COVID-19 Rollercoaster
Safety Lessons Learned in a Clinical Laboratory Setting

Patricia J. Hlavka, MS, CSP
March 10, 2021

Disclosures

Relevant Financial Relationship(s):
Nothing to Disclose

Off Label Usage:
Nothing to Disclose
Getting Ready for the Ride

Waiting in Line

Mayo Clinic Locations

- Rochester, Minnesota
- Scottsdale and Phoenix, Arizona
- Jacksonville, Florida
- Mayo Clinic Health System, Minnesota
DLMP Rochester: Who Are We

- Department of Laboratory Medicine and Pathology (DLMP)
  - Rochester location:
    - Number of staff: 4,000 (approx.)
    - Number of tests: approx. 25 million in 2020 (17.7M Mayo Clinic Laboratories; 7.3M intramural practice)
    - Number of labs: 100
    - Safety Committee:
      - 28 members representing 12 divisions/groups
      - Committee Chair: Dr. Audrey Schuetz

Mayo Clinic Laboratories (MCL): Who Are We

- 4.5 million patients worldwide
- 104,000 people reached through education programs annually
- MCL served clients in 60 countries in 2020 (not including Intramural patients)
- 105 new tests launched in 2020
- 3500+ tests and pathology services
In the Beginning

In the car. Seat belts on? Ready to go?
Keeping Up With the Rapidly Changing Information

News Reports and Mayo Clinic’s Response

- Media reports of illness and deaths in China
- Minnesota Department of Health (MDH) notification of 2019-nCoV
- Infection Prevention and Control (IPAC) started situation update meetings
- Healthcare Incident Command System (HICS) was activated
What We Already Had in Place

- Healthcare Incident Command System (HICS) involvement
  - Robust response process in place
  - Established internal and external partners

- DLMP Biohazard Risk Assessments

- DLMP Pandemic Preparedness Plans
  - Created in 2009: H1N1
  - Issue: estimated duration of pandemic was 9 weeks; underestimation of impact and length

- Mayo Clinic and DLMP High Consequence Infectious Disease (HCID) Plans
  - Created in 2014: based on Ebola response
  - Issue: 2 patients; not scalable
Saint Marys Hospital visitor entrance, Friday, April 10, 2020, 4:00pm
Timeline

Where did 2020 go?
Timeline

January 2020
- 11: China state media reports first death from novel coronavirus
- 21: 1st confirmed case in United States
- 22: MDH notification – Information on the 2019 Novel Coronavirus outbreak in Wuhan, China
- 23: Mayo Clinic Rochester IPAC - Specimen Transport discussion started
- 24: Mayo IPCA situation update meetings started
- 30: WHO declares global health emergency
- 31: Mayo Clinic HICS activated

February 2020
- 7: updated DLMP HCID web page with COVID-19 information
- 16: 1st suspect patient admitted Mayo Rochester, HCID lab opened
- 29: 1st death in U.S. reported

March 2020
- 6: 1st confirmed patient in Minnesota
- 8: 1st suspect specimen received at Mayo Rochester
- 9: initiated DLMP respiratory specimen risk assessment
- 9: DLMP posted SARS-CoV-2 Specimen Safety SOP
- 10: 1st patient specimen collection test site opens at Mayo NW Clinic in Rochester
- 11: 1st confirmed case in Rochester, MN
- 12: Mayo Virology (Hilton) PCR test goes live – standing ovation in HICS meeting
- 13: National Emergency and Minnesota Peacetime Emergency declared
- 16: Telework prioritization
- 17: Created DLMP COVID-19 web page
- 18: Mayo HMM Lab (SDSC) PCR testing goes live
- 19: 1st DLMP COVID-19 Town Hall, Safety focus
- 19: 1st confirmed death in Minnesota
- 22: Mayo temperature checks (staff and at doors)
- 23: Mayo staffings/redeployments
- 23: Mayo Social distancing signs posted
- 24: Minnesota lock down

April 2020
- 4: Mayo IDS Lab 1st Antibody test goes live
- 5: Mayo Clinic universal masking
- 28: Vice President Mike Pence visited Mayo Clinic Rochester, DLMP Virology and Blood Bank areas

December 2020
- 18: 1st vaccine dose administered at Mayo Clinic Rochester

March 7, 2021 (2:00 pm)
- Globally Confirmed cases: 116,713,558
- Global Deaths: 2,590,835
- U.S. Confirmed cases: 28,964,443
- U.S. Deaths: 524,668
- Minnesota Deaths: 6,614

Vice President Visit

April 28, 2020

Government officials tour blood bank, learn about therapy that starts with plasma donation

Government officials learn about molecular and antibody testing for COVID-19

Government officials tour Mayo Clinic, impressed by response and innovation
Assessing the Risk

How bad is it?

What You Should Be Asking: Are Staff Safe?

- What is the issue/problem
- What are the risks
- What are the options
- What are the regulations/accreditation requirements
- What is the impact (small or large)
- What is the duration
- What do we know (or don’t know)
- Have you done this before
- Do we need financial support
  - How much
  - Where does it come from
- Who can help
- How long will this last (temporary or on-going)
- When does this need to happen
- What do we need (the stuff)
- Who needs to approve it
- Is training needed
- What communications are needed and how to do it
- After implementation –
  - Is it working
  - Are Adjustments needed
- Do we need to do it again
Performing a Risk Assessment

• Per CDC: *All laboratories should perform a site-specific and activity-specific risk assessment to identify and mitigate risks and determine if enhanced biosafety precautions are warranted based on situational needs, such as high testing volumes, and the likelihood to generate infectious droplets and aerosols.*

• Components:
  - Workforce
  - Risk Characterization
  - Risk Mitigation

• Resources:
  - WHO: Laboratory biosafety guidance related to the novel coronavirus (2019-nCoV)
  - APHL: Risk Assessment Best Practices
  - World Health Organization Laboratory Biosafety Manual, 3rd
  - CDC: Biosafety in Microbiological and Biomedical Laboratories (BMBL) (6th edition)

Respiratory Specimen Survey

What do we need to focus on?
Respiratory Specimen Survey

- Surveyed all 80 laboratory supervisors
- Specimen Types:
  - Nasal swab
  - Nasopharyngeal swab
  - Oropharyngeal swab
  - Sputum
  - Bronchoalveolar Lavage (BAL)
  - Tracheal Aspirate
  - Pleural Fluid
  - Lung Tissue
  - Buccal swab

Respiratory Specimen Survey

- Where testing/processing performed:
  - Biological Safety Cabinet (BSC)
  - Chemical fume hood
  - Laminar flow hood
  - Open bench
- Hazardous chemicals used:
  - Flammable
  - Corrosive
  - Toxic
  - None
- Comments
Respiratory Specimen Risk Assessment

• Goal: identify best practices and gaps
• Visited each lab working with respiratory specimens
• Assessed aerosol generating procedures
• Verified appropriate practices
• Recommended lab modifications such as use of BSCs

Specimen Safety

Staying on the ride…
General Laboratory Safety for All DLMP Staff

- Follow **standard precautions** when handling **all specimens**
- Refer to laboratory’s biohazard risk assessment and personal protective equipment documents
- Ensure use of personal protective equipment (PPE):
  - Use correct type
  - Wear properly
  - Remove correctly
- Use engineering controls (e.g., biosafety cabinets)

---

**Standard Precautions**

- **PPE:** Cuffed lab coat/gown, Disposable gloves, safety glasses with side shields or chemical goggles, face shield or bench/instrument shield.
- **Minimum Laboratory Attire:** Full length pants or equivalent, impervious shoes; ensure area of skin between the shoe and ankle is not exposed.
- **Surface Disinfection:** Follow routine surface disinfection practices, ensure wet contact times, use IPAC approved surface disinfectants such as Oxivir, bleach, etc. Refer to DLMP Surface Disinfectants SOP.
- **Hand Hygiene:** Wash hands with soap and water after removing PPE, after contact with potentially hazardous materials and before leaving the laboratory.
- **Sharps:** Follow safe handling and disposal practices.
- **Disposal:** Use standard specimen disposal practices.
Specimen Infectivity Assessment (for SARS-CoV-2)

• **High Infectivity (respiratory):**
  - Bronchoalveolar lavage (BAL), sputum, nasopharyngeal (NP) swabs, oropharyngeal (OP) swabs, nasal swabs, nasal tissue, oral tissue, lung tissue, and tracheal aspirates.
  - Pleural fluids.
  - Saliva, spit, salivary glands, and buccal swabs.

• **Low Infectivity:**
  - Blood, blood products (serum, plasma), cerebrospinal fluid (CSF), urine, stool, kidney tissue, fixed respiratory specimens, etc.

• **Non-infectious:**
  - Fixed tissue (viral inactivation via heat or chemicals), paraffin embedded tissue, cover-slipped slides, blocks, paperwork, etc.

SARS-CoV-2 Specimens: General laboratory testing when manipulating all specimens for staff safety

• All specimen handling needs to follow CDC guidelines:
  - [Interim Guidelines for Collecting and Handling of Clinical Specimens for COVID-19 Testing](#)
  - [Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with COVID-19](#)

• Low Risk and No Risk SARS-CoV-2 specimens:
  - Can be safely handled with standard precautions in all labs

• Refer to the individual lab's Biohazard Risk Assessment
SARS-CoV-2 specimens: High Risk SARS-CoV-2 specimens (all respiratory specimen types)

- Can be safely handled with additional precautions (along with standard precautions) when there is potential generation of aerosols (using biological safety cabinets - BSCs, splash shields)
- All labs working with these specimens have been recently reviewed by DLMP Safety along with the lab’s supervisor and lab director
- These labs have installed additional BSCs (or modified their specimen handling processes to use BSCs) to ensure these specimens are handled safely
- Refer to the individual lab’s Biohazard Risk Assessment

SARS-CoV-2 Specimen Safety: Created New Document

- Specimen types and handling
- BSCs
- Exposure information
- Surface disinfection
- Transportation and shipping
- Disposal
- Face Masks
- Personal Protective Equipment (PPE)
- Social distancing
- Information and resources
Pneumatic Tube System

Oh no! Now what?!?!?
**Pneumatic Tube System**

- Use pneumatic tube system for SARS-CoV-2 specimens
- Performed and documented Risk Assessment
- Approvals:
  - DLMP Command Center
  - Infection Prevention and Control (IPAC)
  - HICS
- Ensure:
  - Standard Operating Procedure
  - Proper specimen handling and packaging
  - Spill decontamination procedures
  - Training and awareness
  - Communication

**Building Resources**

Getting help and providing answers
Who Are Your Buddies?

- Safety
- Occupational Health
- Infection Prevention and Control (IPAC)
- Biosafety Officer
- Facilities
- Leadership
- External Colleagues
- Test Development
- Documents and Publications

- Communications
- Supply Chain
- Safety Committee
- Education
- Quality
- Finance
- Legal
- Vendors and Technical Service Reps
- Signage

Who Are Your Buddies?

- Emergency Management
- Public Information Officer
- Human Resources

- Waste Management:
  - Regulated Medical Waste (biohazardous)
  - Hazardous Waste (chemical)

- Environmental Services
- Transportation and Shipping
- The IT Help Desk
- System Engineers and Project Management
- Public Health (local and state)
COVID-19: DLMP Information

• DLMP COVID-19 web page

• SARS-CoV-2 Specimen Safety SOP

COVID-19: SMaRT

Mooooooove Over! A SMaRT Public Service Announcement on break room break down
Communications

Keeping up with the tidal wave

COVID-19: DLMP Communications

• Town Halls

• DLMP This Week: Protect Together articles

• DLMP Chair email messages

• DLMP COVID Safety mailbox
COVID-19 Town Halls

- In 2020: 63 sessions
- In 2021: 14 sessions (as of 3-5-2021)
- Town Hall survey indicated transparency is key

Masks

How Will This Work?
CDC: Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19), May 2020

- Identify where and how workers might be exposed to COVID-19 at work. Employers are responsible for providing a safe and healthy workplace. Conduct a thorough hazard assessment of the workplace to identify potential workplace hazards related to COVID-19. Use appropriate combinations of controls from the hierarchy of controls to limit the spread of COVID-19, including engineering controls, workplace administrative policies, and personal protective equipment (PPE) to protect workers from the identified hazards (see table below):

- Conduct a thorough hazard assessment to determine if workplace hazards are present, or are likely to be present, and determine what type of controls or PPE are needed for specific job duties.

- When engineering and administrative controls cannot be implemented or are not fully protective, employers are required by OSHA standards to:
  - Determine what PPE is needed for their workers’ specific job duties
  - Select and provide appropriate PPE to the workers at no cost
  - Train their workers on its correct use

- Encourage workers to wear a cloth face covering at work if the hazard assessment has determined that they do not require PPE, such as a respirator or medical facemask for protection.
  - CDC recommends wearing a cloth face covering as a measure to contain the wearer’s respiratory droplets and help protect their co-workers and members of the general public.
  - Cloth face coverings are not considered PPE. They may prevent workers, including those who don’t know they have the virus, from spreading it to others but may not protect the wearers from exposure to the virus that causes COVID-19.

- Remind employees and customers that CDC recommends wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain, especially in areas of significant community-based transmission. Wearing a cloth face covering, however, does not replace the need to practice social distancing.

Masks: What to Wear and Where

- NOTE: Prior to COVID-19 pandemic, face masks were not worn in clinical labs

- Masks in Clinical Laboratories:
  - Provided by: Mayo
  - Type: Surgical/procedural

- Masks in all other areas:
  - Provided by: Employee
  - Type: Cloth masks

- Per OSHA, CDC recommends universal use of cloth face coverings, which are not considered PPE
Face Mask vs. PPE

- **Respirator is PPE** it is used to protect against known hazards (biological or chemical)

- **Face shield is PPE** and protects face and mucus membranes from splashes

- **Face Mask is not PPE** it is used to minimize person-to-person transmission

---

**Skin Irritation: “Maskne”**

- Avoid or limit wearing:
  - Make-up
  - Lotions
  - Aftershave

- After removing mask (such as when taking breaks):
  - Wash face with soap and water (helps remove facial oils that may be irritating when wearing a mask)
  - Using over-the-counter cleansing wipe helps clean skin and provide a refreshing feeling

- Mask attachments may help with pressure/irritation on ears

- If possible, reducing the ambient temperature in the lab may be helpful

- Staff should also contact dermatology or their healthcare providers as appropriate
Staff Health Issues with Use of Masks or PPE

- Notify supervisor
- Submit Employee Incident Report Form
- Staff should contact their personal healthcare providers as appropriate

COVID-19 Safety

- Social distancing + masking = COVID-19 safety
- Both components needed for optimum safety
- There are no changes in the current masking requirements
- Wear a single face mask that covers both the mouth and nose, doesn’t have obvious gaps or leaks around the sides, and for cloth masks, has more than one fabric layer
Social Distancing

Give me a break!

• Stay 6 feet (2 meters) apart
• Masking required
• Meetings:
  • Gatherings/meetings less than 10 individuals
  • Virtual options preferred
• Issue: needed to ensure space for staff meal breaks
COVID-19 Assessment: Conference Rooms Break Rooms

• Walked through all conference rooms and break rooms in primary clinical lab buildings

• Assessed:
  • Routine seating capacity
  • COVID social distancing capacity

• Requested exclusive use of certain conference rooms to be used as break rooms

• Resulting actions:
  • Posted signage
  • Blocked conference room calendars
  • Provided surface disinfectants
  • Removed extra chairs
  • Provided Environmental Services cleaning
  • Communications

Conference Room Scheduling

Conference Room COVID-19 Capacities

Blocking for Meals/Breaks
Conference Room Scheduling

Conference Room Signage

Conference Room

Hilton Room 11-32

Max Capacity = 9
  • Maintain 6 feet/2 meters social distancing
  • Wear mask
  • Do not move chairs or tables

Break Room Signage

Break Room

Hilton CL-41

Max Seating Capacity = 10
  • Maintain 6 feet/2 meters social distancing
  • Wear mask unless actually eating/drinking
  • Please clean your space before and after eating
  • Do not move chairs or tables

Alternative Break Room Locations Available All Day (showing maximum seating capacity):

<table>
<thead>
<tr>
<th></th>
<th>Hilton</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-08</td>
<td>max seating capacity = 10</td>
<td>3-03, max seating capacity = 9</td>
</tr>
<tr>
<td>4-10</td>
<td>max seating capacity = 14</td>
<td>3-04, max seating capacity = 5</td>
</tr>
<tr>
<td>4-23</td>
<td>max seating capacity = 10</td>
<td></td>
</tr>
<tr>
<td>5-33</td>
<td>max seating capacity = 10</td>
<td></td>
</tr>
<tr>
<td>10-46</td>
<td>max seating capacity = 21</td>
<td>Harwick Cafeteria</td>
</tr>
</tbody>
</table>

Signs of Social Distancing
Signs of Social Distancing

New Testing, New Challenges
Bringing in the BSCs
Impacts to Accessioning, Distribution, Testing Labs

• Lots of new testing instruments
  • Space
  • Training
  • Reagents (many are flammable) – safe use, storage, and disposal issues
  • New and additional hazardous/non-hazardous waste generated

• Additional Biological Safety Cabinets (BSCs) needed:
  • Appropriate location/placement
  • Certification prior to use
  • Training and proper use
  • Decontamination supplies and process
  • One PCR testing lab added 25 BSCs

Impacts to Accessioning, Distribution, Testing Labs, Direct Patient Care

• Documentation (new and updates):
  • Testing SOPs
  • Chemical inventory
  • Waste evaluations
  • Aerosol generating procedures (enhanced PPE)
  • Different testing and processes
  • Where to store PPE for additional staff
  • Longer hours
  • Rapid changes
  • Extra supplies – where to put them
  • Supply shortages - substitutes
  • Fogging of eyewear when wearing masks
  • Tests down
  • Staffing
Serology Testing

Molecular Testing (Respiratory Specimens)
Specimen Operations: Dock and Specimen Accessioning

Specimen Operations: Specimen Transport Within Lab Area
Staffing
The revolving door: who is working where?

Examples of Staffing Increases During Pandemic

<table>
<thead>
<tr>
<th>Lab</th>
<th>Pre-COVID-19 Staff Numbers</th>
<th>COVID-19 Peak Staff Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virology</td>
<td>38</td>
<td>78</td>
</tr>
<tr>
<td>Hepatitis/HIV Molecular</td>
<td>22</td>
<td>354</td>
</tr>
<tr>
<td>Initial Processing and Media</td>
<td>39</td>
<td>53</td>
</tr>
<tr>
<td>Infectious Diseases Serology</td>
<td></td>
<td>+15</td>
</tr>
<tr>
<td>Specimen Operations</td>
<td>176</td>
<td>350</td>
</tr>
</tbody>
</table>
Staffing Impacts: Too Many, Not Enough

- Hundreds of new staff brought in
- Training:
  - Biological Safety Cabinets
  - Emergency Preparedness: specific lab information
  - Specimen and chemical safety
  - New instruments and processes
- Multiple shifts, weekends, holidays
- Specimen volumes continuously changing - hard to predict staffing needs
- Scheduling
- Breaks – when and where
- PPE
- Social distancing
- Staff split into work pods to minimize impact of absences
- Staff huddles were key method to provide updates

Staffing Changes and Challenges

- Spills, splashes, and exposures – need to ensure reporting, recordkeeping, monitoring
- Furloughs
- Redeployments
  - Door Screening
  - Balancing lab testing and support needs
- Contractors
- Illness
- Quarantine
- FATIGUE
Emergency Response and Employee Exposures

What to do if something happens

Redeployed Staff: Specific Work Unit Documents/Items

- Emergency Preparedness Plan (EPP):
  - Evacuation meeting locations
  - Severe Weather protected inner rooms
- Personal Protective Equipment (PPE)
- Biohazard Risk Assessment
- Chemical inventory updates
- Chemical waste evaluations
- Biological Safety Cabinets (BSCs) – training, air flow, cleaning
- Other lab-specific documents and practices
Exposures

- First aid
- Determine who was involved
- Notify supervisor
- Call Blood and Body Fluid (BBF) Hot Line (Occupational Health)
- Submit **Employee Incident Report Form**
- Staff should contact their personal healthcare providers as appropriate

Supply Chain

We can’t get what?!?!
March 2020

Where is the toilet paper?

May 2020

New items for sale in the employee cafeteria: toilet paper and paper towels
Supply Shortages

- Hand Sanitizer:
  - Liquid
  - Bottles
- Surface Disinfectants
- Face Masks
- Reagents
- Viral Transport Media
- Face Shields
- Tubes
- Swabs
- Dry Ice
- Pipette Tips
- Gloves
- Disposable Lab Coats
- What is next………?

Managing Supply Issues

- Communication is critical
- Get to know your Supply Chain contacts
- Identify critical users to ensure they get what is needed
- Conservation
- Expected duration of shortage
- Assess actual need vs. desire
- Use of expired products
- Hoarding
- Constantly changing
Managing Supply Issues

• Substitutions:
  • Are there other options/suppliers
  • Are they acceptable
  • What quantity is available

• Issues:
  • Validation
  • Quality of product
  • Staff reactions (e.g., allergies)
  • Perception/mistrust
  • Is it used the same and is training needed

Supply Shortages: Surface Disinfectants and Hand Sanitizer

• Surface disinfectants and hand sanitizer from labs collected and repurposed to direct patient care areas
• Labs switched to bleach - had to consider issues/impacts:
  • Corrosive to skin, respiratory irritation
  • Corrosive/damaging to stainless steel (e.g., BSCs)
  • Long-term damage to laminated surfaces possible
  • Dilutions have 24-hour shelf-life
• Ensure required wet contact time
• Labs wanted to make their own……
• Alternatives needed to meet EPA requirements for germicidal disinfection
• Certain hand sanitizers contained methanol – refer to FDA Hand Sanitizer Safety
New Surface Disinfectant: Chlorine Cleaning Solution

- Kit prepared by Mayo Clinic Pharmacy (contains EPA-approved disinfectant)

- Chlorine Cleaning Powder Kit contains:
  - 10 small bottles of pre-measured chlorine granules – each used to make 1 liter of Chlorine Cleaning Solution
  - 10 labels for the liter container of the prepared Chlorine Cleaning Solution
  - Preparation instruction sheet

- Advantages:
  - Granules inexpensive and readily available
  - pH = 6.5 (vs. pH = 11 for 10% bleach)
  - Low odor
  - Wet contact time = 4 minutes
  - Not corrosive on stainless steel
  - Shelf life of solution = 72 hours (vs 24 hours for 10% bleach)

Working Remotely

A few more twists……
Working Remotely: Issues

- Ergonomics:
  - Workstations may be less than optimal (kitchen tables, bedroom nightstands, coffee tables, easy chairs, the basement....)
  - Chairs
  - Equipment
  - Injuries

- Virtual meetings

- Staying connected (IT)

- Staying in touch

- Training was impacted for staff not on site
COVID-19: Ergonomics Information

- DLMP Ergonomics Work Group stepped up!
- Developed Resources for Home Office / Office Ergonomics
  - Four Step Process to Computer Workstation Comfort
  - Proactive Symptom Guide
  - Tips for Improving Remote Work-Space Ergonomics
  - More Tips on Working From Home
  - Ergonomics of Working Remotely – Your Home Office
  - Exercise Balls as Office Chairs: Not the Best Seat
- Communicated to staff through DLMP This Week Newsletter
- Answered staff questions

COVID-19 Adjustments: Lab Safety Program

Changes needed: but what is critical, what can pause?
COVID-19 Adjustments: Safety Committee

- Safety Work Groups were paused
- Meetings canceled or reduced
- Email communications continued
- Lots of questions fielded
- Program compliance
- Still needed to ensure staff safety

COVID-19 Adjustments: Training

- Staff new hire orientation changed from face-to-face to virtual:
  - Hands on fire extinguisher training needed to be adjusted
- Annual Fire Drills:
  - Small groups
  - Existing staff: review of emergency plans
  - New staff: required to participate in walk-through drill to designated meeting locations
COVID-19 Adjustments: Safety Audits

• Annual Lab Safety Audits
  • Old model: used trained inspection teams
  • COVID-19 model: self-assessment only
  • Data collection and review slowed down due to staffing and competing priorities

• Feedback:
  • Labs liked new process
  • However, still want inspection teams; maybe alternating years

Inspections: Regulatory and Accreditation

How will that work?
Impacts to Inspection Processes

- Such as CAP, New York State, AABB, CDC, JC, OSHA, etc.

- Inspection options:
  - Postpone
  - Virtual
  - Combination Virtual and On-site
  - On-site
  - Self-inspection

- Documentation sharing and review
- Staff interviews
- COVID-19 considerations (social distancing, travel, outbreaks, local requirements such as masking, etc.)
- Another couple of twists in middle of pandemic:
  - CAP checklists updated June 4, 2020
  - New York State significant revisions August 1, 2020
Lessons Learned

What worked – just in case we need to do this again!

Challenges

• Ensuring timely and appropriate communications
• Supply Chain instability
• Keeping up with all the changes
• Balancing competing priorities
• Surveilling guidance and regulations
• Ensuring compliance
• Finding alternative methods
• Addressing concerns and misinformation
• COVID Fatigue
Best Practices

- Respiratory specimen survey
- Resources created:
  - SARS-CoV-2 Specimen Safety SOP
  - COVID-19 web page
  - Ergonomics (working remotely)
- Communications
- Innovation
- Supporting patient care
- Lab staff working together

Best Practices

- Providing surface disinfectant alternative
- Reserving conference rooms for safe staff meal breaks
- Leadership support and transparency
- Town Halls
- Adjusting training and safety programs to fit situation
- Keeping the labs running
- Share information, don’t shield it
- Staff safety and awareness
What Did We Learn

• Communication and consistent messaging
• Hard to prioritize because things changed so fast
• Resources may be scarce
• Frequent reminders needed
• Need leadership buy-in and support
• Create plans but reassess
• How and when to be nimble
• When to say NO
• When to pause and reassess

What Did We Learn

• Importance of risk assessments
• Behavior modification
• Change can be good
• Unknown is scary
• Know and use your buddies
• Team huddles were critical!
• Say thank you!
• Get ready for the next pandemic.....
Moving Forward
What's around the corner?

Next Steps
• Debrief:
  • Get feedback
  • What worked
  • Where are the gaps
  • What improvements are needed
• Update pandemic documents/plan
• Benchmark
• Continue to monitor CDC, OSHA, etc.
• Manage continuing supply issues
• Communicate updates
• Continue vaccinations
Resources

Navigating the maze: Where to look when you have a question

Dashboards

- Johns Hopkins COVID Resource Center
  - World Map
  - U.S. Map
  - Critical Trends
- Texas Medical Association
- What’s More Risky, Going to a Bar or Opening the Mail?
- Risk Assessment Chart: Know Your Risk During COVID-19
Resources: Centers for Disease Control and Prevention (CDC)

- CDC Coronavirus (COVID-19)
- Biosafety in Microbiological and Biomedical Laboratories (BMBL) 6th Ed.
- Coronavirus Disease 2019 (COVID-19): Information for Laboratories
- Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories
- Interim Guidelines for Collecting, Handling of Clinical Specimens for COVID-19 Testing
- Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 (COVID-19)
- Guidance for SARS-CoV-2 Point-of-Care Testing
- Interim Guidance for Use of Pooling Procedures in SARS-CoV-2 Diagnostic, Screening, and Surveillance Testing
- Guidance for General Laboratory Safety Practices During the COVID-19 Pandemic
- Calculating Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Laboratory Test Percent Positivity: CDC Methods and Considerations for Comparisons and Interpretation

Resources: Centers for Disease Control and Prevention (CDC)

- Laboratory Biosafety Frequently Asked Questions
- Information for Laboratories about Coronavirus (COVID-19)
- Guidance for General Laboratory Safety Practices During the COVID-19 Pandemic
- Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19)
- Interim Guidance for Antigen Testing for SARS-CoV-2
- Publications about COVID-19 for Laboratories
- Using Personal Protective Equipment (PPE)
- CDC: COVID-19 Vaccines
- Using Antibody Tests for COVID-19
- Laboratory FAQs
- Reporting Laboratory Data
Resources: Occupational Safety and Health Administration (OSHA) - Requirements

- **Regulations**
- **Enforcement Memoranda**
- **Recording and Reporting:**
  - Reporting and Recording Enforcement Memoranda
  - Reporting and Recording FAQ
- **Workers' Rights**
- **Updated Interim Enforcement Response Plan for Coronavirus Disease 2019 (COVID-19)**

Resources: Occupational Safety and Health Administration (OSHA) - Guidance

- Occupational Safety and Health Administration (OSHA)
- Coronavirus Disease COVID-19 (resource page)
- Mitigating and Preventing the Spread of COVID-19 in the Workplace (January 29, 2021)
- Guidance on Preparing Workplaces for COVID-19
- OSHA Standards COVID
- Laboratory Workers and Employers
- Hazard Recognition
- Control and Prevention
- Common COVID-19 Citations: Helping Employers Better Protect Workers and Comply with OSHA Regulations (November 6, 2020)
- Respiratory Protection in Long-Term Care Facilities (October 30, 2020)
Resources: Occupational Safety and Health Administration (OSHA) – Highlights and Tools

• **What’s New**
• **Spanish Resources**
• **Additional Resources**
  • CDC Coronavirus (COVID-19) Page
  • CDC Workplaces and Businesses Page
  • Job Accommodation Network (COVID-19)
• **News and Updates**
  • News Releases
  • Daily Enforcement Data
  • Daily Whistleblower Data

Resources: College of American Pathologists (CAP)

• **CAP Responds to Your COVID-19 Questions**
• **COVID-19 Information**
• **Recent Updates on COVID-19**
• **Best Practices for Using Biologic Safety Cabinets While Testing for COVID-19**
• **2020 Modified Inspection Processes**
• **PrimeStore® MTM Releases Cyanide Gas When Exposed to Bleach**
• **Best Practices for Using Biologic Safety Cabinets While Testing for COVID-19**
Resources: Health and Human Services ASPR-TRACIE

- Assistance Secretary for Preparedness and Response Technical Resources Assistance Center Information Exchange (ASPR TRACIE)
- ASPR TRACIE COVID-19
- Testing:
  - COVID-19 Testing
  - COVID-19 Testing Process Overview
  - Drive-Through Testing for Infectious Disease
  - Essential Information for Use of Point-of-Care Tests for COVID-19 Diagnosis
  - Homeless Shelter Resources for COVID-19
  - Hospital Operations Toolkit for COVID-19

Resources: Miscellaneous

- Environmental Protection Agency (EPA) registered germicidal disinfectants:
  - List N: Disinfectants for Use Against SARS-CoV-2
  - Frequent Questions about Disinfectants and Coronavirus (COVID-19)
- Food and Drug Administration (FDA):
  - Coronavirus Disease 2019 (COVID-19)
  - Emergency Use Authorization (EUA)
  - Coronavirus Testing
  - Hand Sanitizer Safety
  - Face Masks, Including Surgical Masks, and Respirators for COVID-19
  - Medical Gloves for COVID-19
  - COVID-19 Testing Supplies FAQ
  - Medical Device Shortages During the COVID-19 Public Health Emergency
Thank You

- Dr. Schuetz
- DLMP Safety Committee members and Work Groups
- DLMP Leadership and Consultants
- Lab and Support staff
- DLMP Quality Management Services, Education, Web Team, and Communications

Questions & Discussion