



# The National Science Foundation Office of Polar Programs

PESH-POL\_2000.09a

## Physical Qualification (PQ) Determination Policy

<b>Organizational Function</b>	Polar Environment, Safety & Health	<b>Policy Number</b>	PESH-POL_2000.09a
<b>Version</b>	2	<b>Issue Date</b>	26 June 2018
<b>Policy Category</b>	Medical	<b>Effective Date</b>	Date of signing
		<b>Review On</b>	Five years from date of signing
<b>Subject</b>	Physical Qualification Determination for Arctic and Antarctic Deployments National Science Foundation	<b>Authorized By</b>	Senior Advisor, Polar Medical Programs
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<b>Distribution</b>	USAP-wide	<b>Status</b>	Policy
<b>Online Publication</b>	USAP Intranet		

### Document Release History

Release Number	Revision Date	Description of Changes	Changes Made By
1	November 2017	Initial Policy	S. LaFratta
2	June 2018	Revision of all sections and new material added	S. LaFratta

**Consult the USAP Master List for the most current version.**

HARDCOPY NOT CONTROLLED – Verify Effective Date Before Use

## Signature Approval

Approved by:



26 JUNE 2018

Susanne M. LaFratta

Date

Senior Advisor, Polar Medical Programs

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**Note** This policy is released and becomes effective on the date of signing.

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## 1. Purpose

The purpose of this document is to establish National Science Foundation Office of Polar Programs (NSF/OPP) administrative policy regarding physical qualification (PQ) determinations in the NSF Arctic Program and the U.S. Antarctic Program (USAP).

## 2. Background

NSF/OPP, as delegated manager of the USAP, requires that all candidates for deployment to Antarctica under the auspices of the USAP undergo and pass a PQ process. NSF-funded researchers and support personnel traveling to certain remote parts of the Arctic must also undergo and pass the PQ process.

The PQ process is designed to identify personnel who are physically qualified and, for winter-over candidates, psychologically adapted for assignment in the polar regions. The PQ process is necessary to identify the presence of any physical or psychological condition that would threaten the health or safety of the candidate or other program participants and that could not be effectively treated by the limited medical care capabilities in Antarctica and the Arctic, or that otherwise poses a risk that would jeopardize accomplishment of OPP objectives. The total risk entails not only the medical condition of the participant but also the length of exposure during which a disease process could manifest.

Also important during any season, summer or winter, are the costs of lost productivity and the diversion of limited resources that result when deployed personnel are unable to perform their assigned function. For these reasons, all participant medical documentation is reviewed against a rigorous set of medical clearance criteria—the Polar Medical Screening Guidelines—that were established and are regularly reviewed by qualified medical personnel. The physical qualification process is outlined at 45 CFR 675.

## 3. Scope

This policy shall be in effect for all Antarctic locations and vessels south of 60° south latitude and at certain Arctic locations.

## 4. Applicability and Compliance

This policy applies to all Antarctic personnel - governmental, military, and contractor - proposed for deployment to USAP stations and vessels south of 60° south latitude.

This policy also applies to personnel deploying to certain Arctic locations in Greenland, as described below. Other locations or circumstances may be identified by the OPP Arctic Sciences section head and the OPP senior advisor for Polar Medical Programs.

- **Kangerlussuaq.** No one deploying to Kangerlussuaq is required to PQ. However, the contractor may reassign certain of its employees to other remote locations in Greenland (e.g, Summit, remote field camps) and therefore may choose to require that these individuals physically qualify. These individuals will be identified by the Arctic contractor to Antarctic Support Contract (ASC)/University of Texas Medical Branch (UTMB) personnel.

- **Remote Field Camps.** Everyone deploying to a remote field camp for 30 days or more is required to physically qualify. These individuals will be identified by the Arctic contractor to ASC/UTMB.
- **Summit Station.** Everyone deploying to Summit Station for any period of time outside of a 109th flight period (the time a 109th aircraft is in theater) must physically qualify. These individuals will be identified by the Arctic contractor to ASC/UTMB.

## 5. PQ Policy

### 5.1. PQ Standard

The basic standard to be met is specified in the current version of the Polar Medical Screening Guidelines. The guidelines are updated from time to time to reflect both currently accepted medical practice and the medical resources in place at various operating locations. It is not OPP's intent to have a fully catalogued, yes/no approach to the physical qualification process. Therefore, OPP expects that individuals will be PQ'd or NPQ'd (determined "physically qualified" or "not physically qualified") according to these guidelines and medical judgment.

Generally, risks to the individual will be balanced against the risk to the program. Only individuals who can reasonably be expected to fulfill their intended roles without adverse medical risk to themselves or others and without inordinate consumption of medical resources should be deemed physically qualified to deploy. It is therefore imperative that due weight to overall health and risks are thoughtfully considered for each individual.

An individual will be determined to be PQ'd if all applicable medical, dental, and mental health screening requirements are met. For those found to be NPQ'd, a waiver process allows for peer review of NPQ decisions.

Employers should ensure they are proposing skilled personnel who meet suitability standards. It is not the purpose of the PQ process to provide that assurance or fit-for-duty certifications.

### 5.2. PQ Process

The PQ process thoroughly reviews a candidate's health. Employers should encourage candidates to begin the process as soon as they become aware they will be deploying. Candidates are required to submit their completed forms, along with the results of tests, no later than eight weeks after receiving the PQ packet from UTMB or the OPP Polar Coordination Specialist. PQ determinations will be issued within eight weeks of receipt of all required tests and examinations.

Travel will not be authorized until the PQ process is complete. It is therefore in the candidate's interest to comply with these timelines to allow sufficient time for the initial and, in some cases, additional review. For example, depending on a candidate's medical condition, additional testing or a waiver may be required, which could add time to the process.

### **5.3. Approved PQ Examiners**

Examinations and tests shall be performed in the U.S. by a physician (MD/DO) or licensed mid-level practitioner (NP/PA).

#### **5.3.1. Exceptions**

- Candidates who convert from a summer position to a South Pole winter-over position will be transported off-Ice for the required mammogram and exercise stress test. All remaining examinations and tests will be conducted at the station clinic.
- Seasonal contractor employees with accepted offers of employment prior to leaving the Ice may complete the PQ examinations and tests in New Zealand or Chile. NSF will not accept the risk of an incorrect or incomplete translation and therefore submissions in languages other than English must be accompanied by a certified translation.
- U.S. citizens whose permanent address is other than in the U.S. shall consult with UTMB to determine whether they may complete their PQ tests and exams outside of the U.S.
- Non-U.S. citizens from countries with which OPP does not have a reciprocal agreement (see Section 6.3.5) or who cannot PQ through their national program should contact UTMB to discuss options for completing the required examinations and tests.

### **5.4. Financial Responsibility**

OPP shall pay for the initial examinations and tests required by the standard PQ process. Most payments are made in the form of reimbursements from the prime contractor to participants or, in the case of LabCorp, direct payments from the prime contractor to the vendor. Additional tests, such as those that may be required to submit a waiver application, are the responsibility of the individual and will not be reimbursed by the government.

OPP grants include funds for the cost of initial examinations and tests. Grantees from other federal agencies are responsible for paying all costs associated with the PQ process.

OPP does not reimburse NSF employees for the cost of the required dental examination.

### **5.5. Decision Responsibility**

Three organizations are authorized by OPP to issue PQ determinations, depending on the participant's affiliation.

#### **5.5.1. UTMB**

UTMB conducts the screening review and makes PQ determinations for the vast majority of Antarctic personnel, Arctic personnel required to undergo the PQ process, and Intergovernmental Personnel Act (IPA) personnel assigned to OPP.

#### **5.5.2. NSF Health Unit**

The NSF Health Unit conducts the screening review and makes PQ determinations for NSF employees and distinguished visitors. IPA personnel

assigned to OPP may complete screening tests and examinations at the NSF Health Unit, but UTMB makes the PQ determination for these individuals.

The NSF Health Unit notifies the OPP polar coordination specialist as OPP employees, distinguished visitors, and other visitor events are PQ'd. The polar coordination specialist in turn notifies UTMB of these PQ determinations so clinic staff know which medical records to expect.

### **5.5.3. Pacific Air Forces/Surgeon General (PACAF/SG)**

Military members deploying to McMurdo Station, Antarctica, including Department of Defense distinguished visitors, are required to be physically qualified for mobility assignment in accordance with AFI 48-123 Medical Examination and Standards: Deployment Criteria. (This is an Air Force Instruction; other services should refer to their version.) The member's unit will be responsible for medical screening and the PACAF/SG has final disposition authority for deployment with Joint Task Force – Support Forces Antarctica.

## **5.6. Medical Records**

- The medical clinic at the station to which a participant is deploying must have a copy of the participant's medical record before the participant arrives. For the vessels, the records shall be sent to the Palmer Station clinic.
- UTMB shall follow the ASC Medical File Data Transfer Procedure (MED-SOP-0004) to send medical records via Secure File Transfer Protocol (SFTP). Arctic PQ records are not generally sent except in the case of complicated medical histories or waivers. If necessary, the ASC Medical Director shall discuss participant medical issues with the contracted medical provider for the Arctic.
- The NSF Health Unit shall provide each OPP employee with a copy of the employee's medical records.
- OPP employees are responsible for ensuring their medical records are transferred via SFTP to the applicable clinic.
- If any OPP employees fail to transfer their medical records prior to their deployment, the OPP senior advisor for Polar Medical Programs shall authorize the NSF Health Unit to make the transfer.
- The NSF Health Unit shall provide copies of medical records for distinguished visitors and other visitor events to the OPP polar coordination specialist, who shall then send them via SFTP to the applicable clinic.

## **5.7. Constraints and Conditions**

### **5.7.1. PQ Examination Time Limit**

Tests and examinations used in reaching the PQ determination may not be more than six months old. OPP will not reimburse for the cost of tests and examinations that must be repeated due to the expiration of results.

### **5.7.2. Medical or Health Changes**

Individual participants are required to inform contractor medical staff of all medical or health changes, including changes in medication, that occur after submitting the PQ documentation and/or following receipt of a PQ determination.

### **5.7.3. PQ Duration**

PQ determinations are valid for 12 months from the date of issue, or until the participant departs from the Arctic or Antarctic. For individuals deploying under an approved waiver, the PQ determination will be valid for 12 months from the date of the NPQ determination.

Participants are deemed to have departed the Arctic or Antarctic when:

- they physically depart;
- they reach the maximum allowable continuous deployment period of 14 months for the Antarctic (see AIL-POL\_1000.04) and eight months for the Arctic (after this time, the PQ process must be repeated); or
- they are transported from their primary assigned work location for medical treatment or evaluation.

### **5.7.4. Multiple Deployments**

Participants who are physically qualified to deploy, whether under the auspices of the USAP or the NSF Arctic Program, may make multiple deployments to the Arctic or Antarctic or between the Arctic and the Antarctic within the 12-month effective period of the PQ determination.

### **5.7.5. Deployment After Medical Transport**

- When participants are transported to New Zealand, Australia, South America, Greenland, or the continental U.S. for psychological reasons, they must repeat the PQ process before they are authorized to deploy again.
- When participants are transported to New Zealand, Australia, South America, Greenland, or the continental U.S. for medical or dental reasons, the ASC medical director will consult with the OPP chief medical officer, clinic staff, and others as necessary to make a determination, consistent with the Polar Medical Screening Guidelines, as to whether the participant:
  - may deploy again;
  - may deploy again following successful completion of certain portions of the PQ tests and examinations; or
  - is NPQ. In some circumstances, a participant determined to be NPQ may request a waiver.
- When participants are transported from South Pole, a remote field camp, or a vessel to McMurdo Station or Palmer Station, or from certain Arctic locations for any medical or dental reason, the ASC medical director will

consult with the OPP chief medical officer, clinic staff, and others as necessary to make a determination, consistent with the Polar Medical Screening Guidelines, as to whether the participant:

- may return without restriction to his or her primary assigned work location;
  - may return following successful completion of certain portions of the PQ tests and examinations; or
  - is NPQ. Depending on the circumstances, a participant determined to be NPQ may be able to request a waiver.
- Recognizing that there may be medical as well as non-medical risks involved in the above-mentioned participants returning to the Arctic or to Antarctica, the senior advisor for Polar Medical Programs will review each case and determine whether the participant will be authorized to return.
  - OPP will not reimburse for the cost of any treatment or evaluation received away from the Arctic or Antarctic or of any tests and examinations that must be repeated to determine whether the participant may deploy again.

## 6. Exceptions

### 6.1. Short-Duration Deployment PQ (Pilot Program)

#### 6.1.1. Eligibility

Candidates are eligible to apply for the short-duration deployment PQ process if:

- the PQ process is conducted by UTMB;
- deployment is anticipated for 14 days or less;
- the individuals are not employees of USAP or Arctic contractors, subcontractors, partner agencies, or organizations;
- the individuals are not deploying under active awards; and
- the individuals are not expected to engage in strenuous labor.

#### 6.1.2. Process

The process for reviewing candidates deemed eligible for the short-duration deployment PQ process takes into account that these candidates are likely to represent a low risk for adverse medical outcomes during the period of their deployment and therefore may be adequately screened by a review of their medical history, vision information, and self-assessment. Candidates must demonstrate normal height/weight characteristics and the absence of chronic disease for which there is no on-site treatment capability.

Candidates shall be reviewed against the existing medical clearance criteria. UTMB may use its judgment to determine that a candidate should instead undergo the full PQ process. Candidates judged NPQ under the expedited

process must undergo the standard PQ process before they are eligible to submit a waiver application.

Approval under this exception is strictly for a single deployment of 14 days or fewer, and candidates will not be authorized to redeploy without completing either the short-duration deployment process again or the standard PQ process.

### **6.1.3. Pilot Program Assessment**

Metrics will be collected to determine whether the program should be made permanent at the conclusion of the pilot. Clinic data on every candidate's medical issues while deployed will be anonymized and reported to the senior advisor for Polar Medical Programs. At the first indication that the pilot program is not successful, the program will be cancelled.

## **6.2. Emergency Deployments**

PQ decisions are made in a timely manner, yet it is acknowledged that the process takes a significant amount of time to complete; examinations and tests must be scheduled and completed, candidates must return the information for evaluation, and the information must then be thoroughly reviewed. OPP has on occasion authorized a streamlined process for emergency deployments, such as when they are necessary to conduct investigations, preserve evidence, or make emergency repairs. These exceptions are always and only made for limited purposes, and candidates will not be authorized to redeploy without completing the standard PQ process.

The requirements will differ according to the station or vessel to be visited, the anticipated length of the deployment, and the purpose of the deployment. Each streamlined process shall be developed and agreed to by the OPP senior advisor for Polar Medical Programs, the OPP chief medical officer, and the ASC medical director. For example, authorization to deploy to the South Pole may require an acclimatization period.

## **6.3. Reciprocal PQ Program**

### **6.3.1. Federal Aviation Administration (FAA)**

OPP accepts valid, first-class medical certificates for FAA/Flight Inspections Services personnel participating in the annual certification of McMurdo and South Pole runways. In the absence of such certificates, personnel will be required to complete the standard PQ process.

### **6.3.2. Edison Chouest Offshore (ECO)**

OPP accepts ECO's certification that every crew member who is present south of 60° south latitude has passed the U.S. Coast Guard physical and meets any additional requirements imposed by OPP, such as those related to vaccinations and immunizations.

### **6.3.3. NOAA**

For NOAA personnel transiting on OPP research vessels, OPP accepts NOAA's two-tier review that involves a full physical examination (which explicitly

considers the difficult conditions and the physical labor required at its field camps), lab tests, and required vaccinations.

The first tier is certification by each person's physician that all conditions and vaccinations have been met and the person is fully fit for duty. The second tier involves review of all material by the emergency medical physicians at George Washington University's Medical Maritime Access program.

#### **6.3.4. Observers**

Observers are placed on board USAP vessels working in the Argentine and Chilean Exclusive Economic Zone. OPP accepts a medical certificate stating generally that the individual is in good health and does not show any apparent illness. The observers must hand-carry a copy of their medical records, and they must comply with OPP's infectious diseases requirements:

- Annual flu shot
- Negative test for latent and active TB
- Measles, mumps, rubella vaccine

(Note that these requirements apply only if the vessel will travel south of 60° south latitude. If staying north of 60° south latitude, no part of the PQ process is necessary.)

#### **6.3.5. National Antarctic Programs (NAPs)**

OPP currently accepts the PQ determinations from the NAPs of the following countries:

Argentina	Japan
Australia	South Korea
Chile	New Zealand
China	South Africa
France	Sweden
Germany	Ukraine
Italy	United Kingdom

The following conditions apply:

- U.S. candidates collaborating with other NAPs may PQ through the NAP.
- OPP does not accept PQ determinations of other NAPs for U.S. participants deploying to U.S. stations or vessels.
- In addition to any tests and examinations that are required by a NAP, OPP imposes infectious disease requirements that must be complied with even if the NAP does not require the same. These are:
  - Annual flu shot
  - Negative test for latent and active TB

— Measles, mumps, rubella vaccine

- Candidates must also meet all winter-specific requirements, even if their NAP does not require the same.
- Individuals must hand-carry a copy of their medical records.

#### **6.3.5.1. NAP Process**

1. The candidate undergoes the NAP's PQ process.
2. The NAP has the ultimate say in whether or not it will physically qualify a person scheduled to deploy to a USAP location.
3. Once the NAP determines that the person is physically qualified according to the NAP's standards and has met the OPP infectious diseases requirements, the authorized program representative (usually the medical officer, medical administrative manager, or head of the national Antarctic program) advises the senior advisor for Polar Medical Programs that the person is considered PQ'd.

## **7. Waivers**

NSF's physical qualification program allows individuals, with their employer's endorsement, to apply for a waiver. When a waiver is granted, it means that strict application of a particular standard is waived.

There may be conditions or restrictions associated with approved waivers. When this is the case, they will be explicit. The conditions or restrictions may require additional tests, certain medications, or limitations on deployment length or location.

UTMB is responsible for ensuring that waiver conditions are made known to clinic staff at the deployed location and, when appropriate, to NSF representatives.

NSF recently authorized UTMB to institute a new procedure for individuals who in the past have had to submit waiver requests year-after-year for chronic yet stable diseases and conditions. If there is improvement or no change in the individual's condition, UTMB will document that although the waiver condition persists there is nothing in the medical record to indicate that the waiver should not be renewed. This practice will save UTMB and OPP significant time and administrative burden while not increasing the risk either to the individual or the program (whether Arctic or Antarctic). It should be noted that UTMB is also empowered to require that the individual again pursue a waiver.

It is permissible to send medical files and waiver materials between UTMB and NSF via encrypted e-mail, with a separate message containing the password required to access the record.

## **8. Policy Review**

This policy is valid until rescinded. It will be reviewed at an interval of not more than five years. The short-duration PQ pilot will remain in effect for three years unless cancelled earlier.