

Update to UNOLS Considerations for Conducting Seagoing Science

The following information and guidance is provided as an update and adjustment to previous UNOLS Guidance related to conducting science onboard U.S. Academic Research Fleet Vessels (see: [1June2020 UNOLS COVID-19 Considerations For Conducting Seagoing Science](#) and [11May2021 Update to UNOLS COVID-19 Guidance](#))

This update has been developed with advice and guidance provided by George Washington Medical Faculty Associates.

Those elements of the previous UNOLS Guidance not addressed in the following paragraphs remain in effect.

Based on the below stated (see “Background”) observations, recommendations, guidelines and published data, the following changes are made to previously issued UNOLS guidelines for consideration in conducting oceanographic research on U.S Academic Research Fleet vessels. In all cases, the Vessel Operators and Chief Scientists can choose to use more strict protocols if this is deemed appropriate for any reason.

UNOLS continues to highly recommend that cruises sail only with fully vaccinated personnel.

UPDATED GUIDANCE

If the crew and science party are all fully vaccinated

	Action Required
Pre-travel Testing	None
Self-Quarantine	None
Pre-Boarding Symptom Tracking	7d prior to boarding
Embark Testing	Testing based on Pre-boarding Symptom Screening

If during the 7-day pre-boarding period a person develops a symptom indicative of COVID-19, a PCR or other CDC recognized Nucleic Acid Amplification Test (NAAT¹) test must be conducted.

- If positive: The person should not sail
- If negative: The Operator and Chief Scientist may consider allowing the person to sail if:
 1. Ship will remain within 12 hours of adequate medical facilities.
 2. They can get informed consent of other crew/science party.
 3. The vessel has the ability to conduct on-board NAAT or Ag testing.

¹ - CDC recognized NAAT - Nucleic Acid Amplification Test – see: <https://www.cdc.gov/coronavirus/2019-ncov/lab/naats.html>

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Risk levels shall be determined through the established Risk Mitigation Process. Any requests to proceed without quarantine for high risk cruises require concurrence from the funding agency, institution and UNOLS prior to proceeding.

Participant vaccinations should be verified through signed attestation.

If the crew and science party are not fully vaccinated

	Tier 1		Tier 2	
	UV	V	UV	V
Pre-travel Testing	PCR ²	PCR ²	PCR ²	None
Self-Quarantine	7 days	7 days	7 days	None
Self-Quarantine exit test	PCR ² d5 or Ag d7	PCR ² d5 or Ag d7	PCR ² d5 or Ag d7	N/A
Pre-Boarding Symptom Tracking	7 d prior to boarding			
Embark Testing	N/A	N/A		Testing based on Pre-board Symptom Screening

² - Reverse transcription polymerase chain reaction or other CDC recognized NAATs also acceptable - Nucleic Acid Amplification Test – see: <https://www.cdc.gov/coronavirus/2019-ncov/lab/naats.html>

PCR - Reverse transcription polymerase chain reaction

Ag – Antigen test

UV – not fully vaccinated

V – vaccinated

If during the quarantine or pre-cruise boarding period a person develops a symptom complex indicative of COVID-19, a PCR or other CDC recognized Nucleic Acid Amplification Test (NAAT¹) must be conducted.

- If positive: The person should not sail.
- If negative: The Operator and Chief Scientist may consider allowing the person to sail if:
 1. Ship will remain within 12 hours of adequate medical facilities.
 2. They can get informed consent of other crew/science party.
 3. The vessel has the ability to conduct on-board NAAT or Ag testing.

Where pre-cruise testing is required but cannot be completed, a quarantine/strict self-isolation period of 14 days shall be maintained.

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Tier 1 recommended for higher risk cruises. Considerations in determining risk should include distance from shore, cruise duration, investment, bigger science parties, public transport travel required, the number of high-risk participants, the ratio of vaccinated to unvaccinated persons.

Tier 2 recommended for lower risk cruise. Considerations should include coastal, shorter duration, smaller science parties, minimal travelers, no high-risk participants, high ratio of vaccinated participants.

Risk levels shall be determined through the established Risk Mitigation Process. Any requests to proceed without quarantine for high risk cruises require concurrence from the funding agency, institution and UNOLS prior to proceeding. In all cases, current or more strict protocols can be utilized in cases where risk levels are determined to be significant.

Participant vaccinations should be verified through signed attestations.

Travel Recommendations – for crew and science party who travel to meet the ship

- Travel to port should be conducted in private vehicle when possible.
- Travelers should always wear a mask and minimize interaction during travel.

For 2 weeks prior to travel, limit outside exposures to people out of household

Background

Vaccinations

A person who is fully vaccinated against COVID-19 is less likely to:

- Manifest any signs of infection
- Become seriously ill and/or need hospitalization
- Die from COVID-19 complications
- Become a source for asymptomatic transmission to others

Incidence of vaccine failure are generally very low but are increased in certain populations (e.g. persons with cancer or on immunosuppressives).

Vaccines

Currently three vaccines are authorized under an Emergency Use Authorization (EUA) by the U.S. Food & Drug Administration (FDA):

- Pfizer-BioNTech vaccination: 2 doses
- Moderna COVID-19 vaccination: 2 doses
- Johnson & Johnson – Janssen COVID-19 vaccination: 1 dose

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In addition to the above 2 vaccines, the WHO has given EUL approval to:

- Astra Zeneca: 2 doses
- Sinopharm

- Published data indicates that all FDA/WHO EUA/EUL vaccines are safe and effective, but surveillance for effectiveness and adverse events continues.
- Pfizer petitioned the FDA for full approval in May 2021. Moderna petitioned the FDA for full approval in early June 2021.

U.S. Vaccination Status

As of May 23, vaccinated data:

- Population >12years of age:
 - ~46% are fully vaccinated
 - ~58% are partially vaccinated
- Total Population
 - ~39% are fully vaccinated
 - ~49% are partially vaccinated

Globally over a billion vaccine doses have been administered but overall vaccine availability and vaccination rates remain low in most countries.

US Infection and Death rates U.S. by 7 day moving average

Avg#/day over last 7 days

Date	Cases/day	Deaths/day
Jan 8, 2021	~252,000	3,364
Feb 8, 2021	~107,000	2,488
Mar 8, 2021	55,000	1,246
Apr 8, 2021	63,000	601
May 8, 2021	40,000	579
May 22, 2021	24,000	504

Based on these numbers and other trends, on 13 May 2021 the CDC issued the Interim Public Health Recommendations for Fully Vaccinated People stating they could, in general:

1. Resume activities without wearing masks or physically distancing, except where required by federal, state, local, tribal, or territorial laws, rules and regulations, including local business and workplace guidance
2. Resume domestic travel and refrain from testing before or after travel or self-quarantine after travel
3. Refrain from testing before leaving the United States for international travel (unless required by the destination) and refrain from self-quarantine after arriving back in the United States

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4. Refrain from testing following a known exposure, if asymptomatic, with some exceptions for specific settings
5. Refrain from quarantine following a known exposure if asymptomatic
6. Refrain from routine screening testing if feasible

For now, fully vaccinated people should continue to:

1. Get tested if experiencing COVID-19 symptoms
2. Follow CDC and health department travel requirements and recommendations

In addition, UNOLS calls attention to the following:

1. The fact that the CDC's current recommendations for not fully vaccinated persons are INTERIM and amendments are therefore expected.
2. The CDC makes explicit that these recommendations are subject to local governmental laws/regulations; business/workplace guidance. Special deference is given to workers and residents of healthcare facilities, homeless shelters, and correctional/detention facilities.
3. The decrease in infections/deaths in the U.S appears to be significant and sustained but surveillance continues.
4. The continued increase in vaccinations in the U.S is expected but no clear number has been set to define "herd immunity" or adequate to "return to normal".
5. The continued variability in vaccination rates and disease transmission rates at a state, county, and community level within in the U.S.
6. A ship can be considered a congregate setting with colocation of living accommodations, eating facilities and work areas.
7. A ship represents a potential remote location without ready access to adequate healthcare facilities.
8. Operating a ship during COVID-19 without instituting strict pre-cruise quarantine and testing protocols even when community vaccination rates are high and disease transmission rates are low introduces a finite chance of active, symptomatic COVID-19 disease with potential onboard transmission.
9. The chance of on-board disease and transmission increases with a greater proportion of persons who are vaccine non-responders and if not fully vaccinated persons have boarded.

A person is fully vaccinated only if:

1. More than 14 days have lapsed after vaccination series has been completed
2. Vaccination was with an FDA or WHO EUA/EUL vaccine
3. Appropriate documentation (CDC card, government or healthcare program sponsored documentation) including electronic documentation is presented
4. Documentation of full vaccination has been verified

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