Improving the Utilization of Occupational Therapy: A Quality Assurance Study

(occupational therapy referral, ADL deficiency, accountability, peer review, utilization review)

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Concerned about the lack of referrals to occupational therapy for patients with activities of daily living (ADL) deficiency, the occupational therapy section of an acute-care community hospital conducted a quality assurance study. Referral standards were established by the occupational therapy department and approved by the medical staff. Initial measurements indicated that 71 percent of patients requiring a referral did not receive it. Since the staff standard for missed referrals was only 15 percent, improvement actions were implemented. After improvements were made in the referral system, missed referrals dropped from 71 to 27 percent, marking an improvement of 44 points. The study produced several other benefits, including better communication among health care providers, improved patient functional assessment, and greater staff commitment to quality assurance activities.

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The quality assurance standard of the Joint Commission on Accreditation of Hospitals (JCAH), which went into effect in January 1981, has had a widespread impact on the health care community. The standard emphasizes the need for reliable and valid accountability methods.

Compatible with the Joint Commission's standard is health accounting, an approach to patient care evaluation that focuses on improving the outcomes of care. Outcome refers to any point in the ongoing process of care at which one measures the results of the treatment process. In health accounting, if outcomes are deficient, the processes are subjected to an improvement action. The health accounting approach has proved to be a problem-solving tool compatible with retrospective chart audit, as well as with other methods of patient care evaluation and peer review.

In addition to complying with the Joint Commission's quality assurance requirements, health accounting also satisfies the quality assurance guidelines included in The American Occupational Therapy Association's Standards of Practice for home health, developmental disabilities, physical disabilities, and mental health.

Health accounting, which was developed by Williamson and found feasible and successful in various settings (1, 2), includes five stages: 1. establishing priority quality assurance problems; 2. conducting an initial problem assessment and measuring current outcomes to verify the nature and scope of the problem; 3. determining correctable factors and developing improvement plans; 4. implementing improvement actions; and 5. measuring results of improvement actions. The basic details of the process are fully discussed in other sources (3-7).

The study discussed in this article focused on the outcomes of a referral process. It was conducted in the occupational therapy section of the rehabilitation medicine department of an acute-care facility. An 11-member multidisciplinary priority-setting team at the 450-bed hospital...
Identified “lack of referral to occupational therapy of ADL-deficient patients 65 and over” as a high priority problem with a potential for quality assurance impact. It was the team’s judgment that notable achievable benefits from occupational therapy services were not being realized because of lack of referral of these patients.

Topic Selection
The 11-member team included two occupational therapists, two physicians, an administrator, representatives from the Social Service, Nursing, Dietary, Medical Records, and Physical Therapy Departments, and a patient. Together, they generated and weighted a list of problem areas/topics, focusing on potential benefits not achieved in the occupational therapy services at that hospital. From their list of problems, the study of occupational therapy referrals for ADL-deficient patients aged 65 and older was selected.

The health accounting approach used in this study is compatible with JCAH’s quality assurance standards.

Study Design
In the second stage of the study, a small team composed of occupational therapists planned the study design. This team’s responsibilities included determining the standard for the maximum acceptable number of “missed referrals,” and developing and identifying objective ways to measure the outcomes against the standard. This team also determined the study population and the sampling method. The study population was composed of those judged to be at high risk for both ADL deficiency and poor referral to occupational therapy. They were patients likely to have newly acquired ADL deficiencies for whom return to independence is of great importance before dependency patterns become established.

With these parameters in mind, the study team decided to study individuals who were more than 65 years of age with a diagnosis of hip fracture, lower limb amputation, abdominal surgery, or arterial sclerotic/cardiovascular/cerebrovascular/ peripheral vascular diseases, excluding individuals with cerebral vascular accidents, cancer, and chronic brain syndrome. These exclusions were made because such patients composed a distinctly different population, with various complications, whose referral to occupational therapy was not seen as a problem.

The topic and design were approved by the hospital’s quality assurance committee. These steps, as well as the presence of two physicians on the team who gave the topic high priority, increased physician interest and cooperation. In a study such as this, where a change in physicians’ referral patterns may be required, their early and full participation is essential.

The sample for the study was drawn retrospectively: 100 consecutive medical charts for patients more than 65 with any of the included diagnoses. The medical charts of these patients were reviewed to determine the need for referral to occupational therapy in terms of ADL dependence, and whether the patients actually received referral.

The team used structured group judgment techniques to establish an outcome standard against which to assess their current program. The team, drawing on their professional experience, agreed upon a “maximum acceptable standard” of 15 percent, representing the highest tolerable percentage of missed referrals before improvement action would be initiated; that is, a “maximum acceptable” failure rate.

Eight of the 100 patients in the study were disqualified because of medical complications. Of the remaining 92 patients, 75 (82%) required referral to occupational therapy because of ADL deficiencies; yet 53 patients (71%) did not receive that referral. This finding differed significantly from the team’s standard of 15 percent (p < 10), using the binomial goodness-of-fit test. (Note that significance of difference does not have to be computed in a quality assurance study. The difference between the standard of 15% and the actual result of 71% can be easily judged by the study team to be a difference they wish to correct without computing statistical significance.)

Causes of Deficient Outcomes
In the third stage of the health accounting study, the team conducted a definitive assessment of the probable causes of the inadequate referral patterns revealed by the study. During the assessment meeting, four factors were judged to be principal causes:

1. Physician focus in the acute-care facility on medical care and not functional rehabilitation.

2. Limited awareness by physicians and nurses of existing occupational therapy services directed at functional restoration to augment ADL skills for patients 65 and older.

3. Lack of a defined and structured (systematic) referral process from primary physicians to occupational therapy.

4. Inconsistent occupational therapy participation in the nursing...
orientation program, and no participation in the physician orientation program.

**Plan for Improvement**

Once these factors were identified, the following improvement plan was designed with specific educational and administrative procedures addressed to each factor.

1. Occupational therapy would participate in the weekly hospital-wide discharge planning meetings, which not only consider discharge, but track the patient's treatment program to maximize full benefit from the expected length of stay. The occupational therapy goal: to identify to the nursing staff those patients who could benefit from therapy. Nursing, in turn, would request referral to occupational therapy from the primary physician.

2. Occupational therapy would use the weekly discharge planning sessions to improve the multidisciplinary discharge planning team's awareness of the various programs available in occupational therapy.

3. Occupational therapy would reorganize the rehabilitation referral screening process to include all patients 65 and older for ADL function screening by the occupational therapy section. This would require the approval of the Chairman of the Rehabilitation Medicine Department and the support of the medical staff.

4. Occupational therapy would meet with the nursing education coordinator to reestablish its role in the nursing orientation program. In addition, occupational therapy would become involved in the physician orientation program through work with the hospital medical director and the public relations department. Pamphlets and slides would be produced for use in physician orientation to occupational therapy services for the geriatric population. A description of outcomes of occupational therapy services in this facility would be emphasized with data from a previous quality assurance study.

Stage 4 of the health accounting study involved implementing the improvement actions at the hospital over a 6-month period.

**Effects of Improvement Plan**

In the fifth, and final, stage the team reassessed outcomes to determine the effects of the improvement actions. The reassessment and measurement of referral decision outcomes focused on a sample of 50 consecutive patients who met the same population parameters as the sample in Stage 2. Again, a retrospective chart review was conducted. Seven patients were disqualified from the study because the post-admission diagnoses indicated additional diseases, bringing the total sample to 43 patients (86% of the sample originally drawn).

The measurements indicated that missed referrals had decreased from 71 to 27 percent, a 44-point improvement. Of the 43 patients studied, 37 required referral to occupational therapy (i.e., were ADL-dependent), 10 of whom, or 27 percent, did not receive it. Although the missed referrals were still higher than the team's established maximum acceptable standard of 15 percent, the operational significance of the 44-point increase in patient referrals was noted. Stated in positive terms, 67 percent (27 of 37) of the patients requiring occupational therapy were receiving it. Despite the gains achieved, the study design team decided to augment improvement actions until results were closer to the 15 percent standard. Figure 1 provides a graphic summary of the study findings.
The study reported here had a measurable, positive impact on referrals to occupational therapy.

Discussion
The health accounting study was found to have a measurable, positive impact on patient referrals to occupational therapy. The likelihood that other causes might have contributed to the differences in referral patterns before and after improvement actions were taken was examined. No other major factors were found. Therefore, it was considered likely that the outcome changes measured could be attributed to the improvement actions implemented. The study team, then, felt justified in continuing their improvement actions.

Several additional improvements and benefits were realized, including enhanced communication among health care providers and a greater staff commitment to quality assurance functions. The study team thought that hospital-wide involvement of nonoccupational therapy personnel in solving an important problem in poor referral to occupational therapy was a successful approach.

This study is an example of how therapists can fulfill the historical mandate and current requirements for providing and documenting quality care (8, 9). The findings of this study have implications for health care facilities with geriatric populations. Such facilities are becoming increasingly prominent, when people older than 65 constitute 10 percent of the total population, accounting for one quarter of hospital stays and 30 percent of the nation’s $220 billion per year health bill (10). It thus becomes important for these facilities to refer ADL-dependent patients to occupational therapy—especially those with new ADL deficiencies—for a quick return to maximum function before old habits of self-reliance are lost.

Summary
A significant improvement in referral of geriatric patients to occupational therapy was related to a quality assurance study conducted in an acute-care hospital. The study used a health accounting method whereby health care outcomes are assessed and improved through a five-stage process.

An occupational therapy study team at the hospital directed the quality assurance study, which was based on the lack of referral to occupational therapy of ADL-dependent patients 65 and older with any of the following diagnoses: hip fracture, lower limb amputation, abdominal surgery, or arterial sclerosis/cardiovascular/cerebrovascular/peripheral vascular diseases—excluding individuals with cerebral vascular accidents, cancer, and chronic brain syndrome. By reviewing medical charts, the team determined that 82 percent of the patients (75 out of 92) in the sample required referral to occupational therapy for ADL deficiencies; however, only 29 percent were receiving appropriate referrals. Thus 53, or 71 percent, were not appropriately referred.

The team then advised and implemented several improvement actions, the most important being a revised, systematic referral system. Other improvement actions included education of the nursing staff and other personnel in identifying patients needing therapy, and an understanding of the programs available in occupational therapy.

A follow-up study after these improvement actions were implemented indicated a significant increase in patient referrals: of the 86 percent (37 of 43) in the follow-up sample requiring referral to occupational therapy, 67 percent (27 of 37) were receiving it. “Missed” referrals dropped from 71 to 27 percent.

Acknowledgment
This article is based on one of three quality assurance demonstration projects funded by The American Occupational Therapy Association, Inc., with John W. Williamson, M.D., acting as Consultant, and Patricia C. Ostrow, as Project Director.

REFERENCES