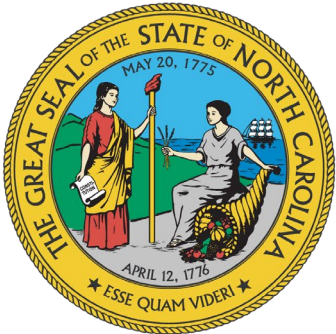


NC Blood Lead specimen submission project



NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**

Division of Public Health
State Laboratory of Public Health

Kate Koehler
Hemachemistry Manager
North Carolina State Laboratory of Public Health

September 2022

Project: reduce specimen submission errors

- Influx of Blood Lead specimens due to Lead Care recall
- Standardization of demographics submitted on specimens
- Improve messaging and communication with providers
- New providers enrolling for testing, creating a need for training

Project Goals: 3-pronged approach

- Decrease submitter error rates by creating **specimen labels** to be disseminated with Blood Lead specimen collection kits
- Develop a **provider contact list** to aid in timely communications
- Develop **outreach materials** for correct specimen collection, specimen requisition completion as well as correct packaging and shipping

Specimen labels



Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____
Patient Name: _____ DOB: _____	Patient Name: _____ DOB: _____

Provider contact list

ARBORETUM PEDIATRICS
ARCHDALE-TRINITY PEDIATRICS
ASHE COUNTY HEALTH DEPT
ASHE PEDIATRICS, PLLC
ASHEVILLE CHILDRENS MED CTR
ATRIUM HEALTH
ATRIUM HEALTH -MYERS PARK PEDIATRICS
ATRIUM HEALTH LEVINE CHILDREN'S DENVER PEDIATRICS
ATRIUM HEALTH LEVINE CHILDREN'S-SHELBY CHILDREN'S CLINIC-KINGS MOUNTAIN
ATRIUM HEALTH WAKE FOREST BAPTIST PEDS@ PREMIER
ATRIUM HEALTH WAKE FOREST BAPTIST PEDS-LEXINGTON
ATRIUM HEALTH-THE DAVIDSON CLINIC
AVANCE CARE
AVERY COUNTY HEALTH DEPT
BEAUFORT COUNTY HEALTH DEPT
BERTIE COUNTY HEALTH DEPT
BLADEN COUNTY HEALTH DEPT
BLADEN MEDICAL ASSOCIATES
BLADEN MEDICAL ASSOCIATES INC
BLUE RIDGE PED. & ADOLESC. MED
BLUE RIDGE PEDIATRICS
BLUE SKY PEDIATRICS
BOICE WILLIS CLINIC PEDIATRICS
BOICE WILLIS FAMILY PRACTICE / IMMEDIATE CARE
BOICE-WILLIS CLINIC NASHVILLE
BOICE-WILLIS CLINIC SPRINGHOPE

Outreach materials



150 μ L is the minimum that can be tested. Seal the tube well.

Put 2 unique identifiers on the specimen tube's label.

For example Patient's First and Last Name AND Date of Birth.

*Information on the specimen and DHHS 3707 form must match EXACTLY.
If the specimen label has John, the form cannot have Johnny, Johnathan, etc.*

Complete the entire DHHS 3707 form for each specimen.

Available at: <https://slph.dph.ncdhhs.gov/Forms/3707-Blood-Lead-Analysis.pdf>

*DO NOT alter the form.
Use the most current version.
Ensure all information is accurate. Inaccurate submissions are subject to rejection.
For Medicaid patients, enter Medicaid # (required) and Member ID # (if applicable).*

Seal tube with absorbent material in a leak-proof specimen bag.

Slide folded DHHS 3707 form in outer sleeve of bag.

Use enough absorbent material to soak up all liquid in case of leaks.
One specimen per bag.

Package specimens as UN3373 Biological Substance, Category B.

The State Lab boxes can transport up to 50 mL of blood, per shipping regulations.
Use a State Lab Blood Lead label if supplying own box.

*Envelopes are not acceptable.
Attach a return address label, including responsible person with phone number.
Add cushioning to protect specimen(s) in transit.*

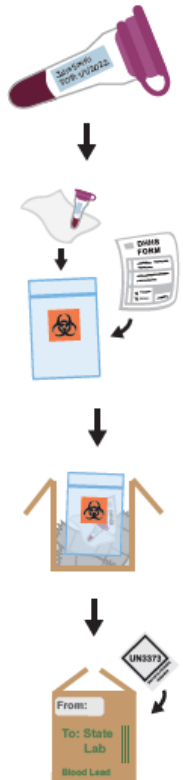
Ship at ambient temperature.

Need supplies or help?

Call SLPH Customer Service at 919-733-3937,
SLPH Mailroom at 919-733-7656, or visit us at
<https://slph.dph.ncdhhs.gov/hemachem/resources.asp>



NC Department of Health and Human Services
Division of Public Health
North Carolina State Laboratory of Public Health
<http://slph.dph.ncdhhs.gov> 5/31/2022 NCDHHS
is an equal opportunity employer and provider.



Laboratory ... x

NCDHHS

State Laboratory of Public Health

North Carolina Public Health

SLPH Home

A-Z Topics

About / Administration

Contact Us / Location

Lab Test Results

Biosafety

Bioterrorism and Emerging Pathogens

Chemical Terrorism and Threat

CLIA Contract Program for LHDs

Environmental Sciences

Forms and Misc. Docs

Hemachemistry

Lab Improvement

Microbiology

Molecular Epidemiology

Newborn Screening

Waters/Contaminants

DHHS > DPH > SLPH

Effective January 31, 2022, the NCSLPH website is changing to <https://slph.dph.ncdhhs.gov/>. Please update your bookmarks.

Environmental lab services for NC citizens

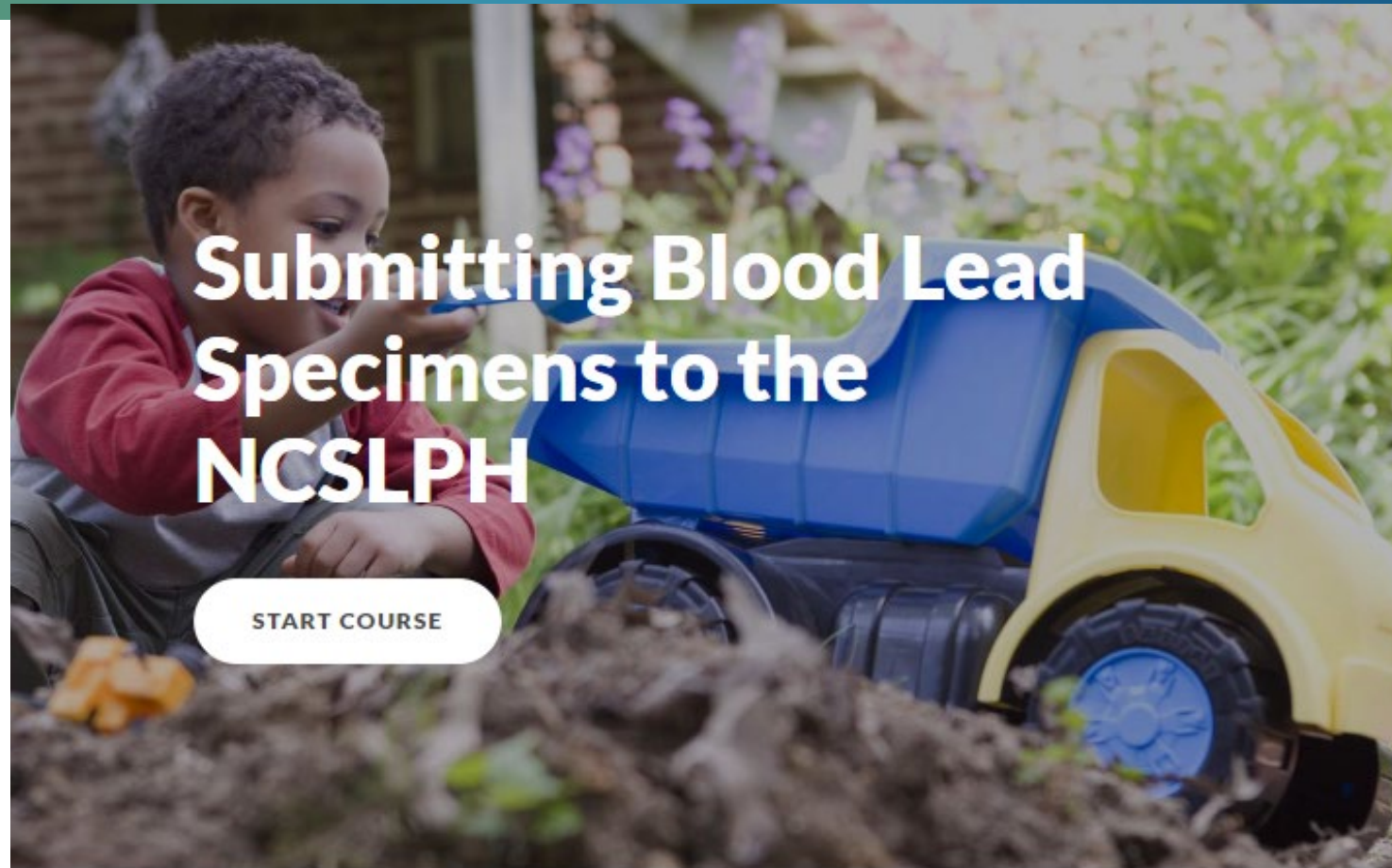
Overview

Childhood Blood Lead Testing

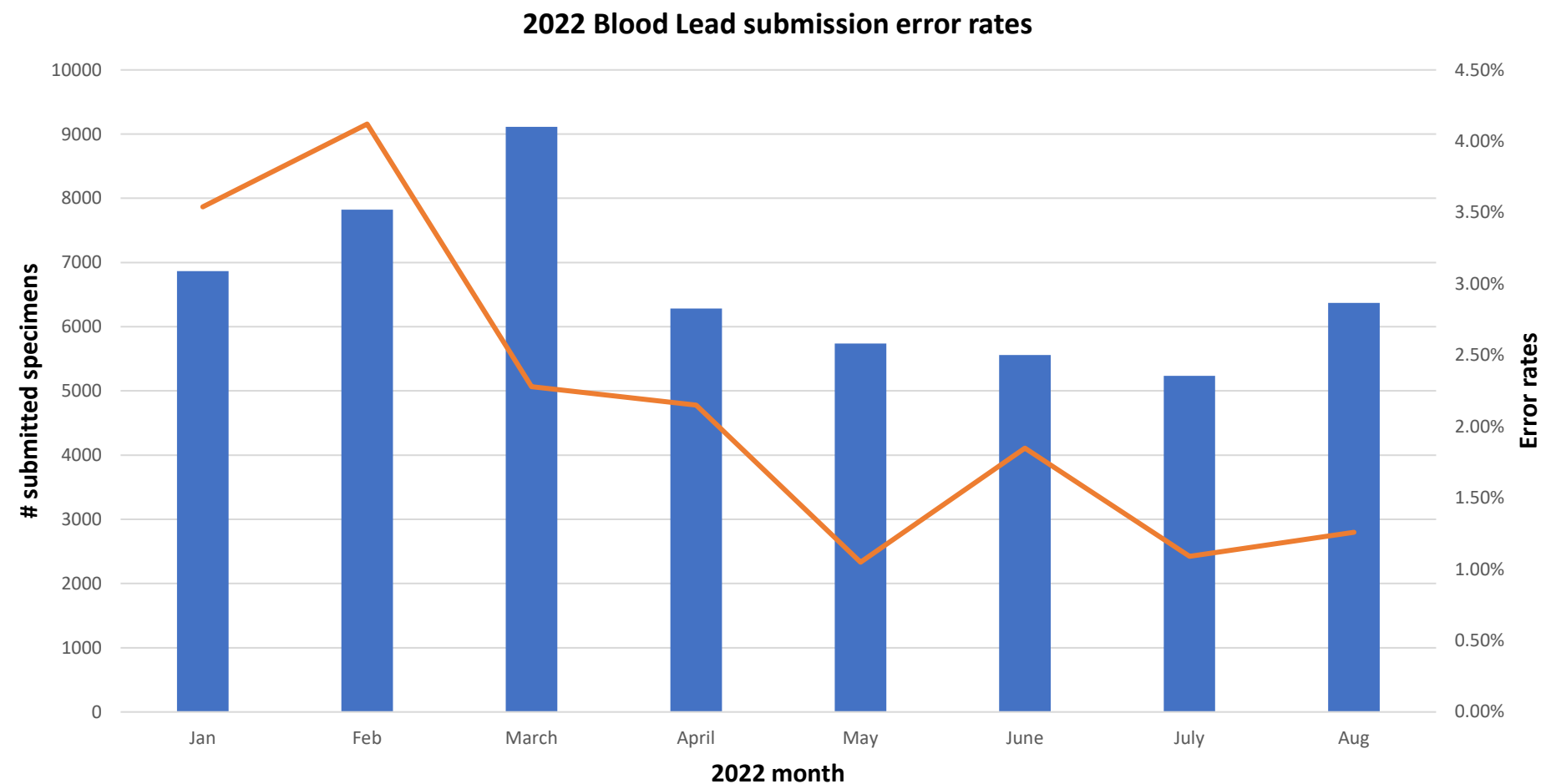
Resources

The State Laboratory of Public Health provides certain medical and environmental laboratory services (testing, consultation and training) to public and private health provider organizations responsible for the

Outreach materials



2022 error rates by month

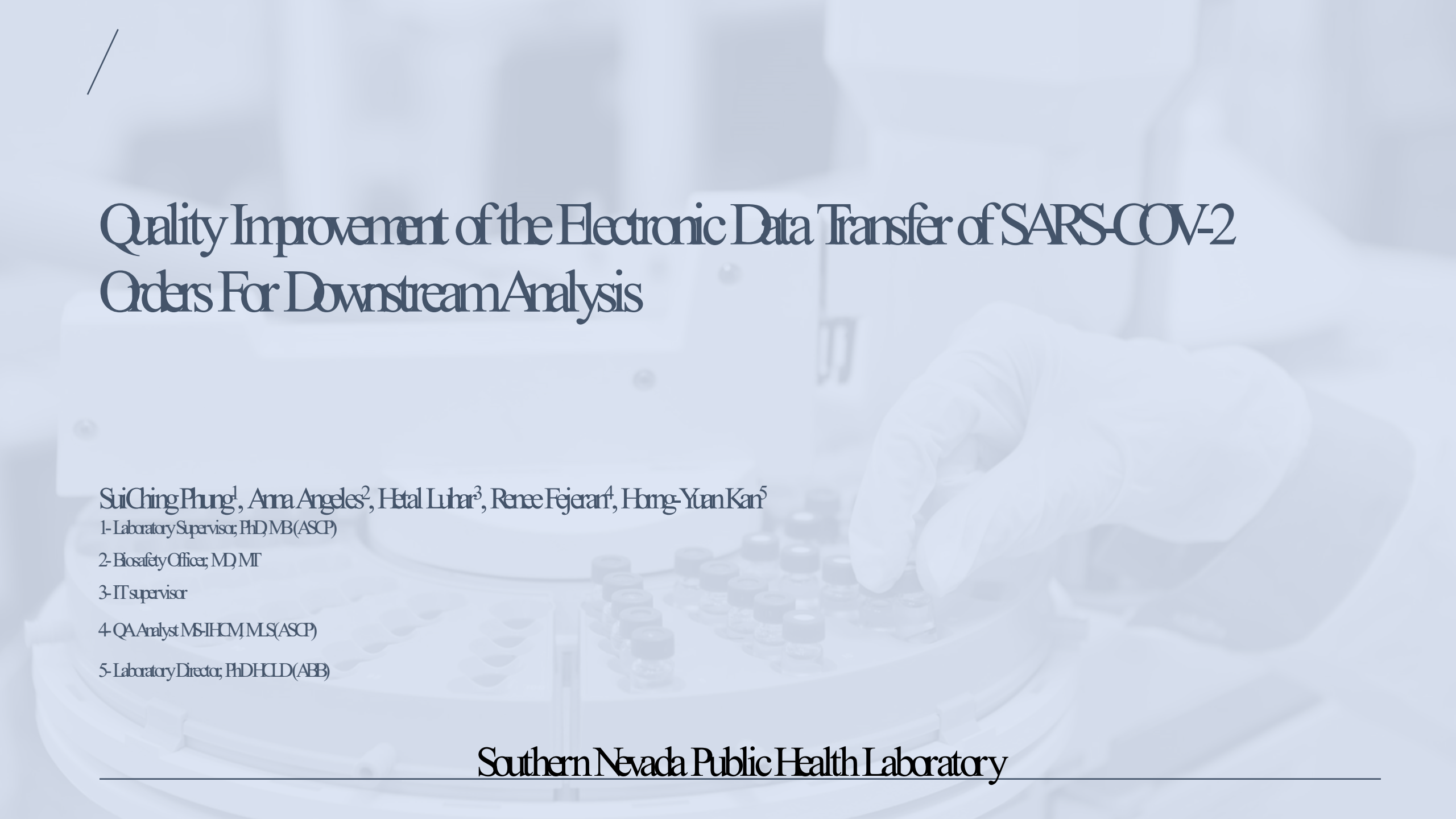


Lessons Learned

- Resource in-house assets, reduce vulnerability for supply chain
- Create communication logs to identify providers for training needs
- Communication with stakeholders for outreach materials, ongoing conversations
- Create a “canned” email with all links needed to initiate Blood Lead testing
- **ELECTRONIC TEST ORDERING!!!**

- Kate Koehler
- North Carolina State Laboratory of Public Health
 - Kate.Koehler@dhhs.nc.gov
 - <https://slph.dph.ncdhhs.gov>





Quality Improvement of the Electronic Data Transfer of SARS-COV-2 Orders For Downstream Analysis

Sui Ching Phung¹, Anna Angeles², Hetal Luhar³, Renee Fejeran⁴, Hong-Yuan Kan⁵

1- Laboratory Supervisor; PhD MB(ASCP)

2- Biosafety Officer; MD, MT

3- IT supervisor

4- QA Analyst MS-HCM, MLS(ASCP)

5- Laboratory Director; PhD CLD(ABB)

Southern Nevada Public Health Laboratory

Introduction

PROBLEM AREAS:

- All samples were ordered manually using paper requisitions
 - Average time to accession is 15 minutes
- Order not coming through to the Release Stored Order (RSO) system in the lab
- Increased time for specimens to get to testing area
 - COVID Testing Turn Around Time (TAT): 22.47 hours



PLAN:

- Focus on the sample collection orders and accessioning area
- Improve the COVID test order application
- Provide in house training and tools at nursing facilities
- Implement better use of COVID application and Release Stored Order (RSO) system
- Electronically verify samples and release quicker for downstream analysis for SARS-COV-2 testing



Poll Question

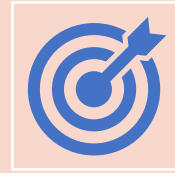
Introduction



QUALITY IMPROVEMENT GOAL 1

To optimize the electronic data from the COVID application and Release Stored Order (RSO) system

- IT to update software

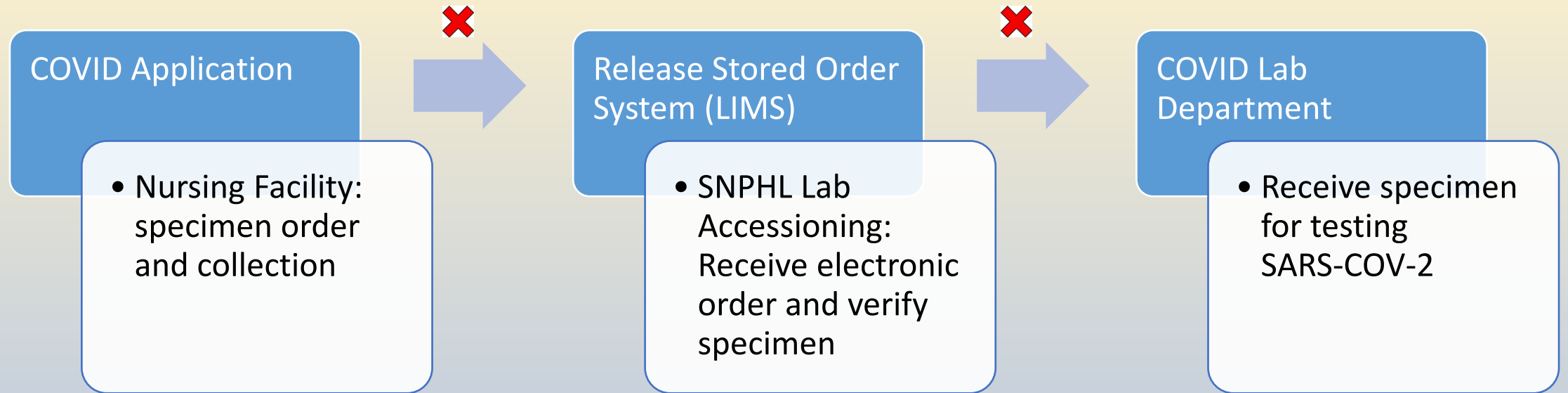


QUALITY IMPROVEMENT GOAL 2

To enhance the application use and accuracy of data entry from the providers.

- Provide better training and tools

Workflow



Implementation Plan

COVID Application

- Update software
 - Save patient information
 - Pop-Up window prompt for collection
- Communicate changes to Informatics team

Train Facilities

- Create training videos for nursing staff
- Update SOP's for COVID application and Release Stored Order (RSO) System
- In person training
- Distribute label printers
- Pre and Post Training Surveys

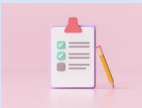
Performance Measurements

- SARS-COV-2 Test Turn Around Time (TAT)
- Average Order Delivery Time (from collection to receipt in lab)



Prior to Intervention

Performance Measurements	Paper requisition (min)	RSO (min)
Average time for 1 person to do a paper requisition from start	15	-
Average time for 1 person to verify sample accessioned from paper requisition	5	-
Average time for 1 person to release sample from RSO	-	5
Total	20	5



Poll Question

Prior to Intervention

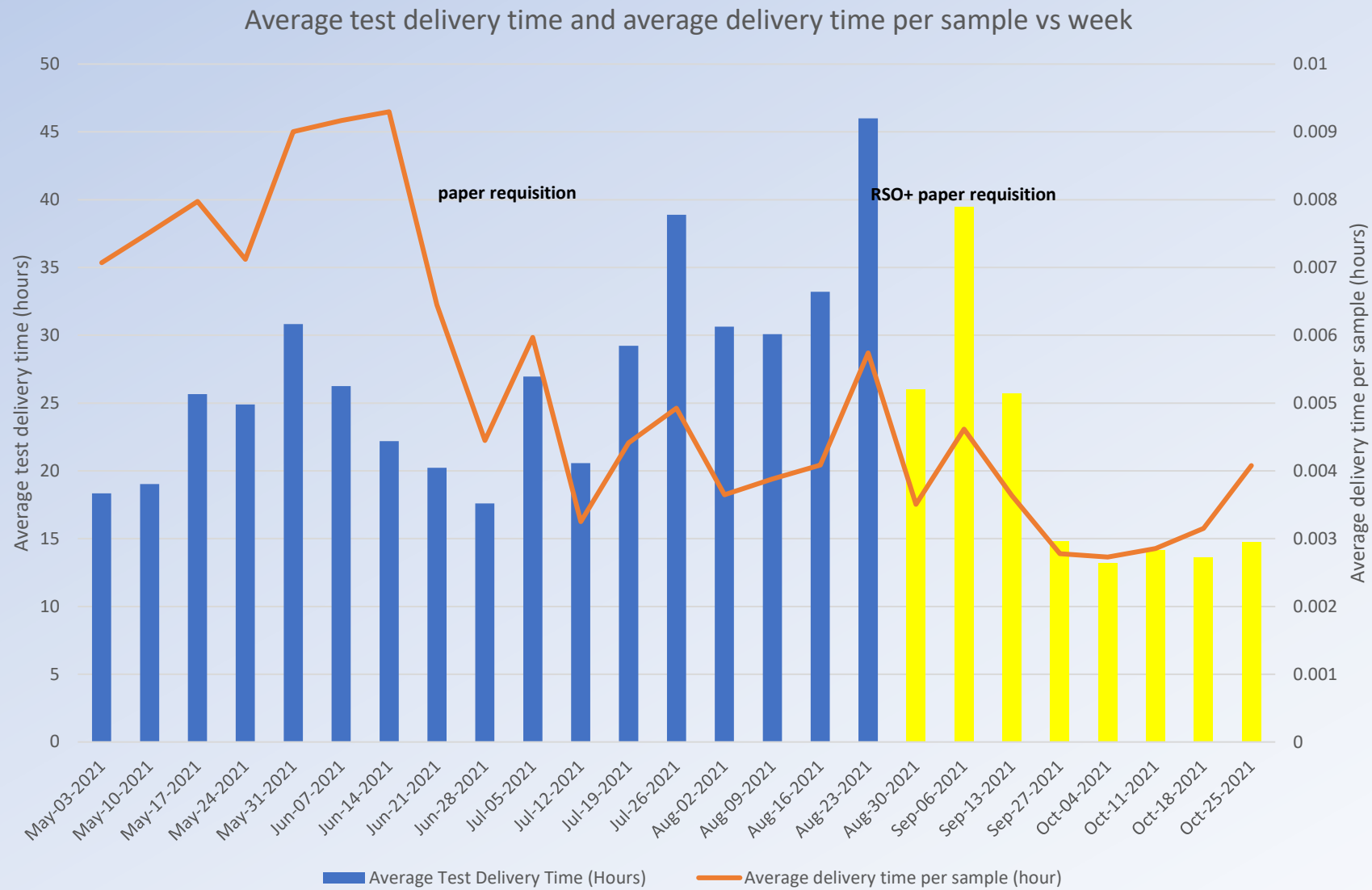


Figure 1: Graph of average sample delivery time and average time per sample versus Weekly

COVID Application

Modifications:

- ☐ Save patient information for repeat collections
- ☐ Prompt the use of check box after collection is complete via Pop Up Window

GUIDELINES TO USING THE COVID APP FOR SOUTHERN NEVADA HEALTH DISTRICT

Go to: <https://www.southernnevadapod.com:3001/#/>

southernnevadapod.com:3001/#/

Sign In

POD Code: Type in POD CODE and

Password: password

Sign In

Click Sign In

Pre survey

- 5-50% of an employee's job
- + • involves ordering and
- collecting COVID specimens.
- 4/5 evaluators indicated the COVID application would make their duties easier.



Southern Nevada Public Health Laboratory

COVID App Pre-Training Survey

This is a survey to gauge the experience of the participants before attending the training. Thank you for sharing your experiences and opinions.

1. Have you used the COVID App from the Southern Nevada Public Health Laboratory before?

☐ Yes

☒ No

2. Approximately what percent of your job involves ordering and collecting COVID specimens?

50 %

3. Is this your first-time attending training for the COVID App?

☒ Yes

☐ No

4. How do you expect the COVID App to help with your duties?

☒ Make it easier to order COVID tests

☐ Make it more complicated

☐ No expectations

5. Is this your first time learning from this particular instructor?

☒ Yes

☐ No



Southern Nevada Public Health Laboratory

COVID App Post-Training Survey

This is a survey that reflects the training that you recently attended.
Thank you for your time and for sharing your opinions.

1. Please rate COVID App in the following areas, according to your experience.

	Poor	Below Average	Average	Above Average	Excellent
Ease of use	☐	☐	☐	☐	☒
Effectiveness	☐	☐	☐	☐	☒
Convenience	☐	☐	☐	☐	☒
Quality	☐	☐	☐	☐	☒
Look and Feel	☐	☐	☐	☐	☒

2. Overall, on the scale of 1-5, 1 being the worst and 5 being the best, how would you rate the COVID App ?

1	2	3	4	5
☐	☐	☐	☐	☒

3. In a few words, what do you like most about the COVID App?

Ease of use

4. In a few words, what do you dislike about the COVID App?

None

5. Was the trainer able to answer all your questions and concerns?

- ☒ A. Yes
B. Somewhat
C. No

Post Survey

- 1 user indicated the dislike of using the mouse more
- Most liked about the application: "Ease of Use"

TAT Measurements

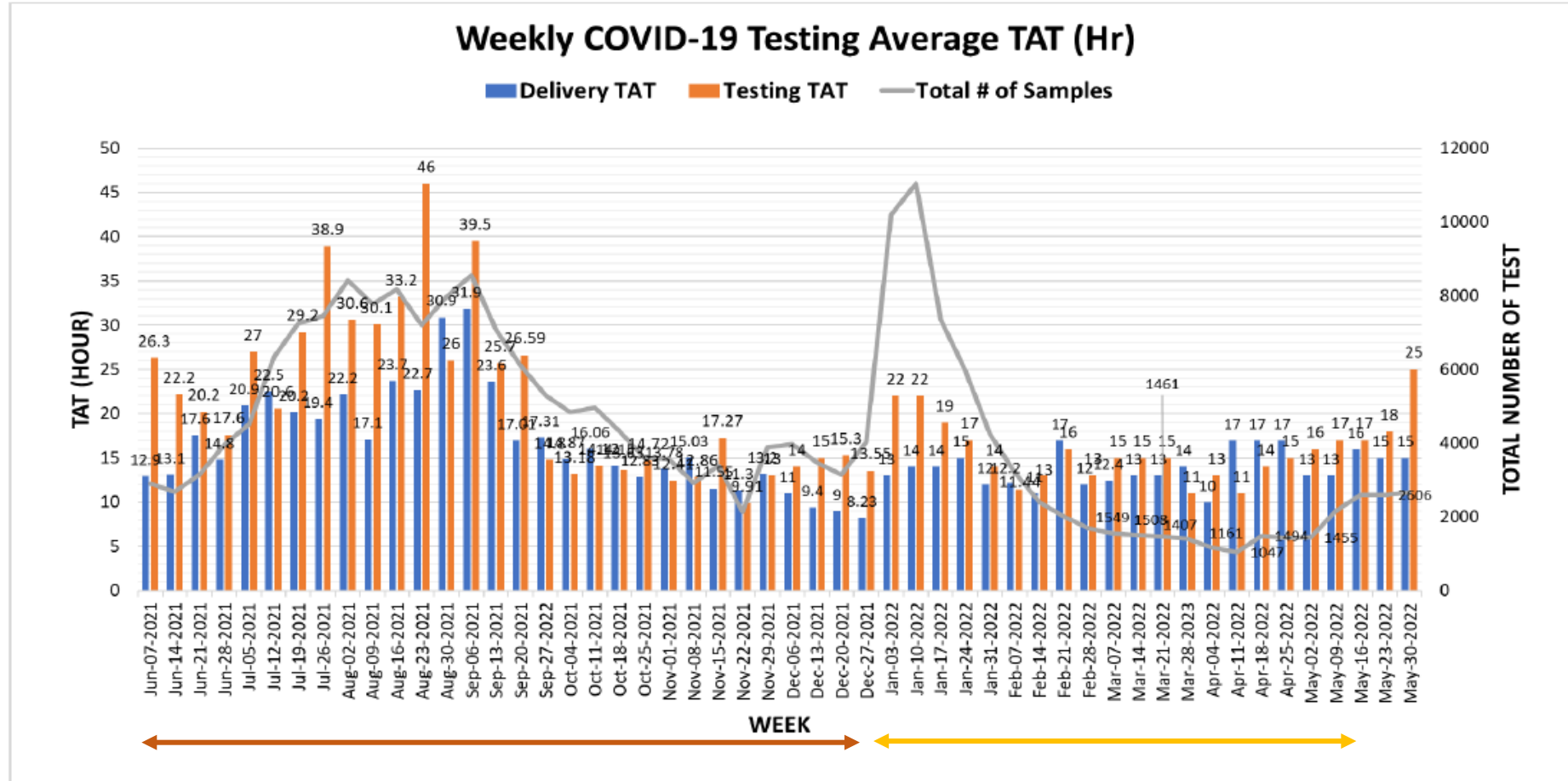


Figure 1: Weekly Covid-19 Testing average (TAT). June 7th 2021-Jan 17th 2022- Partial RSO before APHL QI grant. Jan 24th - may 30th improved RSO and more training to the nursing facilities with the APHL QI grant support. From this data, the testing time was reduced significantly when RSO was utilized. For may 30th, the rise in total testing time is due to the changes in the lab working time. WE have transitioned from 8am-830pm to 8am-6pm and at that time, we have 1/3 of the staff members were contracted with Covid-19 leading to decreased in staff members.

OUTCOMES

Project Outcomes

- Improving the turn-around time (TAT) for sample processing to downstream analysis, allowing the test results to be released faster.
- Avg. time for 1 person to release from RSO + verify sample= 5min
- TAT from 22.47 hrs. to 15 hrs.
- Order delivery time from 22.88 hrs. to 13.21 hrs.

Benefit from the Project Results and Findings

- Identified a compromise that would help both SNPHL and the nursing facilities for faster sample accessioning.
- Creating videos is helpful to the training staff at the nursing facilities.
- In reducing Turn Around Time, staff were able to focus on other processes more instead of accessioning.
- This also allowed SNPHL to increase the total test capacity and for contact tracers to be able to contact positive patients quicker.

Challenges and Lessons

What challenges did you encounter while executing this project?

- We encountered high turnover and un-cooperative staff members from the nursing facilities. The training video helps with the turnover.
- Not all staff was utilizing the COVID application correctly. When approached to identify the solution, most of the staff were ignoring some steps.

What lessons did you learn during this process?

- Have an early discussion to understand the workflow and create a solution between the public health lab and the nursing facilities.
- An easy-to-follow training video plays a large role to ensure that the newly executed program can be followed easily.
- By reducing the total test delivery time, the contact tracer team at the Health District can identify positive patients rapidly in Clark County.

Training + Video ◦ New Patient Order

<https://youtu.be/qVsyVlj4bnI>

Facility: DemoSNPHL

Patient ID *

888040657

Medical Record Number

DOB (MM/DD/YYYY) *

2/2/2002

First Name *

Jason

Middle Name

Last Name *

Gender *

Homeless *

Race *

Ethnicity *

Street Number *

Street Address *

Unit Number

City *

State *

Postal Code *

Home Number

Mobile Number *

Laboratory *

SNPHL

Specimen Type *

Nares Swab

Have this patient had ANY of the following symptoms in the last two weeks? *

Fever, cough, shortness of breath, fatigue, muscle aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea

☐ Collected

Save

Training + • Video Existing Patient Order

<https://youtu.be/xZEHgPsinOs>

Facility: DemoSNPHL

Date of Birth



First Name

Jack

Last Name

Reacher

Search

	Patient	Date of Birth	Status	Collection Date
	Jack Reacher 700 Cruise st Las vegas Nv 89106	Mar 3, 2003	Collected	Mar 4, 2022
	Jack Reacher 700 Cruise st Las vegas Nv 89106	Mar 3, 2003	Collected	Mar 3, 2022
	Jack Reacher 700 Cruise st Las vegas Nv 89106	Mar 3, 2003	Collected	Feb 28, 2022

Training + Video Not Collected Order

<https://youtu.be/VpLqX1tMIZQ>

southernnevadapod.com:3001/#/healthpatient?event=DemoOnly&name=Peter%20Pan&facility=DemoSNPHL&eventId=6130fa7f5fb6f904b45f6cc7

First Name * Jack Middle Name Last Name * Reacher

Gender * Male Homeless * No

Race * Native American Ethnicity * Non-Hispanic

Street Number * 700 Street Address * Cruise St Unit Number

City * Las Vegas State * Nevada Postal Code * 89106

Home Number Mobile Number *

Laboratory * SNPHL

Have this patient had ANY of the following symptoms in the last two weeks? * Yes

Fever, cough, shortness of breath, fatigue, muscle aches, headache, new loss of taste or smell, vomiting, and diarrhea

Symptoms

☒ Sore Throat ☐ Runny or Stuffy Nose

☐ Fever or Chill ☐ Muscle Pain or Body Aches

☒ Cough ☐ Vomiting or Diarrhea

☐ Headache ☐ Other

☐ Collected

Confirmation

This record will not be sent to Southern Nevada Public Health Lab until the specimen is marked Collected

Cancel Continue

Acknowledgement

- APHL
- Southern Nevada Public Health Laboratory Staff
- Various Nursing Facilities
- Southern Nevada Health District IT and Informatics Team

Contact Information

Renee Fejeran, QA Analyst

fejeran@snhd.org

Sui Ching Phung, Virology

Supervisor

phung@snhd.org

Southern Nevada Public Health Laboratory

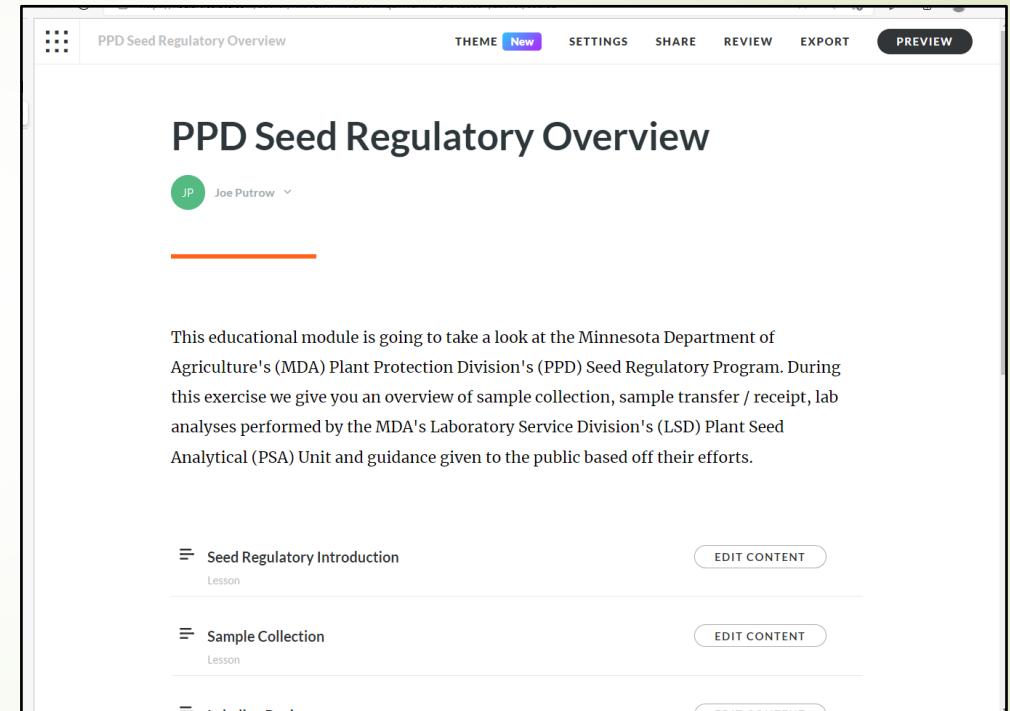
Sample Integrity Interactive Training Module



Minnesota Department of Agriculture
Laboratory Services Division

Introduction

- Minnesota Department of Agriculture (MDA)
 - Laboratory Services Division (LSD)
 - Plant Protection Division (PPD)
 - Seed Regulatory Program
- Articulate 360
 - Rise 360
- Entire sample life cycle
 - Collection > Lab Receipt > Analysis > Results & Regulatory Enforcement



Prologue (2018)

- Laboratory's Quality Committee concerned about MDA's overall sample quality
 - Examples of Analytical Integrity
 - Temperature
 - Time
 - Preservation
 - Examples of Evidentiary Integrity
 - Data Discrepancies
 - Broken Chain of Custody
 - Identification



Prologue (2019)

- Laboratory's QC creates Sample Integrity Policy Draft
 - Objectives
 - Scope
 - Policy Statement
 - Definitions
 - Standards and Expectations
- Management meets w/ Commissioner's Office
- Collaboration with regulatory division directors on policy adjustments
- Maintaining Laboratory Sample Integrity Policy created
 - Signed and authorized by MDA Commissioner December 2019
 - Example in APHL June 2022 Publication
 - Evidentiary and Analyte Integrity Policy Checklist

Maintaining Laboratory Sample Integrity Policy <i>Working@</i>	
Policy #19-005 Authorized by: Thom Petersen, Commissioner Effective: December 20, 2019	
Policy List	
Objective:	To define the minimum practices required by MDA for sample collection, handling, and chain of custody in order to maintain sample integrity and ensure accurate and defensible test results.
Scope:	Applies to all divisions with programs engaged in sample collection and laboratory analysis used to support surveillance activities and enforce statutes, rules and regulations that protect public health, promote food safety and safeguard the environment.
Policy Statement:	It shall be the policy of the Department of Agriculture that all samples collected for laboratory analyses will be obtained following established procedures that contain, at a minimum, the specific evidentiary and analyte integrity elements listed below to ensure the suitability of samples to support the Department's regulatory divisions and program data objectives. Each division submitting or analyzing samples will establish, maintain, and train staff on procedure(s) that conform to this policy and chain of custody principles. Conformance with this policy shall be reviewed using the process outlined in LAB-SOP-0016 "Requests, Tenders, and Contracts for Laboratory Analysis" and documented in Program Summaries.
Definitions:	Analyte Integrity: The characteristic or concentration of the analyte of interest is maintained from collection of the primary sample through the test portion (maintain sample correctness). Custody: A sample is "in custody" when: 1) the sample is in the sampler's possession, 2) the sample was in the sampler's possession and then secured by the sampler in a manner to detect or prevent tampering, or 3) the sample is placed in a designated secure area. Chain of Custody: In legal contexts, refers to the chronological documentation or paper trail that records the sequence of custody, control, transfer, analysis, and disposition of sample. Chain of Custody Documentation: A record which tracks each step in the sample handling process and each responsible entity that handles the sample from the time it was collected up until the sample is

Prologue (2020-2021)

➤ Policy Implementation Results

- 25 % of program already in compliance
 - Quality system already implemented
- 25% of programs close to compliance
 - Most had quality system implemented
- 25 % of programs missing multiple standards /expectation
 - Few had quality system implemented
- 25% of programs missing most standards/expectation
 - No quality system
 - Lack of resources

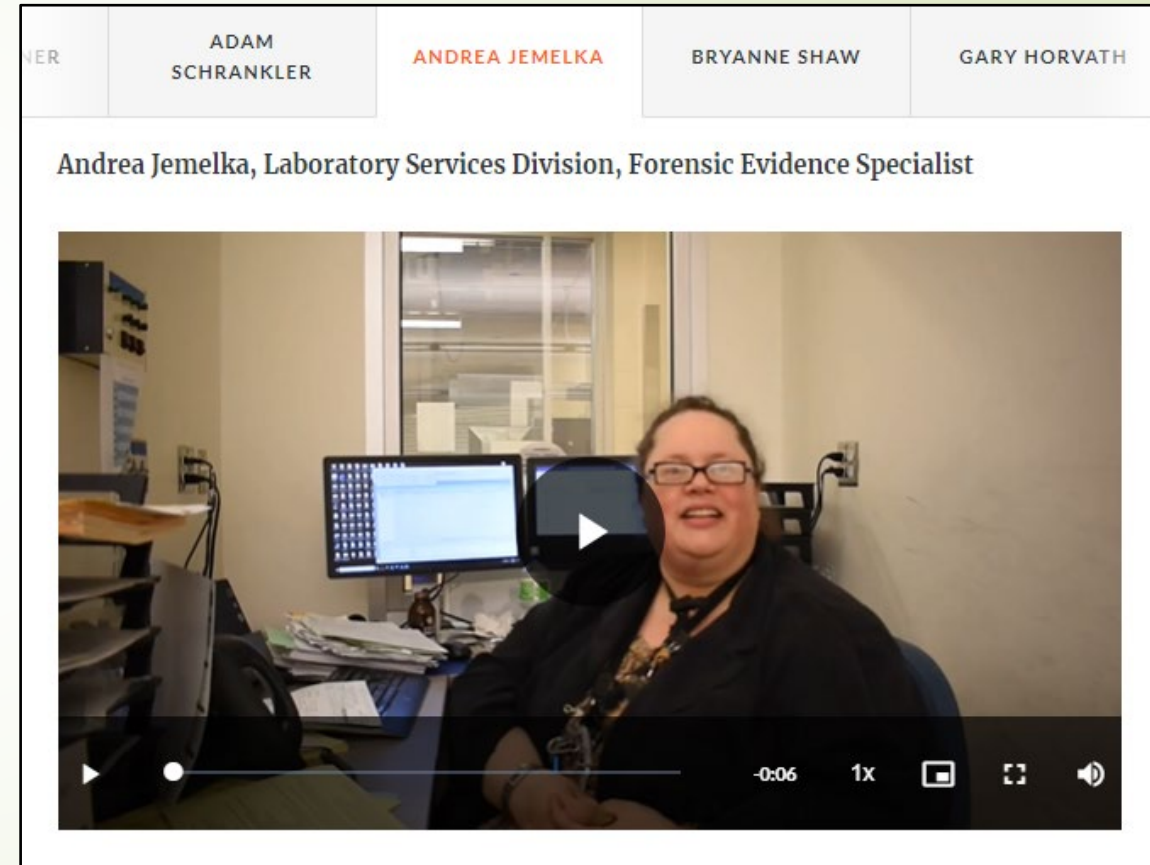


Seed Regulatory Program

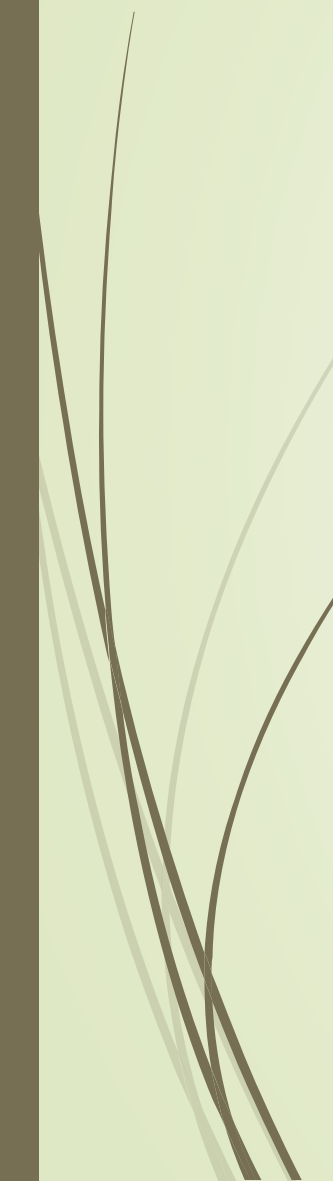
- **Missing multiple standards and expectations**
 - **Analytical Integrity: Sample Size**
 - **Evidentiary Integrity: Chain of Custody Documentation**
- **Willing and desire to collaborate with lab on these issues**
- **Wanted to show staff lab side of the process**
 - **Provide better understanding to inspectors / collectors**
 - **More buy-in from both sides of the entire process**

Participants in APHL Project

- Seed Regulatory Program
 - Program Manager
 - Program Coordinator
 - Inspectors
- Laboratory Service Division
 - Director (current and past)
 - Operations Supervisor
 - Sample Receiving
 - Plant Seed Analytical Supervisor
 - Analysts



Audience



- **Seed Regulatory Program**
 - **Evidentiary and Analytical Integrity Importance**
 - **Lab Analysis Process**
- **Plant Seed Analytical and Operations Unit**
 - **Inspection and Sampling Process**
 - **Results Interpretation and Enforcement Process**
- **Minnesota Department of Agriculture**
 - **Introduction to program and analytical unit for new employees**

Key Elements to Module

- Visual and Audio Learners
 - Images
 - Videos
 - Diagrams
- Interactive
 - Matching
 - Flip cards
 - Scenarios
- Story telling
 - Sample for start to finish
 - Builds off previous chapters
- Others
 - Utilize full screen
 - Systematic but program specific
 - Accessibility



Chapters : Seed Regulatory Introduction

- Overview of Program's function and enforcements requirements
 - Minnesota Seed Law
 - Federal Seed Act
- Fun facts about the program and seed industry
- Video introduction of contributors (inspection program and lab staff)
- Videos of explaining seed reg and lab's role in the process
 - Seed Regulatory Program Manager
 - Lab Director

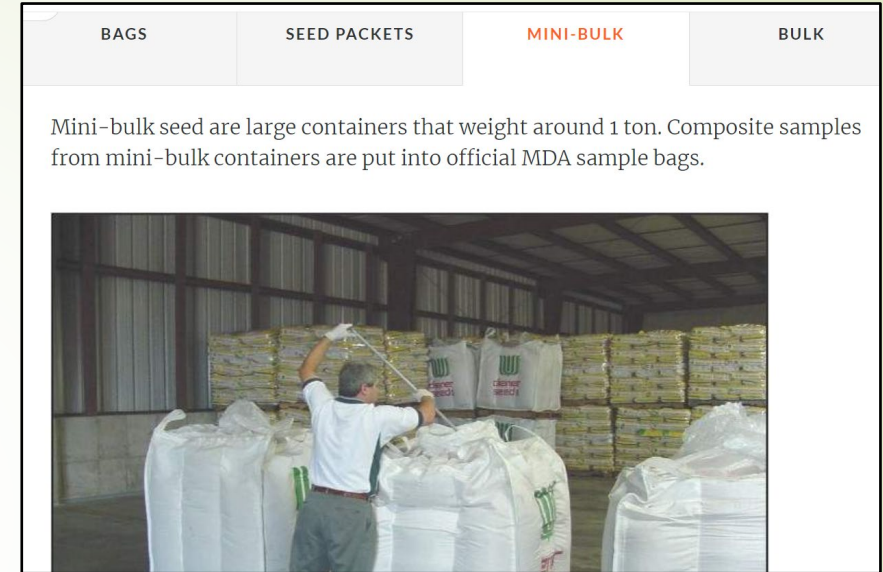
Minnesota Seed Regulatory Program

- PPD's Seed Regulatory Program functions to protect consumers based on truth-in-labeling principles and promote fair competition among seed sellers through the establishment of minimum standards.
- All seed that is sold in Minnesota must be properly labeled to meet the requirements of the [Minnesota Seed Law](#) (Minnesota Statutes, sections 21.80-21.92) and the [Federal Seed Act](#). The information provided on the label informs the consumer about the contents and quality of seed.



Chapters: Sample Collection

- Purpose
 - Collect seed for sale across Minnesota
- When and where
 - Video of Program Coordinator and Visual Images
- Different Location Sites
 - Visuals Images (with key bullet points)
- Sample Types
 - Visuals Images (with summaries)
- Label Claim and Submission Form
 - Images w/ marker explaining importance



Sample Collection

+	Chris Jones	101	1/20/2022
	Additional Inspector	Lead Inspector	
	Adam S		
	Inspector Sample		
+	CJ21003		
	CJ21004		
	Received from P		
	Chris Jo		
	Received from		

Kind

Kind is a group of seed that are biologically related to each other. If routine testing is being performed, the laboratory knows what analyses should be performed based on the kind field. If specialized testing is required, the inspector must document on the submission form what analyses are being requested. For corn, the routine tests associated with it are germination, purity, and noxious weed.

+	CJ21003	Seed Count
	CJ21004	Received 1/23/2021
		Received 1/23/2021
		Time
		19:00
		via

Chapters: Labeling Review

- Purpose of label claims
- Factors of label claim requirements
 - See image (top right corner)
- Specifics of each factors
 - Images with summaries
 - Flip cards
 - Images with content markers
 - See image (bottom right corner)
- Info required for analysis
- Scenario
 - Review example label claim
 - Identify errors and why problematic

Labeling Review

Seed labeled differently depending on these factors.

- 1 Weight of seed container: commercial (>1 lb) or home use (<1 lb)
- 2 Category of seed: agricultural, vegetable and flower, food plot, turf and lawn grass, native grass and wildflower
- 3 Number of kinds and varieties: single kind, blend, mixture
- 4 Treatment: treated seed has specific labeling requirements
- 5 Other factors: hybrid seed corn, coated seed, hemp seed, tree and

Labeling Review

PREVIEW

Front

\$1.99 Vegetable Net Wt 100 mg

Berryvine Seed Company



Tomato Durango

Back

Packed for: 2021 Lot #: a3
Sell by: 11/21 Origin: MN

Inside

- ✦ Grow to seedlings prior to planting outside
- ✦ Sow about 8 weeks before last frost
- ✦ Place pots in a well-lit warm area
- ✦ Keep soil moist

Outside

- ✦ Plant in full sun
- ✦ 15-20 days to germinate
- ✦ Sow at 1/4 in. depth
- ✦ Space seedlings at 1/2 in.
- ✦ Keep soil moist



Growing Tips

- ✦ 15-20 days to germinate
- ✦ Sow at 1/4 in. depth
- ✦ Space seedlings at 1/2 in.
- ✦ Thin seedlings when they are 3 in. tall
- ✦ Adult plants should be 3 in. apart
- ✦ Water frequently



Berryvine Seed Co.
13 Orchid Avenue
Saint Paul, MN 55106

Chapters: Sample Integrity

- Process of physical receipt for lab staff
 - Video demonstration
- Color coded sample acceptance criteria
 - Requirements in different scenario
 - Image in top right corner
- What is analytical and evidentiary integrity?
 - Videos of purpose, explanations and who
- Key definitions of analytical and evidentiary integrity?
 - Flip cards with definitions
- Chain of Custody Process
 - Step by step start to finish
- Scenario
 - Errors on physical sample, submission form, and label claim
 - What each errors causes

Sample Acceptance Criteria

The images below are sample acceptance criteria Operations uses when receiving seed samples. [Please click to enlarge](#) to see the various tools they might use to ensure samples are ready for analysis.

The image displays three sample acceptance criteria forms. The first form, 'Shipping Enclosure', is a table with columns for Inspector, Inspector #, Date Collected, and various inspection points. The second form, 'Official Seed Sample', is a form from the Minnesota Seed Regulatory Program, including fields for Inspector Sample Number, Inspection Number, and a section for 'Inspection Analysis' with checkboxes for 'Required on the physical sample bag' and 'Optional on the physical bag'. The third form, 'Seed - Hybrid Sweet Corn', is a form from the Minnesota Seed Regulatory Program, including fields for Seed, Quantity, Matter, Test Date, and a section for 'Inspection Analysis' with checkboxes for 'Required on the physical sample bag' and 'Optional on the physical bag'.

The screenshot shows a web browser displaying a 'Knowledge Check: Sample Integrity Scenario'. The scenario text reads: 'The laboratory has just received a sample from a Seed Regulatory inspector. Review the physical sample, label claim, and shipping enclosure form below before moving on to chat with Sara to discuss anything you noticed. [Click to enlarge](#) the Submission Form, Label Claim, and Physical Sample example documents.' Below the text are three sample documents: 'Shipping Enclosure', 'Label Claim', and 'Official Seed Sample'. The 'Label Claim' document is a table with columns for Variety, Lot Number, and various inspection points. The 'Official Seed Sample' document is a form from the Minnesota Seed Regulatory Program, including fields for Inspector Sample Number, Inspection Number, and a section for 'Inspection Analysis' with checkboxes for 'Required on the physical sample bag' and 'Optional on the physical bag'.

Chapters: Sample Analysis

- Purpose
- AOSA
 - Regulatory body that determines testing methods
- Role analytical unit plays in program
 - Video with explanation
- Testing methods
 - What? Why? How?
- Definition of seed lot components
 - Flip cards images with definitions
- Definitions of seed lot quality (lab reports)
- Lab Equipment
- Scenario
 - Error in seed analysis
 - How does it affect the results

Seed Analysis PREVIEW

The purity exam requires analysts to identify pure seed, weed seed, other crop seed, and inert matter within a seed sample.

The noxious exam involves identifying the prohibited and restricted weed seeds. Noxious weed seeds are seeds of species that are specifically listed as regulated as noxious weed seeds in MN per [Minnesota Seed Law 21.85, Subd 15](#).



< Seed Analysis PREVIEW



Seed Analysis Scenario

Jimmy just finished analyses on his first sample without supervision in Plant Seed Analytical unit. Let's help Doug determine if the results are acceptable to send out to the vendor.

CONTINUE

Chapters: Results Interpretation and Enforcement

- How are test results used by Seed Reg
 - Video with explanation
- Label claims vs. lab test results
- Actions taken if in nonconformance
 - Video
 - Flip cards with definition
- Philosophy in enforcement
- Scenario
 - Interpretation of results
 - Why is that a problem?
 - Enforcement Used

Result Interpretation and Regulatory Enforceme... PREVIEW

Denise Thiede, Plant Protection Division, Seed Regulatory Program Manager

For definitions, click on the images below

Corrective Action

Click to flip ↻

Stop Sale

↻

A statistical comparison of the labeled value to the value found in testing. If the difference is too large the result is out of tolerance.

↻

Result Interpretation and Regulatory Enforceme... PREVIEW

How does Seed Regulatory program use test results from the lab? Click play on the image below

A video player interface showing a woman with short grey hair and glasses on her head, speaking. The video is paused, indicated by a large play button in the center. The background of the video shows an indoor setting with a framed picture on the wall.

2021 vs 2022 Results

- Comparing results from Jan 1st – May 30th (duration of project time)
- Metric Used:
 - Errors / Per Sample Total
 - 27 % decrease in overall errors
 - 58 % decrease in sample size errors
 - Errors / Per Submission Form Errors
 - 82% decrease in chain of custody errors
- Data discrepancies (ex: physical sample ID vs. submission form ID)
 - Majority of errors in 2022 (focus for 2023 revisions or process change)

Feedback : Lessons Learned

- Both seed regulatory and lab staff overall had positive reception
 - 9 people completed survey
 - Enjoyed seeing entire process
 - Putting faces to names
- Seed Regulatory use of annual in-person training time use differently?
- Other areas of focus in next year module and different scenarios
 - Break chapters up into separate modules but with more specificity
- Would like shorter versions
 - Currently runs 20- 30 minutes to complete
 - Ideal time wanted 15-20 minutes

Afterword : Lessons Learned

- Multiple programs want to do a similar collaboration
- Seed Regulatory wants to use platform for further training
- Part of a position in lab operation now focuses Sample Integrity Policy
- Improved Relationship with Seed Regulatory Program and Plant Protection Division

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Thank You!

Any questions?

