

## Test Utilization

Overview

Create Partnerships with Key Clients

Manage Test Utilization

Standards of Performance

### OVERVIEW

In the ongoing national debate concerning the growing consumption of health care services, increased expenditures for laboratory tests, particularly molecular diagnostics, face continued scrutiny to control costs. Evaluating test utilization should cover both inpatient and outpatient activity as well as those tests that are performed in the laboratory and those sent to an outside vendor.

Effectively managing test utilization produces both operational and financial benefits. By reducing excessive orders for tests, there is available capacity, with both staff and instruments, to implement new tests as the need arises and to absorb increased volume. It will also increase the net revenue margin for test services that are reimbursed through capitated payments.

## CREATE PARTNERSHIPS WITH KEY CLIENTS



In its effort to appropriately manage test orders, the laboratory leadership should consider engaging external resources. These resources can include practicing physicians who are “thought leaders” within a medical specialty, information technology tools that can monitor activity, or consultative expertise from other areas such as finance, compliance, legal, or risk management.

### *Case with Error*

The laboratory leadership conducted a review of tests sent to reference laboratories. These data indicated that more than 40% of these orders were placed during inpatient stays. However, the results would not be available until postdischarge. Since these tests were ordered during inpatient stay, the cost for them was included in the capitated payment for the admission.

### *Explanation and Consequences*

Although the results were valuable in the ongoing care of the patient, they were not necessary for inpatient diagnostic and treatment needs. Per regulatory requirements, since these tests were ordered during inpatient stay, they were covered under the capitated payment. Ordering these tests during the inpatient admission directly contributed to increased costs for this admission and, thus, lowered the net revenue.

The laboratory leadership collaborated with the hospital's medical staff leadership and initiated an educational program to instruct providers on the appropriate utilization for esoteric testing. Also, the services of the information technology (IT) department were engaged to modify the computerized test order entry program to redirect these test orders to the outpatient setting.

### ***Case with Error***

The microbiology laboratory at a tertiary academic medical center observed an accelerated growth in the number of blood culture tests. This increased test activity exceeded the expected volumes based on actual inpatient admissions. Analysis of the data indicated that orders were placed, but the clinical symptoms did not support the need for blood culture and that duplicate orders were made by providers from different specialties.

### ***Explanation and Consequences***

The excessive ordering of blood cultures created several problems. It unnecessarily subjected the patient to additional venipuncture and loss of blood. Laboratory resources, both staff and supplies, were inefficiently engaged in performing duplicate testing that had no value in patient care. The consumption of these additional resources increased the hospital's cost for these inpatient admissions and, thus, lowered its net revenue margin.

A multidisciplinary team was established with members from the laboratory, the infection disease division, and software programmers. The clinical experts developed a quick reference "pocket guide" card with an algorithm defining the appropriate clinical indications for ordering blood cultures. It was disseminated through an education program for the entire medical staff, with particular focus on the house staff. The IT staff modified the test order entry software program to generate a dialog box that notified the provider if there was already an existing order for blood cultures placed within the previous 24 hours. After these actions were implemented, an audit of blood culture tests was conducted and the data indicated reduced utilization.

## MANAGE TEST UTILIZATION



Inappropriate utilization of some tests may occur because there is a poor understanding of the appropriate clinical indications. The laboratory clinical leaders can actively manage appropriate test utilization and constructively support the providers.

### ***Case with Error***

An audit of coagulation test activity demonstrated increased volume for tests used in the diagnosis of both bleeding and thrombosis. This test volume was higher than expected for the patient case mix. Further analysis of the data indicated that the patients' symptoms did not support the clinical necessity to perform all of the ordered tests.

### ***Explanation and Consequences***

Physicians were admitting patients with bleeding disorders of unknown etiology and ordering a number of esoteric coagulation tests. In an effort to promptly treat these patients, the physicians had developed a practice habit of ordering a broad spectrum of tests upon admission. They then sorted through

this large number of results to make a diagnosis and initiate treatment.

This “shotgun” approach to coagulation test orders meant that many tests were performed unnecessarily, which produced some unintended consequences. These unnecessary tests contributed to higher costs. This practice also inappropriately utilized staff and instrument capacity that could have been available for performing necessary tests. The medical director collaborated with clinicians and jointly developed a program of algorithmic test selection to order only the correct and necessary tests.

### ***Case with Error***

A hospital laboratory instituted the in-house performance of vitamin D testing. Previously, this test had been sent to a reference laboratory, but the volumes had increased such that it was now cost-effective to perform it in the laboratory. It was observed that there was an unexpected increase in requests for fractionated D2 and D3 levels.

### ***Explanation and Consequences***

A more detailed analysis of the data revealed that some physician practices were routinely ordering the reference laboratory test to obtain the fractionated D2 and D3 vitamin levels

instead of the vitamin D test offered by the hospital laboratory. The physicians had routinely ordered this more esoteric test rather than the routine vitamin D screening test, and did so even when the assay for total vitamin D was brought in-house. The laboratory medical director met with the physician leaders of the practices, reviewed the clinical indications for both tests, and test order patterns were appropriately modified.

## STANDARDS OF PERFORMANCE

- Patient care providers can obtain large amounts of diagnostic information from numerous tests. Whenever appropriate, the laboratory leadership should engage technology to assist in appropriately directing the selection and ordering of tests.
- Laboratory management must be effective stewards of its employees, instruments, and supplies. Test order patterns should be periodically monitored to identify any excessive or unnecessary utilization. Appropriate test order activity will assure that laboratory resources are efficiently supporting patient care and that there is available capacity to manage increased volume and implement new tests.



## Competitive Performance in the Outreach Market

### Overview

### Understand Service Requirements

### Manage Staff Performance to Support Outreach Market

### Define Infrastructure Requirements

### Standards of Performance

### OVERVIEW

Hospital laboratories have long recognized the opportunities of testing services in the outpatient market. The hospital has the capital infrastructure and capacity in the off-hour shifts that coincidentally is the time frame when most outreach testing is performed. A hospital laboratory also has an existing relationship with the physicians who admit patients and can build on that relationship.

Hospital laboratory leadership must recognize that performance standards in the outreach market are decidedly different from those for their inpatients. To succeed in outreach, the hospital laboratory must compete with commercial laboratories and at least meet, if not exceed, the performance standards in the outpatient marketplace. It is imperative to