

Four Steps in the Management of Lab Test Results

1) tracking tests sent until results received
2) notification of patients of results
3) documentation that notification occurred
4) assuring that recommended follow-up occurred

Results of First Survey

Step 1-Tracking Test Results	
78%	reported having a method to track results until they came back to the office
57%	reported that they or their staff consistently followed up on test results that had not come back with the expected period of time
35%	were very satisfied with their method
39%	were plus/minus about their method
9%	were not satisfied with their method
9%	did not rate their level of satisfaction
Step 2-Notification of Patients of Test Results	
92%	physicians within group practices use physician specific methods for reporting lab results
61%	use different notification procedures for different types of tests
57%	make an attempt to notify all patients of their test results
39%	call patients on the phone regarding test results
30%	either have patients call or return to obtain results
26%	send a letter to patients regarding test results
17%	provide patients with their numerical results
Step 3-Documentation of Patient Notification	
70%	reported that they documented patient notification in the record 76%-100% of the time
9%	reported that they documented patient notification in the record 51%-75% of the time
Step 4-Follow-up Tracking	
39%	reported having a method, however, 22% of these reported that it was not being used consistently

Combined Best Practices Method

Step 1: Tracking lab tests

The physician marks the labs to be done on a billing encounter form, or physician service request form. The physician's nurse makes/keeps a copy of the form and sends the original to the in-house lab technician or phlebotomist. The lab technician or phlebotomist notes the lab tests in one of two log books, a "pathology log book" for biopsies, Pap smears, etc., a "standard lab test log book" for all other labs.

When the test results come back, the lab person or phlebotomist marks them off in the logbook and sends them to the nurse. The nurse matches the labs to the billing slips until all results are back on a specific patient, then attaches them to the patient's chart, and takes them to the physician. The nurse checks the billing slips daily. If a lab test result is not back within a reasonable period of time (3 days for standard labs and 5-6 days for biopsies), the nurse notifies the M.D. and calls the lab person or phlebotomist who calls the reference lab regarding the reason for the delay. The lab person checks the standard logbook daily and the pathology logbook once a month.

It appears that the key feature of this system that accounts for its effectiveness is the duplication of review (by both the lab tech and the physician's nurse). Single log-out log-in recording systems were associated with significant error rates.

Step 2: Notification of patients about test results

When the lab test results are received, the physician reviews, dates, and writes comments/recommendations directly on the lab report as a personal note to the patient and signs or initials his/her note. The nurse then notes the date that the results were mailed the patient, signs or initials the report, copies it, and mails the copy to the patient

along with a generic lab-test explanation sheet, which gives a brief explanation of each component of many routine lab tests.

Step 3: Documentation of patient notification

As described above, the nurse dates and initials the original lab report that includes the physician's note to the patient, indicating when a copy of the lab report was mailed to the patient, and then files the report in the patient's chart.

Step 4: Following up on patients with abnormal test results to be sure that they followed through on recommendations

At this point we don't know a method that works particularly well for this step. The methods that we reviewed were fairly complicated and worked better for early follow-ups (e.g. return to the office for a recheck in 2 weeks) than for later ones (e.g. repeat TSH in 3 months). It would seem that some sort of tickler file might be an effective strategy.

Time-Motion Study

TIME (MIN.)	COST EST.	PERSON	TASK
1	\$0.75	Doctor	Puts a mark on the labs that need to be done on the billing slip.
1	\$0.20	Nurse	Receives the billing slip from the doctor , makes a COPY, places it in the lab-log folder, and gives it back to the patient.
1.5	\$0.30	Lab Tech	Calls the patient in, writes down the labs ordered on a label (sticker), writes down the patient's name, address and telephone number and enters them in the computer.
3		Lab Tech	Draws blood for the labs. Separates serum if necessary.
3		Lab Tech	Packs the drawn blood in a plastic bag, labels it (for the reference lab), and sticks the lab-order label in the lab logbook.
1.5	\$0.30	Lab Tech	Reviews the log-book, receives the lab results from the printer, checks them off the log-book, and takes the lab results to the doctor's folder located in the lounge cabinet, from where the nurse is supposed to pick them up.
2	\$0.40	Nurse	Picks up the incoming labs from the doctor's folder in the lounge cabinet, checks her copy of the billing slip to make sure that all the results are back, clips them together to the Test Results Information (TRI) sheet, and takes them to the doctor. Reviews the billing-slip folder once a day.
3	\$2.25	Doctor	Reviews the labs, initials and writes recommendations or comments on the lab sheet.
1.5	\$0.30	Nurse	Picks up the chart and the reviewed lab results from the doctor, mails the copy of the lab slip along with the Lab result information sheet and prescriptions, if any.
1.5	\$0.30	Nurse	Initials the original lab-slip, writes down the mailing date, places the slip in the chart, files the chart and places the original billing slip in a special folder for one month, after which it is shred.

In addition, for each envelope plus stamp the cost was \$0.39. The total cost per patient was \$5.19 not including drawing and processing the sample and not including component four since we had no model for it. These estimates were based upon annual salaries for doctors = \$140,000 (60 hours/week), for office nurses = \$25,000 (40 hours/week), and for lab technicians = \$25,000 (40 hours/week).

LABORATORY TEST EXPLANATION

Brief and general explanation of routine lab work:

TEST	EXPLANATION
Glucose	Diabetes test
BUN	Kidney function
Creatinine	Kidney function
Calcium	Bone and parathyroid disease
Uric Acid	Gout
Cholesterol	Blood fat associated with hardening of the arteries and heart disease
Triglycerides	Blood fat associated with diabetes, alcohol intake, ardening of the arteries
CK	Muscle disease/injury
LD	Liver, heart, brain and blood disease
AST (SGOT)	Liver, blood, brain and heart disease
ALT (SGPT)	Liver disease
Alkaline Phosphatase	Bone, liver, or gall bladder disease
GGTP	Liver or gall bladder disease
Total Bilirubin	Red cell breakdown or liver disease
Total Protein	Protein in blood
Albumin	Nutritional deficiency or liver or kidney disease
TSH	Thyroid disease
T4	Thyroid disease
Hgb A1C	A measure of average blood sugar over 3 months