

# Improving the Transition of Care in Patients Transferred Through the Ochsner Medical Center Transfer Center

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## ABSTRACT

**Background:** Patient transfers from other hospitals within the Ochsner Health System to the main campus are coordinated through a Transfer Center that was established in fall 2008. We analyzed the transfer process to assess distinct opportunities to enhance the overall transition of patient care.

**Methods:** We surveyed internal medicine residents and nocturnists to determine their satisfaction with transfers in terms of safety, efficiency, and usefulness of information provided at the time of transfer. After a kaizen event at which complementary goals for the institution and members of the study team were recognized and implemented, we resurveyed the group to evaluate improvement in the transfer process.

**Results:** The preintervention average satisfaction score was 1.18 (SD=0.46), while the postintervention score was 3.7 (SD=1.01). A *t* test showed a significant difference in the average scores between the preintervention and postintervention surveys ( $P<0.0001$ ).

**Conclusions:** By including residents in the transfer calls (a result of the kaizen event), data were collected that facilitated fewer and higher quality handoffs that were performed in less time. In addition, the process resulted in increased awareness of the value of resident participation in institutional quality improvement projects.

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## INTRODUCTION

Interfacility transfers are often fraught with numerous difficulties, and in many ways are akin to an elaborate patient handoff process.<sup>1,2</sup> At many institutions, the process for transfer acceptance is inconsistent and typically begins with a phone call that a clerk or other support person in the Emergency Department answers.<sup>3</sup> Unfortunately, this individual with minimal (if any) medical training attempts to coordinate communication between the referring and the potential accepting doctors. Additional contacts are required to coordinate the process, including bed control for determining potential room and bed assignments, admitting for assessing financial issues, and patient transport services for transporting the patient to the accepting facility. This process is often complicated by fragmented communication, minimal focus on the referring physician and the referring facility, and a limited ability at the accepting facility to expedite the entire process.<sup>4</sup>

The Ochsner Transfer Center, established in fall 2008 in an attempt to alter the chaotic acceptance process of interfacility patient transports, coordinates patient transfers from other hospitals to Ochsner's main campus facility. The goal of center operations was to accept 80%-90% of new patient transfers within 10 minutes with only one telephone call.<sup>3</sup> The center's current staffing includes the following:

- Registered nurses who staff the center 24/7 and whose sole function is to coordinate transfers into the hospital
- A bed control liaison as a vital component of the team who ensures expedited bed assignments
- A case manager capable of conducting the appropriate financial clearance after patients are accepted for transfer
- Patient transport and Flight Care staff members who facilitate appropriate and timely communication and dispatch if helicopter or other air transport is needed

The Transfer Center handled 3,116 transfers in 2010, compared to 1,040 transfers in 2008, prior to the creation of the Transfer Center. In addition to receiving patients from the 7 other hospitals within the

Ochsner Health System, in an average month in 2010 the Transfer Center also accepted patients from more than 30 institutions in the region.

The aim of our study was to analyze in detail the existing Transfer Center processes to identify opportunities to enhance the overall transition of patient care. In particular, we sought to eliminate the number of internal handoffs once a patient was accepted for transfer to improve the efficiency, timeliness, and safety involved in the transition of care. We conducted this study as part of our participation in the National Initiative–II (NI-II) sponsored by the Alliance for Independent Academic Medical Centers (AIAMC) from November 2009 through March 2011. That initiative—Improving Patient Care Through Graduate Medical Education: A National Initiative of Independent Academic Medical Centers—launched with Phase I in early 2007 and is focused on ongoing quality improvement.

## METHODS

The Ochsner Institutional Review Board approved the study. With the assistance of an institutional statistician, we created a questionnaire and forwarded it to nocturnalists and internal medicine residents assigned to the hospital service with the expectation that all would complete a survey for each new patient received through the Transfer Center during the prior 24 hours. The questionnaire asked the following:

1. Was the patient information provided in anticipation of receiving a new patient via the Transfer Center, allowing me to be better prepared to take care of them?
2. Was the patient information provided in anticipation of receiving a new patient via the Transfer Center satisfactory/useful to me?
3. Was the patient information provided in anticipation of receiving a new patient via the Transfer Center, allowing for a more efficient transfer of care?
4. Was the patient information provided in anticipation of receiving a new patient via the Transfer Center, allowing for a safe transition of care to the service/institution?
5. Was the patient information provided in anticipation of receiving a new patient via the Transfer Center, reflecting an accurate assessment of the patient once they arrived on service/at this institution?

Each question was graded on a 5-point scale with 1 representing disagreement, 3 representing a neutral position, and 5 representing strong agreement. A comments box was also included to allow the physician to discuss how the current transfer process might be improved to enhance the transition of care or to assess the quality and safety of the care provided.

## Preintervention

The faculty/resident questionnaire was implemented from mid-May 2010 to July 1, 2010. We forwarded 22 completed questionnaires to our statistician for analysis to assess the statistical validity of the questionnaire and to identify emerging trends. These results represent our baseline data. The majority of the responses were 1s or 2s, representing disagreement with an efficient/timely/safe transition of care. Figure 1 illustrates the preintervention patient transfer process.

Even more valuable data were captured by analyzing the physician handwritten comments that included variables such as a lack of detailed, accurate, and timely updates of patient information once a transfer was initiated; delays from the time of acceptance to the time of arrival at our facility; and delays in initial assessment by the admitting team once the patient arrived at our institution. This final trend was the most problematic because a hospitalist may have accepted a transfer patient earlier in the day via a formal handoff process, and then a nocturnalist assumed care for the evening shift without active participation in or knowledge of the on-call resident team.

## Intervention

As a result of these findings, the authors met with the leaders and staff of the Transfer Center to develop a new Transfer Center worksheet that would provide more meaningful data. Concurrently, the institution was focused on improving the efficiency and safety of healthcare delivery. To this end, a 3-day kaizen meeting was held in October 2010. Multiple stakeholders in the healthcare system attended, ranging from Transfer Center nursing personnel to nursing executives.

Initially, planners did not solicit physician participation in this process, but then representatives from the NI-II physician team were invited to participate, which helped to facilitate better understanding of potential interventions in physician workflow. Participants designed a new process for interfacility transfers coordinated through the Transfer Center. The most important change was the creation of a 4-way call at the time of transfer initiation that included the outside transferring physician, the admitting staff physician at Ochsner, the on-call resident, and the nurse in the Transfer Center. These calls are recorded to ensure our compliance with the Emergency Medical Treatment and Active Labor Act. During these calls, the resident physician is allowed to ask the transferring physician for additional clinical information to create a body of information that can be

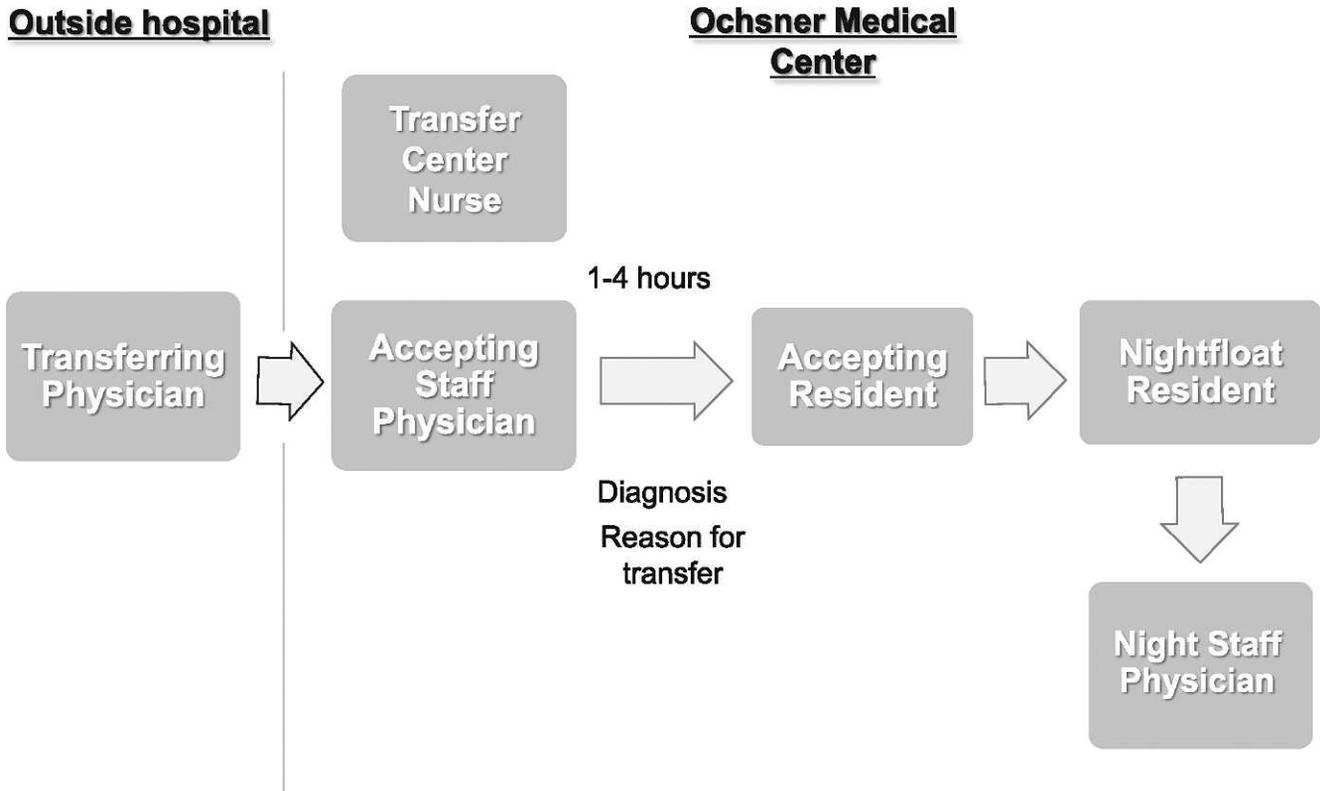


Figure 1. Patient transfer process preintervention.

included on the Transfer Center worksheet and discussed during the resident handoff process.

Information the resident gathers during the call facilitates the creation of a transition order set delivered to the floor within 1 hour of patient arrival. The transition order set was a critical outcome of the kaizen event, while the remainder of the process overlapped with the specific needs of our study. Therefore, complementary goals were recognized that otherwise may not have been achieved individually.

### Postintervention

As previously mentioned, the principal groups affected in the transition of care process were internal medicine residents and nocturnalists who received patient transfers coordinated by the Transfer Center. We resurveyed these stakeholders during January and February 2011 using the original 5-item questionnaire and compared the results to baseline data.

We collected an additional 23 questionnaires. Prior to analysis, we believed that the postintervention questionnaires would reflect a positive change. Even though staff did not complete a Transfer Center worksheet for every transfer, the objective scores primarily reflected a positive trend based on resident involvement at the time of the transfer call. In other words, the residents received real-time data regarding

the status of patients being considered for transfer. This involvement afforded them the opportunity to better prioritize patient needs at the time of arrival and consider new or updated laboratory and imaging studies, resulting in an average time savings of 2 to 6 hours per patient. The time savings helped expedite clinical decisionmaking. Figure 2 illustrates the post-intervention patient transfer process.

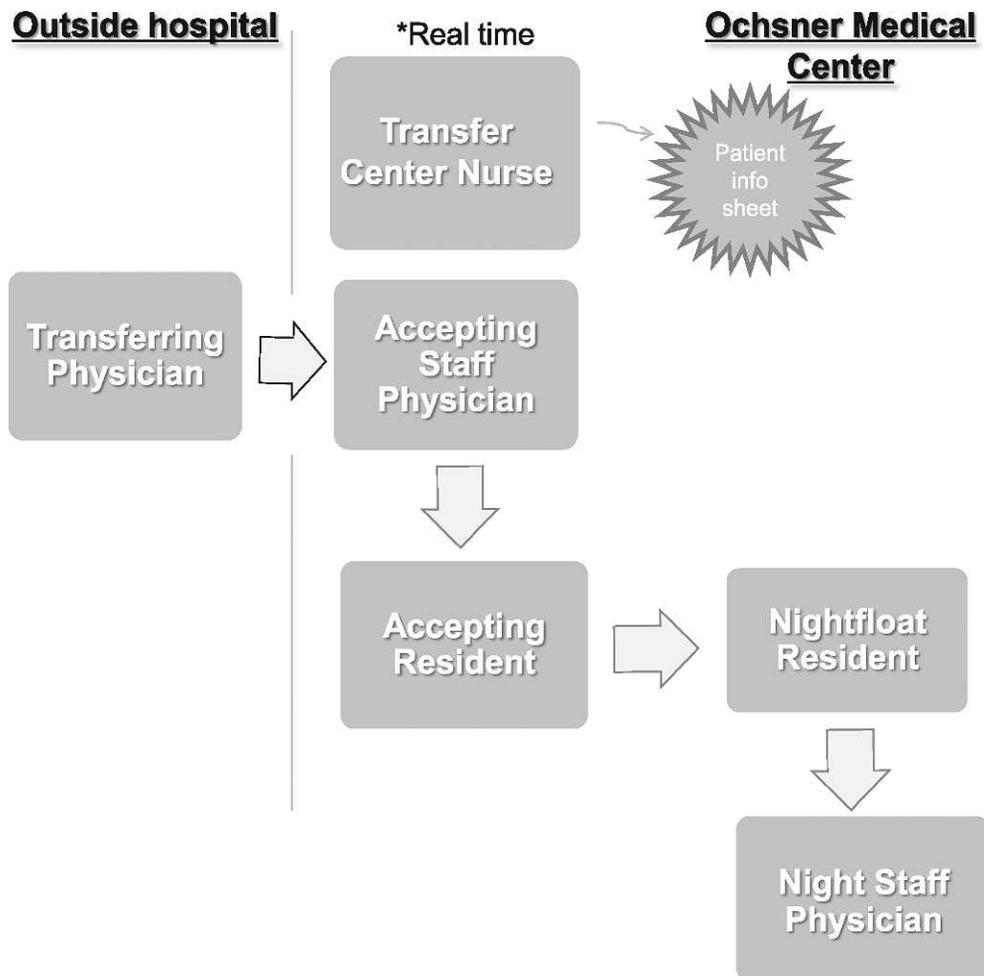
### RESULTS

We defined the overall outcome score as the average of questions 1 through 5 on the questionnaire. The 2 groups of surveys—preintervention and postintervention—were independent. *T* test analysis found a significant difference in the average scores between the preintervention and postintervention groups ( $P < 0.0001$ ). The results are detailed in the table.

As a result of the data collected in this study, the Internal Medicine department—including hospitalists, nocturnalists, and residents—participated in a continuous improvement project and the results yielded a template for how transitions of care could best be handled through the Transfer Center systemwide.

### DISCUSSION

As learned through the kaizen event, institutional goals for improving the Transfer Center's operational



**Figure 2. Patient transfer process postintervention.**

efficiency were discovered to be parallel to the goals of the institutional NI-II project. Improving the staffing structure and process ensured that transfers were more expedited and timely. Centralized intake for all transfers (although not optimal) improved, as did the ability to track data more efficiently. We identified enhanced communication with the referring physician or institution as a major driver for volume increases during the first 27 months of Transfer Center operations. The availability of these metrics allowed our institution's executives to better understand Ochsner's interfacility transfer business.<sup>5</sup>

By including residents in the transfer calls, we were able to collect more robust data that facilitated fewer and higher quality handoffs, the main objective outcome of the study. The success also led to an increased awareness of the value of resident participation in institutional quality improvement projects, not only as spokespersons for their peers, but also as essential participants in providing safe, timely, and realistic patient care. This project has additionally produced enhanced and timely access to patients

requiring more complex care needs and/or subspecialty assessment.

The limitations of this study include the inability to standardize incoming data as evidenced by frequently incomplete data transmission on the Transfer Center worksheet. We hope to improve in this area after a transition to a new electronic medical record platform in 2012. This system will facilitate real-time data analysis during interfacility transfers and will also serve as a repository for critical information needed during transitions in care. Another limitation was the lack of communication following the kaizen event that resulted in a delay in the initiation of the intervention. Finally, we had difficulty collecting completed faculty/resident questionnaires in a timely fashion.

The single most important piece of advice we offer is to encourage more participation throughout various levels of the organization at the outset of such a project. In this particular study, a nurse or practitioner champion in the Transfer Center at the beginning of this project would have ensured more complete data collection. Subsequent planned stud-

**Table. Summary of Resident and Nonturnist Satisfaction With Transfer Process Survey Results Pre- and Postintervention**

Group	N	Average Score	Standard Deviation	Min	Max
Preintervention	22	1.18	0.46	1.0	1.2
Postintervention	23	3.7	1.01	2.8	5.0

ies will examine how these improved efficiencies affect patient length of stay, mortality rates, and patient satisfaction scores.

### CONCLUSIONS

The opening of the Transfer Center involved the frequent arrival of unstable patients, the transmission of poor information regarding patient status, and a lack of communication within the team as to next steps in the evaluation and treatment of patients. Often, the exact reason for a transfer to the main campus facility was not readily evident. Internal medicine residents frequently assumed the care of patients they were not comfortable treating. These specific issues frequently led to treatment delays because of an inability to adequately prioritize the patients being received.

At the completion of the NI-II project at our institution, the residents are now recognized for their importance as participants in the transfer of patients

to the facility. As a result of being involved in the transfer call, residents are more comfortable in helping to assume the care of these patients upon arrival.

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### Epitoma

*In 2009-2010 the Accreditation Council for Graduate Medical Education's Task Force for Quality Care and Professionalism placed the onus of responsibility on the sponsoring institution for the oversight and integration of residents into patient safety and quality improvement programs. This study is an example of a grassroots, resident-driven quality improvement project that ultimately led to changes in the way an entire health system functions. Transfers of patients from outside hospitals to another site for higher acuity care represent the ultimate in complex patient handoffs because these transitions of care may jeopardize both quality outcomes and patient safety. Using standardized performance/quality improvement processes, multiple plan-do-study-act cycles yielded fewer and higher quality handoffs and a greater awareness of the value of resident participation in institutional quality improvement projects.*

—Guest Editor Ronald G. Amedee, MD

*This article meets the Accreditation Council for Graduate Medical Education and the American Board of Medical Specialties Maintenance of Certification competencies for Patient Care, Interpersonal and Communication Skills, Professionalism, Systems-Based Practice, and Practice-Based Learning and Improvement.*