Updated Monthly Capacity Numbers: Current EUA’s

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>516M</td>
<td>November 2021</td>
</tr>
<tr>
<td>593M</td>
<td>December 2021</td>
</tr>
<tr>
<td>631M</td>
<td>January 2022</td>
</tr>
<tr>
<td>912M</td>
<td>February 2022</td>
</tr>
<tr>
<td>1,035M</td>
<td>March 2022</td>
</tr>
</tbody>
</table>

No changes to capacity this week. Feels like the tide has started to turn - while retail stock of tests is not up everywhere, tests are broadly available in many cities. Some stores have even dropped test purchase limits.

What Happened Last Week

The FDA issued 11 amendments to existing EUAs and two new safety/policy communications in the past week:

- New Amendments to Existing EUAs (11):
  - Molecular Tests (4): Vela Operations ViroKey | Fluidigm Advanta Dx | LetsGetChecked | PerkinElmer
  - Antigen Tests (4): Nano-Ditech Corp Nano-Check | Abbott BinaxNOW (3)
  - Serology Tests (2): Assure Tech IgG/IgM | NOWDiagnostics ADEXUSDx
  - Collection Kits (1): Color Health Self-Swab Kit

- Safety/Policy Communications (2):
  - Recalls (1): SD Biosensor issued a voluntary recall for tests imported illegally into the US. See more below.

New & Noteworthy

Updates on Free Tests

#1 The Medicare gap has been filled.
The administration announced a free COVID-19 home test program for Medicare patients. Those with Medicare Part B (90% of Medicare subscribers) can pick up eight tests per month at pharmacies, beginning in the early spring.

#2 Frozen tests should still work - but check the instructions.
With winter aggressively upon us, we saw concern about whether the home tests being sent through the mail will still work if they’ve gotten frozen in your mailbox. Bottom line - most likely they will. There’s not a lot of research on the subject, but consensus is that if a test is left to warm to room temperature, then it should be effective. Caution - make sure that the control line is clearly visible before using, and check the package instructions for details.

#3 Unvaccinated folks are also uninterested in tests.
Maybe no surprise here - but interesting to note that a poll of unvaccinated people showed that 70% of them have not and do not plan to order free tests from the federal program.
Some People Will Smuggle Literally Anything

When demand for any commodity is high enough, unscrupulous folks smell an opportunity. The latest: COVID-19 rapid tests. This week we saw SD Biosensor acknowledge that their non-US tests were illegally imported and sold here. Commentary: While the price of tests is still higher than everyone wants them to be, we don’t anticipate much selling of “fake” tests - it takes too much work to create counterfeits.

(By the way - if you’d have told us six months ago that someone would be smuggling rapid tests into the US because of sky-high demand here, we would have laughed. A lesson in the unpredictability of this pandemic.)

Food for Thought

Back to the Animal Kingdom

We learned more this week about the hamster disaster in Hong Kong. The small furry creatures and their pet shop owner both carried a strain of Delta that hadn’t previously been present in Hong Kong.

We also learned more this week about COVID in deer. (We don’t want to say that you heard it here first - but we have been covering deer stories for many, many months now!) These large furry creatures seem to be reservoirs for the virus - mostly without any symptoms. However, as the NY Times notes, three key questions remain: “How are deer catching the virus? How might the pathogen mutate inside its cervid hosts? And could the animals pass it back to us?”

Lastly, the Viral Emergence Research Initiative used AI to look at which species of bats might be harboring the kind of coronaviruses that could infect humans in the future. While that thought might be worrisome, it’s important to remember that bats also play a critical role in our ecosystem. Bottom line: We need to understand more about how and when these flying furry creatures interact with humans. Probably not a job for those with chiroptophobia. (Great cocktail-party word for the future!)

Isolation Exit Criteria: 10 Days or a Negative Test, Please

A University of Chicago Medical Center study of worker permission to return after Omicron COVID-19 reveals that 43% of workers had a positive antigen test in days 5-10. We stand by our Pick 2 Strategy.

COVID Challenge Study

More details on the UK human challenge study: A controlled group of young, unvaccinated, healthy volunteers were inoculated with an infectious dose of the original Wuhan strain and no severe disease resulted. As we noted last week, only half of the volunteers developed an infection. While this may seem surprising, it’s consistent with 2020 data from China, in which only 25% of household members contracted COVID in the presence of an index case. The study tracked viral load by patient, by PCR (in blue), as well as the level of infectious virus (in red), determined by cultivation studies. Notably, every infected patient was still infectious at 5 days, and half were still infectious after 10 days.

K-12 Round Up:

Test to Stay: An Idea Whose Time Came at Just the Wrong Moment

Test to Stay (TTS) came into its own just as Omicron made it very hard to implement. New research soon to be published in Pediatrics backs up what proponents have been saying: TTS keeps kids in school without causing significant additional in-school COVID-19 transmission. And as of January 19, schools also have a practical guide to TTS, courtesy of the Duke-Margolis Center.

However, as the guide notes, schools must address staffing, space, and test access when they plan TTS programs. If they skip that step, they’ll just end up “overburdening staff and exacerbating existing disparities among underfunded schools.” COMMENTARY: Where are we with Test to Stay? We expect,
like so many other COVID-19-mitigation protocols, TTS will either be implemented - or not - on a state-by-state basis. Latest example: The state of Colorado went ahead with its own version (dubbed test and mask) on February 1, mid-surge.

First Contact Tracing, Now Masks: School Protocols Rolling Back

More and more schools - and the state governments that regulate them - seem to be crossing their fingers and hoping that the end of the Omicron wave will allow a transition to post-COVID times. Districts in Oklahoma, North Carolina, Ohio, and Pennsylvania have joined the trend of de-emphasizing or eliminating contact tracing. Massachusetts, Connecticut, New Jersey, Delaware, and Oregon announced this week that school mask mandates would be ending soon (CT and MA on February 28, NJ on March 3, OR and DE on March 31), though Oregon explicitly left the door open for re-imposing a statewide mandate should future conditions require it.

The Good News is…

A great new addition to CDC COVID Data Tracker: the new wastewater tab. Wastewater is a “leading indicator” of COVID-19 infections in a community - it’s the measurement that goes up first when a wave is happening, even before case counts do. (It was the canary in the coal mine that allowed South Africa to warn the world that Omicron was on the way.) Your Local Epidemiologist Dr. Katelyn Jetelina has a terrific overview of how wastewater-based epidemiology (WBE) works both in general and for COVID-19 specifically, if you want to know the full scoop on what we can find out from poop.

Latest Monthly Capacity Estimates

Estimated Monthly Capacity of All Tests (M)

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Nov '21</th>
<th>Dec '21</th>
<th>Jan '22</th>
<th>Feb '22</th>
<th>Mar '22</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTIQUE</td>
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</tr>
<tr>
<td>Antigen Professional + Point of Care EUA Today</td>
<td>174</td>
<td>185</td>
<td>187</td>
<td>187</td>
<td>191</td>
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<tr>
<td>Antigen OTC: Home/Self EUA Today</td>
<td>141</td>
<td>216</td>
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<tr>
<td>Antigen Central Lab Today</td>
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<tr>
<td>Antigen Total</td>
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<td>408M</td>
<td>454M</td>
<td>729M</td>
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<tr>
<td>MOLECULAR</td>
<td></td>
<td></td>
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<tr>
<td>Molecular Professional, Point of Care, OTC EUA Today</td>
<td>32</td>
<td>36</td>
<td>36</td>
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<tr>
<td>Lab Based PCR Today</td>
<td>130</td>
<td>130</td>
<td>125</td>
<td>130</td>
<td>130</td>
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<tr>
<td>Add'l Lab Based PCR with Pooling</td>
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<td>16</td>
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<tr>
<td>Molecular Total</td>
<td>190M</td>
<td>185M</td>
<td>177M</td>
<td>182M</td>
<td>183M</td>
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<tr>
<td>Total Test Capacity</td>
<td>516M</td>
<td>593M</td>
<td>631M</td>
<td>912M</td>
<td>1,035M</td>
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