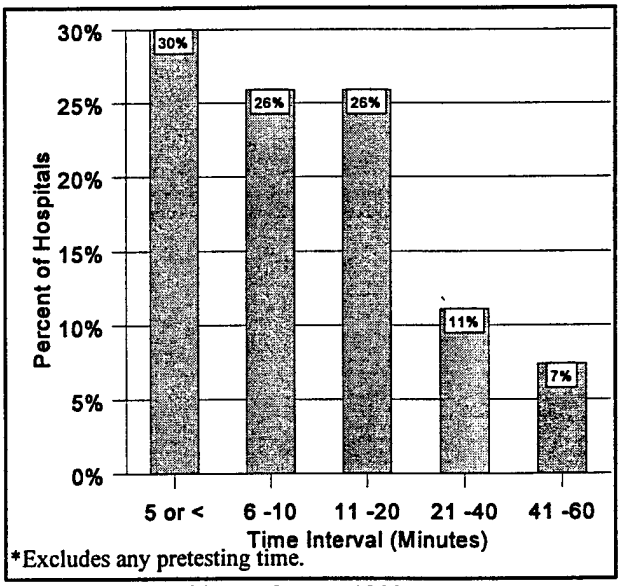
The time from patient arrival until room escort captures the entire period of patient activity and waiting times but it does not identify where longer waits may occur within the process. For this reason, The Healthcare Forum (1992) developed Figures 8 and 9 which divide the period from arrival to room escort into two intervals: (1) arrival to registration or interview; and (2) interview to room escort. Over 44 percent of the hospitals begin interviewing the patients within five minutes. Over 81 percent begin the interview or registration process within 10 minutes. JHH Admitting Department begins interviewing their EAC inpatients within eight minutes (S.D. of 8 minutes) on average. Only about 15 percent of the hospitals

FIGURE 8. Patients Not Preadmitted: Average Time from Arrival to Interview*



Source: The Healthcare Forum. 1992.

FIGURE 9. Patients Not Preadmitted: Average Time from Interview to Room Escort*

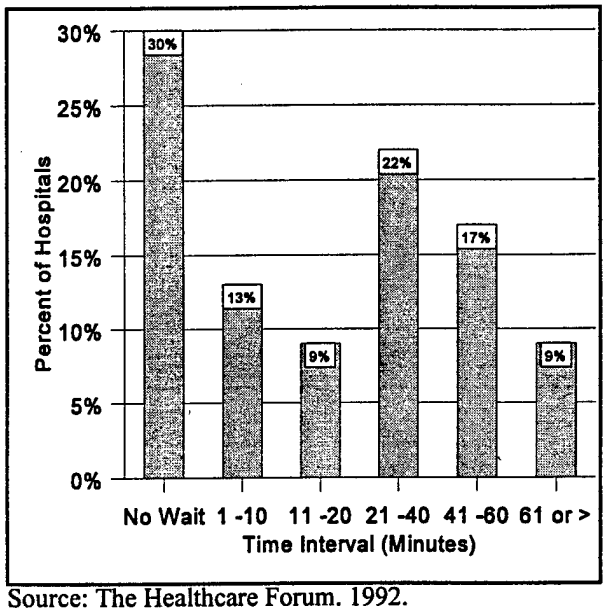


Source: The Healthcare Forum. 1992.

have average waits between 11-20 minutes. About four percent of the hospitals actually average 21-40 minute patient waits before the patient begins their interview. Figure 9, on page 23, shows that a greater variation occurs with waiting time between the patient interview and their room escort. The percent of hospitals with waiting periods of five minutes or less, 6-10 minutes, and 11-20 minutes are dispersed quite evenly. JHH patient interview to room escort waiting time averages about 85 minutes (S.D. of 60 minutes) for patients not preadmitted which is much longer than all of the other hospitals.

Various factors may lead to the overall patient waiting times, but bed unavailability is one factor that can cause substantial delays from the interview until bed escort. Figure 10 shows the average EAC inpatient waiting time due to bed unavailability for 23 hospitals in The Healthcare Forum benchmarking study. Although 26 percent of the hospitals have waits of greater than 40 minutes due to bed unavailability, 30 percent of the hospitals proudly say they have no patient delays due to bed unavailability. JHH average EAC inpatient waits due to bed unavailability is 68 minutes (S.D. of 61 minutes). Bed occupancy rate has a

FIGURE 10. Average Patient Wait Due to Bed Unavailability



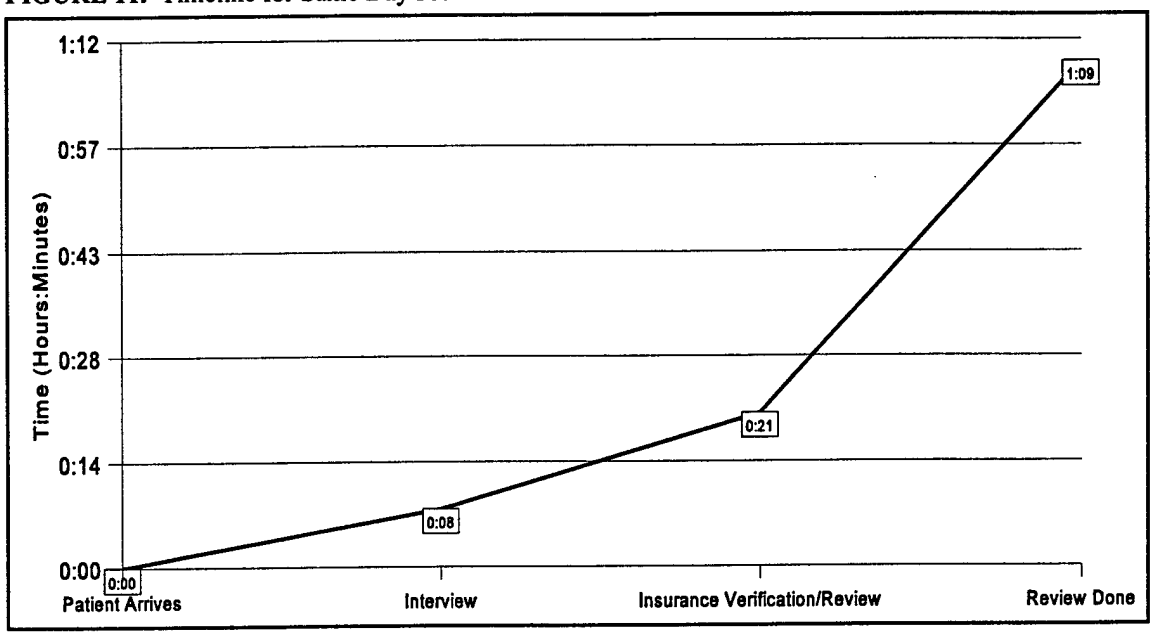
Source: The Healthcare Forum. 1992.

significant affect on bed availability. "Nonetheless, timely bed control and patient scheduling may help reduce patient waiting due to bed unavailability" (The Healthcare Forum, 1992).

The EAC inpatient admitting interview is another area which can add substantial waiting time to the admission process. This detailed information is normally not collected by hospitals so benchmarking data is unavailable, but JHH Admitting Department does collect this information. The JHH interview process averages 18 minutes (S.D. of 7.7 minutes) for preadmitted patients and 20.4 minutes (S.D. of 6.8 minutes) for patients not preadmitted. The times are close because the JHH Admitting Department reverifies all information, whether the patient was preadmitted or not.

Insurance verification or preadmission on the day of admission is another important process which can significantly affect patient waiting times. This data is not available as a benchmark because these times are not normally collected by hospitals, but JHH Admitting Department does collect this information. Figure 11, on page 26, shows the timeline for preadmission or insurance verification on the day of admission. Sixty-seven percent of JHH EAC patients not preadmitted have their insurance verified on the day of admission. Of those patients having same day insurance verification, the Admitting Department is able to begin preadmitting over 54 percent of the accounts before (i.e., hours or even days) the patients arrive but their insurance verification does not start until late into the admitting interview process. The Admitting Department takes

FIGURE 11. Timeline for Same Day Preadmission or Insurance Verification



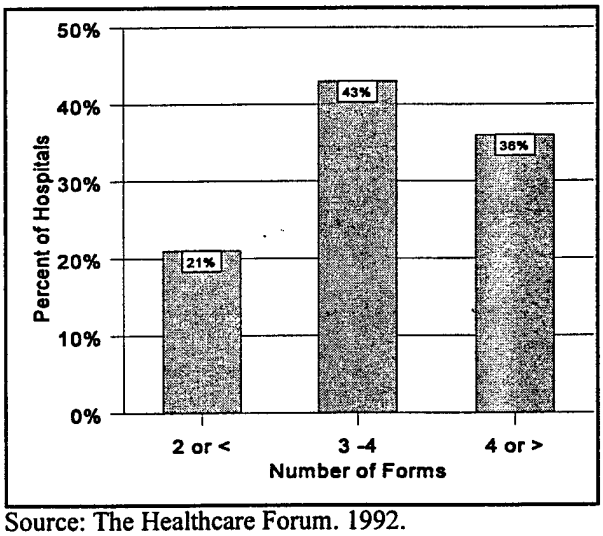
22.7 minutes (S.D. of 11.8 minutes) on average after the interview begins to notify the Accounting Department for all same-day insurance verifications. The Accounting Department then averages 48 minutes (S.D. of 32.3 minutes) for preadmission or to verify insurance while the patient waits.

No matter how efficiently designed an EAC inpatient admission process is, its overall effectiveness is increased when patient information is collected accurately and completely. The collection of inaccurate and incomplete information can lead to significant delays in the process and for the patient not to mention increased uncollectible charges. Despite the importance of collecting *accurate and complete information,* these measures are not tracked by most of the hospitals in The Healthcare Forum benchmarking survey. JHH also does not track this information, which can be used to identify and

prevent problem areas within the EAC inpatient admitting process. For those hospitals who did track the accuracy and completeness of information, the patient face sheets (e.g., JHH Admission Registration Sheet) were the most commonly tracked form of patient information.

The fourth critical success factor which should be analyzed and improved upon is *information and forms redundancy.* Patients do not enjoy repeatedly being asked the same questions and this only adds to the total time that it takes to admit a patient. Patients may be asked for information from their referring doctor's office, then as the hospital collects demographics before patient arrival, and then again upon arrival for a final review and collection of any missing information.

FIGURE 12. Number of Forms Requiring Patient Signature



Source: The Healthcare Forum. 1992.

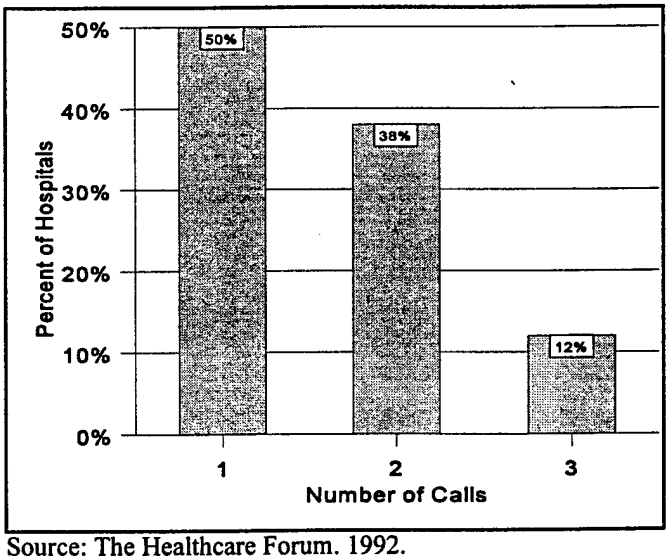
Figure 12 reports on the average number of forms which hospitals require the patient to sign for EAC inpatient admissions. The majority of hospitals (43 percent) require three to four forms be signed by the EAC inpatient. Over 21 percent of the hospitals require two or fewer forms to be signed. JHH EAC inpatient admitting requires a minimum of two forms for males and three forms for females (JHH EAC admissions are distributed 60 percent male

and 40 percent female). The Annotated Code of Maryland, Health-General 19-348, requires hospitals to offer cervical cancer screening to female patients 18 years of age and over which accounts for the additional form for females. The Omnibus Reconciliation Act of 1986, Section 1866, requires Medicare eligible patients (20.6 percent of JHH EAC admissions) be briefed on their Medicare Rights which JHH provides on an additional form for a total of three and four forms for males and females respectively. The total number forms required vary depending on individual state or hospital requirements, but the objective would be to consolidate these forms and therefore decrease the number of required signatures.

Patient contact and interaction is identified as a critical success factor to an EAC inpatient admitting process. As discussed earlier, patients prefer to have a minimum number of contacts, and any interaction is preferred to be with familiar people. Patients are often first contacted by phone by admitting departments.

Figure 13 shows the average phone contact by hospitals within The Healthcare Forum benchmarking study. The majority (50 percent) of

FIGURE 13. Number of Calls to Patient Prior to Admitting



Source: The Healthcare Forum. 1992.

hospitals only make one phone call to the patient before admission. Two calls are made by 38 percent of the hospitals. Very few hospitals go beyond two phone contacts with the patient. The goal of JHH EAC inpatient admitting process is to keep patient phone contacts to a minimum, if at all. This JHH Admitting Department policy is based on research that patients do not like excessive contact as discussed earlier. JHH Admitting normally does not call the patient for missing information but waits until the interview process on the day of admission to collect missing data. The JHH Accounting Department will contact the patient for information only as a last resort if it is required for preadmission or precertification. Very seldom does the Admitting Department believe it is necessary to contact the patient. The minimum phone contact policy by the JHH Admitting and Accounting Departments may lead to increased processing time for the patient on the day of admission as information is reviewed/collected and patient questions are answered at the last minute.

Interaction with the patient can occur throughout the process to include any required pretesting before or after patient arrival. All interaction should be minimized throughout the process and kept with the same JHH representative whenever possible. JHH Admitting Department does minimize contact with different staff members by assigning a JHH Admitting Interviewer to each individual patient. The Interviewer also escorts the patient to any required testing and to their assigned rooms.

The whole EAC inpatient process must be understood as the patient sees it. An

effective well monitored Patient Survey has the ability to provide this information. The JHH Admitting Department Satisfaction Survey (Appendix 2) is over five years old and does not direct the questions to the above mentioned EAC inpatient admitting success factors. Even though this survey is currently accessible to JHH EAC inpatients, the patients' input is not tracked nor used in any manner for policy decision making.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

This analysis and benchmarking of the JHH's elective acute care inpatient admission process has identified numerous functions for performance improvement. Some recommendations can be completed immediately while others should be long term goals. Immediate recommendations have the potential to decrease patient waiting from 89 minutes to less than five minutes while saving nearly $200,000 annually in personnel costs. The following is a consolidation of conclusions and recommendations:

CONCLUSIONS	RECOMMENDATIONS
1. Over 57 percent of the patients arrive with only partial or no preadmitting activity.	1. Phone the patient or the referring physician's office for required preadmitting information (e.g., demographic and insurance data) the day before admission.
2. Admission interview process takes too long (i.e., 18-20 minutes) and there is only a few minutes difference between the preadmitted and patients not preadmitted interview process.	2. Consolidate forms, eliminate redundant and/or unnecessary questions, do not reverify information (at minimum for preadmitted patients) which is current as of three months except insurance data, and request patients to provide copies of their insurance cards (e.g., on the admission appointment postcard and whenever contact is made with the patient) or provide a dependable and easily accessible copier for the interviewers.

3. Insurance verification or preadmission begins too late and takes too long on the day of admission.	3. For same day admissions, request insurance information from all referral providers before the patient arrives and immediately provide the data to Accounting for preadmission/ precertification (All other accounts should have been called the day before). When the insurance data is unavailable until the patient arrives, request the information at the reception desk (or, at minimum, at the beginning of the interview process) and immediately provide it to Accounting. Accounting needs to prioritize all same day insurance verifications and review the process for simplification.
4. Patients arrive on a nonscheduled basis which causes customer service delays and inefficient use of personnel (i.e., eight minutes from arrival to interview).	4. Schedule admission appointment times for planned EAC admissions by mailing admission appointment postcards to the patients and/or have JHH physician offices reserve a slot (online) when scheduling the patient for admission.
5. The average wait of 68 minutes due to bed unavailability is too long.	5. Discharge patients earlier or use admission appointment postcards to meet patient arrivals with expected bed availability.
6. Patient information does not always transfer between the SMS, PHS, and EPIC systems. This requires double entry of information and increases the likelihood of misentries.	6. Request system changes or consider purchasing one integrated information system which meets the needs of the Outpatient, Inpatient, and Accounting Departments.

7. The preadmitting process requires multiple phone calls and provider/patient contacts. The Accounting/Admitting Departments do not collect/request missing insurance or demographic information normally collected by the other Department. When some information is collected by the opposite Department, it is often entered into system comments or on handwritten forms. Data must then be typed/retyped into the appropriate system by each Department. Some data is specifically not requested by Accounting because it is reviewed and can be entered during the admitting interview process.	7. Accounting/Admitting Departments should request any missing preadmitting data when contact is made with either the patient or the referring physician's office. All JHH Departments with system access should also collect/verify basic demographic and insurance data during any patient contact. Transferring the preadmission and precertification positions to the Admitting Department should be considered.
8. Not all reservation, preadmission, or precertification personnel have advanced telephone equipment.	8. Provide speaker/headphones, speed dialing, and automatic redialing (for busy signals) to all reservation, preadmission, and precertification personnel.
9. Numerous manual forms are used by reservations, preadmission, and precertification. Some information is first filled out on the handwritten forms and then entered into the system.	9. Automate forms used by reservations, preadmission, and precertification which will allow data to be directly entered into the system. Use system for information review (i.e., precertification review by insurance companies) and print automated forms only when hard copy is required.
10. Admitting Patient Activity Report (PARS Folder) is not monitored, audited, or used as a decision making tool.	10. Regularly monitor the Patient Activity Report and make quarterly audits on the information and collection process. Develop reports using the data for identifying improvement opportunities.
11. The JHH Patient Satisfaction Survey is not current and is not monitored or used as a decision making tool.	11. Revise the Patient Satisfaction Survey (i.e., Ask questions which can be used to improve the admitting process), monitor/collect the data, and use the information to identify improvement opportunities.

12. There are no established formal training programs concerning quality, productivity, customer service, or professional development.	12. Establish formal training programs which focus on quality, productivity, customer service, and professional development.
13. The JHH Admitting Department does not have any management reports to identify problem areas or improvement opportunities.	13. Develop and monitor monthly reports which summarize the five critical success factors listed on page 13. Use the information to prevent problems and to identify improvement opportunities.

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The Johns Hopkins Hospital

☐ PARS ENTERED

ADMITTING
PATIENT ACTIVITY REPORT

INTER-VIEWER #1		PRE ☐	FTF(P) ☐	FTF(F) ☐	ACTIV ☐	STAT ☐	NBN ☐	PRIV ☐	BED ☐	OBS ☐	CVDL ☐
INTER-VIEWER # 2		PRE ☐	FTF(P) ☐	FTF(F) ☐	ACTIV ☐	STAT ☐	NBN ☐	PRIV ☐	BED ☐	OBS ☐	CVDL ☐
INTER-VIEWER #3		PRE ☐	FTF(P) ☐	FTF(F) ☐	ACTIV ☐	STAT ☐	NBN ☐	PRIV ☐	BED ☐	OBS ☐	CVDL ☐
RESERVATION DATE		EM DEPT ☐									

☐ AMBU PT. ☐ SDCC ☐ OPD ☐ SDSU

DATE
SERVICE
NURSING UNIT
ROOM #
BED CNTRL TIME

STAMP PATIENT ID OR PRINT CLEARLY

AM ☐ PM ☐

DR'S NAME: ____ DR'S CODE: ____

REMARKS: ____

COMMENTS :

INTER-VIEWER #	Record Times START	STOP	BOOTH	BED CONTROL HOLD	ROOM ASSIGNMENT	LAB PACK	PLATE/ARM B. CORR.	CHANGE ACCOMMOD	INSURANCE	LAB	LUNCH	MD INTERVENTION	PT OUT OF AREA	LATE DEPARTURE	TRANSFER REQ.	HOUSEKEEPING	NURSING HOLD	BED READY CALL	ESCORT TO ROOM	OTHER
	:	APPT.																		
	:	ARRIV.																		
	:	:																		
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28-0090

The Johns Hopkins Hospital

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THE JOHNS HOPKINS HOSPITAL
ADMITTING DEPARTMENT SATISFACTION SURVEY

Welcome to the Johns Hopkins Admitting Department

At Johns Hopkins, we believe that expert medical care and expert service go hand-in-hand. We strive to be courteous and helpful, prompt and efficient in all aspects of the services that we provide for you.

Your feedback is an important contribution to our ongoing commitment to provide the highest quality patient care services. Please take a moment to tell us if we have served you well. If our service did not meet your expectations, we trust that you will tell us, so that we can serve our patients better in the future. When you are escorted to your room, please drop your completed survey in the box located on the Reception Desk of the Admitting Department.

1. Did someone from Johns Hopkins telephone you prior to the day of your admission to collect registration and insurance information? (please circle a response)

   Yes No

2. If we called you prior to your admission, how would you rate the employee with whom you spoke? (please circle a response)

		Excellent				Poor
a.	Courtesy?	5	4	3	2	1
b.	Helpfulness?	5	4	3	2	1
c.	Answered your questions adequately? (Knowledge)	5	4	3	2	1

3. Prior to the day of your admission, did you receive in the mail, information about Johns Hopkins (pre-admission information, what to bring, etc.)?

   Yes No

4. Was there any additional information you would like to have received prior to your arrival for admission?

   _____
   _____

5. Upon arrival, how long did it take you to find a parking space?

   ____ Less than 5 minutes

   ____ Between 5 and 10 minutes

   ____ More than 10 minutes

   ____ Did not drive

6. ADMITTING OFFICE RECEPTION

   Were you greeted promptly? Yes No

   How would you rate the Reception staff?

		Excellent				Poor
a.	Courtesy?	5	4	3	2	1
b.	Made a personal effort to resolve your problems? (Helpfulness)	5	4	3	2	1
c.	Answered your questions adequately? (Knowledge)	5	4	3	2	1

7. REGISTRATION INTERVIEW

   Were you seen promptly? Yes No

   How would you rate the employee who interviewed you?

		Excellent				Poor
a.	Courtesy?	5	4	3	2	1
b.	Made a personal effort to resolve your problems? (Helpfulness)	5	4	3	2	1
c.	Answered your questions adequately? (Knowledge)	5	4	3	2	1

Was the interview quick and efficient? Yes No

Was the following information adequately explained during your admission interview?

a. Telephone Service for Patient Rooms Yes No

b. Television Service for Patient Rooms Yes No

c. Room Availability Yes No

d. Parking Yes No

e. Discharge Information Yes No

f. Living Wills, etc. (Advanced Directives) Yes No

g. Insurance Coverage and Financial Responsibilities Yes No

Was there any additional information you would like to have received during the admission interview?

_____

_____

8. If you experienced a delay in your admission, was the reason adequately communicated to you?

Yes No

9. BLOOD DRAWING AND EKG
(Please answer only if you received these services)

Were you seen promptly? Yes No

How would you rate the Blood Drawing and EKG staff?

		Excellent				Poor
a.	Courtesy?	5	4	3	2	1
b.	Quality of Patient Care?	5	4	3	2	1

10. RADIOLOGY
(Please answer only if you received these services)

Were you seen promptly? Yes No

How would you rate the Radiology staff?

		Excellent				Poor
a.	Courtesy?	5	4	3	2	1
b.	Quality of Patient Care?	5	4	3	2	1

11. Was the admitting process (from the time you arrived in the Admitting Department until you were escorted to your room) quick and efficient?

12. We like to give special recognition to members of our staff when our patients judge their performance to be outstanding. Was there any individual who provided you with exceptional service, was extremely helpful, or otherwise left you with a positive impression?

Name(s):_____

13. How would you rate your overall experience in the Johns Hopkins Hospital Admitting Department?

Excellent				Poor
5	4	3	2	1

Suggestions on how we may improve _____

_____

_____

_____

If you would like to speak with someone about your admission, please feel free to contact our Admissions Supervisor at (410) 955-8813.

Thank you for selecting the Johns Hopkins Hospital for your health care needs.

600 N. Wolfe Street
Baltimore, Maryland 21287

REPORT DOCUMENTATION PAGE

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13. ABSTRACT *(Maximum 200 words)*

The Johns Hopkins Hospital (JHH) has more than 41,000 inpatient admissions in a given year, or averaging about 110 admissions per business day (Monday-Friday). Admissions continue to increase as JHH attempts to maintain bed occupancy rates during a period of continual decline in the average length of stay. This sheer volume of daily admissions is very good for JHH but is taking a toll on JHH's number one customer, the patient, as the admission process becomes more congested. Over 26 percent of all JHH admissions are considered to be elective. The elective acute care inpatient admission process includes multiple patient contacts, long waits, and the requirement for the patient to sign numerous forms. The purpose of this study is to identify functions for performance improvements within the elective acute care (EAC) inpatient admitting process and to provide process alternatives to decrease patient waiting times. A complete analysis of the JHH admitting process was conducted and critical success factors of EAC admitting processes were benchmarked against JHH's. The study identified that JHH has great opportunity to improve the percentage of patients pre-admitted, patients waiting times, and patient contact and interaction. Multiple recommendations are presented to improve JHH's EAC admitting process such as increasing patient contract prior to admission, consolidating forms, and scheduling patients for admission appointment times.

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