

Covid-19 Pool Testing

John Friedman (Updated April 11th 2020)

US Navy Pool Testing

- Split sailors into groups, and Pool test each group.
 - If positive, sailors may be isolated, or evacuated
- Samples are collected onboard, then transported onshore for Pool testing.
- Medical Teams have a preventive medicine technician, preventative medicine officer, a microbiologist and medical laboratory technician
- 'The two tests being utilized by the teams are the BioFire Film array, which tests for respiratory diseases, and the Step One RT-PCR System, which allows the team to perform more comprehensive coronavirus tests at sea.'
- As of March 14th, they've been testing the 7th fleet.
 - USS America, USS Blue Ridge, 7th Fleet flagship, aircraft carrier USS Theodore Roosevelt
- Sources:
 - <https://www.stripes.com/news/pacific/navy-deploys-medical-teams-aboard-ships-at-sea-to-batch-test-for-coronavirus-1.623344>

Places doing pool testing:

- Nebraska tested 60 people, in groups of 12.
 - Cost-effective: Saved 50% of reagents
- Germany conducted some large-scale tests
 - Germany may begin doing pool testing at the national level in the next few weeks.
- Israel did some large scale tests, up to 64 people at one time.

Misc Sources

- <https://www.wired.com/story/researchers-push-for-mass-blood-tests-as-a-covid-19-strategy/>
- <https://www.jpost.com/health-science/acceleration-in-multiple-coronavirus-tests-at-once-by-israel-research-team-621533>
- Israel develops tests for multiple people at once
- <https://www.washingtonpost.com/outlook/2020/03/31/coronavirus-testing-groups/>
- Nebraska, Israel, Germany experimenting with pool testing
- <https://www.technion.ac.il/en/2020/03/pooling-method-for-accelerated-testing-of-covid-19/>
- <https://aktuelles.uni-frankfurt.de/englisch/pool-testing-of-sars-cov-02-samples-increases-worldwide-test-capacities-many-times-over/>
- <https://www.forbes.com/sites/kotlikoff/2020/03/29/group-testing-is-our-secret-weapon-against-coronavirus/#2bb88fba36a6>
 - Claims Israel, Iceland, Nebraska are group testing
- <https://www.ketv.com/article/nebraska-public-health-lab-begins-pool-testing-covid-19-samples/31934880#>
 - Nebraska's State Public Health Lab is pool testing

- Split 60 people into 5 groups of 12
 - Saved more than 50% of reagents
- <https://www.news18.com/news/india/may-extend-covid-19-lockdown-post-april-30-mumbai-to-be-under-red-zone-says-health-min-rajesh-tope-2574171.html>
 - India's state of Maharashtra demands PM to allow pool testing
- <https://www.hindustantimes.com/india-news/govt-mulls-new-testing-approach/story-eD4ZiGlrdaynBRPSebpJoO.html>
 - India is considering pool testing
- <http://www.koreabiomed.com/news/articleView.html?idxno=7966>
 - Korea is considering pool testing for specific groups
- <https://www.hindustantimes.com/cities/we-will-begin-pool-testing-trials-to-speed-up-diagnosis-satyendar-jain/story-muy5XdftNphPykZYFdXAwK.html>
 - Germany is doing pool testing en masse?

Key Search Terms:

- Group testing, pool testing, batch testing