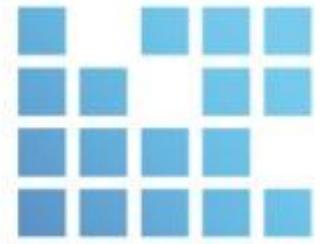


Anesthesia  
Quality Institute



# **User Guide for the Participant Use Data File**

**National Anesthesia Clinical  
Outcomes Registry**

**April 2013**

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## 1. Introduction

This document accompanies the NACOR Participant Use Data File (PUF) available for download on the Anesthesia Quality Institute (AQI) website (<http://aqihq.org/>). The following sections will provide the user with information on how to request the PUF, the contents of the data files, the data collection methodology, the inclusion and exclusion criteria for cases, important data limitations, and the definitions and descriptions of each field.

This user guide applies to all NACOR PUF files.

## 2. Data Request Process

The NACOR PUF is available to researchers employed in any anesthesia practice which contributes data to NACOR. A copy of the PUF can be downloaded by visiting <http://aqihq.org/> and following the steps below:

1. Select the NACOR PUF tab
2. Download the Participant Use File (PUF) Data Use Agreement. This is a document which implements the data protection of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the AQI Participation Agreement. Access to the PUF is contingent on agreement to the terms and conditions specified within the Data Use Agreement.
3. Complete a brief form to provide AQI with basic information about the researcher, including AQI participating group in which they are currently employed and in what capacity, as well as how the requestor plans on using the PUF data.
4. AQI staff will review the requests in a timely manner. Requestors and AQI contacts in the participating groups may be contacted to confirm the requestor's affiliation.
5. Following the receipt of confirmation of the information submitted, an email will be sent to the requestor containing the instructions to download the data.
  - a. The PUF will be made available via the AQI secure FTP server.
  - b. Requestors will need to use an FTP client to download the file. FTP clients are available for free download – Filezilla is a popular program.
6. The file will be available in a single format: Comma-Separated-Values. Depending on the connection, the download will take between 30 minutes and 2 hours.
7. Once the file has been downloaded, it will need to be converted to the proper format for importing into a statistical package.
8. The requestor is responsible for all institutional review board approvals required to work with, present, or publish data from the AQI. Advice on this subject is available from AQI Executive Director Richard P. Dutton, M.D., M.B.A. at [r.dutton@asahq.org](mailto:r.dutton@asahq.org)

9. The requestor should confirm receipt of the data file and provide feedback on the request process, delivery mechanism, data points contained, and data file format.

### 3. File Description

The NACOR PUF is a single file constructed close to the date of the request. NACOR data is not static. As NACOR receives data from new contributors, they may contribute case information going back in time as far as 1/1/10. PUF's generated on different dates may therefore contain different data, even for preceding years.

The PUF will be generated quarterly with a one quarter lag. Thus NACOR\_PUF\_2013\_01 will have available data through the fourth quarter of 2012.

The files contain about 65 variables for each case. A variable-by-variable description is provided in Section 9. A brief overview of the current PUF is:

File Name	Type	File Size	Description
NACOR_PUF_2013_01	.csv	2.3 GB	Contains 8M cases from 110 groups since 2010

### 4. Data Collection Background

AQI NACOR collects data on 100+ variables, including preoperative risk factors, intraoperative variables, intraoperative medications and medical device readings for patients undergoing both surgical procedures and anesthesia procedures in all types of inpatient and outpatient settings. Data is captured in the local group's electronic systems – billing, AIMS, and EMR. AQI does not include chart review as a means of data collection. The digital data available from different groups varies widely, as not every group sends all data fields.

Collected data elements are extracted from the local systems and formatted into an AQI approved format. These files are then uploaded to the AQI's secure FTP server. AQI has a series of data audits that each file must pass in order to be included in the registry.

AQI also conducts a nightly audit of the NACOR registry. A series of 'exception' reports is produced nightly and reviewed by AQI on a daily basis.

These combined audits ensure that the data in NACOR maintains referential integrity and is clinically consistent both with previous data received from the group and with the broad boundaries of national anesthesia practice.

## 5. Case Inclusion/Exclusion Criteria

NACOR is a census registry. AQI does not sample cases from its contributors. Every case or procedure a group does is included in the registry, which is why there are categories for both procedural anesthesia (where the anesthetic is given to facilitate an operation or study) and non-procedural anesthesia (e.g. pain management blocks, ICU intubations, central line placement, labor epidurals). We hope that NACOR is as inclusive as possible.

### Case Inclusion

- All cases in NACOR are eligible for inclusion in the PUF

### Case Exclusion

- Case Date of Service < 1/1/2010
- Case does not contain a primary CPT code (either an Anesthesia or Procedural CPT is acceptable)

## 6. Data Limitations

While every effort has been made to make the PUF as complete as possible, the data does have some limitations. Some of these are intentional to safeguard the privacy of patients, providers, and facilities. Other limitations are due to a lack of data. Practices don't have to report every element. Only the elements with "enough" data are included. Additional data elements will be included in future PUFs as the density of reporting increases.

The following outlines the key data limitations:

- AQI collects data from a wide-variety of procedures at all types of facilities. Data includes endoscopies in an office setting through Coronary Artery Bypass Grafts at Academic Medical centers – and everything in between.
- Age of patient represents the age at the time of surgery in whole years only.
- Patients are followed after surgery for a variable length of time, based on practice logistics. This varies from discharge from the PACU to 24hr follow-up to 1-week follow-up. This variability is problematic when comparing outcomes from different practices.
- In order to comply with HIPAA requirements, some data has been scrubbed. Some dates/times have been expressed as durations, including length of surgery and hospital length of stay.
- Many risk factors are reported as ICD codes and co-morbidities. The corresponding preventative measures are not recorded which may statistically affect the reporting of such conditions.
- The data is received from groups that are participating in the AQI NACOR. This data may not represent a statistically valid, nationally representative sample.
- This list may not include all data limitations and additional limitations may apply in future versions of the data.

## 7. Contact Information

All questions about the User Guide or PUF, as well as comments and suggestions for improvement are welcome and may be directed to Lance Mueller, Business Manager, AQI, via email at [l.mueller@asahq.org](mailto:l.mueller@asahq.org).

## 8. Frequently Asked Questions

### Request Process

Q: Who has access to the data?

A: The NACOR PUF is available to researchers in AQI participant practices.

Q: Is the file available to individuals from nonparticipating sites?

A: No, the data files are only available to individuals with official standing at fully participating groups.

Q: Can I share the data with researchers at non-participating sites?

A: No, the data file is restricted to individuals at fully participating sites.

Q: How do I request a file?

A: Please see above – Section #2 in this document – for the process to request a copy of the file.

### Contents of the file

Q: What's in the file?

A: The NACOR PUF contains HIPAA de-identified data from contributors to AQI. The variable name, data definition, and other pertinent information are provided in Section 9: Data Variables and Definitions.

Q: Are site identifiers included in the database?

A: We do provide geographic identifiers based on the US Census Regions. We do not provide site specific identification.

Q: Are there provider specific identifiers included in the database?

A: We do include a de-identified numeric provider id. This is an AQI internal id and not related to the providers NPI # in any way.

Q: I am a researcher from a specific group. The PUF contains cases from our group. How do I identify which specific records are mine.

A: You should contact Lance Mueller, AQI Business Manager, via email: [l.mueller@asahq.org](mailto:l.mueller@asahq.org) to request a file which contains the Case ID's from your group.

Q: Does the data in the PUF change?

A: Yes, as groups join NACOR, they can send in historical data – back to 1/1/2010. On a periodic basis, AQI will create a new version of the PUF. The new version will contain all cases for the

designate timeframe based on date of service of the case. Thus a 2011 file produced on 1/1/13 may contain fewer cases than the 2011 file produced on 7/1/13.

### Values in the Data

Q: Why do some data elements contain the value -1?

A: A data element will be set to -1 for a variety of reasons:

- Value is unknown
- Value could not be imputed
- Value provided was outside pre-defined range (e.g. negative age or age > 125)

### File Format

Q: In what file formats are the data available?

A: The data is available in a single file format – Comma-Separated-Values (.csv).

## 9. Data Variables and Definitions

The data variables and definitions are in a corresponding spreadsheet.

Please direct any questions to:

Lance Mueller - AQI Senior Manager

[l.mueller@asahq.org](mailto:l.mueller@asahq.org)