



LABORATORY SPECIMEN ID REPORT

FEBRUARY 2018



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EXECUTIVE SUMMARY

Hospital laboratories perform an essential role in diagnostics, providing a majority of clinical test findings that determine patients' treatment options. A recent report found that 60 to 70 percent of treatment options are determined by lab results.¹ With large specimen volumes passing through laboratories on a daily basis, laboratories are at risk for labeling errors. According to a study published in the Archives of Pathology and Laboratory Medicine, specimen labeling errors account for 55.5% of identification errors in the lab.²

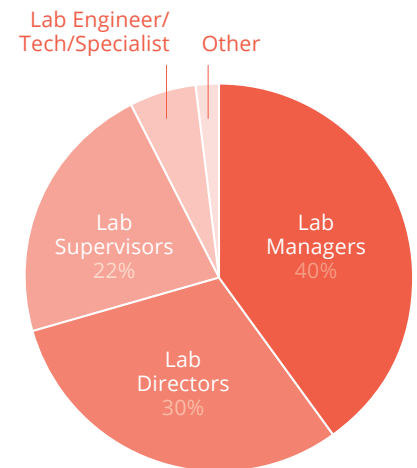
The purpose of this report is to delve deeper into this pervasive problem, and report laboratory concerns as they relate to specimen labeling errors throughout hospital facilities in the United States. Four key conclusions recur across our survey findings: 1) specimen errors and specimen labeling errors are a key concern for labs; 2) improper specimen collection/handling is the most common lab specimen error; 3) human error and distractions are the top cause for errors; and 4) barcoding usage for specimens is inconsistent.

An online survey was sent out by TechValidate on behalf of PDC Healthcare to 3,610 laboratory contacts from acute hospitals, between February 7 and March 17, 2017. 1,503 responses from 231 respondents yielded an overall 6.4% response rate.

SURVEY DEMOGRAPHICS

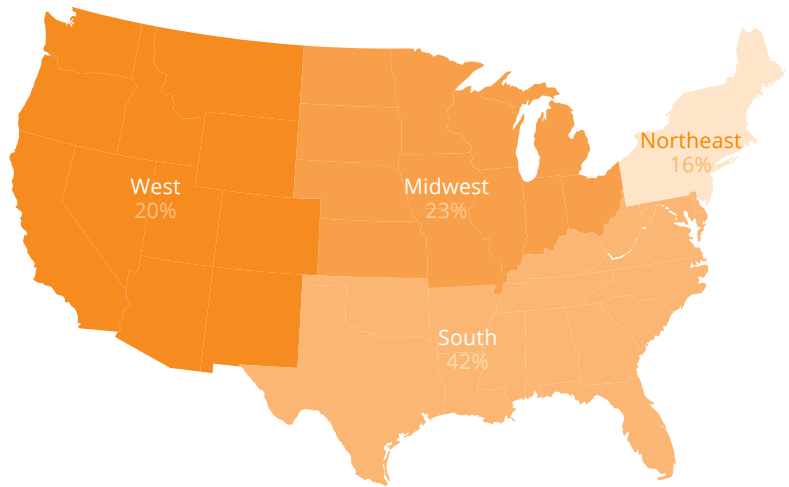
JOB TITLE

TITLES	# OF RESPONDENTS	%
■ Lab Managers	93	40%
■ Lab Directors	70	30%
■ Lab Supervisors	51	22%
■ Lab Engineer/Tech/Specialist	13	6%
■ Other	4	2%



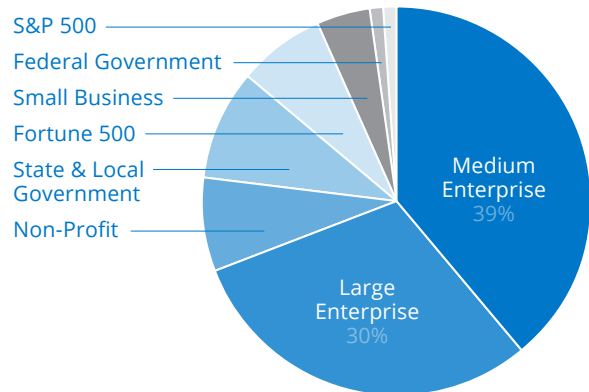
REGION

REGION	# OF RESPONDENTS	%
■ South	96	42%
■ Midwest	53	23%
■ West	45	20%
■ Northeast	36	16%



ORGANIZATION SIZE

HEALTH ORGANIZATION SIZE	# OF RESPONDENTS	%
■ Medium Enterprise	90	39%
■ Large Enterprise	70	30%
■ Non-Profit	21	9%
■ State & Local Government	18	8%
■ Fortune 500	17	7%
■ Small Business	10	4%
■ Federal Government	3	2%
■ S&P 500	2	1%



LABORATORY PRIORITIES

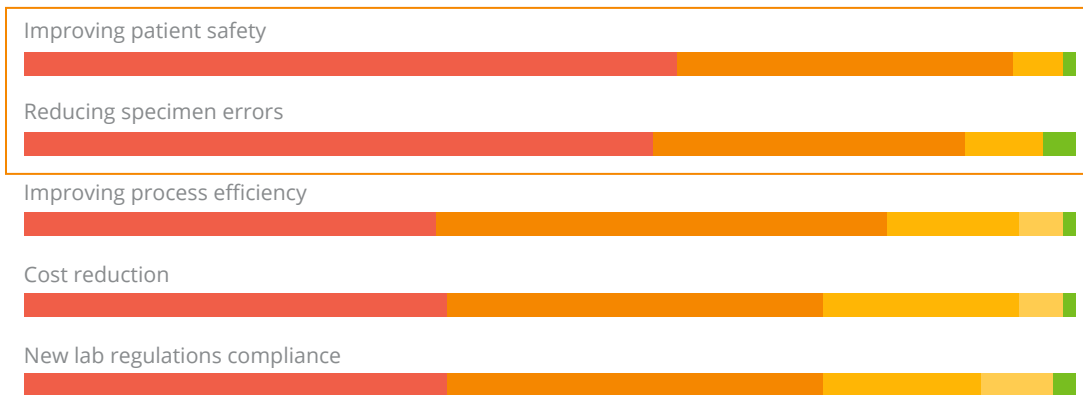
IMPROVING PATIENT SAFETY & REDUCING SPECIMEN ERRORS ARE TOP PRIORITIES FOR LABS

When asked to rate the level of priority each item below has for their laboratory in 2017, laboratory contacts ranked improving patient safety and reducing specimen errors as top priorities. Approximately **61%** of lab contacts responded that improving patient safety is an essential priority, and **59%** responded that reducing specimen errors is essential as well. Improving process efficiency, cost reductions, and compliance with new lab regulations were also high priorities for surveyed labs in 2017.

LEVEL OF PRIORITY FOR LABORATORIES IN 2017

For each item below, please rate the level of priority it has for your laboratory in 2017.

■ Essential
 ■ High priority
 ■ Medium priority
 ■ Low priority
 ■ No priority



Source: TechValidate survey of 155 users of PDC Healthcare Laboratory labels.
Published March 13, 2017. TVID: 751-942-BA6

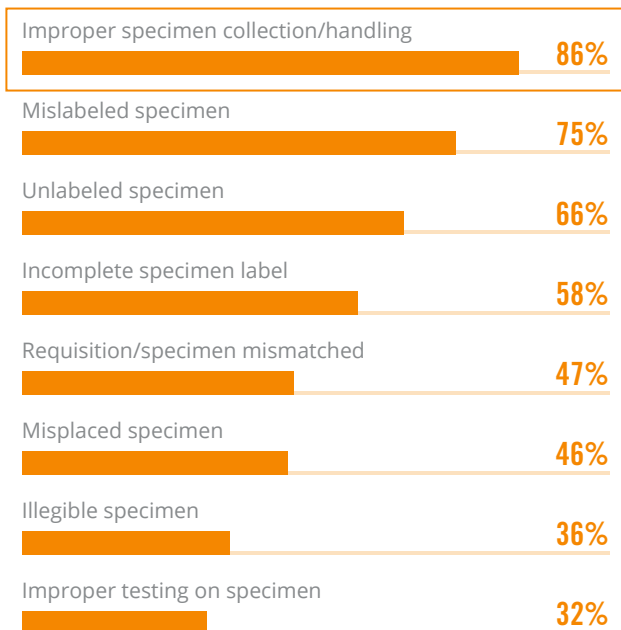
TYPES OF LABORATORY SPECIMEN ERRORS

IMPROPER SPECIMEN COLLECTION & HANDLING IS THE MOST COMMON SPECIMEN ERROR

When asked which of the following types of specimen errors laboratories have experienced, improper specimen collection and handling made the top of the list. After analyzing our data, however, we found that a large number of specimen errors were connected with inadequate labeling practices. Mislabeled specimens were the most common error, cited by **75%** of respondents, unlabeled specimens made up **66%** of errors, incomplete specimen labels were associated with **58%** of specimen errors, and illegible labels related to **36%** of lab specimen errors.

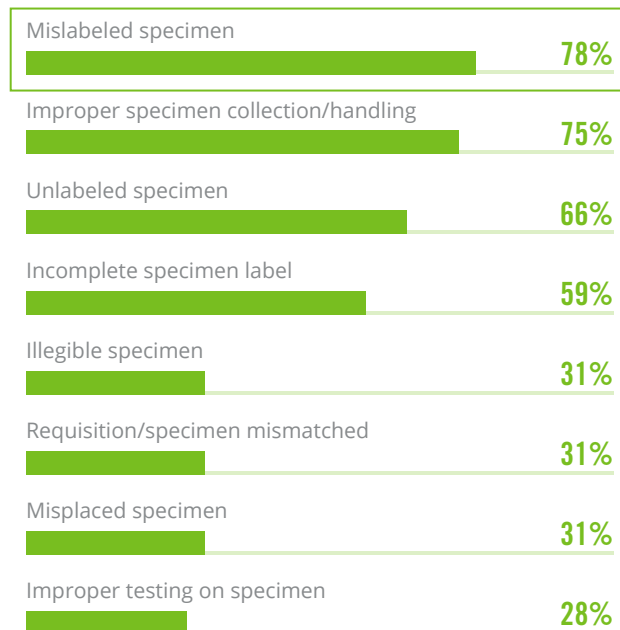
An interesting result surfaced when we narrowed the survey results solely to Lab Supervisors. Mislabeled specimens were cited as the leading cause of specimen errors according to Lab Supervisors, surpassing improper specimen collection and handling.

ALL RESPONDENTS TYPES OF SPECIMEN ERRORS EXPERIENCED



Source: TechValidate survey of 158 users of PDC Healthcare Laboratory labels. Published March 10, 2017. TVID: 79C-386-172

LAB SUPERVISORS TYPES OF SPECIMEN ERRORS EXPERIENCED



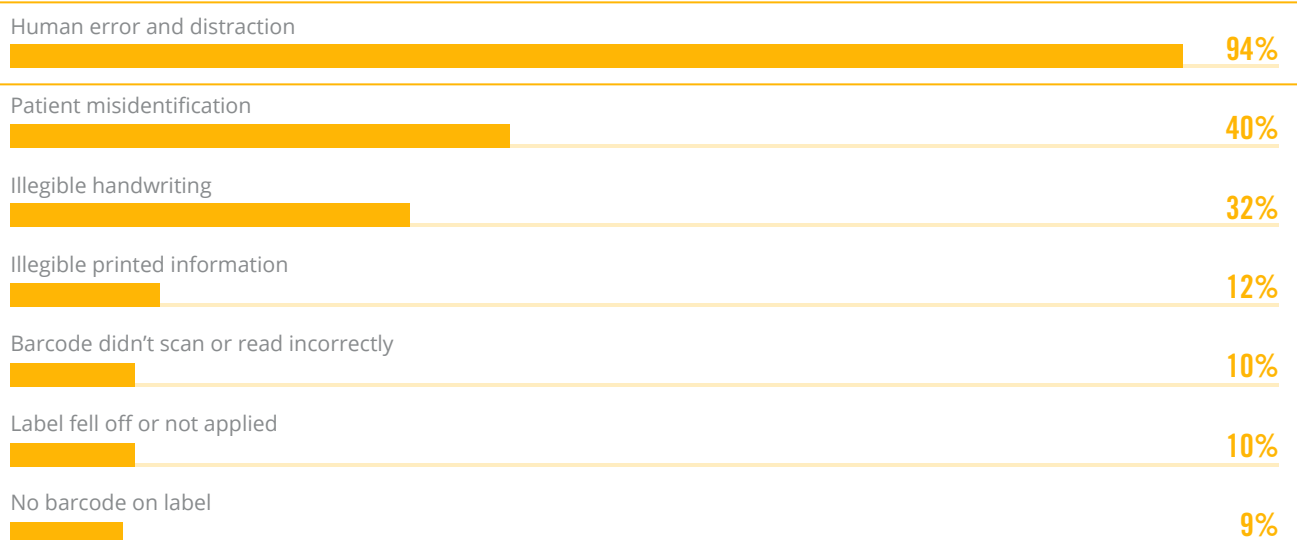
Source: TechValidate survey of 32 users of PDC Healthcare Laboratory labels. Sample comprised of Laboratory Supervisors. Published April 13, 2017. TVID: 831-658-629

CAUSES OF SPECIMEN LABELING ERRORS

HUMAN ERROR & DISTRACTION IS THE TOP CAUSE OF SPECIMEN LABELING ERRORS

When asked what the top causes of specimen labeling errors are for their laboratories, overall lab professionals ranked human error and distraction the highest, with an astounding **94%**. The remainder of the responses can be attributed to patient misidentification and illegible information or barcodes on specimen labels.

TOP CAUSES OF SPECIMEN LABELING ERRORS



Source: TechValidate survey of 152 users of PDC Healthcare Laboratory labels. Published March 10, 2017. TVID: 49F-150-33E

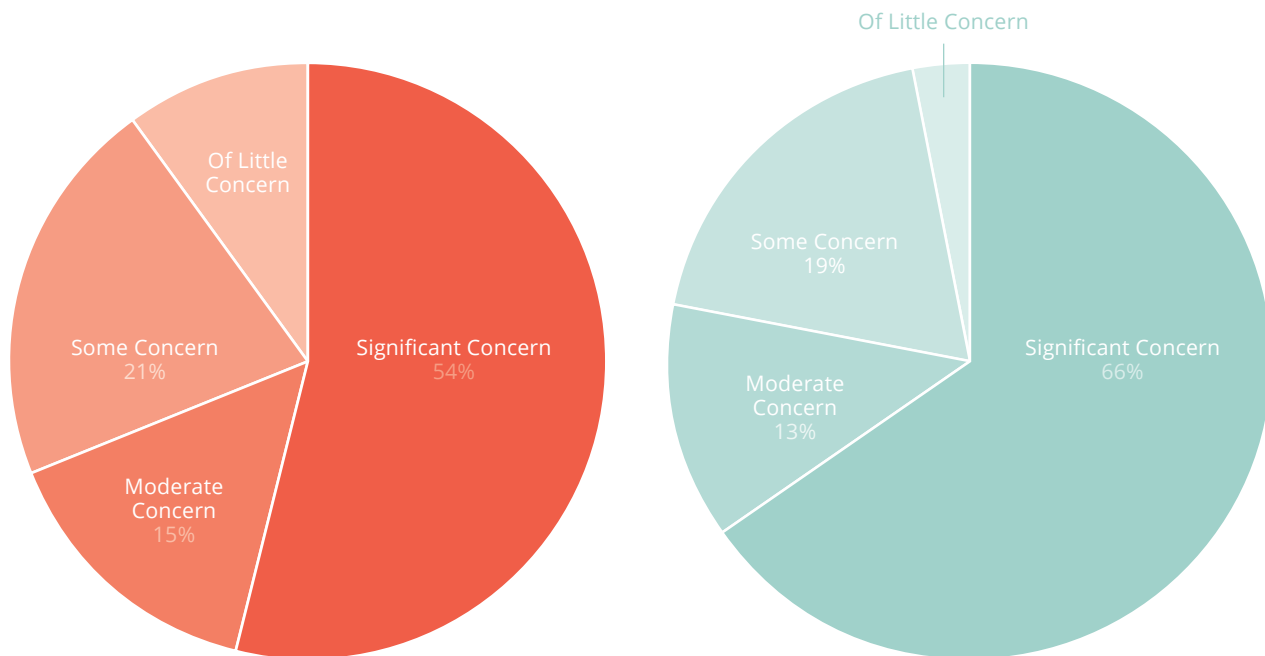
VIDEO TIP

VIEW HOW TO PROPERLY APPLY SPECIMEN LABELS

SPECIMEN LABELING ERROR CONCERNS

When asked how much of a concern specimen labeling errors are for their laboratory, **90%** of lab contacts found specimen labeling errors to be a concern. Additionally, over half of lab contacts surveyed claimed that specimen labeling errors are a significant concern for their labs.

66% of Lab Supervisors claim that specimen labeling errors are a significant concern for their labs, which is greater than any other laboratory job title surveyed.



90%
OF SURVEYED
LABS FIND
SPECIMEN
LABELING
ERRORS TO BE
A KEY CONCERN

ALL RESPONDENTS SPECIMEN LABELING ERROR LEVEL OF CONCERN

- Significant concern | **54%**
- Moderate concern | **15%**
- Some concern | **21%**
- Of little concern | **10%**
- No concern | **0%**

Source: TechValidate survey of 155 users of PDC Healthcare Laboratory labels. Published March 10, 2017. TVID: 8F2-82F-281

LAB SUPERVISORS SPECIMEN LABELING ERROR LEVEL OF CONCERN

- Significant concern | **66%**
- Moderate concern | **13%**
- Some concern | **19%**
- Of little concern | **3%**
- No concern | **0%**

Source: TechValidate survey of 32 users of PDC Healthcare Laboratory labels. Sample comprised of Laboratory Supervisors. Published April 13, 2017. TVID: B6F-4FD-BA2

IMPROVING SPECIMEN LABELING

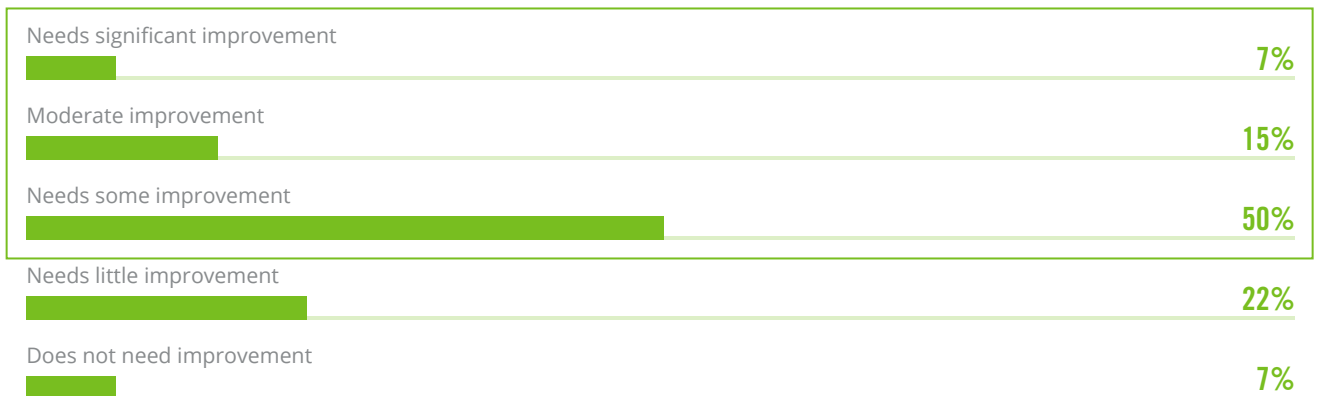
OVER 70% OF LAB DIRECTORS CLAIM SPECIMEN LABELING IMPROVEMENT IS NEEDED

When asked how much improvement is needed with the way their laboratory currently handles specimen labeling, over **70%** of Lab Directors responded that specimen labeling improvements are needed in their labs. **50%** of Lab Directors believe that some improvement is needed with the way their laboratories currently handle specimen labeling, and only **7%** believe no improvement is needed. These statistics illustrate that a majority of laboratory contacts are aware that their labs need improvement with the way they currently address specimen labeling.

TIP

READ 3 WAYS
SPECIMEN
LABELING
ERRORS
THREATEN
THE LAB

AMOUNT OF IMPROVEMENT LAB DIRECTORS CLAIM IS NEEDED IN THEIR LABS WITH SPECIMEN LABELING



Source: TechValidate survey of 46 users of PDC Healthcare Laboratory labels. Sample comprised of Laboratory Directors and Diagnostics Directors at laboratories. Published March 29, 2017. TVID: DEF-C10-AB5

BARCODE SCANNING OF SPECIMENS

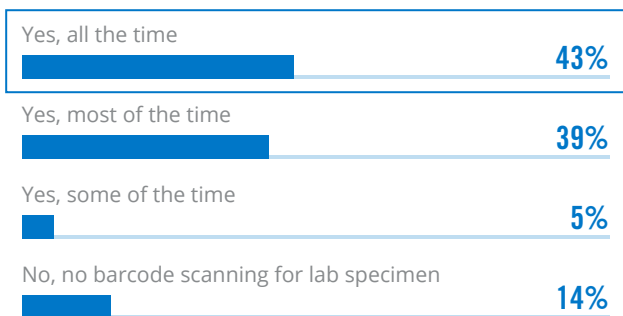
CONSISTENT BARCODE SCANNING OF SPECIMENS IS ESSENTIAL FOR PATIENT IDENTIFICATION & SAFETY

When asked if their hospitals scan barcodes on laboratory specimens for patient identification, an average of only **43%** laboratory contacts claimed that they consistently scan barcodes, while an overwhelmingly **44%** use bar coding inconsistently, and **14%** never scan barcodes for lab specimens. This means **58%** of bar coding is either inconsistent or nonexistent.

When isolating Laboratory Supervisors, the results are even more concerning. Only **34%** of Lab Supervisors scan barcodes all of the time, and **21%** never scan barcodes. This means that **66%** of Lab Supervisors think lab staff are not scanning barcodes consistently.

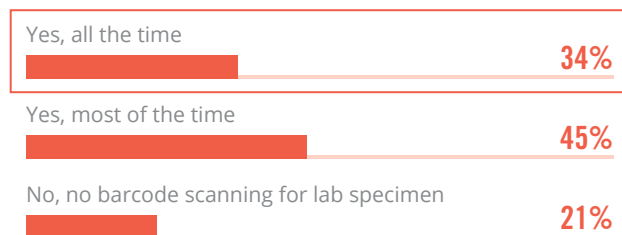
These results are troubling since numerous studies, including the CDC's Laboratory Medicine Best Practices policy, conclude that effective and consistent bar coding significantly reduces specimen identification errors.

ALL RESPONDENTS BARCODE SCANNING FREQUENCY



Source: TechValidate survey of 155 users of PDC Healthcare Laboratory labels. Published March 10, 2017. TVID: F5E-312-183

LAB SUPERVISORS BARCODE SCANNING FREQUENCY



Source: TechValidate survey of 29 users of PDC Healthcare Laboratory labels. Published April 14, 2017. TVID: 472-4D2-D78

TIP

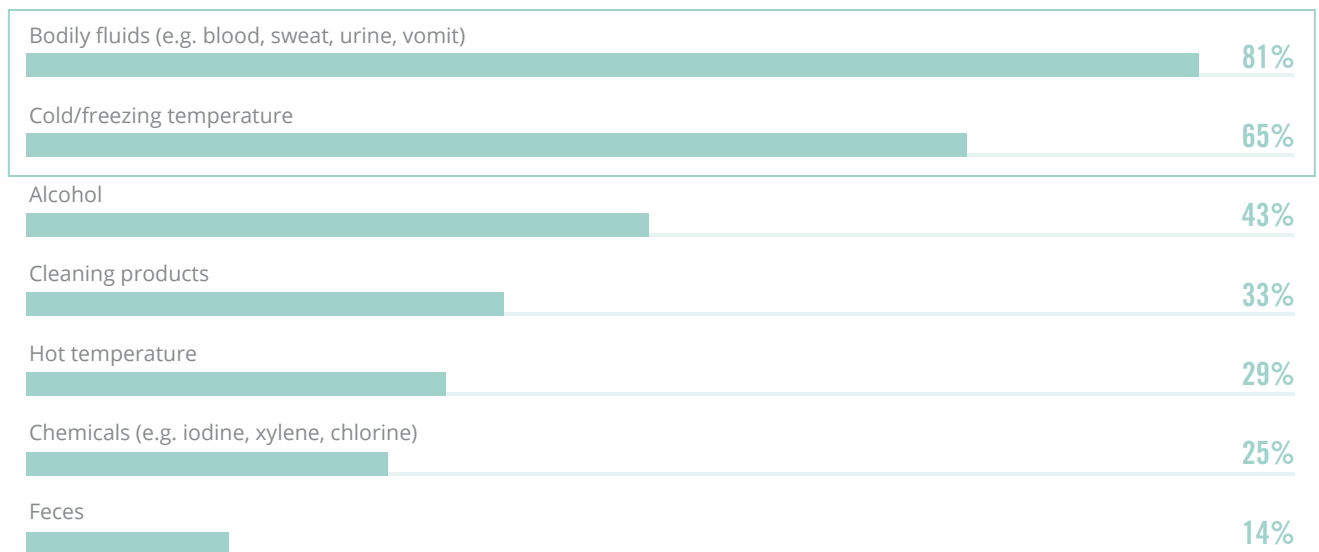
READ WHY
BLOOD TUBE
LABEL
ALIGNMENT
MATTERS

PHYSICAL CONDITIONS LABELS MUST WITHSTAND

LAB LABELS MUST SURVIVE HARSH CONDITIONS

When laboratory contacts were asked which of the following substances and conditions their specimen labels have been exposed to in the laboratory and survived, bodily fluids and cold/freezing temperatures topped the list. Responses from this question indicate that lab labels are subjected to various harsh conditions like bodily fluids, extreme temperatures, and chemicals. Therefore, quality labels, resistant to harsh substances and conditions, are crucial to your lab's everyday operations, patient safety, and reduction of specimen errors.

SUBSTANCES SPECIMEN LABELS HAVE BEEN EXPOSED TO AND SURVIVED



Source: TechValidate survey of 150 users of PDC Healthcare Laboratory labels. Published March 13, 2017. TVID: DB9-08F-3A7

TOP LABORATORY REGULATORY CONCERNS

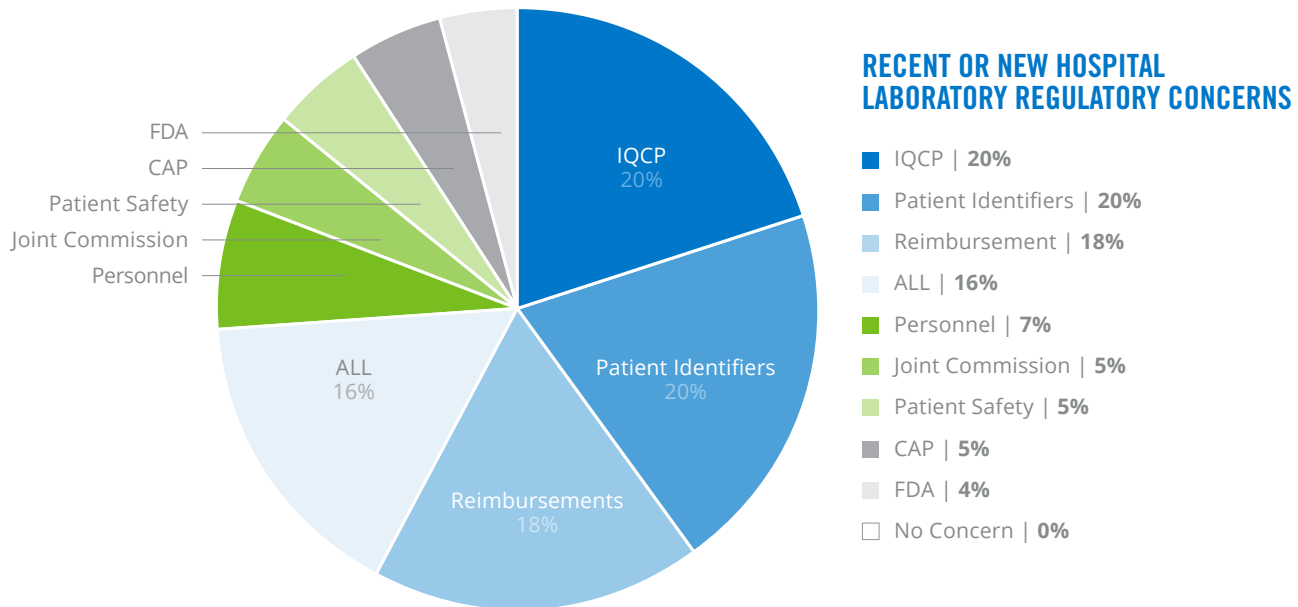
IQCP & PATIENT IDENTIFIERS ARE MOST CONCERNING TO LABORATORIES

When asked to think about recent or new hospital laboratory regulations or compliance requirements, the following regulatory changes concerned laboratory contacts the most. The top two regulatory concerns for all surveyed lab contacts are IQCP (Individualized Quality Control Plan) and patient identifiers.

IQCP requires laboratories to assess the risk of potential errors for five components; one directly involving specimens. Labs must evaluate specimen sources of error, which include but are not limited to, specimen collection, specimen labeling, and specimen processing.³

Additionally, laboratory contacts are concerned with patient safety and reducing specimen labeling errors by properly identifying patients by labeling specimens with two unique patient identifiers per Joint Commission’s Laboratory National Patient Safety Goals.

By identifying potential sources of specimen errors and implementing an Individualized Quality Control Plan, as well as using two patient identifiers, labs reduce the probability of specimen-related errors from occurring.



CONCLUSION

Based upon the data of this survey, it's apparent that specimen labeling errors are problematic and a pronounced concern for laboratory management. Specimen labeling errors continue to threaten all healthcare facilities, no matter the size or the amount of specimens processed. No laboratory is immune to the damaging effects yielded by specimen labeling errors. In fact, over **70%** of surveyed Lab Directors claim specimen labeling improvements are needed in their facilities.

Improving patient safety and reducing specimen errors continue to be top priorities among laboratories, with **90%** of surveyed labs affirming specimen labeling errors are a key concern for their laboratories. Mislabeled, unlabeled, incomplete, misaligned, and inconsistent bar coding can threaten your laboratory by compromising patient safety, increasing lab and hospital costs, and wasting valuable staff time and resources. Shedding light on such a vital and prevalent issue will help your facility gain awareness, so tools can be employed to help reduce specimen labeling errors and protect your patients' safety.

THE PATH FORWARD

PDC Healthcare is committed to working with our customers to publish a series of helpful articles and videos for best practices in specimen labeling to address widespread concerns and help educate laboratory personnel on ways to prevent and reduce specimen labeling errors.

PDC Healthcare would like to thank those who participated in our Laboratory survey.

To learn more, visit www.pdchealthcare.com/lab or read our blog at blog.pdchealthcare.com.

Sign up today for our newsletter to get best practices, helpful tips, and timely articles, curated specifically for hospital laboratories to help you reduce errors and improve patient safety and workflow efficiency.

SIGN UP TODAY

REFERENCES

¹ Martin, H., Metcalfe, S. & Whichello, R. (June 2015). Specimen labeling errors: A retrospective study. *Online Journal of Nursing Informatics (OJNI)*, 19 (2), Available at <http://www.himss.org/ojni>

² "Identification Errors Involving Clinical Laboratories: A College of American Pathologists Q-Probes Study of Patient and Specimen Identification Errors at 120 Institutions," *Archives of Pathology and Laboratory Medicine*, 2006; Vol. 130, No. 8: 1106-1113

³ <https://www.cms.gov/Regulations-andGuidance/Legislation/CLIA/Downloads/CLIAbrochure13.pdf>

ABOUT PDC HEALTHCARE

With more than six decades of experience, PDC Healthcare is a trusted leader in identification and patient safety solutions. Over 90% of hospitals rely upon PDC Healthcare products today. Our extensive portfolio of identification solutions ensures positive patient identification, reduces medical errors, and helps reduce risk. PDC Healthcare's wristbands, labels, and patient safety solutions also help organizations improve workflow efficiencies and fiscal performance, while maintaining compliance with important patient safety regulations.

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