OneLab™

A Unified Response to Training Needs

CDC OneLab Virtual Summit 2022

Elevating Connections, Building Bridges in Adversity

Tuesday, April 19 to Thursday, April 21 EDT

Welcome!

Stay on mute until the interactive sessions

Email onelab@cdc.gov for technical issues or questions

Keep the closed captioning and Zoom windows open

Stay tuned for link for the general session at the end

About the Speaker

James M. Crawford, MD, PhD
Northwell Health

To see full speaker biographies, visit https://www.cdc.gov/labtraining/onelab/onelab-summit-2022.html

The Importance of Partnerships

CDC OneLab, April 21, 2022

James M Crawford, MD, PhD
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Senior Vice President for Laboratory Services, *Northwell Health*

Professor and Chair, Pathology/Lab Medicine
Donald & Barbara Zucker School of Medicine at Hofstra/Northwell

Manhasset, NY

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Labs

Financial Relationships

Commercial Interest:	Nature of Relationship:
Project Santa Fe Foundation, LLC *	Chair, Board of Directors
Northwell Health Genomics Alliance	Chair, Board of Directors
ClaraPath, Inc	Member, Technical Advisory Committee

*** “Clinical Lab 2.0”**

CDC OneLab Summit: Key Points (Days 1-2, Selected)

- **Make Connections/ Build Bridges = work with Partners, Communicate**
- **Share Knowledge, Leverage Expertise**
- **Learn the Landscape, Mitigate Risks**
- **Don't "Bounce Back"; "Bounce Forward"**
- ***Hit the ground running***
- ***We are only as good as our Relationships***
- **Survive and Thrive (= "Thrival")**
- **Not only is Lab 70% of Data/Knowledge/Insight:**
  - **Lab is the First-to-Know; and…..**
  - ***Lab has opportunity (and responsibility) to provide Leadership****

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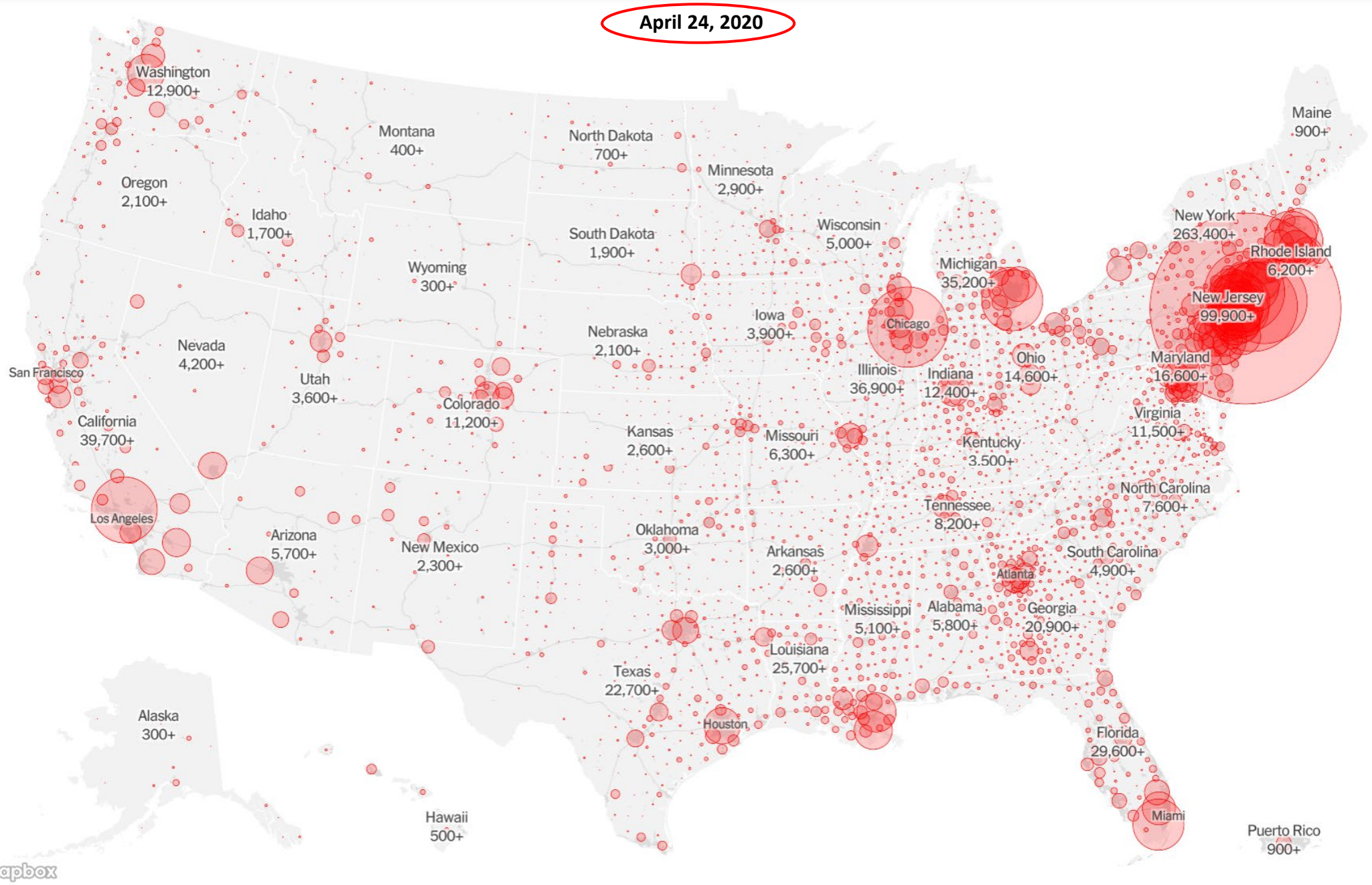
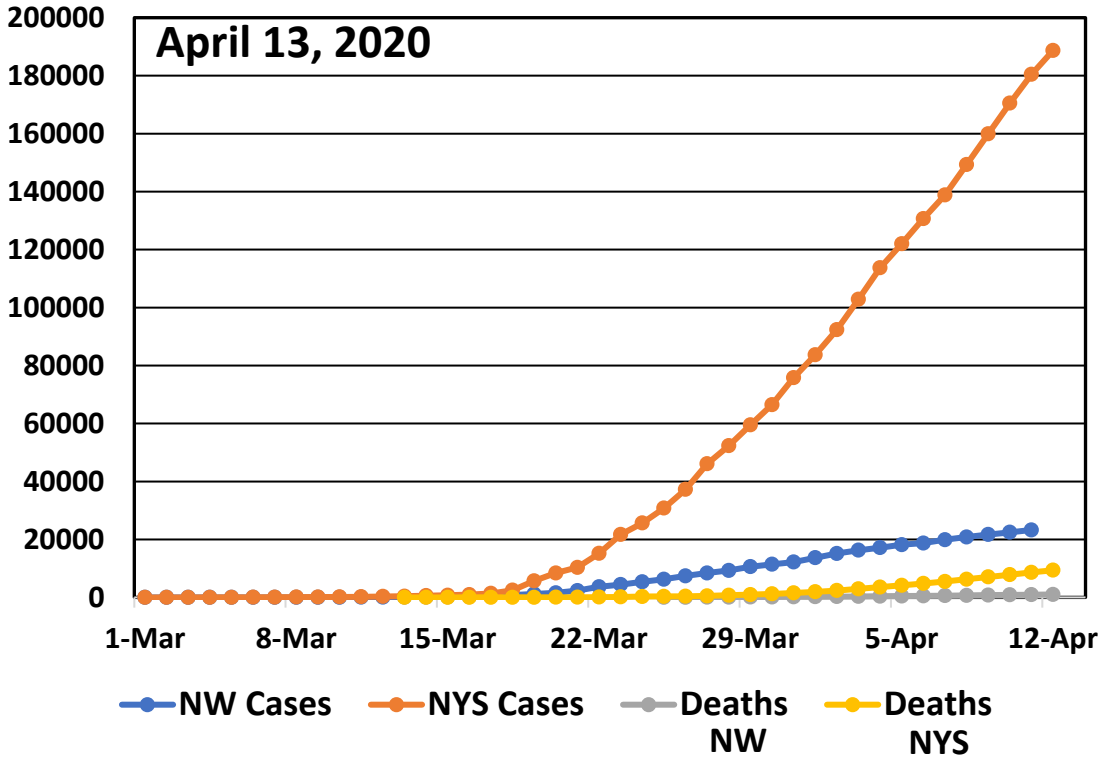
*** "Clinical Lab 2.0": Crawford JM et al, *Academic Pathology* 2017; DOI: 10.1177/2374289517701067**

We're All In This Together!

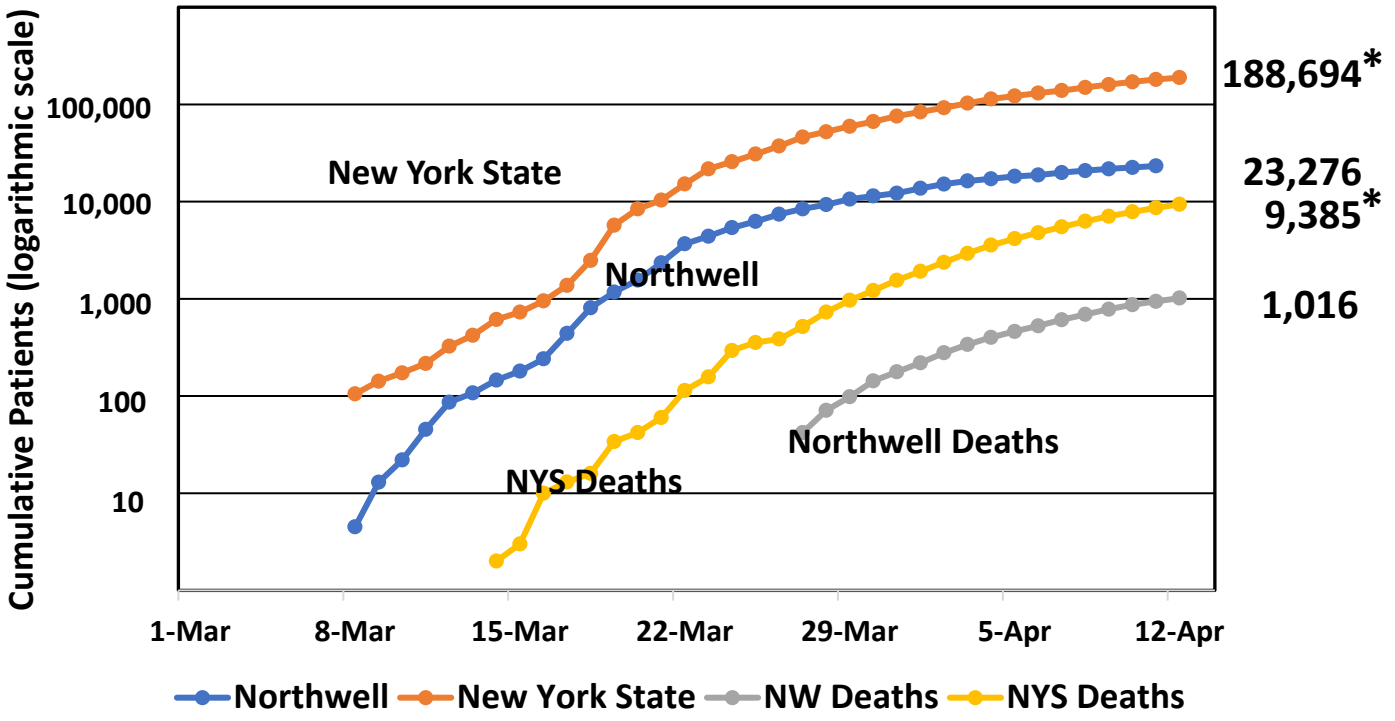

April 24, 2020
Washington
12,900+
Oregon
2,100+
California
39,700+
Nevada
4,200+
Idaho
1,700+
Montana
400+
Wyoming
300+
Utah
3,600+
Colorado
11,200+
Arizona
5,700+
New Mexico
2,300+
North Dakota
700+
South Dakota
1,900+
Nebraska
2,100+
Kansas
2,600+
Oklahoma
3,000+
Texas
22,700+
Minnesota
2,900+
Iowa
3,900+
Missouri
6,300+
Arkansas
2,600+
Louisiana
25,700+
Wisconsin
5,000+
Illinois
36,900+
Michigan
35,200+
Indiana
12,400+
Ohio
14,600+
Kentucky
3,500+
Tennessee
8,200+
Mississippi
5,100+
Alabama
5,800+
Georgia
20,900+
Florida
29,600+
South Carolina
4,900+
North Carolina
7,600+
Virginia
11,500+
Maryland
16,600+
New York
263,400+
New Jersey
99,900+
Rhode Island
6,200+
Maine
900+
Chicago
Atlanta
Houston
Miami
San Francisco
Los Angeles
Alaska
300+
Hawaii
500+
Puerto Rico
900+
mapbox

New York State, March-April 2020

Linear Plot



LOG10 Plot



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*NYS Cases (4/20/22) = 5.07M (25X increase)
NYS Deaths (4/20/22) = 67,507 (7X increase)

We have been here before…

Contents lists available at ScienceDirect

Journal of Clinical Virology

journal homepage: www.elsevier.com/locate/jcv

doi:10.1016/j.jcv.2009.06.005

Evaluation of multiple test methods for the detection of the novel 2009 influenza A (H1N1) during the New York City outbreak

Christine C. Ginocchio[a,*], Frank Zhang[a], Ryhana Manji[a], Suman Arora[a], Mark Bornfreund[a], Leon Falk[a], Madhavi Lotlikar[a], Margaret Kowerska[a], George Becker[a], Diamanto Korologos[a], Marcella de Geronimo[b], James M. Crawford[a]

[a] *Department of Pathology and Laboratory Medicine, North Shore-Long Island Jewish Health System, Lake Success, NY 11042, United States*
[b] *Krasnoff Quality Management Institute, North Shore-Long Island Jewish Health System, Lake Success, NY 11042, United States*

DOI: 10.3201/eid1601.091167

Suggested citation for this article: Crawford JM, Stallone R, Zhang F, Gerolimatos M, Korologos DD, Sweetapple C, et al. Laboratory surge response to pandemic (H1N1) 2009 outbreak, New York City metropolitan area, USA. Emerg Infect Dis. 2010 Jan; [Epub ahead of print]

Laboratory Surge Response to Pandemic (H1N1) 2009 Outbreak, New York City Metropolitan Area, USA

James M. Crawford, Robert Stallone, Fan Zhang, Mary Gerolimatos, Diamanto D. Korologos, Carolyn Sweetapple, Marcella de Geronimo, Yosef Dlugacz, Donna M. Armellino, and Christine C. Ginocchio

"Lessons Learned": Pandemic (novel H1N1) (Apr 24 – Jun, 2009)

- ***Decisive and immediate response to laboratory needs (Apr 27, 2009ff)***
  Staffing, Supplies, LIS, Physical Plant, Reporting, Client/Public Relations
- ***Staffing:*** Arranging for immediate cross-coverage: technical, non-technical
- ***Coordination:*** Standardization of testing (incl. LDT), logistics, communications
- ***Reporting*:*** Patient results; Daily epidemiology; **local/civic/state officials/CDC**
- ***Client Services:*** Proactive communication; Responses to FAQs
- ***Public Relations:*** Civic officials; News media (through system PR Office)

Crawford JM et al., *Emerging Infectious Diseases* 2010 Jan; DOI 10.3201/eid1601.091167

We believe that there will be future infectious outbreaks that will strain the standing capacity of clinical laboratories, requiring effective implementation of surge capacity responses independent of public health laboratory support.

***NB: The importance of the Sentinel Laboratory**

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Commentary

PUBLIC HEALTH REPORTS

Advancing the Public Health Laboratory System Through Partnerships

Public Health Reports
2019, Vol. 134(Supplement 2) 3S-5S

DOI: 10.1177/0033354919882704
journals.sagepub.com/home/phr
SAGE

Kirsten St. George, PhD[1]; Renée Ned-Sykes, PhD[2]; Reynolds Salerno, PhD[2]; and Michael A. Pentella, PhD[3]

Keywords
public health laboratory, laboratory systems, laboratory partnerships, laboratory networks

- **Public Health Laboratory networks: Laboratory Response Network**
- **Clinical, Commercial, Environmental, Agricultural, Veterinary laboratories**
- **Industry: Laboratory technologies and capabilities**
- **Academia: Public Health-related research; training to Sentinel Laboratories**
- **Public Agencies: Disease Surveillance Networks**

[1]Laboratory of Viral Diseases, Wadsworth Center, Albany, NY
[2]Division of Laboratory Systems, Centers for Disease Control and Prevention, Atlanta, GA
[3]State Hygienic Laboratory, University of Iowa, Iowa City, IA

Creation of the New York State SARS-CoV-2 Testing Consortium

- **Mon April 13, 2020: 4 lab leaders met with NYS Commissioner of Health**
  - **Request-for-Recommendations, with GNYHA* as Convening Authority**
- **Convened 4X Tues-Thurs April 14-16; issued recommendations April 17**
  - **Lab Leadership of 10 major NYS academic institutions, + DOH, GNYHA**
- **Ongoing: April 2020 – present**
  - **Capacity Building; Testing Platforms; Laboratory Science; Logistics**
  - **Civic and Community relations for Pre- and Post-Analytic Workflows**
  - **Coordination of university lab efforts with NYS DOH (Wadsworth)**
  - **Examining Access/Equity: testing of HCW; Civic/Essential; Vulnerable..**
  - **Reporting: to NYS DOH, CDC, national task force**
  - **Educational Programming: Institutional; Policymakers; Public**
  - **Research: Human Subjects; Biobanking; Autopsy; LDT; Investigative**
  - ***WORKFORCE (working with NYSCLA**)***

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*Greater New York Hospital Association
**New York State Clinical Laboratory Association

Special Collection: COVID-19-Regular Article

Academic Pathology: Volume 8 **2021 Apr 7**
DOI: 10.1177/2374289521006818
journals.sagepub.com/home/apc

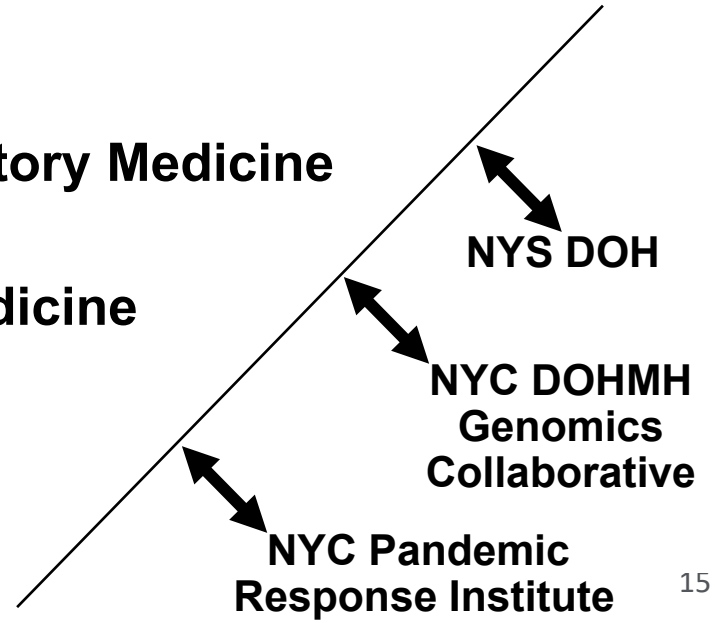
SAGE

The New York State SARS-CoV-2 Testing Consortium: Regional Communication in Response to the COVID-19 Pandemic

James M. Crawford, MD, PhD[1], Maria E. Aguero-Rosenfeld, MD[2], Ioannis Aifantis, PhD[2], Evan M. Cadoff, MD[3], Joan F. Cangiarella, MD[2], Carlos Cordon-Cardo, MD[4], Melissa Cushing, MD[5], Aldolfo Firpo-Betancourt, MD[4], Amy S. Fox, MD[3], Yoko Furuya, MD[6], Sean Hacking, MD[1], Jeffrey Jhang, MD[4], Debra G. B. Leonard, MD, PhD[7], Jenny Libien, MD, PhD[8], Massimo Loda, MD[5], Damadora Rao Mendu, MD[4], Mark J. Mulligan, MD[9], Michel R. Nasr, MD[10], Nicole D. Pecora, MD[11], Melissa S. Pessin, MD, PhD[12], Michael B. Prystowsky, MD, PhD[3], Lakshmi V. Ramanathan, PhD[12], Kathleen R. Rauch, BSN, RN[13], Scott Riddell, PhD[10], Karen Roach, MPH[13], Kevin A. Roth, MD, PhD[6], Kenneth R. Shroyer, MD, PhD[14], Bruce R. Smoller, MD[11], Steven L. Spitalnik, MD, PhD[6], Eric D. Spitzer, MD, PhD[14], John E. Tomaszewski, MD[15], Susan Waltman, Esq[16], Loretta Willis, BSN, RN, CPHQ, CCM[13], and Zeynep Sumer-King, MS[16]

NYS SARS-CoV-2 Testing Consortium: April 2020 ongoing

- **Columbia University/NYP: Dept of Pathology & Cell Biology**
- **Memorial Sloan Kettering Cancer Center: Dept of Laboratory Medicine**
- **Montefiore Medical Center: Dept of Pathology**
- **Icahn School of Medicine at Mount Sinai: Dept of Pathology, Molecular & Cell-Based Medicine**
- **New York University Grossman School of Medicine: Dept of Pathology**
- **Zucker School of Medicine at Hofstra/Northwell: Dept of Pathology/Lab Med**
- **SUNY Downstate Health Sciences University: Dept of Pathology**
- **Renaissance SOM, Stony Brook University: Dept of Pathology**
- **University at Buffalo: Dept of Pathology & Anatomical Sciences**
- **Larner COM, University of Vermont: Dept of Pathology & Laboratory Medicine**
- **Upstate Medical University: Dept of Pathology**
- **Weill Cornell Medicine/NYP: Dept of Pathology & Laboratory Medicine**
- **Greater New York Hospital Association (GNYHA)**
- **Hospital Association of New York State (HANYS)**
- **New York State Clinical Laboratory Association (NYSCLA)**



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The Value of a State-Wide Consortium

- ***A Pandemic is first-and-foremost a Regional Event***
- ***The response of medical and societal communities is Regional***
- ***The Regional Community benefits from communication and collaboration***
- ***The New York State SARS-CoV-2 Testing Consortium empowered:***

Bidirectional communication and advocacy with the State
Informing of Civic Authorities and the NYS Public Health Lab
Informed discussion of State (and City) Policies and Orders
Strong communication about Best Practices, Lessons Learned, etc

- ***Key Point***:

This is not a Trade Organization
This is a peer group, devoted to learning and sharing

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Take Away Lessons (from our COVID-19 Experience)

- ***The broader community of Pathology & Laboratory Medicine:***
  - **Education of Stakeholders: Laboratory 101**
  - **First to see the Data → First contribution to Epidemiology**
  - **Data: (essentially) the primary communication vehicle**
  - **Attain/Maintain Expertise in Public Health & Policy implications of Data**
  - **Maintain active regional and national posture for Advocacy**
- ***Working with Public Health Authorities and Policy Makers***
  - **Diagnostic laboratories are a national asset for Public Health Emergencies**
  - **Integrated health systems: a critical source of harmonized data***
  - **Academic health systems: a primary source of Discovery & Investigation**
  - **Access to Supply Chain is essential**
  - **Support of our Laboratory Workforce is the most critical factor**

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Evidence Base for Practice of Medicine

Laboratory Workforce

- ***May 2021 Consortium survey:*** **12% unfilled positions at member institutions**

  But: a substantial minority of technologists were working 2 jobs
  a substantial minority of technologists were nearing retirement

- **Access of students to clinical laboratory rotations is a major bottleneck**
- **Visibility of Laboratory to students (of all levels) is a major challenge**
- ***Retention*** **of Laboratory professionals is very sensitive to compensation**
- **Career Development opportunities are not evident or publicized**

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Medical Technologists (MLT) by state (selected)

State	Total Licenses	State Population*	Licenses per 100,000
California**	25,975	39,538,223	66
Florida**	26,351	21,538,187	122
Georgia**	11,077	10,711,908	103
Illinois	11,926	12,812,508	93
Michigan	10,039	10,077,331	100
New Jersey	8,051	9,288,994	87
*New York**	*13,564*	*20,201,249*	*67*
Ohio	13,083	11,799,448	111
North Carolina	11,009	10,439,388	105
Pennsylvania	10,432	13,002,700	80
Texas	29,571	29,145,505	101

*2020 Census. **Require licensure (also: Hawaii, North Dakota, Tennessee, Louisiana, Nevada, West Vriginia, Montana)

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National Data for NAACLS accredited programs*

Program Type	Grads 2017-2018	Grads 2018-2019	Grads 2019-2020	Grads 2020-2021	4 Year Average	Vacancies 2020-2021**	# of Programs	% of capacity 2020 - 2021
MLS	3570	3529	3736	3834	3667	995	226	79%
MLT	2802	2681	2760	2637	2720	1305	226	67%

**Unfilled training positions.

*New York State Clinical Laboratory Association Survey, December 2021

New York State Certificates issued by year*

Year	*2016*	*2017*	*2018*	*2019*	*2020*	*2020: Total Licensed*	*2020: % of workforce/yr**
Medical Technologists	477	364	410	365	304	13,564	2%
Medical Technicians	79	87	94	79	73	1,894	4%
Cytotechnologist	17	22	16	13	12	578	2%
Histologic Technician	262	79	60	32	33	339	10%

*NYSCLA data, October 2021

**per cent of total 2020 workforce receiving NYS certificates in 2020

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The Laboratory Workforce

- This profession must be better represented to STEM* candidates
- The training pipeline should be closer to the candidates (more programs)
  - A concern: resources required for the on-campus practical lab training
- Clinical laboratories need to provide more clinical rotation opportunities
  - This is a key limitation for training programs' placement of students
  - *A very successful recruiting mechanism for the training laboratory*
- The central issues regarding recruitment into our profession:
  - Entry compensation is lower than other health professions
  - Compensation advancement is less than in other health professions
  - Lack of an evident "career ladder"
  - Lack of visibility of this profession to……

    Middle School, High School, University students

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*Science, Technology, Engineering, Mathematics

Current and Future Partnerships

- Diagnostic Labs with Public Health Labs and Civic Leaders/Policymakers
- Diagnostic Labs with Educational Programs for Laboratory Professionals
- The Laboratory Community with STEM (e.g., School Counselor Associations)
- Local, Regional, and National Laboratory Associations and Consortia
- The Laboratory Community with our Financial Stakeholders (Public, Private)
- The Laboratory Community with our Clinical Stakeholders
- The Laboratory Community with the Public: Health Literacy, Equity, Access

Being Colleagues to One Another

Acknowledgments: New York State Laboratory Leadership Consortium*

Maria E Aguero-Rosenfeld, MD
Ioannis Aifantis, PhD
Evan Cadoff, MD
Joan Cangiarella, MD
Carlos Cordon-Cardo, MD
James M Crawford, MD, PhD
Melissa Cushing, MD
Adolfo Firpo, MD
Amy S Fox, MD
Yoko Furuya, MD
Sean Hacking, MD
Jeffrey Jhang, MD
Debra Leonard, MD, PhD
Jenny Libien, MD, PhD
Massimo Loda, MD
Damadora Rao Mendu, MD
Mark Mulligan, MD
Michel R Nasr, MD
Nicole Pecora, MD
Melissa S Pessin, MD, PhD
Michael B. Prystowsky, MD, PhD
Laksmi V Ramanathan, PhD
Kathy Rauch
Scott Riddell, PhD
Karen Roach
Kevin A Roth, MD, PhD
Kenneth R Shroyer, MD, PhD
Kenneth R Shroyer, MD, PhD
Bruce Smoller, MD
Steven Spitalnik, MD, PhD
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Jill Taylor, PhD
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Susan Waltman, Esq.
Zeynup Sumer-King
Eloise Aita, PhD

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Northwell Health® Labs

*renamed in January 2022

How to Join General Sessions

Thanks for attending the keynote!

The keynote and general sessions are separate links.

Use the link in the Zoom chat to join the general session.

The next session starts at **9:30 AM EDT**.