

CC Activities Regarding Novel Coronavirus (COVID-19)

Clinical Center Research Hospital Board
17 July 2020

Source: Johns Hopkins CSSE

7 July

US

US

New York

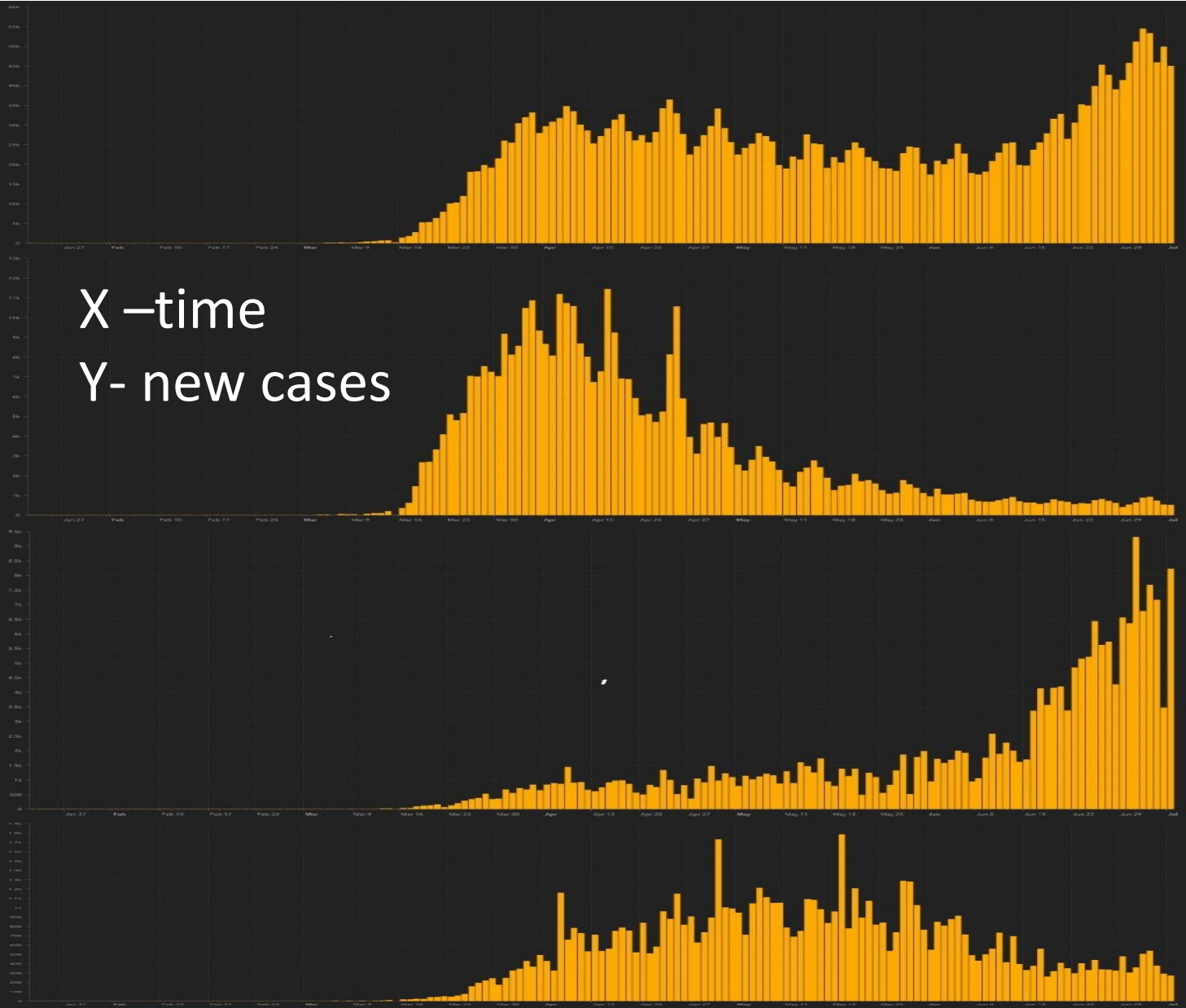
New York

Texas

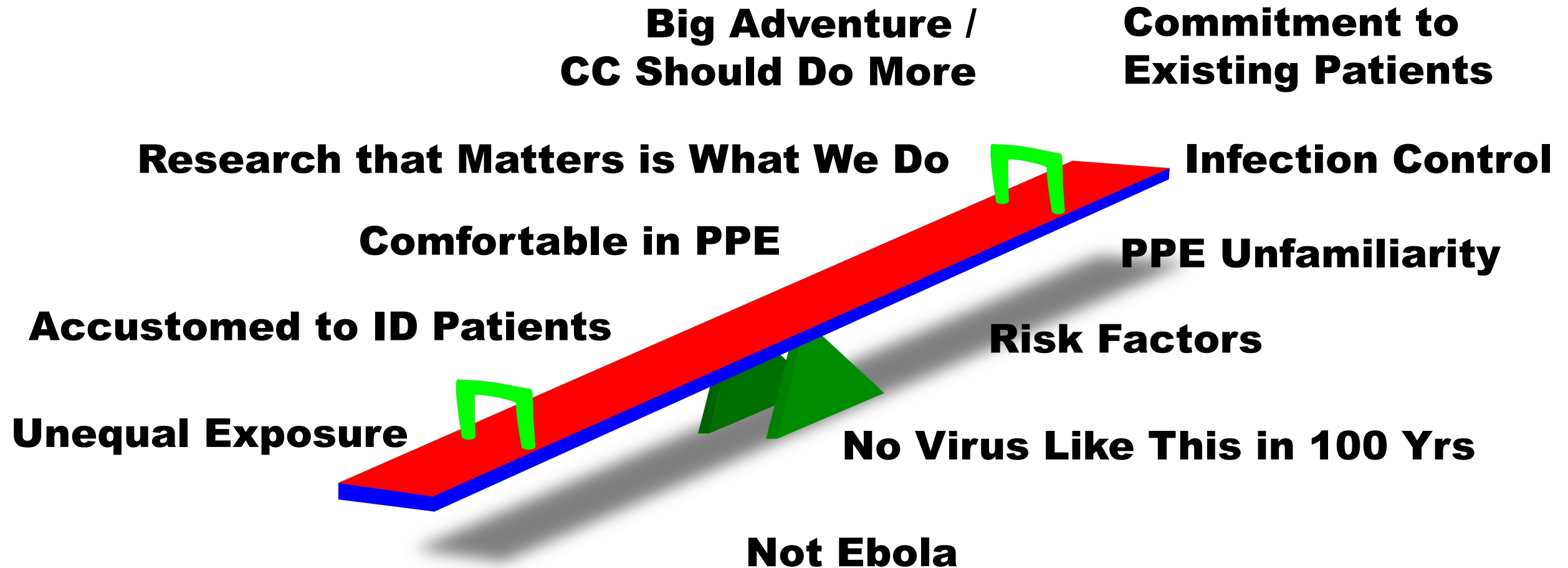
Texas

Maryland

Maryland



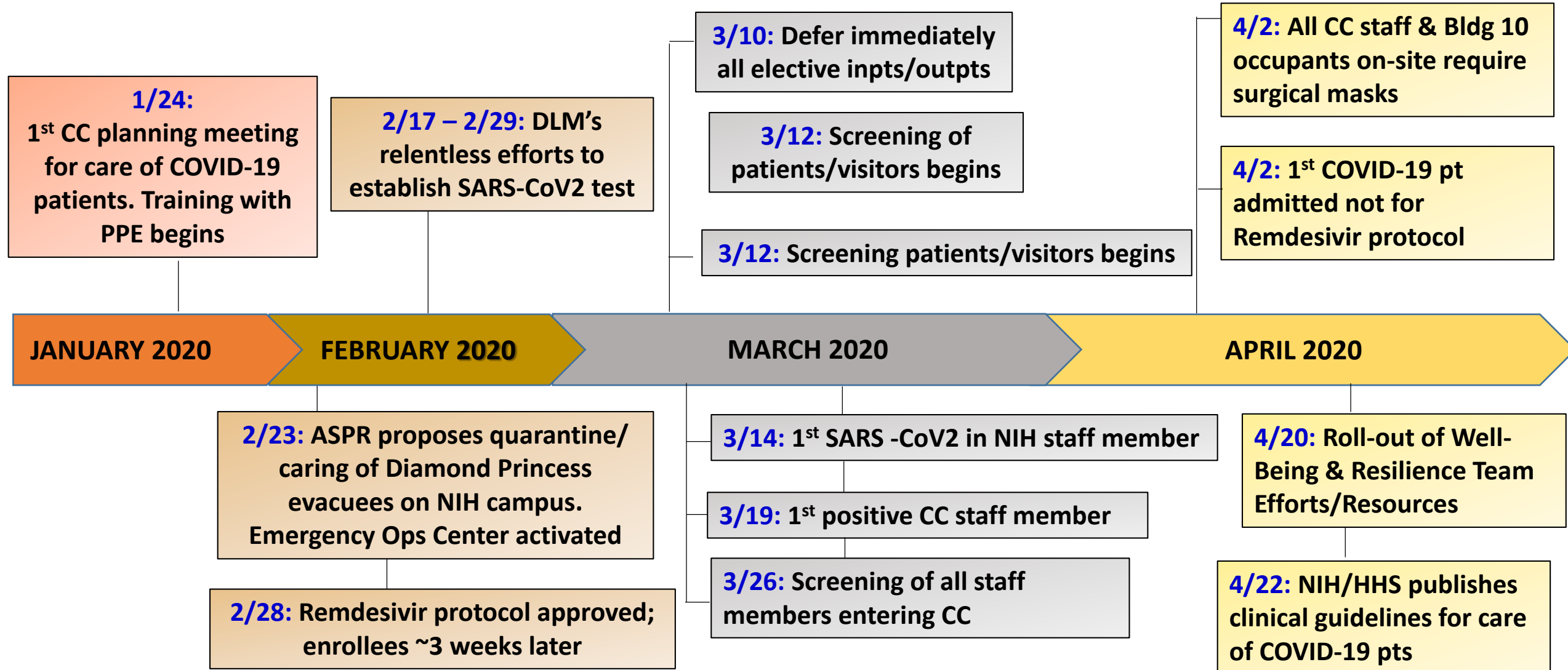
A Difficult Balancing Act



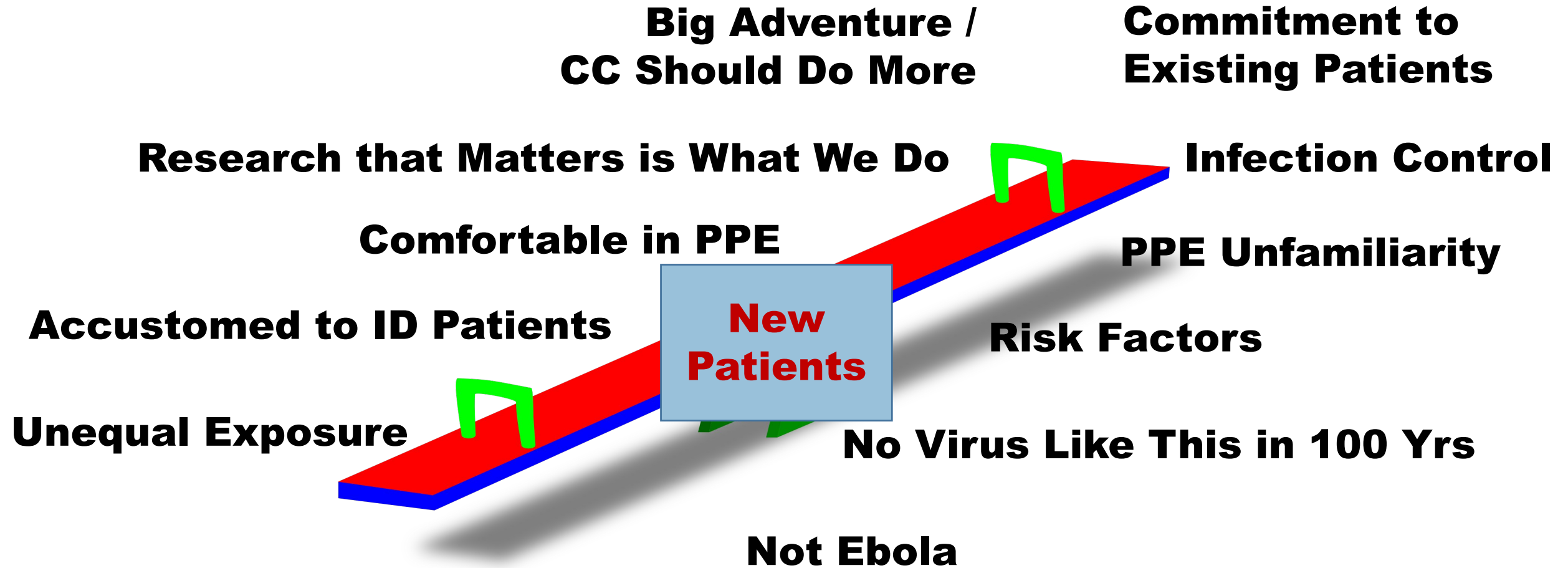
“Dr. Gilman – what are you doing to keep us safe?”

- Our building - SCSU
- Hospital Epidemiology Service – Drs. Palmore & Henderson – best in the business
- DLM Microbiology – testing support great and getting more great
- Dramatically reduced the arrival of new patients and even follow-ups
- Restricted visitors for both in-patients and out-patients
- 100% screening of patients & visitors
- 100% screening of staff
- PPE – now 100% masks for source control

HIGHLIGHTS: CC Response to COVID-19 (January – April 2020)

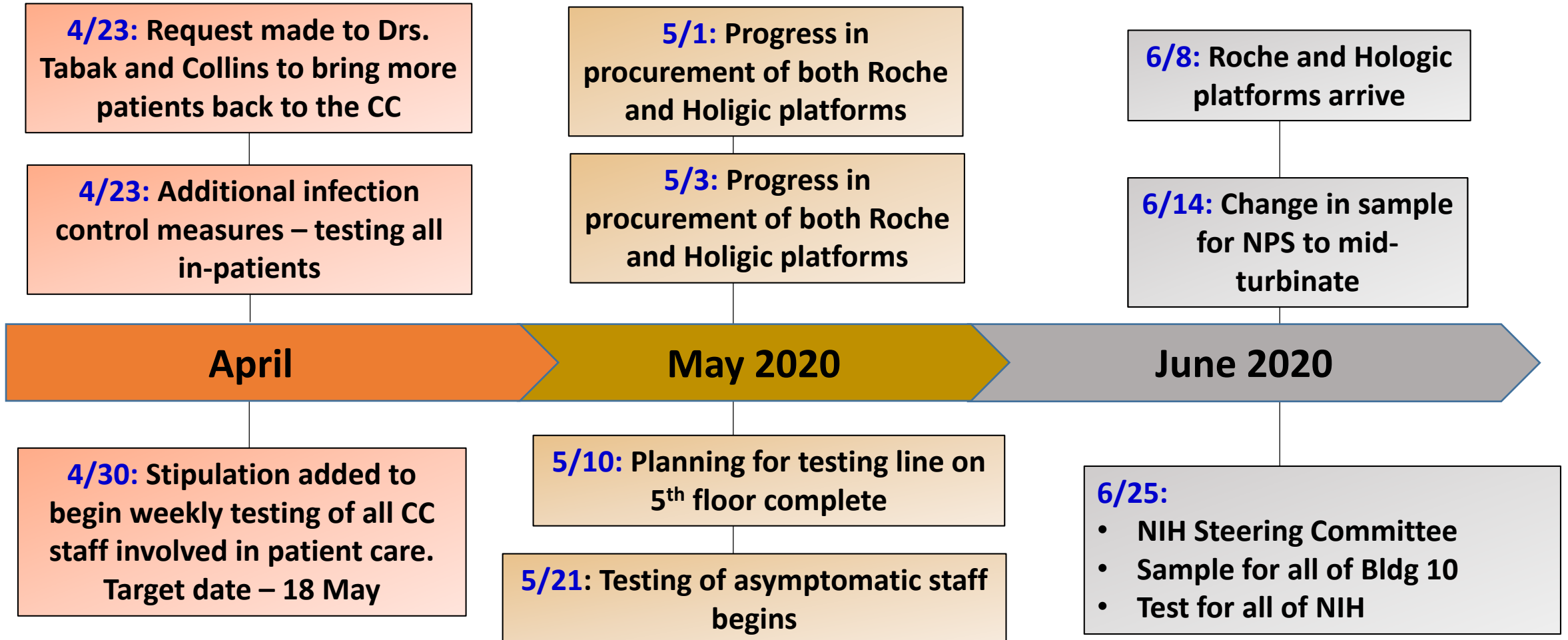


A Difficult Balancing Act



HIGHLIGHTS: CC Response to COVID-19

April (cont) – June 2020



CC Employee Well-Being and Resilience Resources

- Psychosocial well-being is critical as employees respond to many crises:
 - COVID-19 pandemic
 - racial injustice
 - economic distress
- Goal: all employees (from frontline providers to teleworkers) should feel supported and have easy access to reliable resources as we continue in our mission
- To mitigate and respond to the psychological toll of crises, systems launched in collaboration with our colleagues at NIMH and throughout NIH, that support institutional and individual resilience:
 - Well-Being and Resilience Resources
 - Peer-to-Peer Support



Need emotional support during the COVID-19 pandemic?



Monday - Friday, 9 am - 12 pm and 1 pm - 4 pm

Mental health clinician peers are here to:

- Listen to emotional challenges and stressors
- Provide encouragement and problem solving approaches
- Promote resiliency
- Offer resources

Calls are confidential unless there is a safety concern.
This is not an emergency line or clinical service.

Source: http://intranet.cc.nih.gov/od/staff_wellbeing/index.html#peertopeer



With Gratitude to Bernard Harper & Entire MMES Team!

COVID-19

Sample resources on the web

Home Page →



Search the Site SEARCH

Contact us | Site Map | Staff Only

About the
Clinical Center

Search the
Studies

Patient
Information

Education &
Training

Researchers &
Physicians

News & Events

Staff Directory

COVID-19 is an emerging, rapidly evolving situation. Get the latest public health information from CDC: <https://www.coronavirus.gov>. Get the latest research information from NIH: <https://www.nih.gov/coronavirus>.

Patient Information

Patient Information

Getting Started

COVID-19 Information for Patients and Their Visitors

Coronavirus (CoVID-19) Fact Sheet for Patients and Visitors [PDF](#)

Coronavirus (COVID-19) Hoja de datos para pacientes y visitantes del Centro Clínico NIH [PDF](#)

Map: Hospital Floor Plan [PDF](#) (Patient/Visitor Entrances)

Pediatric Inpatient Visitor Policy [PDF](#) (Effective March 25, 2020)

Reglamentos para visitas a pacientes pediátricos ingresados [PDF](#) (Efectivo 25 de marzo de 2020)

Update to Patient Visitor Policy [PDF](#) (Effective March 23, 2020)

Actualización a la política de visitantes de pacientes [PDF](#) (Efectiva el 23 de marzo de 2020)

Intranet

2019 Novel Coronavirus (COVID-19)

The Clinical Center Hospital Epidemiology Service remains vigilant and continues to monitor activity involving emerging infectious diseases. »

Office of the CEO

NIH Guidance on Coronavirus

Resources, FAQs and updates for NIH staff, including employees, contractors, trainees and volunteers.

Patient & Worker Safety

NIH Clinical Safety Rounds

Safety Tracking and Reporting System (STARS)

Additional Resources

BUILDING 10 ENTRY POINT SCREENING

CAPT ANN MARIE MATLOCK, USPHS

Screening stations – patients and family members *

- March 12 – set up screening stations in three locations
 - South lobby
 - North lobby
 - P 1 lobby
- Initial screening – 100% of all patients and family members 24/7
- To ensure safety of patients and staff
- Patients with positive screen transported to 5th floor for testing
- Public Health Service team discovered first COVID -19 patient through screening

* Reducing number of entry points to 3 – big challenge

Screening expanded – visitor policy

- March 22 – new visitor policy
- Visitors no longer permitted with exceptions
- One visitor for pediatric patient
- 2 visitors for end of life
- All other exceptions cleared through Patient Representative – CAPT Jones



A graphic representing a visitor policy sign. The top left features the text 'COVID 19' in large white letters, with 'CORONAVIRUS DISEASE' in smaller white letters below it. The top right has a blue background with the text 'STOP THE SPREAD OF GERMS' in white. The main body of the sign has a black background with the word 'VISITORS' in large white letters, followed by a horizontal orange line. Below the line, the text 'FOR THE SAFETY OF OUR PATIENTS AND STAFF,' is written in white. At the bottom, the word 'EXCEPTIONS:' is written in orange, followed by a bulleted list of three exceptions in white text.

COVID 19
CORONAVIRUS DISEASE

STOP THE SPREAD OF GERMS

VISITORS

FOR THE SAFETY OF OUR PATIENTS AND STAFF,

EXCEPTIONS:

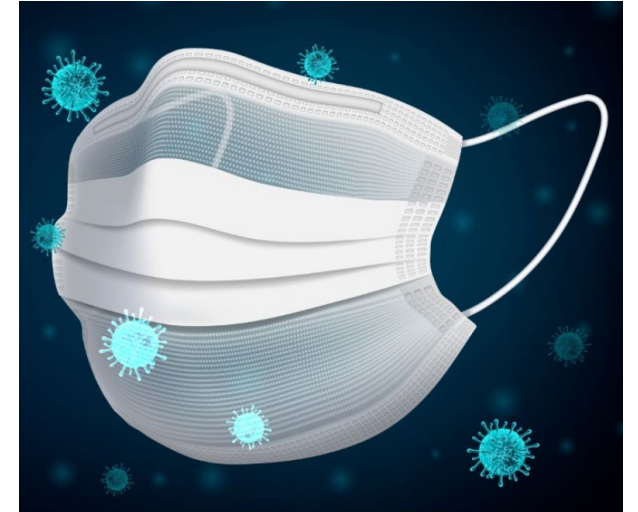
- PATIENTS UNDER AGE 18 MAY HAVE ONE VISITOR, PARENT, OR GUARDIAN
- PATIENTS WHO ARE AT THE END OF LIFE MAY HAVE TWO VISITORS
- PATIENTS UNDERGOING SURGERY/ PROCEDURES MAY HAVE ONE VISITOR

Expanded screening – 100% of all persons entering building

- March 25 – new entry point - P 1 ramp (underground garage) pilot for a few hours
- Developed process for management of positive screen for employees
- Successful pilot for symptom screening - no temperature monitoring of employees
- March 26 – began 100% screening

Source control masking

- April 2* – began 100% masking of all persons entering building 10 with negative screen
- Screening approx. 12,500/week



* Earliest date for assurance of mask supply chain supportability

Symptom screening

- Symptoms updated in collaboration with Hospital Epidemiology Service (CDC)*
 - New cough
 - New fever
 - Shortness of breath/difficulty breathing
 - Muscle aches
 - Chills
 - Diarrhea
 - New loss of taste/smell
 - Headache
 - Sore throat

* Screening criteria evolved as CDC guidance evolved

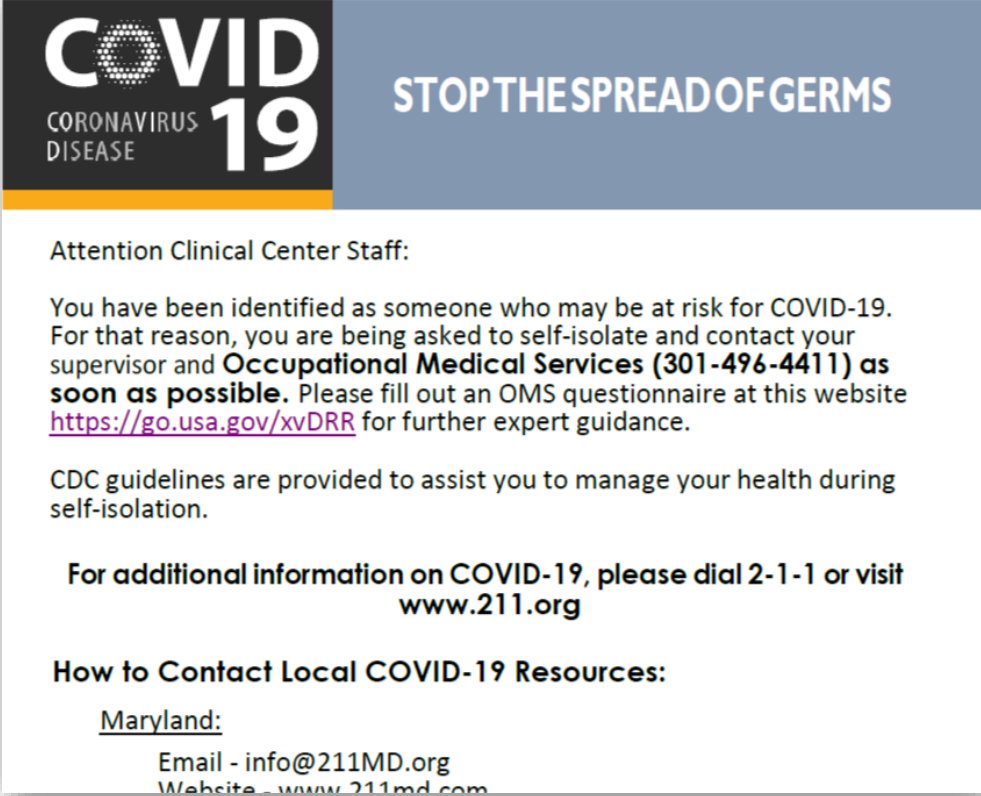
Process

- Patients
 - Symptom screening questions
 - Temperature check
 - If negative screen – sticker and mask provided
 - Entry permitted
 - If positive screen – sticker and mask provided
 - Transportation to 5th floor for testing
- Visitors
 - Same as above but referred to local health providers if positive screen



Process

- Employees
 - Only building 10 employees
 - Symptom screening questions
 - If negative screen – sticker and mask provided
 - If positive screen – provided with paperwork with Occupational Medicine Service (OMS) contact, asked to exit building or exit garage, call supervisor and call OMS



The flyer features a header with the 'COVID 19' logo on the left, which includes the text 'CORONAVIRUS DISEASE' and '19' in a large font. To the right of the logo is a blue bar with the text 'STOP THE SPREAD OF GERMS' in white. The main body of the flyer is white with black text. It begins with 'Attention Clinical Center Staff:' followed by a paragraph stating that the recipient has been identified as someone at risk for COVID-19 and is being asked to self-isolate and contact their supervisor and Occupational Medical Services (301-496-4411) as soon as possible. It provides a URL for an OMS questionnaire and mentions CDC guidelines. Below this, it offers additional information on COVID-19, including a phone number and a website. The final section is titled 'How to Contact Local COVID-19 Resources:' and lists contact information for Maryland, including an email address and a website.

COVID 19
CORONAVIRUS
DISEASE

STOP THE SPREAD OF GERMS

Attention Clinical Center Staff:

You have been identified as someone who may be at risk for COVID-19. For that reason, you are being asked to self-isolate and contact your supervisor and **Occupational Medical Services (301-496-4411)** as **soon as possible**. Please fill out an OMS questionnaire at this website <https://go.usa.gov/xvDRR> for further expert guidance.

CDC guidelines are provided to assist you to manage your health during self-isolation.

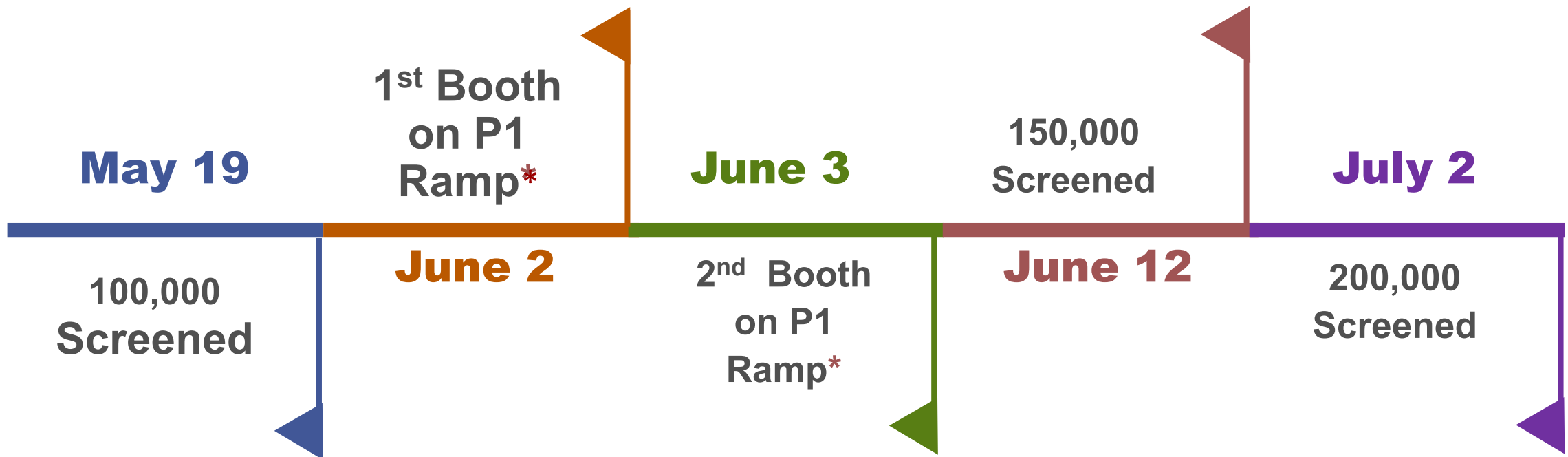
For additional information on COVID-19, please dial 2-1-1 or visit www.211.org

How to Contact Local COVID-19 Resources:

Maryland:

Email - info@211MD.org
Website - www.211md.com

Milestones



Since June 14 → 17,560 screened/week

* Entry to underground garage identified as a choke point

Routine Staff Testing - Why?, How?, and Who?

- Necessary to increase the inpatient / outpatient census and staffing in the CC
- 3 Phases (All supported by Department of Clinical & Research Informatics)
 - a. Sampling production line – CAPT Ann Marie Matlock, USPHS
 - b. DLM phase – Dr. Karen Frank
 - c. F/u & contact tracing – Dr. Tara Palmore

Registration Process

- ICs provide names to be placed on list – staff working in Building 10 – adding in contractors
- Remote or onsite access allowed
- Person enters NED ID
- First Access
 - Acceptance of privacy notice
 - Establish patient portal account

Welcome to the Clinical Center Testing system!

This system allows authorized NED users the ability to schedule appointments for testing.

<https://clinweb.cc.nih.gov/cct>

Conditions of Use and Logon

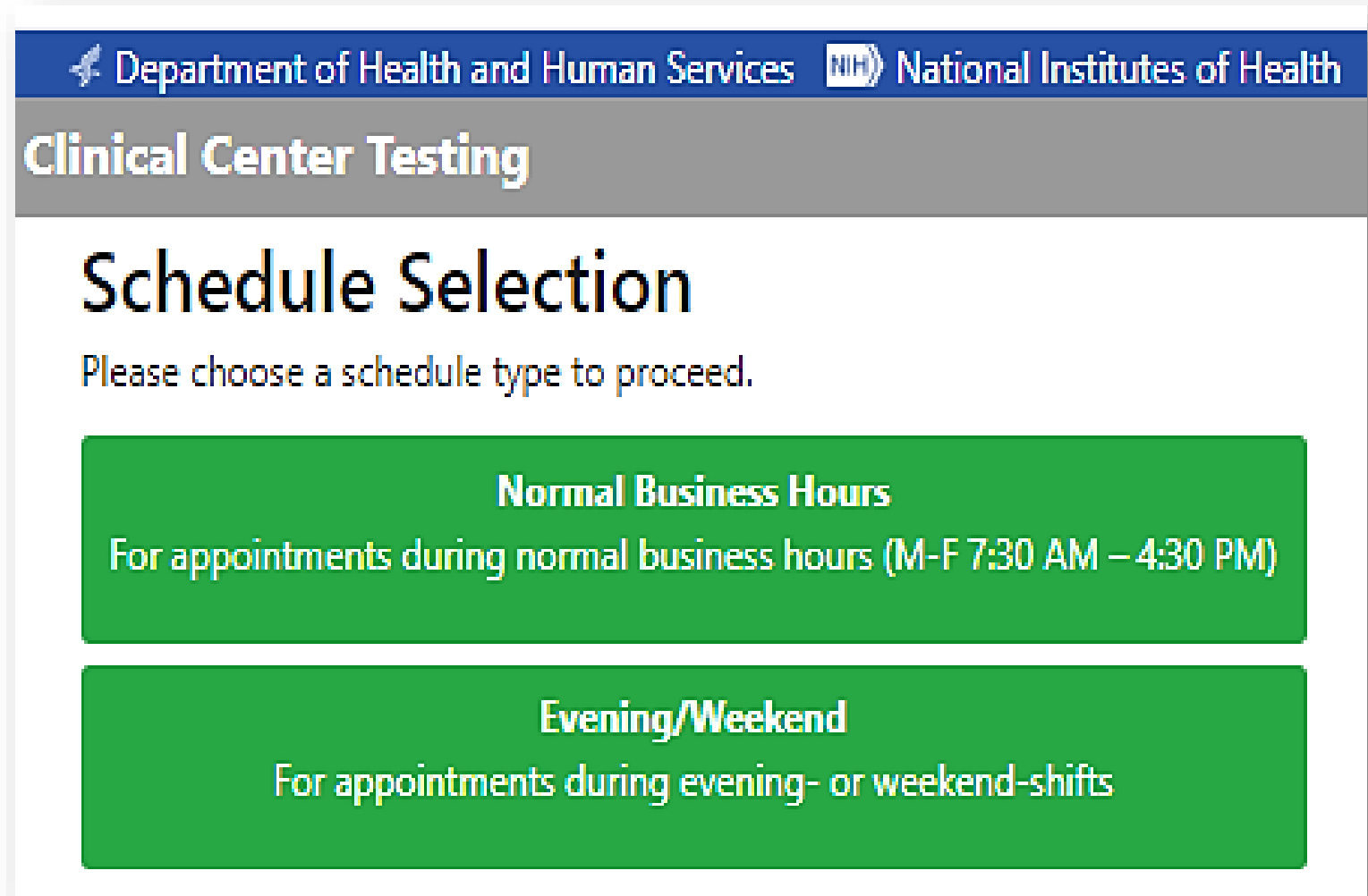
This warning banner provides privacy and security notices consistent with applicable federal laws, directives, and other federal guidance for accessing this Government system, which includes (1) this computer network, (2) all computers connected to this network, and (3) all devices and storage media attached to this network or to a computer on this network. This system is provided for Government-authorized use only. Unauthorized or improper use of this system is prohibited and may result in disciplinary action and/or civil and criminal penalties. Personal use of social media and networking sites on this system is limited as to not interfere with official work duties and is subject to monitoring. **By using this information system, you understand and consent to the following:**

The Government may monitor, record, and audit your system usage, including usage of personal devices and email systems for official duties or to conduct HHS business. Therefore, you have no reasonable expectation of privacy regarding any communication or data transiting or stored on this system. At any time, and for any lawful Government purpose, the government may monitor, intercept, and search and seize any communication or data transiting or stored on this system.

Any communication or data transiting or stored on this system may be disclosed or used for any lawful Government purpose.

Self Scheduling

- **Two Options**
 - Normal Business Hours
 - Evening/Weekend
- Email confirmation sent after registration and appointment scheduling
- Second email is Invite to Patient Portal
- Able to cancel/reschedule appointments and add appointment to calendar



The screenshot displays the 'Self Scheduling' interface. At the top, a blue header bar contains the text 'Department of Health and Human Services' and the 'NIH' logo followed by 'National Institutes of Health'. Below this is a grey bar with the text 'Clinical Center Testing'. The main content area is white and features the title 'Schedule Selection' in a large, bold, black font. Underneath the title, a smaller line of text reads 'Please choose a schedule type to proceed.' There are two green rectangular buttons stacked vertically. The top button is labeled 'Normal Business Hours' in bold white text, with the subtitle 'For appointments during normal business hours (M-F 7:30 AM – 4:30 PM)' in white text below it. The bottom button is labeled 'Evening/Weekend' in bold white text, with the subtitle 'For appointments during evening- or weekend-shifts' in white text below it.

Department of Health and Human Services NIH National Institutes of Health

Clinical Center Testing

Schedule Selection

Please choose a schedule type to proceed.

Normal Business Hours
For appointments during normal business hours (M-F 7:30 AM – 4:30 PM)

Evening/Weekend
For appointments during evening- or weekend-shifts

Scheduling Slots: 4,140 Weekly

Self Scheduling

Normal Business Hours: 3 Weeks Shown at a Time

- Monday to Friday :
 - 7:30 AM – 11:30 AM;
 - 12:30 PM to 4:30 PM
- 30 Slots per 15 minute Block
 - started 6/29/2020
- WOW station at check-in to register
- Walk ins supported

Evening / Weekend Hours:

- Monday to Friday
 - 8:00 PM – 5AM
- Weekends:
 - 9:00 AM – 5:00 PM;
 - 8:00 PM – 5:00 AM
- 30 Minute Blocks
- 1 Slot available per Block
- Nursing Staff on Unit Perform Check-In and Collection

Appointment Timeslot Selection

Please choose from the available appointment timeslots (06/18/2020 - 07/17/2020) to schedule and proceed.

- Available timeslots with <25% availability are indicated in YELLOW **LOW AVAILABILITY**
- Unavailable timeslots are indicated in GREY **UNAVAILABLE**
- Your previously scheduled appointment timeslots are indicated in LIGHT BLUE **SCHEDULED**

06/18/2020, Thursday	06/19/2020, Friday	06/22/2020, Monday	06/23/2020, Tuesday	06/24/2020, Wednesday	06/25/2020, Thursday
7:30-7:45am 7 of 25 available	7:30-7:45am 6 of 25 available	7:30-7:45am 12 of 25 available	7:30-7:45am SCHEDULED	7:30-7:45am 14 of 25 available	7:30-7:45am 23 of 25 available
7:45-8:00am 21 of 25 available	7:45-8:00am 18 of 25 available	7:45-8:00am 19 of 25 available	7:45-8:00am 25 of 25 available	7:45-8:00am 23 of 25 available	7:45-8:00am 25 of 25 available
8:00-8:15am 16 of 25 available	8:00-8:15am 22 of 25 available	8:00-8:15am 20 of 25 available	8:00-8:15am 21 of 25 available	8:00-8:15am 20 of 25 available	8:00-8:15am 23 of 25 available
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8:45-9:00am 24 of 25 available	8:45-9:00am 22 of 25 available	8:45-9:00am 24 of 25 available	8:45-9:00am 25 of 25 available	8:45-9:00am 24 of 25 available	8:45-9:00am 25 of 25 available

The floor plan shows the 5th floor of the Hatfield Center, divided into four quadrants: NW, NE, SW, and SE. The testing area is located in the SE quadrant, specifically in the 5-4400 and 5-5400 rooms, which are highlighted in yellow. The evacuation route is marked with red arrows, starting from the testing area, passing through the East Corridor, and exiting through the 300 and 100 rooms. The route also includes a check-in area and a line starting point. The plan also shows various rooms, corridors, and stairwells, along with a 'Do Not Enter' sign and an 'EXIT' sign.

Testing Area – 5th floor

Evacuation Route:

- Start at the Testing Area (5-4400 and 5-5400).
- Proceed through the East Corridor.
- Exit through the 300 and 100 rooms.
- Proceed to the Check-In Area and Line Starting Point.

Other Key Features:

- Do Not Wait Here:** A blue box indicating a no-waiting zone.
- Line Starts Here:** An orange box indicating the starting point for the evacuation line.
- Check-In Area:** A blue box indicating the area for checking in.
- Do Not Enter:** A red sign indicating a restricted area.
- EXIT:** A red sign indicating the exit point.

Room Numbers:

- NW:** 5-1600, 5-2600
- NE:** 5-1400, 5-2400
- SW:** 5-3600, 5-4600, 5-5600
- SE:** 5-3400, 5-4400, 5-5400
- E:** 5-3200, 5-5200

Other Labels:

- North, South, Central:** Directional labels for the building.
- Corridor 5-4600:** A specific corridor label.
- East Corridor:** A specific corridor label.
- 300, 100:** Room numbers for the exit area.
- Hatfield Center:** The name of the building.

Resource Utilization

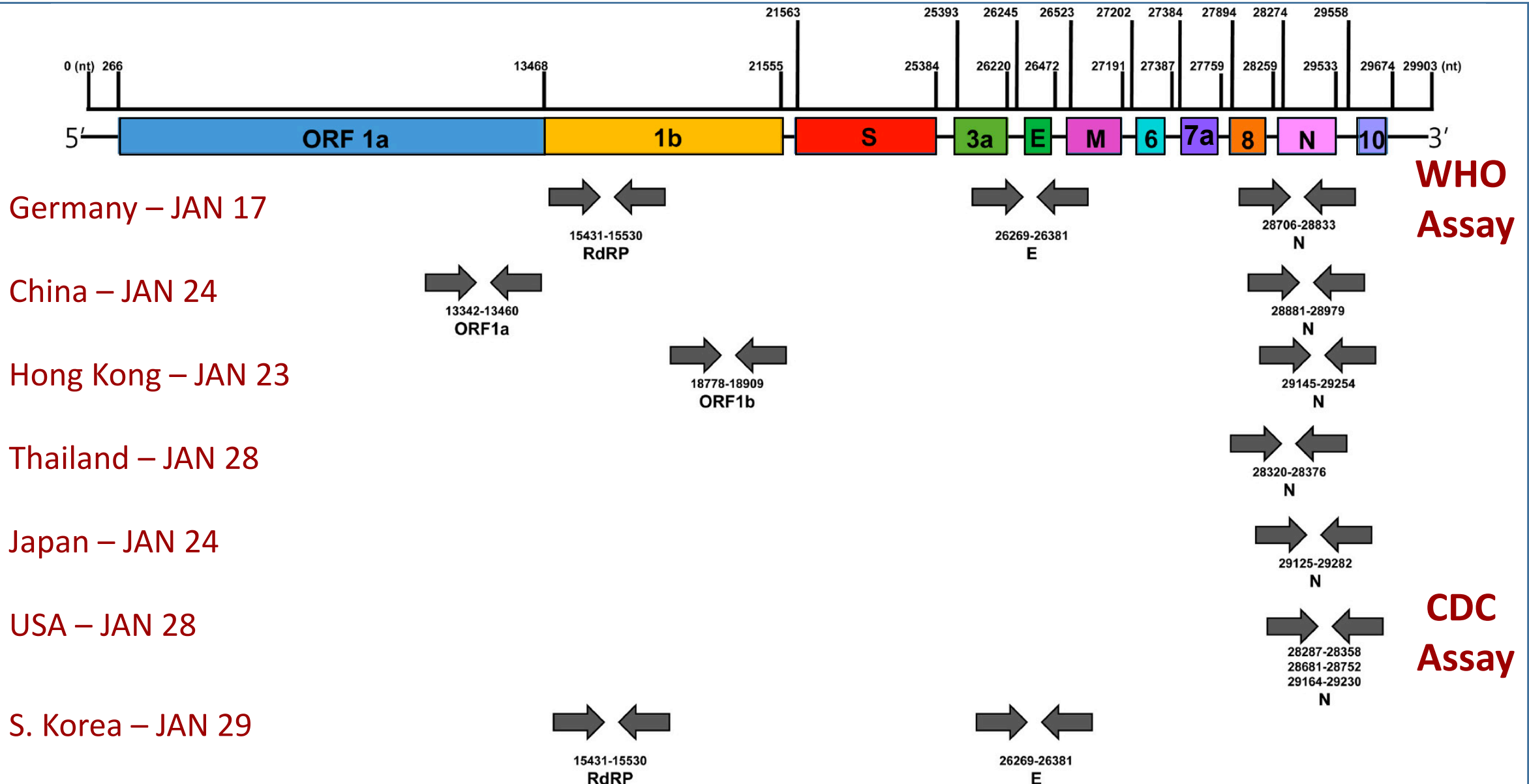
Space	Supplies	Personnel
<ul style="list-style-type: none">• 5 SE South nursing unit• 10 patient care rooms• 5th floor atrium	<ul style="list-style-type: none">• Isolation gowns• Gloves• Masks – N-95 and Surgical• CAPR – if unable to be fit tested• Eye protection• Hand hygiene gel• MPW boxes• Disinfecting wipes• Specimen bags• FLOQ swabs• Viral transport medium	<ul style="list-style-type: none">• MSA – check in staff• Guards – crowd control, line management• Messenger and Escort – gather specimens and take to Laboratory• Nurses – obtain specimens• Nurse leaders - Unit preparedness, staffing and unit flow during testing day

1,859 asymptomatic tests have been collected (July 9, 2020)

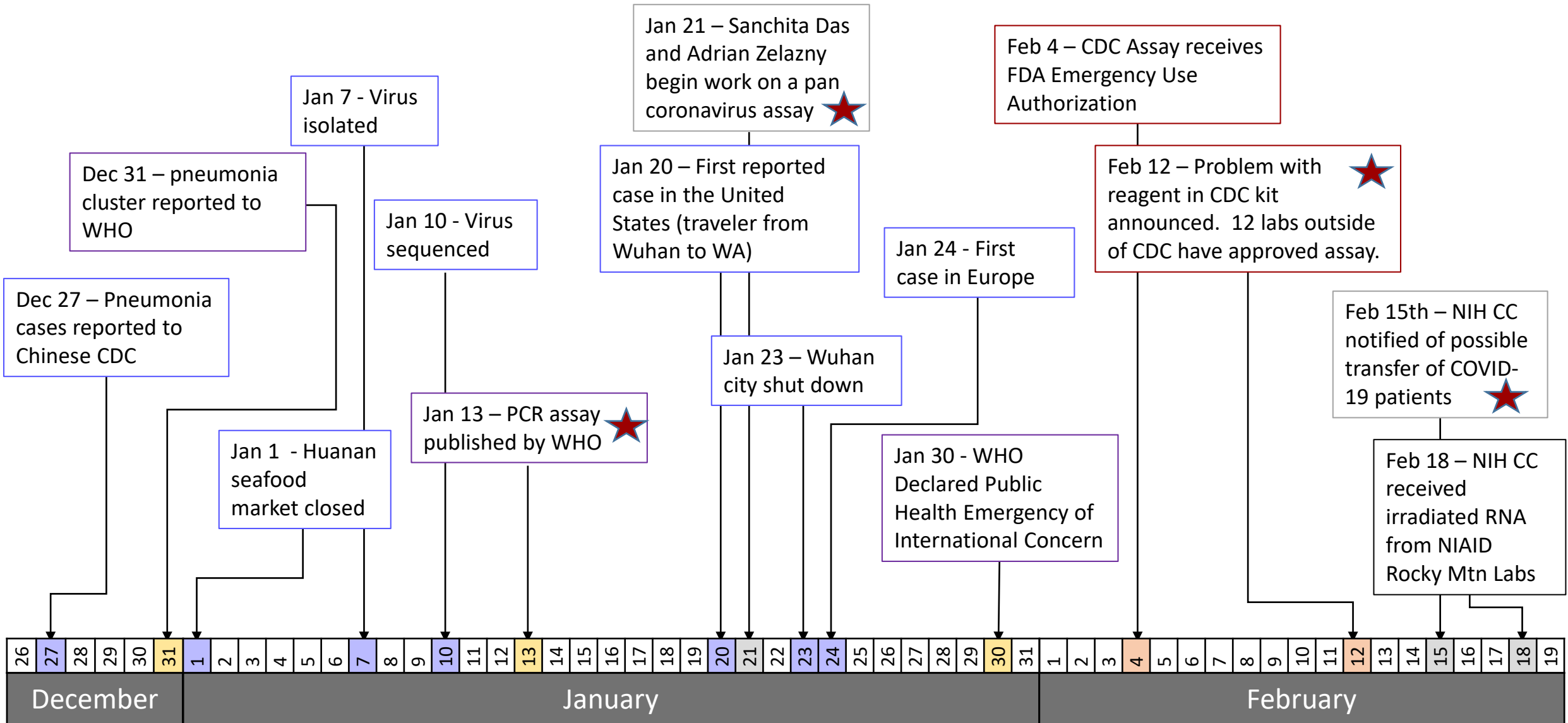
DLM PHASE

DR. KAREN FRANK

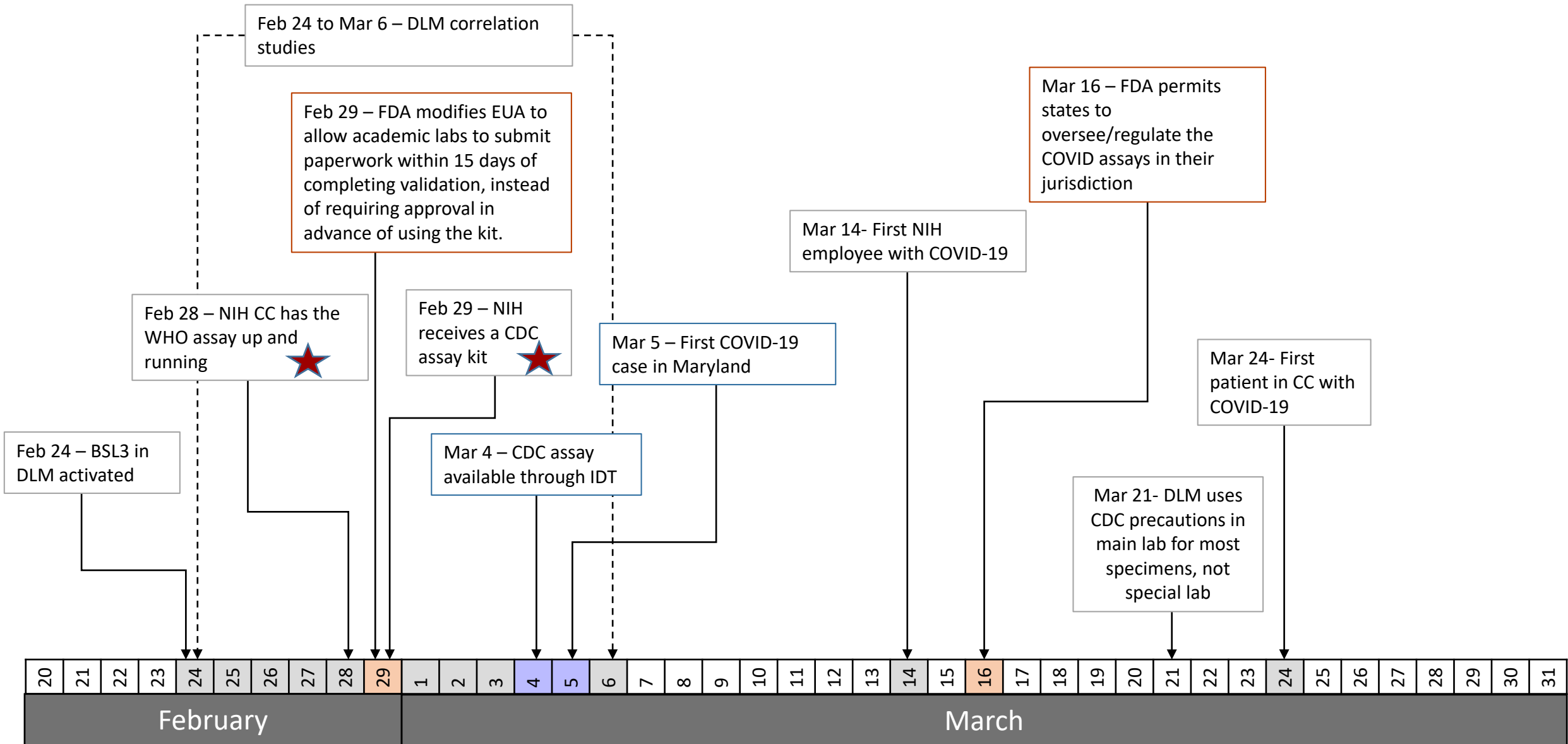
Assays use Different Combinations of SARS-CoV-2 Gene Targets



COVID-19 Timeline



COVID-19 Timeline



Qiagen



bioMerieux EasyMag



Low Volume



Perkin Elmer Chemagic 360

Borrowed from NIAID Research Lab



High Volume

RNA
Extraction
Methods



Abbott ID Now

Rapid 48 hour assessment for White House

Lower sensitivity of 81%
compared to NIH running CDC kit



Cepheid

Rapid Results in 1 hour.
Very limited supply
Only used for STAT/urgent
patient needs.

Pooling of Specimens

- Permits higher volume of testing while saving on limited reagents and technologist labor
- Go-live May 21st
- 10 samples pooled into 1 tube for testing
- Batch resulting in computer record
- Test individually for any positive pool
- Validation demonstrated slight loss of sensitivity (4 Ct levels); still detect very low viral load
- Only used in asymptomatic staff screening
- Submitted to FDA as bridging study added to EUA

3 Instruments Currently in Clinical Center for SARS-CoV-2 RNA Detection

**Applied
Biosystems
7500 Fast**



**Used
March - Present**

**Hologic
Panther Fusion**



**Go-live
June**

**Roche
COBAS 6800**



**Go-live
July (DTM)**

Testing Capacity

Instrument	Volume per day (Individual Tests)	Volume per day (with Pooling in batch of 10)	Volume per Week	Current Volume per week
ABI 7500	100	1,000		
Panther Fusion	750	7,500		
COBAS 6800	1,000	10,000		
TOTAL		18,500*	129,500*	1,000

* Would need some additional staff to actually increase volume dramatically. Staff approved, but not hired or trained.

Specimen Type for Collection

- Nasopharyngeal Swab – Gold Standard (used for patients and symptomatic employees)
- Midturbinate Swab – Used for Asymptomatic employees
- Nasal swab – Not in use; lower sensitivity
- Saliva – Not in use; IRB protocol approved to collect samples to assess sensitivity, but prevalence low in Maryland, so needed samples not yet available. Uncertain if this will be robust given mixed results at other centers.
 - NIH IRB Protocol (Car line)
 - Collaborative IRB Protocol with Maryland Dept of Public Health
 - Adding Washington Hospital Center Emergency Room to NIH Protocol

HOSPITAL EPIDEMIOLOGY SERVICE

DR. TARA PALMORE

Hospital Epidemiology Service

Goals of our service are:

- Prevent and contain infections
- Protect patients, staff, and visitors
- Support clinical research

Close collaboration with the Occupational Medical Service during the pandemic

Infection prevention measures evolve with science base, guidelines, and events

NIH Clinical Center COVID-19 Statistics (July 7)

- 16 NIH patients have tested positive at the Clinical Center
- 20 patients with COVID-19 admitted to the Clinical Center
 - 11 patients brought to NIH for COVID-19 studies
 - 2 existing NIH patients enrolled in NIAID studies
- 256 NIH staff (employees and contract staff) with COVID-19
 - ~ 43 healthcare personnel
 - 7 staff tested positive via asymptomatic surveillance testing (1 symptomatic, 1 presymptomatic)

COVID-19-Era Universal PPE

- | | |
|-----------------|--|
| March 27 | All patient care staff wear surgical masks |
| April 1 | All Building 10 staff wear surgical masks |
| April 3 | All Building 10 staff and patients wear surgical masks |
| May 3 | All inpatients asked to put on surgical masks when healthcare personnel enter the room |
| June 26 | Providers use face shields over surgical masks for essentially all patient encounters |

At each juncture – Bernard Harper and Materials Management ascertained that supplies were available and could be maintained at par levels, following burn rate.

Screening/testing patients for COVID

- **Ahead of appointment/admission**
 - Patient is called and asked about symptoms/exposure
- **Upon arrival at entrance**
 - Patient has temperature taken, symptom screening, given a mask
 - If fever or two symptoms, taken to 5th floor negative pressure wards a PUI for COVID testing
- **In clinic**
 - Nurse asks same screening questions
 - Patient may undergo pre-procedure surveillance testing
- **Upon admission**
 - Nurse asks same screening questions
 - If asymptomatic → admission surveillance testing
 - If symptomatic → tested as a PUI
- **Pre-procedure testing**
 - Aerosol-generating procedures

Hospital Epidemiology Service Contact Investigations

- 32 contact studies over 3 months
- 4 secondary cases among staff
- No secondary cases among patients

