



Tracking US Coronavirus Testing Capacity

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■ Current National Capacity Projections. (Tests / Month)

349M

March 2021

504M

June 2021

700M

September 2021

852M

December 2021

This week's updated numbers reflect a more conservative outlook on the manufacturing growth curve: amidst testing declines and fewer new EUAs each month, companies appear to be cutting back potential future manufacturing capacity. Perhaps strong return-to-work testing practices as recently shown in the ASU Workplace Commons survey may reverse this trend in the fall.

What Happened Last Week

The FDA issued no new EUAs and ten amendments to existing EUAs:

- New Amendments to Existing EUAs (10)
 - Molecular Tests (6): BD for BD MAX | DxTerity | Seasun AQ-TOP | LabCorp | Agena Bioscience MassARRAY | SML Genetree Ezplex
 - Serology Tests (3): Advaita RapCov | Quotient MosaiQ | Roche Elecsys
 - Flu/RSV Panels (1): BD for BD MAX

New & Noteworthy

- Collaboration is increasing important. The last few weeks saw an uptick in partnerships to develop and/or deliver tests. Several teams including some new players in COVID-19 testing announced new collaborations this week:
 - [The University of Utah, ARUP Laboratories, and Techcyte Inc.](#) for an AI-augmented rapid antibody test
 - [Minute Molecular Diagnostics and Northwestern University](#) with NIH support for a rapid POC PCR test
 - [Gingko Bioworks and Quest Labs](#) for widespread rollout of their school testing program to support in-classroom learning
 - [UC Davis and Allegiant Travel Company](#) for a rapid test using a machine-learning assisted MALDI-TOF-MS approach
 - [Inspire Health Alliance Patterns and the North Carolina Association of Educators](#) for an at-home PCR testing program for teachers
 - [UPS and FedEx](#) for transportation and other logistical assistance with critical pandemic relief efforts in India, including test kit distribution

A Glimpse at a Post Vaccination World

- An [article in MIT Technology Review](#) examines breakthrough infections in vaccinated individuals based on [newly released CDC data](#). Post vaccine infection is exceedingly rare at .008%. Out of 7,157 people, only 331 were hospitalized and 77 died. More insight to come as data from vaccination of younger people can be analyzed.
- As older Americans are getting vaccinated, 36% of COVID hospitalizations are now [those under 50](#). The second largest group by age are those between 50 and 64 who now account for 31% of those hospitalized. The upshot? While overall hospitalization is down significantly, no one can be complacent.

The steady pace of back to traditional / in-person schools continues – from [Burbio](#):

- Only 3.3% of K-12 kids are in virtual-only schools. For K-5 kids – it is only 2.2%
 - % US K-12 students attending “virtual-only” schools = 3.3% (from 5.6% last week)
 - % US K-12 students attending “traditional in-person/every day” schools = 67.1% (from 65.3%)
 - % US K-12 students attending “hybrid” schools = 29.6% (from 29.1%)

Food for Thought

Commentary:

In the pandemic's 17th month, we live in a world of vivid contrast between early-vaccinating countries that appear to be approaching an end to their epidemic and those falling rapidly into the abyss. Brazil and India are suffering escalating COVID caseloads exhausting health care resources. The long haul with the virus in the US and the current situation in Brazil and India have clearly underscored the importance of a strong, coordinated, and sustained public health response.

In early 2020, more than a year ago, we didn't know how the disease spread, we lacked critical supplies like PPE and diagnostic testing, we did not have therapeutic treatments that worked, and we were a long way from a vaccine. Now that we have all these tools, international cooperation is critical to ensuring that we stamp out the virus everywhere. If this virus has taught us anything, it's that we live in a small world and the true end of the pandemic will come only when every country has controlled the virus.

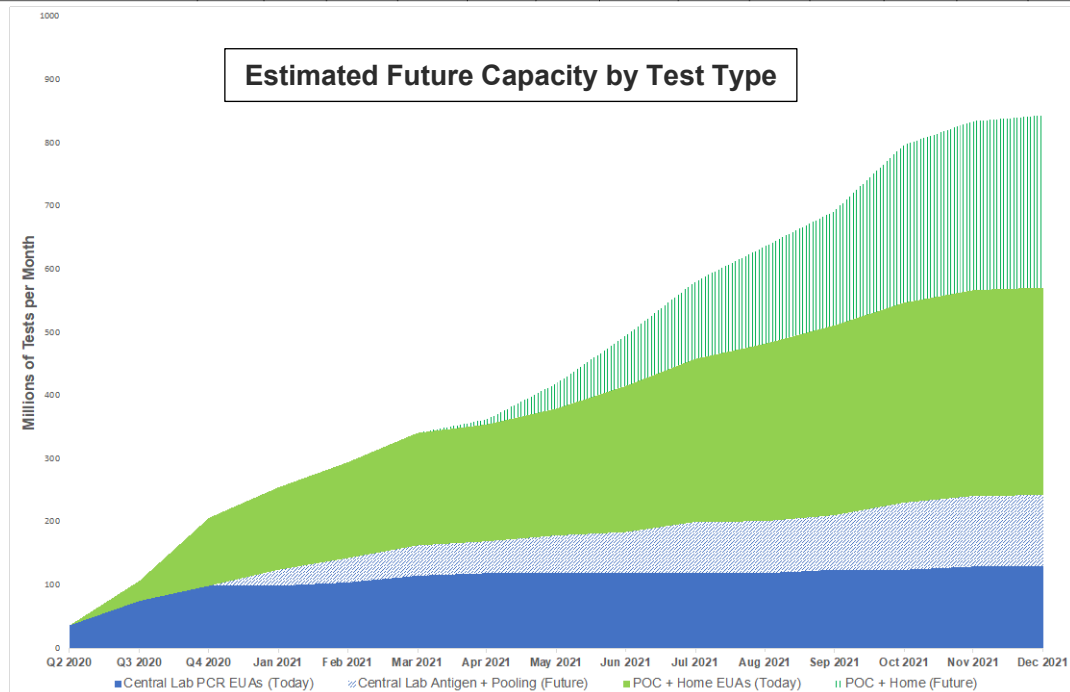
It would be a tragic error if again the US were to become overconfident based on what is impressive but only very recent progress – is there any evidence this is happening? Possibly: Vaccine skepticism has cut daily vaccination rates in half to only 1 million a day; testing has declined by 33% from its peak, while test positivity remains too high at 5.3%. As a result, many experts now believe [herd immunity has become out of reach](#). We currently celebrate case loads of “only” 40,000 per day - an 84% reduction from January highs - but it is worth remembering that 40,000 is 50% higher than the April/May caseload that sent the US into lockdown.

So as we enter a new phase of the pandemic - the last phase provided we do not let down our guard - let's not forget that as long as the virus is still circulating, people will continue to get sick and new variants can emerge. In fact, more effective treatments and widespread vaccination increases pressure on the virus to evolve increasingly successful escape mutations. The bottom line here: this is absolutely not the time to be complacent. Let's continue to deploy our best tools to combat the virus: widespread testing for screening and for genomic surveillance of novel variants.

Latest Monthly Capacity Estimates

Estimated Monthly Capacity of All Tests (M)

Test Type	Sep '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21	May '21	Jun '21	Jul '21	Aug '21	Sep '21	Oct '21	Nov '21	Dec '21
Antigen Point of Care EUA Today	28	99	116	136	150	160	167	181	193	205	218	220	226	226
Home / Self Tests EUA Today	0	2	6	7	17	12	21	38	45	55	63	75	77	80
Molecular Point of Care EUA Today	4	5	8	10	12	12	12	13	20	20	20	21	22	22
Subtotal POC & Home EUA Today	32	107	130	152	179	184	201	232	258	280	301	316	325	328
Antigen Point of Care Future	0	0	0	0	0	0	18	41	81	106	119	144	152	152
Home / Self Tests Future	0	0	0	0	0	0	11.4	28	29	37	47	93	101	107
Molecular Point of Care Future	0	0	0	0	0	8	10	10	12	12	14	14	14	14
Subtotal POC & Home Future	0	0	0	0	0	8	39	79	122	155	180	251	267	273
Total POC & Home	32	107	130	152	179	192	240	311	381	435	481	567	592	601
Antigen Central Lab Today	0	0	3	7	7	8	8	8	8	8	8	8	8	8
Antigen Central Lab Future	0	0	0	0	0	0	9	14	22	23	25	26	29	30
Lab Based PCR Today	75	100	100	105	115	120	120	120	120	120	125	125	130	130
Add'l Lab Based PCR with Pooling	0	0	25	38	48	50	50	50	59	59	61	80	83	83
Total Central Lab	75	100	128	150	170	178	187	192	209	210	219	239	250	251
Grand Total	107	207	258	302	349	371	427	504	589	645	700	806	842	852



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