

COVID-19 Update

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Monday May 18th

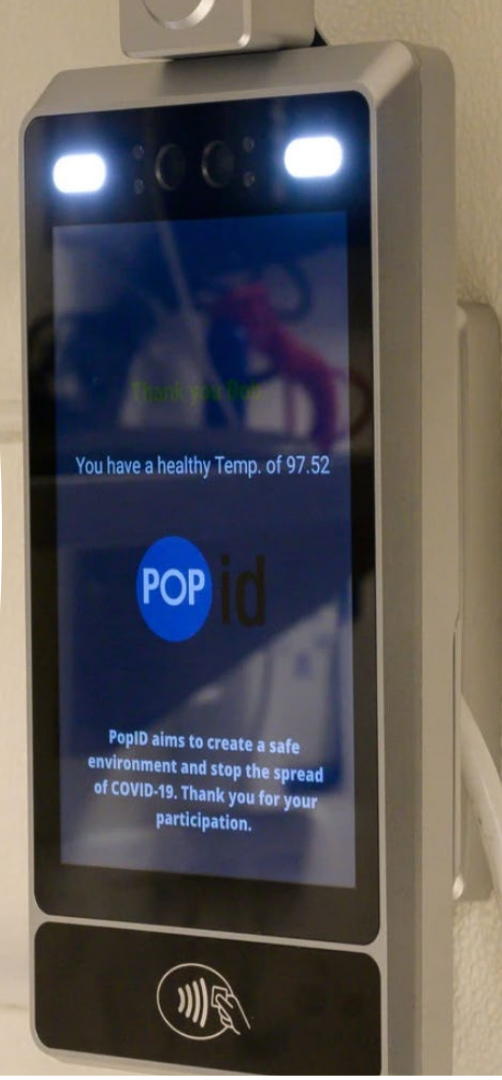
NYS Dashboard

	14-Day Decline in net Hospitalizations OR Under 15 new Hospitalizations (3-day avg)	14-Day Decline in Hospital Deaths OR Fewer than 5 deaths (3-day avg)	New Hospitalizations (Under 2 per 100K residents - 3 day rolling avg)	Share of total beds available (threshold of 30%)	Share of ICU beds available (threshold of 30%)	30 per 1k residents tested monthly (7-day avg of new tests per day)	Contact tracers 30 per 100K residents or based on infection rate	Metrics Met
Capital Region	1 18 ✗	1 6 ✗	0.98 ✓	39% ✓	54% ✓	1,397 / 1,085 ✓	Expected ★	5/7 ✗
Central New York	0 6 ✓	3 3 ✓	0.86 ✓	44% ✓	52% ✓	1,231 / 775 ✓	Yes ✓	7/7 ✓
Finger Lakes	0 11 ✓	1 4 ✓	1.41 ✓	41% ✓	56% ✓	1,812 / 1,203 ✓	Yes ✓	7/7 ✓
Long Island	34 425 ✓	3 99 ✗	2.61 ✗	30% ✓	34% ✓	4,851 / 2,839 ✓	Expected ★	5/7 ✗
Mid-Hudson	32 132 ✓	1 69 ✗	2.93 ✗	33% ✓	51% ✓	4,159 / 2,322 ✓	Expected ★	5/7 ✗
Mohawk Valley	0 4 ✓	0 2 ✓	0.96 ✓	50% ✓	55% ✓	602 / 485 ✓	Yes ✓	7/7 ✓
New York City	33 820 ✓	32 502 ✓	2.37 ✗	28% ✗	23% ✗	14,840 / 8,399 ✓	Expected ★	4/7 ✗
North Country	22 3 ✓	10 1 ✓	0.08 ✓	55% ✓	63% ✓	783 / 419 ✓	Yes ✓	7/7 ✓
Southern Tier	1 5 ✓	3 2 ✓	0.26 ✓	49% ✓	42% ✓	1,028 / 633 ✓	Yes ✓	7/7 ✓
Western New York	2 28 ✗	3 9 ✗	1.28 ✓	42% ✓	56% ✓	1,756 / 1,381 ✓	Expected ★	5/7 ✗

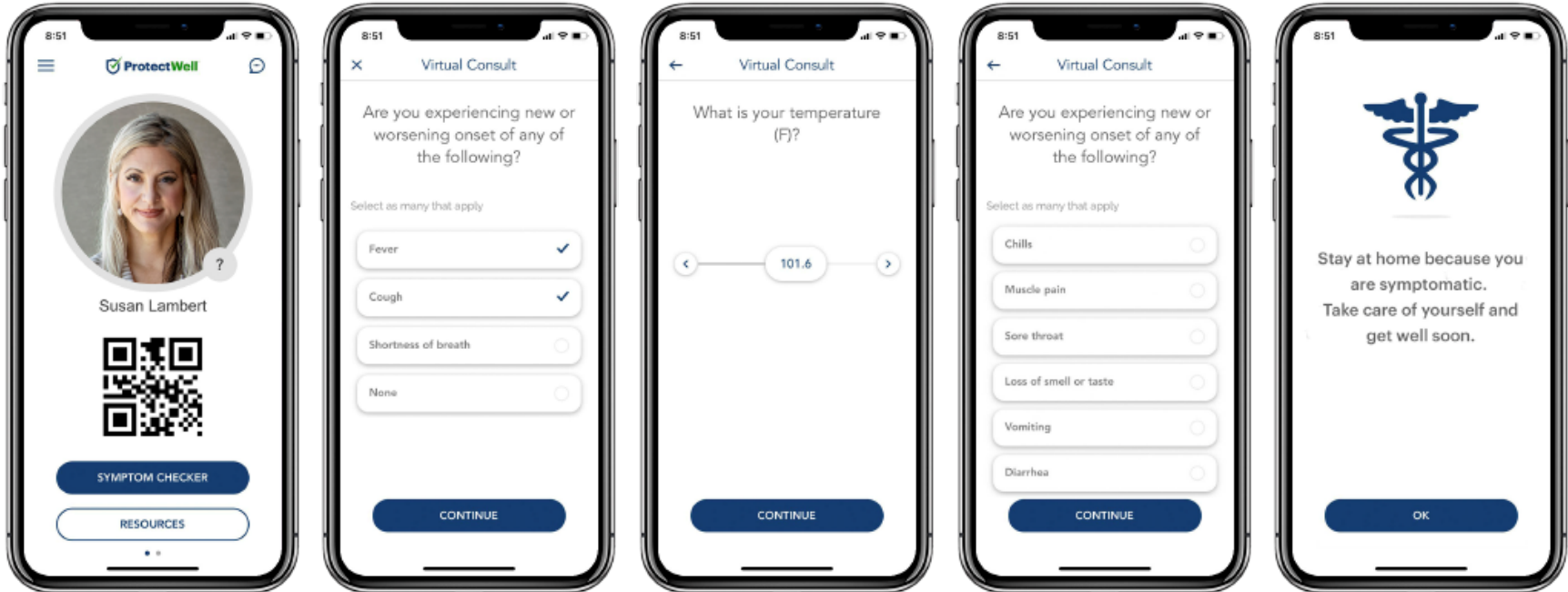
- 5 counties opening up
- State beaches opening in NY (not NYC), Connecticut and New Jersey

Access

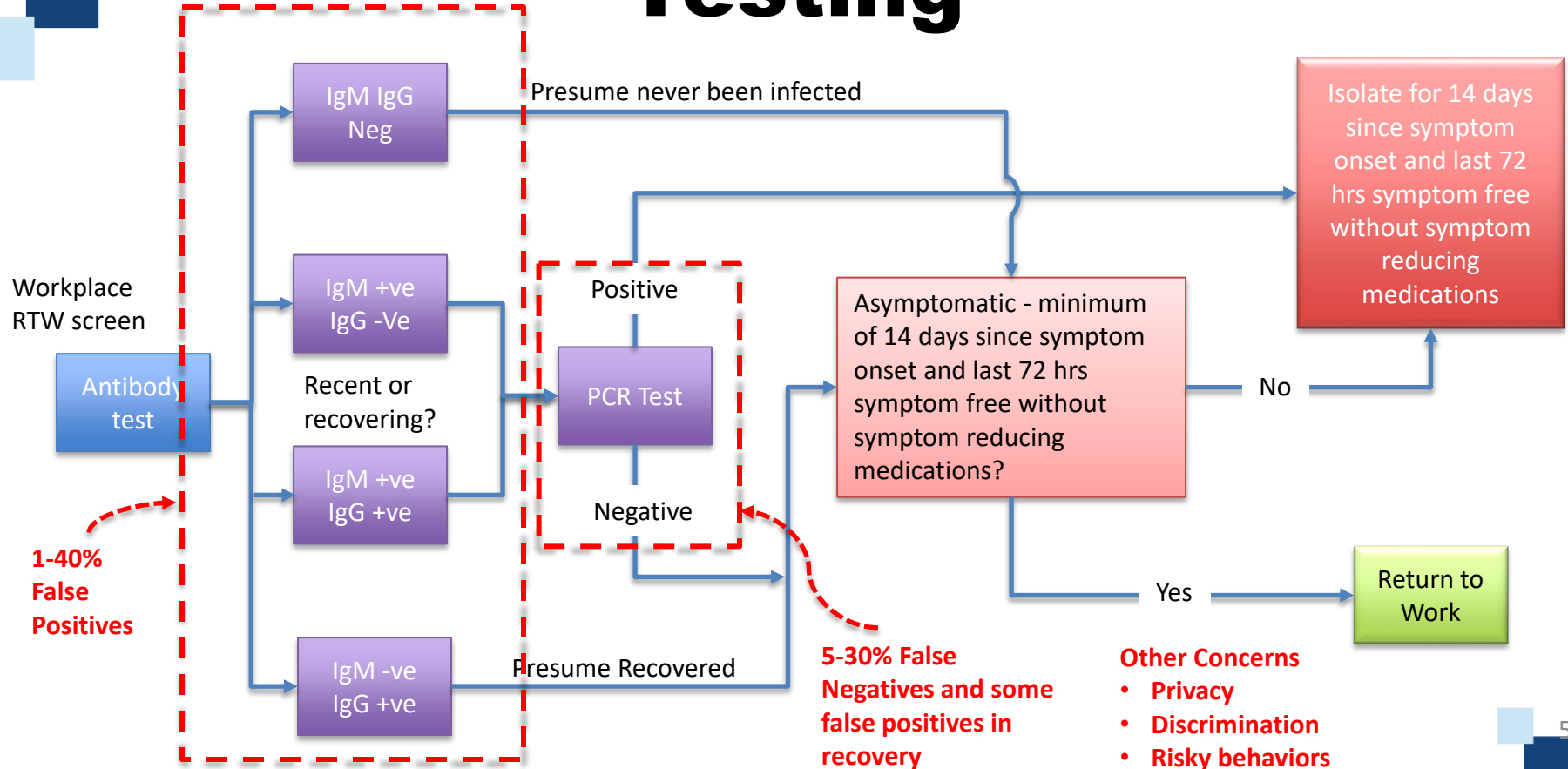
- Symptom & Temperature Screening
 - **Limited effectiveness** – false negatives, asymptomatic carriers....
 - Reminder to stay at home if sick
 - Provides a level of reassurance
- Visitors, Contractors and the public:
 - Restricting access for non-essential visitors and the public
 - Controlled area for deliveries



ProtectWell™



Testing





New & Interesting

Talking may be an Issue



Space, Time and Airflow

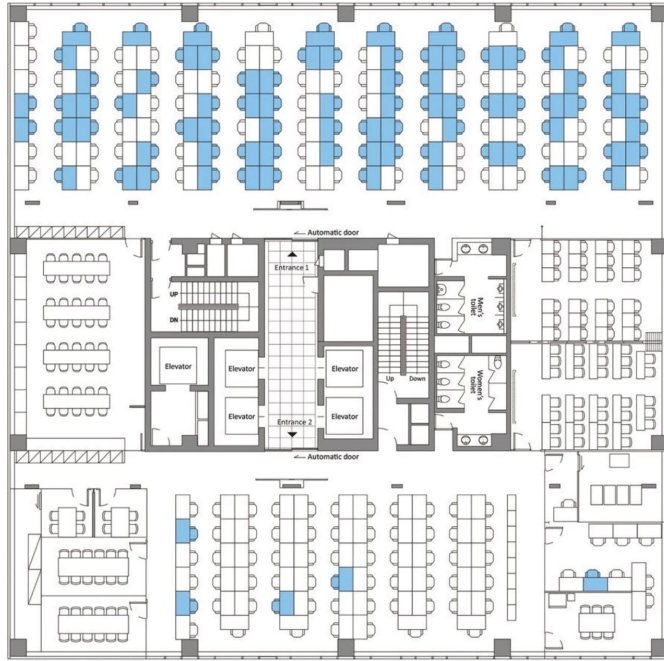
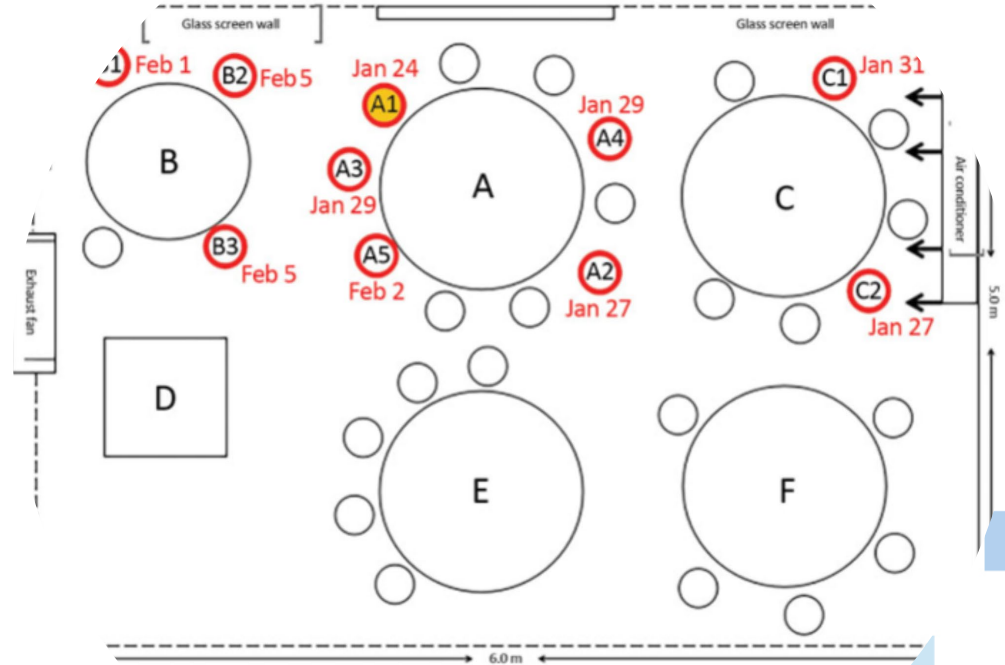
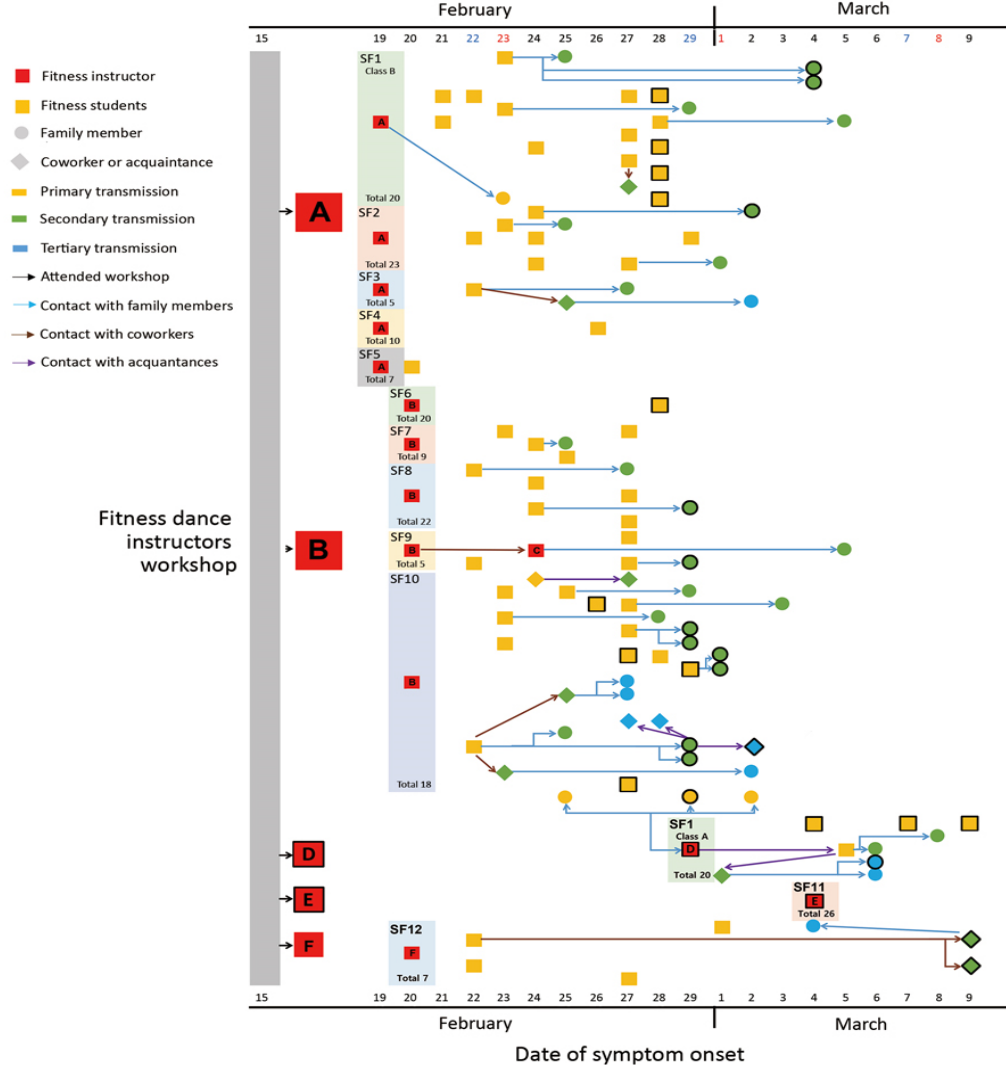


Figure 2 Floor plan of the 11th floor of building X, site of a coronavirus disease outbreak, Seoul, South Korea, 2020. Blue coloring indicates the seating places of persons with confirmed cases.



When will it be safe to go back to the gym?



China

- Small but concerning new cases in Harbin, Suifenhe and Wuhan,
- 83,000 cases in a population of 1.3B
- Even assuming 10x the true number of cases 95% of people in China have never been exposed to the virus
- Potential for a second 'wave' but large geography and quick public health response



R_0

- The R_0 number was thought to be between 2 and 3
- Recent study suggests that R_0 may be closer to 5 to 6
- Why this matters:
 - At an R_0 of 2.2 herd immunity is achieved at 55% of people are immune
 - With an R_0 of 5.7 herd immunity is not reached until 82% of people are immune – therefore billions more vaccine doses needed

R_0 is a function of pathogen contagiousness + local environment
(population density – housing and workplace, social distancing)

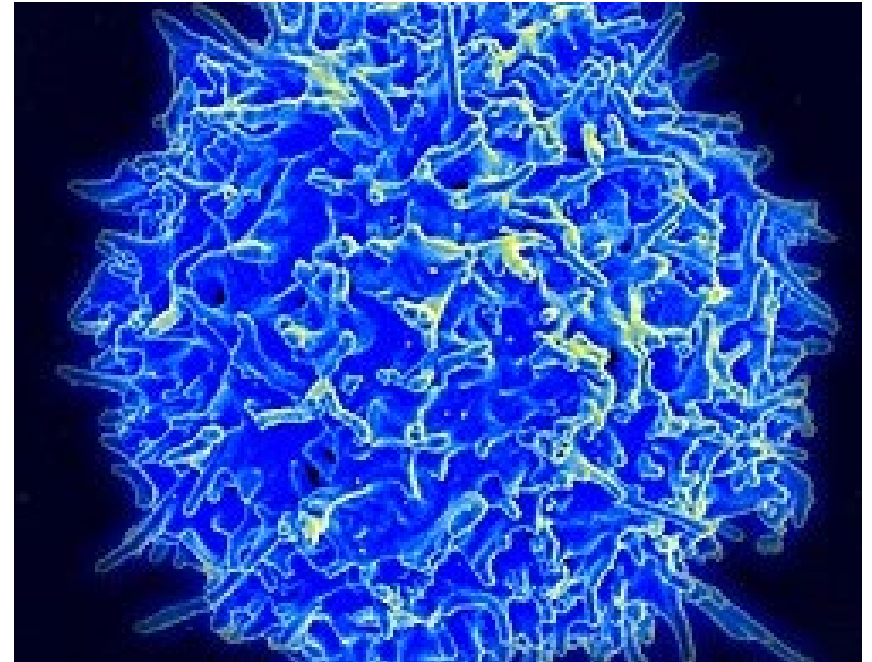
COVID-19 in Sewerage

- New study has found SARS-CoV-2 in wastewater treatment plants
- Potential to track outbreaks
- Treatment of wastewater kills the virus



Some Good News!

- Examining blood from 20 adults who had recovered from COVID-19:
 - All of the patients had CD4⁺ helper T cells
 - 70 percent of them had CD8⁺ killer T cells
- Typical immune response
- Also tested blood samples from 2015 to 2018 and they had CD4⁺ that reacted against SARS-CoV-2
- Supports longer term immunity and potential for a vaccine





Questions