



e-Network Forum

CALIFORNIA BLOOD BANK SOCIETY

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Preventing pre-transfusion specimen labeling errors

A hospital blood banker in Virginia asked what others have experienced with respect to specimen labeling errors on samples that are drawn for pre-transfusion testing. Apparently, at the inquiring blood banker's hospital, **about 5% of samples submitted to the transfusion service lack one or more of the following:**

- Patient's Full name (first and last)
- Patient's Medical Record number
- Blood bank number
- Time of collection
- Date of collection
- Initials of phlebotomist

What has been the experience of others, and what steps are being employed to prevent incomplete or incorrectly labeled specimens from causing harm to patients?

In reply to the above question, the following replies have been received:

1. **A nurse in North Carolina** says that her health care network has been tracking labeling errors for some time now. She reports that the network experiences the same errors as the inquiring institution. The North Carolina network has chosen **a bedside labeling device** which they hope will improve labeling practices, and they recently went live with this technology in all three of their hospitals. The responding nurse says that she will share their results of this bedside labeling system, once they have sufficient experience with it. They are hoping to see a drastic reduction in labeling errors.

Postscript to reply #1: Jan. 31, 2002

As a follow up to reply #1, the responding individual adds that the e-Network can obtain information about the bedside labeling device that they are using at the [manufacturer's web site](#). Once in the site click on patient identification and then on Identi-Print. This is the version the responding institution decided to use. They chose this system because it forces bedside labeling, one ID band may be used for multiple purposes, if armband has to be removed it can immediately be replaced, effective by reducing the number of specimens that have to be recollected, and should reduce the number of sentinel events related to mislabeling. Their goal is eventually bar-coding but they decided to start here first. They have taken the step of implementing this technology after a mislabeling event that led to a root-cause analysis and monitoring of their errors. They have patient care areas where nursing draws the specimens and areas that are phlebotomy drawn. During their analysis of the specimen acquisition process, they discovered that the majority of the errors were from the areas where specimens are drawn by nursing staff. They also discovered that the nurses were at times leaving the bedside after obtaining the specimen and labeling the specimen later. They also discovered in the emergency room nurses were trying to save the patient a stick by collecting specimens prior to receiving an order and were putting these specimens "in holding" in a room until they got an order for the blood work. They discovered issues regarding the location of the equipment that would print the labels, etc. They have made several changes in their processes, reviewed their policies and procedures, and hospital wide emphasis on patient identification which in turn led to the identi-print system.

2. **A blood bank physician at a hospital in Southern California** reports that for the past six years the percentage of specimens due to problems with labeling has ranged from about 3-3.5%. All such specimens are **rejected** if they lack collection date, collection time, phlebotomist initials, or if the patient name is incomplete or misspelled, or if the medical record number is not clearly legible. Regular nursing and physician in-services are held. Trauma and ER patient samples are most prone to such labeling errors.
3. **A Texan** wrote that they have problems with specimen labeling, such as finding out who drew the specimen. Many times the initials of the phlebotomist are unreadable or there are multiple people in

the facility with the same initials. In addition, laboratory phlebotomists are not the only people who draw specimens, and some of personnel who draw samples are not known to the laboratory or in their LIS system. In addition, sometimes the phlebotomist uses the patient's account number rather than the medical record number. However, since the **account number** is unique to the individual at the time, the blood bank personnel are allowed to add the medical record number to the label.

4. **Another Texan** wrote that they have been monitoring specimen labeling discrepancies at her hospital for several years now and track when the following information is missing or incorrect:

- Patient's Full name (first and last)
- Patient's Medical Record number
- Handwritten vs. Printed computer label (we require handwritten labels)

They receive approximately 1300 specimens each month. For year 2000, their average was 0.9% compliance and for 2001, it was 1%. For the other discrepancies mentioned including Time/Date of Collection and Initials of Phlebotomist, they do not track as part of their monitor, although such labeling errors do happen frequently. To handle these discrepancies, they **call the nurse** who collected the sample and obtain the time/date of collection and for the initials, they have the nurse who collected the sample come and document their initials. The responding blood banker concludes that if you were to include these types of problems in their specimen labeling discrepancies tracking report, that they would probably exceed the 5% reported by the Virginia blood banker.

5. **A blood banker from Michigan** wrote that her hospital had a long-term problem with specimen mislabeling. To quote her, "In the mid-90s, our phlebotomy team was replaced with nursing staff drawing samples for testing as part of the conversion to "patient focused care". Within weeks the labeling error rate on lab specimens soared. When we looked specifically at blood bank samples in early 1998, our error rate was almost 7% of samples submitted. We had been allowing people to come to the lab and "correct" errors like wrong name spelling, missing MRN digit, etc. But then we had a couple of mistransfusions (ABO incompatible, of course) and decided we'd have to adopt a **"zero tolerance policy"** as far as accepting blood bank samples with labeling errors. We educated nursing services what this would mean and gave them about 2 weeks to present it to the floor staff, then the fun began! We had a rather hellacious 3 months or so of taking guff over the phone about why samples had to be redrawn. Those primarily involved in patient care seem NOT to understand chain of custody--once the sample leaves your hands, anyone could have drawn & labeled it, etc. So I instructed my technologists to refer anyone "giving them lip" on this policy to me. I took about 30 phone calls the first week, about 20 the second week, etc. By the time 6 months had gone by, we might receive one irate call every couple of months by someone new to the system. I'm happy to report that our specimen labeling error rate declined to around 2% and has stayed there. This seems, at least for us, to be a floor below, which we can't budge. Our biggest concern is the specimens drawn on one patient and labeled with another's name due to not following the procedure for bedside ID. We think we can pick up most of them if the patient has a history of a given blood type & the sample types differently, but who knows how many slip through the cracks? The rest of the lab implemented this policy late last year, so now we're all playing the same tune, and that's helped the blood bank. All the mislabeling that might have resulted in ABO mismatches are reported to hospital Quality Management for follow-up with nursing supervisor & employee."

6. **A California blood banker** wrote that at a previous hospital where she worked, they began allowing nursing to draw specimens. When this happened, many more errors in patient identification were noted. Thus, the blood bank required and **brutally enforced the policy that all specimens drawn for the blood bank must have two licensed persons RN, RT, MT, etc. verify the patient identification and sign the sample as to that effect.** A specimen without two signatures and employee number would not be accepted. Also, the specimen would be rejected if it did not have the entire name of the patient, patient medical record number, as well as date and time drawn. These requirements cut down on a lot of mistakes, and the staff was extra careful when it came to obtaining a specimen for the blood bank.

7. **A Boston blood banker** wrote that the Biomedical Excellence for Safer Transfusion (**BEST**) Working Party of the International Society for Blood Transfusion is currently doing a **multi-center international study** in an attempt to learn two important pieces of information: 1) What is the current frequency of "wrong blood in tube" (defined as a sample whose ABO/Rh group does not match the results previously found on that patient); and 2) What policies or practices in place in hospitals correlate with the lowest frequency of WBIT. The results of this study, expected to be out later in 2002, may provide some real world "numbers" on this problem. This respondent looks forward to a day when there will be a "minimum performance standard" established for this very important part of safe transfusion practice.

ADDENDA Jan. 30, 2002

8. **A blood banker in Connecticut** wrote that in FY2001 her facility had a 1.4% sample error rate for labeling issues. She says that this may seem low, but it represents **over 525 patients**. The vast majority (86%) were due to **lack of identification of the person who drew the sample**.

Curative efforts consisted of phone calls to nursing managers who, if they found the time and knew who it was, spoke to the person who drew the blood. A variety of people draw blood in the responding blood banker's institution: nurses: Patient Care Associates (PCA), med students, MDs. Phlebotomists are not used, although some PCAs are Phlebotomists. Last year, the Patient Safety Initiative (PSI) program included improvement of sample labeling and sample quality among the primary objectives. First step was to standardize phlebotomy protocol. Second step was to standardize phlebotomy training. Third step was to issue pocket-sized cue cards and posters bulleting key points, including label requirements. Concurrently, they standardized data collection of sample errors throughout the Dept of Laboratory Medicine. Just this week they released the first two quarterly reports of sample errors (besides improperly labelled, it itemizes hemolysis, QNS, IV contamination, etc.). The reports are nursing unit specific, showing in graph form the frequency of each type of error per quarter. Except for the PSI committee and nursing administrators, no one sees how everybody else is doing. In the future, the managers will see how their unit is doing compared with the institution average. Blood Bank's data are on graphs separate from the other laboratories. Nursing managers are to use these graphs to drive process improvement. The PSI committee will assist those areas who request it or whose error rates are above their peers. Root cause analyses have already identified some sources of error. The expectation is that more process improvement activities will occur and the error rate will drop. Time will tell. The difference between this approach and the previous efforts taken at this institution is that this has the direct backing of top administration and is multi-discipline. It's not just the lab on the phone 'complaining' again about a sample that must be rejected. The frequency and source of the reason for rejection is visible. Phone calls are still made about each event so a redraw can be done, but nursing managers can consider the information in total and at their convenience. It should be noted that error rates will not be compared to those prior to July 2001 because the data collection was not standardized before that. The only benchmark decided so far is zero events for mis-identification (wrong patient drawn or wrong label applied). If industry benchmarks can be established for other types of errors, they will target them. Until then, they will go for reduction from current levels (baseline).

ADDENDA Jan. 31, 2002

4. **A blood banker in Florida** reports that effective 1/28/02 her hospital adopted the **Securline** blood bank wristband as a positive ID initiative. She works at a 400+ bed Level II trauma center with a comprehensive cancer center. Interesting, when the lab inserviced house wide nursing staff, many nurses specifically in critical care, stated "what took us so long?" The responding blood banker ends by saying that the majority of area hospitals in the same county have utilized this methodology with great success for many years.
5. See also **P.S.** from [responder #1](#) above.

ADDENDA Feb. 3, 2002

6. **A blood banker in Los Angeles** suggested that the e-network might be interested to read a discussion about the problem of specimen mislabeling in an article from **CAP Today, May 1999**.

ADDENDA June 20, 2006

7. **A Transfusion Nurse Consultant in the Southern Adelaide Health Service in Australia** reports that at his hospital the **specimen request form has a space that is completed by the collector**. It requires full name, time and date of collection and signature. This signature **corresponds with the mandatory initialling of the specimen tube label**. A unique identifier is placed on the specimen at the time of collection that also corresponds to the request form and a **unique transfusion wrist band** that is placed on the patient. He claims "No wrist band no blood". He adds that "tracing collectors is relatively easy - compliance with the collector details is high."

ADDENDA June 21, 2006

8. **A colleague at a hospital in Port Jefferson, Long Island, NY** reports that his institution **requires the following** information on the blood bank **specimen label**:

- Patients full name
- Date of Birth
- Medical Record Number
- Date sample drawn
- Time Sample Drawn
- Phlebotomists full signature

He adds that "there are **no exceptions** to this rule. Any specimen received by the transfusion Service that does not fulfill the above requirements, will be disposed of. We **do not allow** nurses or a phlebotomist to come down and **re-label a specimen or add additional pertinent information to the label, once submitted for testing**. We expect that this information is taken directly from the patient and the patient's wristband. It is a requirement that all tubes be labeled at bedside. Any discrepancy will result in an additional specimen being drawn for positive patient identification."

ADDENDA Nov. 12, 2006

9. **A nurse affiliated with a county hospital which serves as a Level I trauma center** somewhere in the USA reports that many of their anesthesiologists and CRNA's feel that they are **'exempt' from proper labeling of specimens** that they draw for pretransfusion and other laboratory testing. Because their hospital policy does not specify that the individual drawing a specimen is accountable for its proper labeling, many of the aforementioned providers feel it is the **responsibility of the circulator in the operating room**, particularly during a surgery of a seriously and acutely ill or injured trauma patient. She reports (without providing specifics) that **transfusion errors and serious reactions have occurred** in this facility in part because of this attitude. She does not comment if any of the transfusion reactions were reported to the FDA or JCAHO. She asks "**What resources are at my disposal**, aside from providing them with hospital policy and procedure, **that support the provider who draws the sample is responsible** for its proper labeling AND that accountability for improper labeling that results in harm to their patient is theirs alone?" She concludes saying "Providers in the OR and in the trauma ER literally **'hand' over unlabeled specimens** to RN's, med techs, and others for labeling and any **opposition to this practice is resisted** by physicians and advanced providers.

Please submit comments to the [e-Network Forum](#).



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Posted: January 30, 2002

Addenda: Jan. 30, 31 & Feb. 3, 2002; June 20, 21 & Nov. 12, 2006

Link Removed: Nov. 15, 2003