Analysis of Patient Discharge Delay
In Mott Children’s Hospital

Program and Operations Analysis
Project Final Report

December 17th, 2004

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Coordinator: Jacquelynn Lapinski, Senior Management Engineer

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EXECUTIVE SUMMARY

The University of Michigan Mott Children’s Hospital presently experiences midday congestion. Patients in the afternoon must wait for current patients to be discharged before they can be admitted. In order to alleviate the midday congestion, hospital administration would like 50% of discharges to occur prior to noon. A past study was performed by a group of senior engineering students in the fall of 2002. The group’s report identified three main delays- prescriptions, laboratory results, and transportation. The purpose of this report was to focus on the three identified delays and quantify the delays they cause. In order to do so, the team observed and interviewed primary parties, gathered and analyzed pre-existing data, and distributed questionnaires.

The following are findings from the prescription process analysis. (1) The number of prescription orders received by the pharmacy was no different between weekdays. Monday did not prove to have more prescription orders than any other week day. This confirms that there is not a large demand for prescriptions during the weekend. (2) Of the prescriptions ordered a day in advance, 95% were completed by the discharge time. Compare this to 41% of orders completed on time when ordered on the day of discharge. (3) The pharmacy identified a major source of delay with obtaining out-patient insurance coverage. Based on the data gathered by our team, we do not have sufficient information to conclude whether out-patient insurance information should be obtained upon admission. (4) Currently, there is no standard procedure for arranging the patient’s transportation home. In terms of transportation, 33% of parent/guardians surveyed did not know prior to the day of discharge when the patient was to be discharged. Of the questionnaires distributed, 63% were notified by the doctor, 34% were notified by the nurse, and 3% were notified by “other.” We were unable to analyze the laboratory results delay due to circumstances beyond our control; therefore we cannot provide findings and recommendations for the laboratory delays.

Based on the findings above, the team provides the following recommendations to increase the number of patients discharged by noon. (1) Since there is not an overwhelming demand of prescriptions through the weekend, the team recommends not changing the current pharmacy hours. (2) In order to experience the benefits of advance prescription orders, our recommendation is that doctors order prescriptions by 3:00pm prior to day of discharge. (3) The team does not have sufficient evidence to determine whether out patient insurance information should be recorded at admission. Therefore, we recommend that further investigation be done to study the advantages and disadvantages of this. (4) In order to standardize how transportation is arranged, the team recommends standardizing the transportation arrangement process. The resident assistants will have the responsibility of notifying the parent/guardian as soon as the discharge decision is made. In addition, a standardized white board with pre-printed columns labeled “Parent Notified” and “Prescriptions Ordered” should be implemented. The doctors and resident assistants will check the appropriate column when the task has been completed. The team understands that discharge delays occur because of various reasons beyond the scope of this project. However, based on the analysis completed, these recommendations will prove to be useful for the goal of discharging 50% of discharge patients prior to noon.
INTRODUCTION

The University of Michigan Mott Children’s Hospital hopes to decrease delays in the patient discharge process. The hospital currently experiences an afternoon congestion, which is partly due to patient discharge delays. In the afternoon, many incoming patients are forced to wait for patient rooms that are still being occupied by patients waiting to be discharged. Therefore, there is a period in the afternoon where incoming and outgoing patients are both waiting, hence the afternoon congestion. A possible solution to the afternoon congestion is to discharge patients earlier in the day, thereby increasing the number and availability of rooms for incoming patients. The purpose of this project is to study the tasks involved with the patient discharge process that contribute most to the delay, specifically prescriptions, laboratory results, and transportation home. We have gathered both new and existing data from these three areas to identify the reasons for delays in the discharge process. Based on this information, we have described recommendations to increase the number of patients discharged earlier in the day. The purpose of this report is to give the results of the project.

Background

Mott Children’s Hospital is a pediatric institution which serves approximately 9,000 patients each year. This high volume of patients contributes to an afternoon congestion at the hospital. A similar study was done in the fall of 2002 with Mott Hospital regarding discharge delays. The past study identified a few major delays that still exist in the discharge process. One major delay identified was discharge prescriptions from the pharmacy; the discharge delay was in large due to prescription wait time. Along with prescriptions, transportation arrangements were identified as a source of delay. At Mott, where the patients are minors, the patient cannot be discharged until a guardian arrives. Lastly, the third largest contributor of delays was noted as laboratory results. These discharge delays, identified in the previous report, account for 65% of the delay (percent delay was calculated using total delay time times the frequency of occurrence) as shown in Figure 1 on the next page. The expected outcome of this project is to provide recommendations that will improve the discharge process by alleviating the main delays previously identified.

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1 Patient Management Database: October 1st, 2003 to September 30th, 2004
Figure 1. Discharge Delays Identified In Previous Report

The hospital administration would like to see 50% of the discharges occur by noon. As seen in the histogram below, only 21.1% of the discharges currently occur before noon. The histogram was compiled using data from the Patient Management Database between the dates October 1st, 2003 to September 30th, 2004.

Figure 2. Percent of discharges by hour of day

Source: Mott Children’s Hospital
Patient Discharge Delay.
December 17th, 2002
APPROACH AND METHODOLOGY

To study the three main delays identified, different combinations of methods were used for each delay. Observation, interviews, gathering pre-existing data, questionnaires, and analysis were various methods that enabled us to draw the findings and conclusions.

Prescriptions
The student team used four main methods to study the prescription process; the four methods were observation, interviews, gather existing data, and analysis.

Observation
In order to understand how prescriptions were processed, the team observed primary parties involved in the prescription process.

- Doctors, residents, interns, clinical nurse specialists during rounds
- Clerks
- Pharmacy technician and pharmacist

Interviews
To develop a deeper understanding of each party’s involvement, the team interviewed several key people. Feedback was received regarding primary parties’ perceived delays not only on prescription but discharge overall and suggestions on improvement. Those interviewed included:

- Four clinical nurse specialists (one of 5 West, one of 5 East, and two of 6 Mott)
- Two clerks
- Order entry technician and pharmacist
- Discharge planner

Once all perspectives were gathered, a comprehensive flow chart of the prescription process was created. The flowchart is shown in Appendix A.

Gather Pre-existing Data
The Ambulatory Care Pharmacy (ACP) keeps daily discharge prescription logs and houses the past logs dating back to April 21st, 2004. With the permission of the pharmacy, we transferred the data from the paper logs to an electronic spreadsheet using Microsoft Excel. The paper logs included the CPI number, the number of prescriptions ordered, time the order was received, time the order is needed for discharge, time the order was filled, and any additional comments about the order. The time the order is needed for discharge is referred to as the target time for the purposes of this report. The team manually searched the log for the prescription orders of 5 West, 5 East, and 6 Mott. The prescription orders between April 21st to November 5th were collected which totaled to be a sample of 714 prescription orders.

The data gathered from the pharmacy was then cross-referenced with the discharge date, time, and unit data in the Patient Management database using the patient identification
numbers which were provided by the project coordinator. Certain entries from the pharmacy log were missing time order received, time order was needed, and/or time order was filled. Of the 714 prescription orders, we were able to utilize a total of 374 data points.

Analysis
To begin the analysis of the pharmacy data, the number of early, on time, and late prescription orders were calculated. The target time was subtracted from the completion time where a negative number indicated the prescription was early. A zero indicated an on time order and a positive number indicated a late order. Each prescription order was then categorized as early, on time, completed within 1 hr of the target time, completed 1-2 hrs after target time, and completed over 2 hrs beyond target time. Many target times were “as soon as possible”; for those cases, if the order was completed within one hour it was categorized as on time. “As soon as possible” orders were never categorized as early. The number of orders that fell within each category was compiled into a histogram/Pareto chart; the results are discussed in the findings section.

Transportation Arrangements
The team used three main methods for the study of transportation arrangement, including interviews, questionnaires, and analysis.

Interviews
Along with prescription delays, the team also discussed transportation arrangements with many of the parties mentioned above, including:

- Four clinical nurses (one of 5 West, one of 5 East, and two of 6 Mott)
- One Discharge planner

Questionnaires
Currently, each unit distributes a small survey upon discharge. The team decided to distribute our questionnaires along with the unit’s survey. This arrangement provided the least amount of variation within the hospitals staff. The questionnaire was composed with input from the head nurses of each unit; it utilized multiple choices wherever possible to make it easier on the patients. The questionnaire is shown in Appendix B.

The questionnaires were distributed between November 19th, 2004 to December 4th, 2004 on 5 West and 5 East. On 6 Mott, the questionnaires were distributed between November 22nd, 2004 and December 4th, 2004. To ensure that questionnaires were being completed, a team member visited each unit every other day to collect and re-stock questionnaires. During the time period we distributed questionnaires, there was a total of 240 discharges from the three units. Of the 240 discharges, 69 questionnaires were returned giving a response rate of approximately 29%. In addition, educational flyers were posted behind clerks’ desks to remind staff and answer questions they may have about the questionnaires. The flyer is shown in Appendix C.
Analysis
The team compiled the questionnaire results into an electronic spreadsheet. From there, we used summary statistics to obtain overall parent/guardians’ perceptions regarding transportation delays. Finally, the questionnaire spreadsheet was cross referenced with the Patient Management database to quantify the time difference between when a parent was told the patient would be discharged and when the patient was actually discharged. Of the 69 questionnaires completed, we were able to cross reference 60 questionnaires within the Patient Management database. These 60 questionnaires that were cross referenced gave us a representative sample of 25% of the discharges that occurred during the time period questionnaires were distributed.

Laboratory
Although laboratory results were identified as one of the main sources of delays, information could not be gathered on the process. Contact with the lab was attempted multiple times through many different avenues. However, all were unsuccessful. A message was sent to the project coordinator from laboratory department expressing the high demand the laboratory was facing. The department was extremely busy and simply unable to accommodate the report’s needs at this time. Unfortunately, for this reason, the team was unable to study the discharge delays caused by laboratory results.

DESCRIPTION OF CURRENT SYSTEM

Appendix A, a cross functional flowchart of the prescription process, describes how prescriptions are currently processed. The pharmacy department identified the step of “determining insurance coverage” as the main source of delay. This step is found at the bottom of the flowchart’s first page under the order entry technician’s function.

Regarding transportation data, there is no standard procedure for notifying the patient’s parent/guardian. Based on interviews conducted, the person to contact the parent/guardian was simply whoever was the most “appropriate”. However, there were no standards or formal rules in determining who was most appropriate.
FINDINGS AND CONCLUSIONS

Prescriptions
The following are major findings and conclusions related to prescription delays.

Extended Hours Unnecessary
Originally, it was thought by nurses and doctors that extended pharmacy hours would decrease the discharge delays. Currently the pharmacy is open from 9:00am to 6:00pm Monday through Friday and also on Saturday morning 9:00am to 12:00pm. If there were a need for weekend pharmacy hours, we would expect to see a larger number of prescriptions ordered on Monday. However, Figure 3 shows a similar number of prescriptions ordered for each weekday and a smaller number on Saturday. Therefore, it is unnecessary to extend the pharmacy’s operating hours.

![Figure 3: Number of Prescription Orders Received By Day of the Week](image)

Prescriptions Not Proven To Be Main Source Of Delay
Figure 4 shows the difference in time between the completion of the prescription by the pharmacy and the actual discharge time of the patient. Of the prescriptions, 54.4% were completed more than 5 hours before the patient was actually discharged, which suggests there was another cause for the patient being discharged later. Only 26% of the prescriptions were completed less than 2 hours before the patient was actually discharged. Table 1 displays the frequency, percent, and cumulative percent of each interval for the time differences.
Figure 4: Hour(s) between Prescription Completion and Discharge Time

<table>
<thead>
<tr>
<th>Difference between Prescription Completion and Discharge (Hours)</th>
<th>Count</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>40</td>
<td>10.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>1-2</td>
<td>51</td>
<td>12.8%</td>
<td>22.8%</td>
</tr>
<tr>
<td>2-3</td>
<td>46</td>
<td>11.6%</td>
<td>34.3%</td>
</tr>
<tr>
<td>3-4</td>
<td>27</td>
<td>6.8%</td>
<td>41.1%</td>
</tr>
<tr>
<td>4-5</td>
<td>14</td>
<td>3.6%</td>
<td>44.6%</td>
</tr>
<tr>
<td>5-10</td>
<td>20</td>
<td>5.0%</td>
<td>49.6%</td>
</tr>
<tr>
<td>10-15</td>
<td>2</td>
<td>1.0%</td>
<td>50.1%</td>
</tr>
<tr>
<td>15-20</td>
<td>2</td>
<td>1.0%</td>
<td>50.6%</td>
</tr>
<tr>
<td>20-25</td>
<td>42</td>
<td>10.5%</td>
<td>61.2%</td>
</tr>
<tr>
<td>25-35</td>
<td>28</td>
<td>7.0%</td>
<td>68.2%</td>
</tr>
<tr>
<td>35-45</td>
<td>33</td>
<td>8.3%</td>
<td>76.4%</td>
</tr>
<tr>
<td>45-55</td>
<td>46</td>
<td>11.5%</td>
<td>88.0%</td>
</tr>
<tr>
<td>&gt;55</td>
<td>48</td>
<td>12.0%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Sum</td>
<td>399</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Difference between Discharge Prescription Completion and Discharge
Prescriptions Ordered Prior To Discharge Date Were Completed By Target Time

Looking at Figure 5, notice that 110 prescriptions were categorized as early, meaning the prescriptions were completed before the anticipated discharge time. This figure is representative of all discharges, meaning those written prior to day of discharge and those written on the day of discharge. Of these prescription orders, 50% were sent to the pharmacy at least one day prior to the discharge. Nearly 60% of all prescription orders were completed by the time of discharge.

![Target Time Completion of Total Prescription Orders](image)

**Figure 5: Number of Prescription Orders Processed Within X amount of Target Time**

Figure 6, below, shows a graphical representation of when the prescription orders that were sent to the pharmacy one day prior to discharge were completed. Of the 66 prescription orders that were sent in one day prior, 95% of these orders were completed by the target time, while the remaining 5% were completed within an hour of target time.

Of the total prescription orders, 82.4% were written on the day of discharge. Of the prescriptions written on the day of discharge, 59% were not completed on time which is 48.6% of total orders. Thus, if this 48.6% were sent prior to day of discharge, 95% would be completed on time. Currently, approximately 60% of all prescription orders are completed on time. If the hospital were to send all prescriptions the day prior to discharge, they could expect to see approximately 97% of total prescriptions completed by the anticipated discharge time.
Within 1 hr of Target Time 5%
On Time 12%
Early 83%

Figure 6: Prescriptions Ordered Prior to Day of Discharge Were Completed By Discharge Time

Further Investigation Needed
The pharmacy identifies a major source of delay as calling the insurance companies to obtain coverage information. This is necessary since the hospital only records inpatient insurance coverage when a patient arrives at the hospital. From the ACP log data, it is apparent that the added time required to fulfill an order with each additional prescription is approximately 25 minutes, displayed in Figure 7. There is a fixed amount of time, approximately one hour, that the pharmacy spends initially processing the order. This time includes calling the insurance companies to determine what is covered. Having outpatient information at the onset would reduce this fixed amount of time.

Our data show that 20% of all Mott patients require prescriptions from the ACP. When patients are admitted to the hospital, only their inpatient insurance information is collected. Therefore, the patients’ outpatient pharmacy coverage must be obtained for those filling their prescription at the ACP. The time required by the pharmacy to obtain outpatient information needs to be quantified. In the past, the pharmacy recorded the time frame to obtain the outpatient insurance information, thus this procedure should be reinstated to determine a precise time. In addition, if the prescription order is for a return Mott patient, the insurance information will already be in the database. Therefore, further analysis needs to be done to obtain the percentage of return patients at Mott. Once further analysis is done to obtain the percentage of return patients in Mott, time pharmacy spends obtaining the outpatient insurance information, and time it would require to obtain
outpatient insurance information per patient upon admittance the following equations can be solved:

(1) \[20\% \times (1\% \text{ of return Mott patients}) \times \text{Time to obtain outpatient insurance information at pharmacy} = X\]

(2) \[100\% \times \text{Time needed to collect outpatient insurance information at check-in} = Y\]

If the value of Y is less than the value of X, then the insurance information should be taken upon admittance for all Mott patients.

![Histogram of average time required to process a certain number of scripts](image)

**Figure 7: Histogram of average time required to process a certain number of scripts**

**Transportation**

The following is a major finding in regards to transportation arrangements. The team had a response rate of 29%, where the questionnaires able to be cross referenced was 25% of the total discharges during November 19th, 2004 to December 4th, 2004 on 5 West and 5 East and November 22nd, 2004 and December 4th, 2004 on 6 Mott.

**No Standard Process**

The process for notification of patient discharge is currently not standardized. There are no formal rules of arranging transportation.

The following are findings given by the questionnaires distributed

- 42 parents were notified of discharge by the doctor, 23 by the nurse, 1 other, and 1 parent was not notified
- 15.9% of parents surveyed arrived after the patient’s expected discharge time (approximately 5% of the total)
Problems listed for late arrivals included traffic, limited access to car, long bus drive, and parent/guardian not available.

92% of families viewed the discharge as timely.

Reasons listed for late discharges included 2 transportation, 2 test results, 3 prescriptions, and 3 supplies.

Figure 8 shows the time between the arrival of a patient’s transportation and the patient’s actual discharge time. Of the total patients surveyed, 37% arrived within an hour of the patient’s discharge. An additional 27% arrived within 2 hours of the patient’s discharge. It appears that if transportation arrived earlier, some patients could be discharged earlier. When cross referenced with the Patient Management data, 37% of the patients we were able to cross reference experienced delays possibly attributed to transportation arriving late. This 37% represents patients discharged within an hour of the transportation arriving, implying that the patient was waiting for transportation to arrive in order to be discharged. By improving the arrival time of transportation, approximately 2,414 discharge times per year could be improved.

Figure 8: Histogram of Time between Transportation Arrival and Patient Discharge
RECOMMENDATIONS

Based on the above findings and conclusions, the team recommends the following.

Prescriptions
- Do not extend operating pharmacy hours
  - Extending pharmacy hours would not necessarily improve discharge time
  - Would not see a cost benefit in extending pharmacy hours
- Order prescriptions prior to day of discharge whenever possible
  - 46% more prescription orders could be completed on time if ordered prior to day of discharge
  - A total of 97% prescriptions orders would be completed on time
- Further investigate the advantages and disadvantages of determining outpatient insurance coverage upon admittance

Transportation
- Standardize the procedure in which transportation arrangements are made
- Implement a system to allow primary parties to know whether parent/guardian had been contacted regarding discharge
- Notify parent/guardian of expected discharge time as soon as possible to allow time to arrange transportation
  - A potential increase of 37% of patients would be discharged in a timely manner if transportation were to arrive on time
  - Eliminate miscommunication

ACTION PLAN

Prescriptions
Prescription orders should be sent to the pharmacy prior to the day of discharge so that the pharmacy has ample time to process the order. Residents will send prescription orders to the pharmacy by 3:00pm prior to the day of discharge. This will ensure that the advance lead time expedites the discharge process.

In addition, the possibility of collecting the outpatient insurance information should be further investigated. After calculating the percentage of return Mott patients, time it currently takes to obtain the outpatient insurance information at the pharmacy, and the time it would take to collect the outpatient insurance information at check-in, these numbers can be plugged into equations 1 and 2 below to obtain X and Y.

\[
\begin{align*}
(1) \quad & 20\% \times (1\% \text{ of return Mott patients}) \times \text{Time to obtain outpatient insurance information at pharmacy} = X \\
(2) \quad & 100\% \times \text{Time needed to collect outpatient insurance information at check-in} = Y 
\end{align*}
\]
If X is less than Y, then the outpatient insurance information should be taken upon admittance for all Mott patients.

**Transportation**
A standard procedure should be implemented as to how parents are informed of a patient’s discharge. At the time the decision of discharge is made, the resident assistant is responsible for notifying the parents. This eliminates communication problems and the lack of standardization that is currently in process. In order to communicate this with other staff, standardized white boards with pre-printed columns should be used in all areas of Mott. A column labeled “Parent notified” will be checked off as soon as the resident assistant has notified the parent regarding discharge. An additional column labeled “Prescriptions ordered” should also be used by doctors to communicate the prescriptions had been ordered prior to discharge day.

**Other Opportunities**
The laboratory should be investigated to determine the delays produced by laboratory results. Also, other various delays in the discharge process should be investigated to determine if they can improve the time of discharge.
APPENDIX

Appendix A. Flowchart of Prescription Process

<table>
<thead>
<tr>
<th>Prescription Process</th>
<th>Doctor</th>
<th>Clerk</th>
<th>Nurse</th>
<th>Order Entry Technician</th>
<th>Pharmacist</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decide medications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write prescription</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Put prescription in patient’s chart and flag chart notifying discharge or hands clerk to clerk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>See flag and pull patient’s chart and/or receives prescription</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does patient want prescription filled here?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fill out routing slip</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Send prescription and routing slip to out-patient pharmacy by tube</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription and routing slip come through tube</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pull order out and enter into system; enter in any allergies, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prioritizes order according to patient discharge time on routing slip</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Determine insurance coverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient takes prescription home</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Prescription Process Continued

<table>
<thead>
<tr>
<th>Doctor</th>
<th>Clerk</th>
<th>Nurse</th>
<th>Order Entry Technician</th>
<th>Pharmacist</th>
<th>Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Call Insurance company to confirm prescription</td>
<td>YES</td>
<td>Pre-authorization needed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>NO</td>
<td>Make and or fill prescription</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Double check against original prescription</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Notify nurse that prescription is ready</td>
<td></td>
<td>Call department to notify prescription is ready</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tells patient prescription is ready</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patient/Guardian picks up prescription to pay and sign</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B. Discharge Questionnaire

For clerk use only (stamp):

Birthdate: ________________________________
Name: ________________________________
CPI#: ________________________________
Sex: _______ Visit #: ________

DISCHARGE QUESTIONNAIRE

Please circle the response most accurately describing your experience:

Were you notified before today of the discharge time/date? Yes No

Who notified you of the patient’s discharge? Doctor Nurse Clerk Other: __________

What time were you told your child would be discharged?

Before 9:00am 9:30 10:00 10:30 11:00 11:30 12:00 12:30 1:00 1:30 2:00 2:30
3:00 3:30 4:00 4:30 5:00 5:30 6:00 6:30 7:00 7:30 8:00 After 8:00pm

What time did you and your transportation arrive at the hospital?

Before 9:00am 9:30 10:00 10:30 11:00 11:30 12:00 12:30 1:00 1:30 2:00 2:30
3:00 3:30 4:00 4:30 5:00 5:30 6:00 6:30 7:00 7:30 8:00 After 8:00pm

Did you think this was a timely discharge? Yes No

If “No” on previous question, what were the delays?

Prescriptions Supplies Test Results
Transportation Other: ________________

If “Transportation” was an issue, about how long did it delay your discharge (in hours)?

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 more: _____

If “Transportation” was an issue, what was the specific cause?

Bus schedule Expected discharge time was incorrect
Parent/Guardian unavailable Limited access to car
Taxi Other: ________________

Are there any suggestions that you think could have further expedited your discharge process?

___________________________________________________________________________

Please hand the completed questionnaire to the clerk on your way out. We appreciate your participation.

THANK YOU!
Appendix C. Educational Flyer

~ DISCHARGE ~

QUESTIONNAIRE

In order to further improve the discharge process, students working with Program and Operations Analysis are collecting data about transportation arrangements.

**Clerks:** Please fill out (or stamp) the top right corner of the questionnaire and place it with the discharge materials for patients. Please place the completed questionnaire in the return envelope when the patient returns it.

**Nurses:** Please ensure that the patients receive the questionnaires along with the hospital’s discharge survey.

Thank you for your cooperation!