Department of Veterans Affairs

**Automated Surgical Risk Calculator (ASRC)**

User Guide



**November 2014**

Version 1.2

Revision History

Note: The revision history cycle begins once changes or enhancements are requested after the document has been baselined.

| Date | Revision | Description | Author |
| --- | --- | --- | --- |
| 11/20/2014 | 1.0 | Creation | B. Frey |
| 11/21/2014 | 1.1 | Tailored for ASRC and provided guidance for:   * Login and system exit * Selecting surgical specialty * Manually entering gender * Manually entering age * Selecting a surgical procedure | B. Frey |
| 11/21/2014 | 1.2 | Technical Edit | S. Vetzel |

**Table of Contents**

[1. Introduction 4](#_Toc404343889)

[1.1. Purpose 4](#_Toc404343890)

[1.2. Overview 4](#_Toc404343891)

[1.2.1. Major Functions 4](#_Toc404343892)

[1.2.2. Characteristics 5](#_Toc404343893)

[1.3. Project References 5](#_Toc404343894)

[1.3.1. Contact Information 5](#_Toc404343895)

[1.3.2. Help Desk 5](#_Toc404343896)

[2. System Summary 6](#_Toc404343897)

[2.1. System Diagram and Data Flows 6](#_Toc404343898)

[2.2. User Access Levels 6](#_Toc404343899)

[3. Getting Started 7](#_Toc404343900)

[3.1. Logging On 7](#_Toc404343901)

[3.2. Select Surgical Specialty Menu 8](#_Toc404343902)

[3.2.1. Cardiac Specialty 9](#_Toc404343903)

[3.2.2. Non-Cardiac Specialty 10](#_Toc404343904)

[3.3. Changing User ID and Password 11](#_Toc404343905)

[3.4. Exit System 12](#_Toc404343906)

# Introduction

## Purpose

The ARSC User Guide will provide a reference for users of the “Automated Surgical Risk Calculator Tool” being developed as a Veterans Administration (VA) Innovations program.

The purpose of this document is to provide clear and easy to follow instructions and associated screen shots to facilitate sufficient understanding to effectively use the ASRC tool. The User Guide will be updated as new functionality is developed and is accessible to system users.

## Overview

The tool can be used at the time the patient is considered for surgical referral by a primary care provider and at the time a surgeon is requesting a surgery. This Tool will support clinical decision-making regarding perioperative risk (includes preoperative, intraoperative, and postoperative). Providers will verify patient-specific data that is automatically pulled from available data sources, enter remaining fields, and be provided with a real-time individual risk calculation of perioperative surgical mortality based on historic Veterans Affairs Surgical Quality Improvement Program (VASQIP) data and current VASQIP risk-adjusted models that are specialty-specific. The data entered and the calculated results will be available for viewing in the Computerized Patient Record System (CPRS) as a progress note. The data will also be transferred and stored as discrete fields in Veterans Health Systems and Technology Architecture (VistA) and a Structured Query Language (SQL) database for use by the National Surgery Office (NSO).

### Major Functions

The ASRC Tool has the following Major Functions/Features

* Accessible through CPRS (Not implemented)
* Automatic Patient and User Context sharing with CPRS (Not implemented)
* Authentication with VistA with User Number (otherwise known as DUZ) – (Temporary feature only needed until context sharing with CPRS is available)
* Selection of Surgical Specialties
* Manual entry of Patient Age
* Manual selection of Patient Gender
* User selection of Current Procedural Terminology (CPT) codes with long description and Relative Value Unit (RVU)

### Characteristics

The Automated Surgical Risk Calculator (under development in the VA’s Future Technology Lab (FTL)) is

* a web-based application with a simple Graphical User Interface
* Integrated with VistA and CPRS
* a decision support system providing calculated surgical risk using NSO approved and validated risk models

## Project References

The reference document for the ASRC Tool is the VA’s Transformation Twenty-one Total Technology (T4), Automated Surgical Risk Calculator Performance Work Statement (PWS), executed out of the National Surgery Office (NSO) and Dated, 08-31-2014 (TAC-14-16044).

### Contact Information

Primary development Team Points of Contact (POC),

* David Tombs, JAVA Developer, 321.608.0919, [David@libertyITS.com](mailto:David@libertyITS.com)
* Jeff Swesky, VistA Developer, (TBD phone #), [Jeff.Swesky@hp.com](mailto:Jeff.Swesky@hp.com)
* Bill Frey, Tester, 321.608.0924, E: [Bill.Frey@libertyITS.com](mailto:Bill.Frey@libertyITS.com)

### Help Desk

Although there is not a Help Desk established for the ASRC Innovations program, members of the development team may be contacted with system operation/function questions. The POC recommended for the initial call is Bill Frey (Test).

# System Summary

## System Diagram and Data Flows

Figure 1 shows a simplified diagram of the ASRC system components and data flow. Whereas CPRS is shown please note that its integration is a future enhancement.

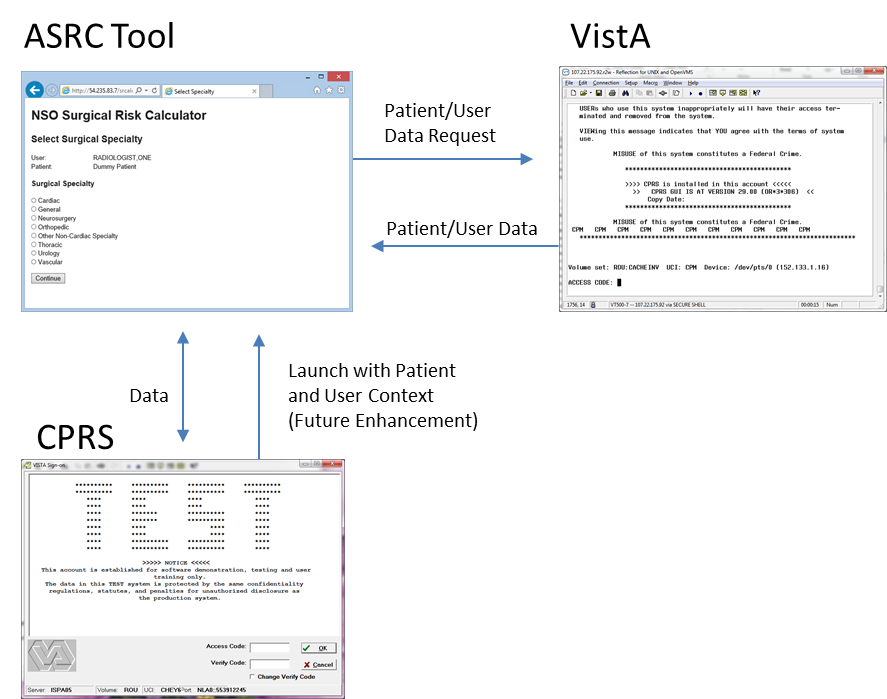


Figure 1 - ASRC System Diagram and Data Flow

## User Access Levels

There are no user access restrictions placed on the ASRC Tool during development. When the tool becomes operational access will be limited to those that can access CPRS.

# Getting Started

## Logging On

To access the ASRC tool (also referred to as the ASRC application) use an internet browser such as Internet Explorer and go to this web-link: <http://54.235.83.7/srcalc/newCalc>.

At the login screen (Figure 2) enter a valid DUZ number (Radiologist = 11716) in the User: field. This is a temporary login approach until context sharing with CPRS has been established.

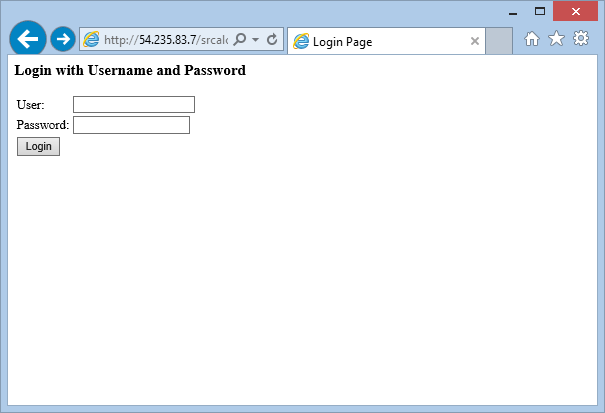


Figure 2 - ASRC Login Screen

## Select Surgical Specialty Menu

Select a Surgical Specialty as shown in Figure 3 below. Please note that this screen maybe updated as the program progresses but should still provide a good reference until the User Guide is updated to support the next version of the tool.

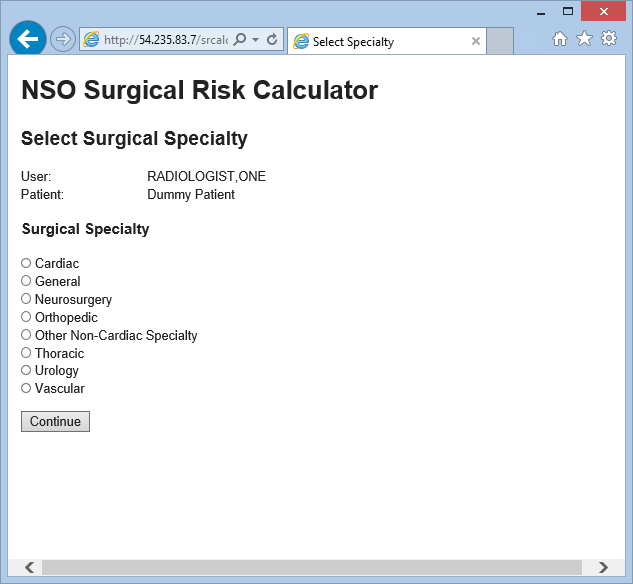


Figure 3 - Select Surgical Specialty

### Cardiac Specialty

The Cardiac Screen (see Figure 4) provides the ability to manually enter the Gender by selecting either Male or Female Gender. When “Run Calculation” is executed the selected gender is shown on the page. The User Guide will be updated as new features are added to this screen.

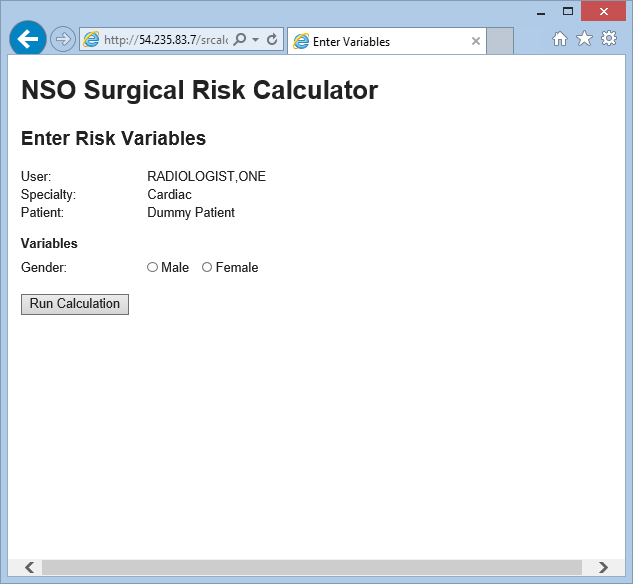


Figure 4 - Cardiac Screen

### Non-Cardiac Specialty

The Non- Cardiac Screens (see Figure 5) provides the ability to manually enter the patient age and select a procedure.

Non-Cardiac Surgical Specialties include the following:

* General Surgery
* Neurosurgery
* Orthopedic
* Other Non-Cardiac Specialty
* Thoracic
* Urology
* Vascular

When “Run Calculation” is executed the selected procedure and entered Age are shown on the page. All Non-Cardiac Screens perform like the Neurosurgery example provided. The User Guide will be updated as new features are added to these screens.

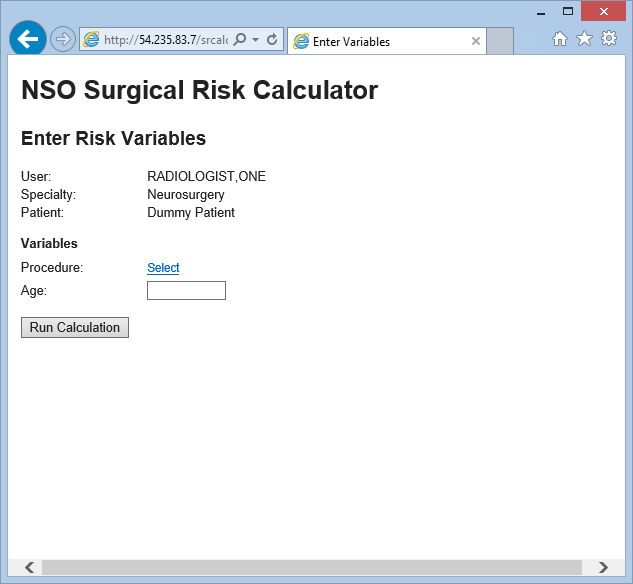


Figure 5 - Non-Cardiac Specialty

**Selecting a Procedure**

To select the Procedure click on the “Select” link that is to the right of “Procedure:” as shown in Figure 6. Select the desired procedure by clicking the corresponding radio button and clicking select. The procedure along with a shortened name is provided on the screen. A future enhancement will incorporate the full list of procedures and a search function to quickly find a specific one.

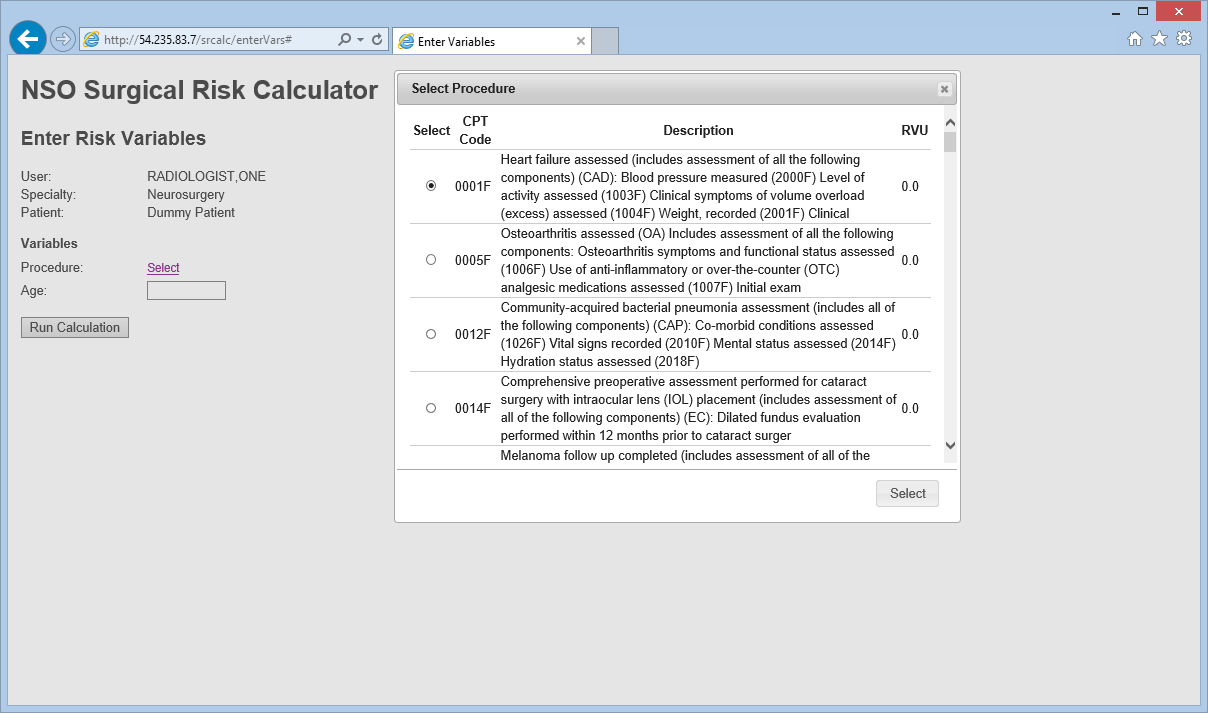


Figure 6 - Selecting Procedure

**Manually Entering an Age**

After selecting a Procedure enter an Age in the field to the right of the Age: field as shown in Figure 7. The entered age must be an integer within a valid range (e.g., > 17, < 120). The tool will provide an error message if the entered value is not in range.

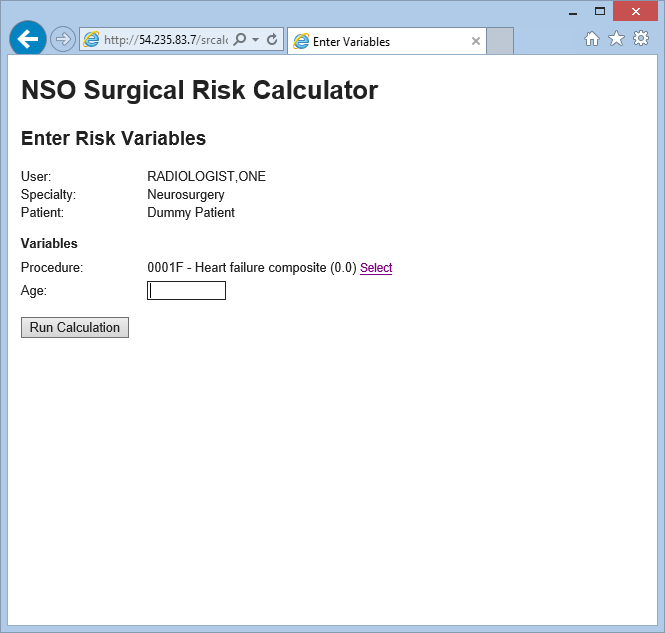


Figure 7- Manually Enter Age

## Changing User ID and Password

There will be no need to change User ID and Password specifically for the ASRC Tool. Either a DUZ number will be used (provided in the login section) or will be accessible through CPRS with provided test accounts.

## Exit System

To exit the system simply close the browser window.