

# PedCath<sup>8</sup>

## Tutorial

### Logging into **PedCath** for the first time

If you are logging into **PedCath** for the first time, the default password is *Taussig!* Once you have used this password to login, you must change it immediately, and will be prompted to do so.

If you are using a demo version of **PedCath**, there is no login screen.

### Exploring the BROWSE screen

The screenshot displays the PedCath BROWSE screen. At the top, there is a menu bar (File, Edit, View, Tools, Help) and a toolbar. Below this are three tables:

Name /	MRN	Cath Date	Cath No.	Staff Name	Role
Deere, John	1234567	09/24/1995	783	Mathema MD, Paul	Attending
Doe, John	123456789012			Heller MD, Felice	Fellow
Impack, Iggy K	Other123				
Oxygen, Lotsa	123				
Plastie, Angela	BB518				
Rogers, Buck	1285656				

Below the tables are buttons for Find, Add Patient, Edit Patient, Add Cath, Edit Cath, and Personnel Record. The main area is divided into three sections:

- Diagrams:** Shows a cardiac diagram labeled "Diagram 1 of 1" with "post-valvuloplasty" text. The diagram includes various flow measurements and percentages.
- Calculations:** Shows "Set 1 of 2: Pre-valvuloplasty" with a warning "Some Calculation Values Overridden".  
Qp = 2.97 L/min (5.82 L/min/m2)  
Qs = 2.58 L/min (5.06 L/min/m2)  
Rp = 2.19 units (1.12 units x m2)  
Rs = 26.72 units (13.63 units x m2)  
Qp/Qs = 1.15 : 1  
Rp/Rs = 0.08
- Diagnoses / Procedures:** Lists "85. Pulmonary Valve Stenosis" and "597. Balloon Pulmonary Valvuloplasty".
- Comments:** Contains text: "Bicuspid pulmonary valve", "Moderate pulmonary insufficiency.", "Hyperdynamic outflow tract", "No residual outflow tract gradient."
- Diagnosis / Procedure Comments:** An empty text area.

The BROWSE screen gives you a visual snapshot of every patient and every cath. Take a moment to browse through the sample patients. Clicking on a patient will update the bottom portion of the screen. Notice how **PedCath** displays patients with multiple cath (Buck Rogers) and multiple sets of hemodynamic data (Lotsa Oxygen and John Deere).

## Adding a New Patient to PedCath

Click on the **Add Patient** button



or click on the **New Patient** icon.



Fill in patient information as shown in the box.

Boxes with labels shown in **bold** are required to save the patient record.

**First Name:** Jane  
**Middle:** A  
**Last:** Doe  
**MRN:** 12345678  
**Date of Birth:** 01/01/2023  
**Gender:** Female  
**Race:** White; Native Hawaiian/Pacific Islander (Native Hawaiian)

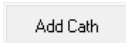
Diagram Template: Template Not Found

Mullins ID = ---

Ok Cancel

## Adding a Cath Report

With the patient you just entered highlighted, click the **Add Cath** button,



or click the **New Cath Report** icon



This will open the **Edit Cath Screen**:

**Case Information:**  
 Cath Date: 06/20/2024  
 Cath Number: 1234  
 Weight (kg): 12.3  
 Height (cm): 82.0  
 Account Number: [blank]  
 Set Access: [blank]  
 Vein: Right brachial 12r; Right femoral 9fr  
 Artery: Right carotid 4fr - Manual Compression  
 Fluoroline (min): 13.00  
 Contrast Total (cc): 45.00  
 Rad Dose (mGy): [blank]  
 Total DAP (µGy·M2): [blank]

**Personnel:**  
 Operator | Name | Role  
 Matherne MD, Paul | Attending  
 Heller MD, Felice | Fellow

**Hemodynamic Sets:**  
 Set 1 of 1: post intervention  
 IMPACT Set  
 Add Set Delete Set

**Calculations:**  
 BSA = 0.51 m2  
 Qp = 1.62 L/min (3.18 L/min/m2)  
 Qs = 1.62 L/min (3.18 L/min/m2)  
 Rp = 5.54 units (2.83 units x m2)  
 Rs = 42.49 units (21.67 units x m2)  
 Qp/Qs = 1.00 : 1  
 Rp/Rs = 0.13  
 View Calculations Calculation Override

**Hemodynamics:**  
 Heart Rate (bpm): 68  
 Inspired O2 (%): 21  
 Thermo CO (L/min): [blank]  
 Hemoglobin (gm/dL): 10.9  
 O2 Consumption (VO2/ml): 118  
 Blood pH: 7.42

**Measurements:**  
 pCO2: 41.0  
 pO2: 91.0  
 HCO3: 26.0

Right					Wedge	
O2%	Site	Sys/A	Dias/V	Mean	Right Mean	Left Mean
71	SVC				6	6
	RA	16	12	11		
	RV			P		
71	PA			15		
	RPA					
	LPA					

Left				
O2%	Site	Sys/A	Dias/V	Mean
96	LA			
	LV	110	8	S
	aAO	108	62	83
96	dAO	105	52	80

Administrator 06/20/2024 19:06:31 | 16 | 10013

## Entering Case Information

Add information about this cath in the *Case Information* box.

Click the clock icon to the right of the Cath Date to enter the procedure start and end times.

Click **Set Access** to set the vein and arterial access data.

Click the Add button underneath the Venous Access list box. Set the access to Right brachial and the sheath size to 12 Fr and click Ok.

To add a second venous access, click the Add button again and set the access to Right femoral and the sheath size to 9 Fr and click Ok.

To add an Arterial access, click the Add button underneath the Arterial Access list box.

Set the access to Right carotid and the sheath size to 4 Fr. Click the Add button next to Arterial Closure methods and select Manual Compression from the pop-up list. Click OK to save the arterial access information.

Check the box labeled Print Closure Methods to include the closure methods on the cath report. Note that Manual Compression is now included in the Artery box within the Report Text group box. This is how the text will appear on the report. To modify how the text will appear click the Override button above the box and enter the text as desired.

## Selecting and Removing Cath Personnel

Click on the **Add Personnel to Cath Report** icon,



You may select personnel by highlighting their names and clicking OK

To change someone's role, click on his or her role in the list for this cath, and use the drop down list to select a new role.

To remove personnel from a cath, click on the **Remove Personnel** icon.



Only administrators may add new personnel to the **PedCath** master list. Users with Full-Edit privileges can add "no-access" staff members to the master list such as referring physicians.


## Entering Hemodynamic Sets

Go to the **Hemodynamics Sets** section of the screen (left, middle) and enter a title, "post intervention" in the box next to the "Set 1 of 1" text. Each cath may have up to eight sets of hemodynamics.

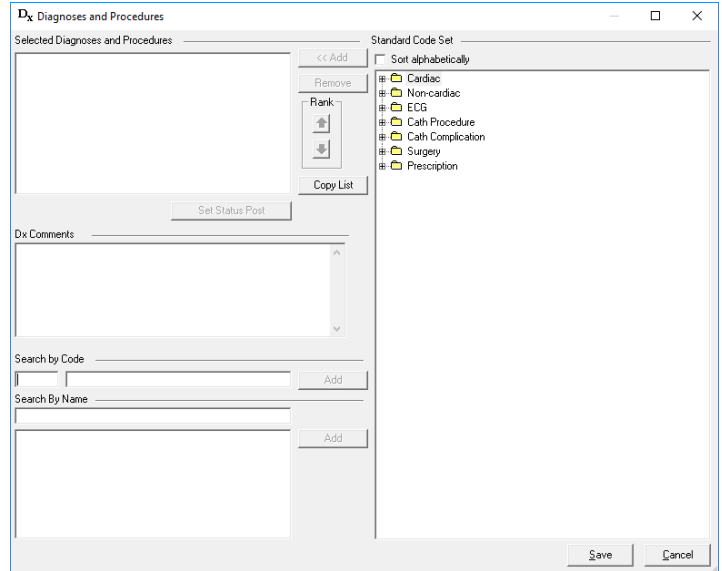
Now click on the Hemodynamics tab unless it is already open and add the cath information listed below.

Hemodynamics					User Fields		Measurements	
Heart Rate (bpm)	68	Hemoglobin (gm/dL)	10.9	pCO2	41.0			
Inspired O2 (%)	21	O2 Consumption (VO2/m <sup>2</sup> )	118	pO2	91.0			
Thermo CO (L/min)		Blood pH	7.42	HCO3	26.0			
Right					Wedge			
O2%	Site	Sys/A	Dias/V	Mean	Right Mean	6	Left Mean	6
71	SVC							
	RA	16	12	11				
	RV			P				
71	PA			15				
	RPA							
	LPA							
Left								
O2%	Site	Sys/A	Dias/V	Mean				
96	LA							
	LV	110	8	S				
	aAO	108	62	83				
96	dAO	105	52	80				

## Entering Diagnosis/ Procedures

Click on the **Diagnosis and Procedures icon** . If asked, choose Yes to save your changes. The **Diagnosis** screen will be displayed.

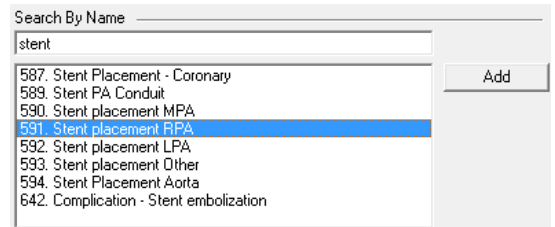
Note: This tutorial assumes you are using the diagnostic code set shipped with the **PedCath** demo CD. If your screen has a different list on the right, you are using one of the alternative codes sets available with **PedCath**. You will still have the tree list and search capabilities described below, but the code descriptions, code numbers and category organization will be different.



A tree list of all possible codes is available in the right-hand box. The upper-left box is for diagnoses and procedures associated with this cath. The two sections in the lower left contain search tools to help you find the correct codes. You may search by code number or by text fragment.

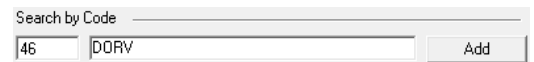
### Text Search

In this example, we will search by name first. Enter *stent*. You can see that two of the procedures you performed are listed. To place them on the selected procedures section either double-click the selection or click the Add button on the right.



### Code Search

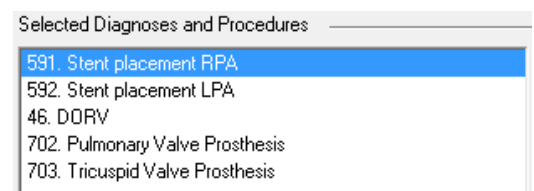
Now search by code. In the select code box, enter 46. DORV should pop up next to it. Click the Add button to place it in the procedures box.



### Tree List Search

Finally, we can use the tree list to find our last two Dx. Codes. In the tree list, click on the + sign next to Surgery Procedure. Scroll down to PVR and TVR (codes 702 and 703). When a code has been highlighted, click on the <<Add button to add it to the list of Selected Diagnoses and Procedures.

Now highlight one of the 5 codes for this cath and use the **Rank** arrows to move it up and down in the list. **PedCath** allows you to set the relative importance of each diagnostic code.




Click the SAVE button to exit from this screen.

## The Diagram Manager

Click on the **Diagram Manager** icon,  under the **Report Component Managers** section (upper right on the Edit Cath Report Screen).

Each cath may have up to three diagrams associated with it.

### Selecting a Heart Diagram

Click on the **Add Diagram** icon,  to view a selection of different heart diagrams.

For this patient, click on the + sign next to *Postoperative Anatomy*

Then choose

*Right Ventricle to Pulmonary Artery Conduit with Patch Closure of the Ventricular Septal Defect for Truncus Arteriosus and Right Aorta Arch*

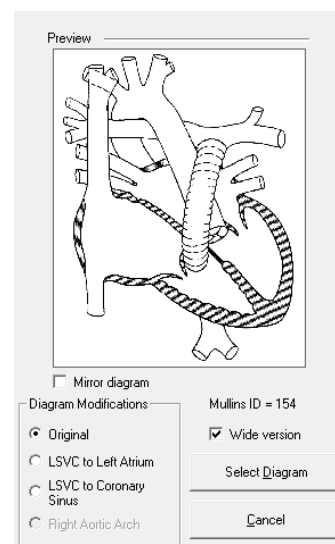
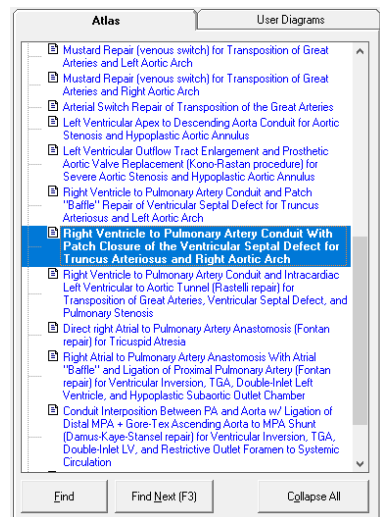
The selected diagram will be shown in the Preview window. There are a number of built-in variations of each diagram as well. These include wider versions with extended pulmonary arteries, mirrored versions for dextrocardia patients, and variations that include a LSVC (to either the Left Atrium or Coronary Sinus) and a Right Aortic Arch. These options can be set underneath the diagram preview. For this tutorial we will use the Original diagram.

Click the Select Diagram button to add the diagram to this cath report. (You can also double-click on the heart diagram title in the Atlas listing to add the diagram if the Diagram modifications are already set as desired).

When you have selected your diagram, PedCath returns to the **Diagram Manager** screen.



To edit your new diagram, just click on the **Edit Diagram** icon.



## Editing a Heart Diagram

### Erasing

Choose the **Eraser Tool** icon.  Next click on a medium sized line.

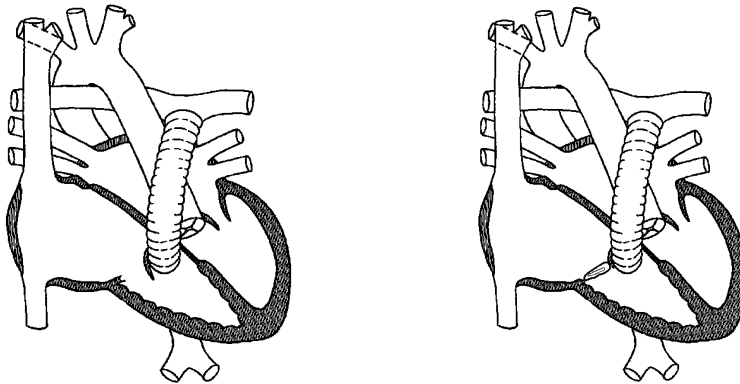


Next erase part of the Tricuspid Valve by drawing over it.


### Freehand Drawing

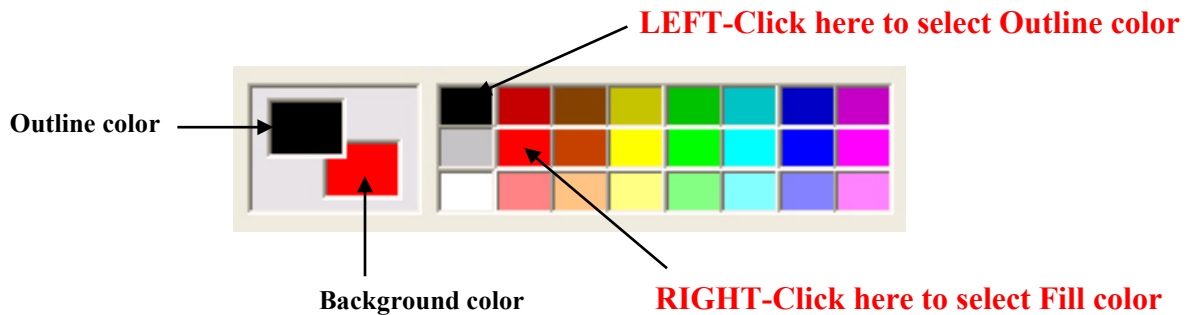
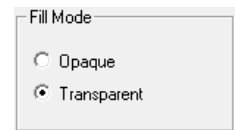
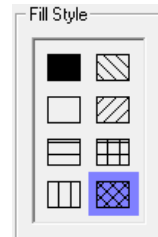
Choose the **Freehand Tool** icon. 

Choose a smaller line width. Sketch a prosthetic tricuspid by drawing a loop where the original valve was.

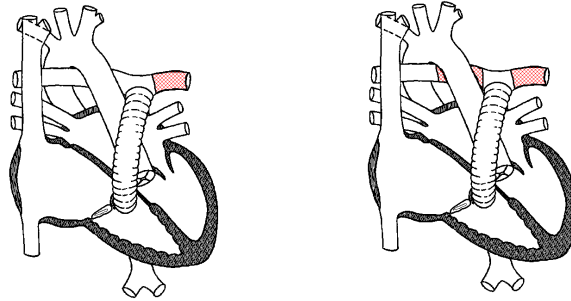


### The Blob Tool



Click on the **Blob Tool** icon.   
Select a thin line, a diagonal crisscross **Fill Style**,  
a transparent **Fill Mode**, a black outline,  
and a red background.



Use the **Blob Tool** to draw stents in the Pulmonary artery by tracing an outline of each stent along the walls of the artery.



### Undo and Erase


If you make any errors you can either use the **Undo** icon  to erase the last thing you drew, use the **Freehand Tool** set to white to erase, or use the **Selection Tool**  to click on the item to make a box appear around the item then press the Delete key.

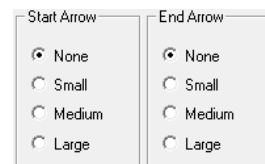
### Saving Diagram Templates

Because you made extensive changes to the diagram, click on the **Save Template** button to save it as a permanent template for the patient. This template will be available for any later caths for this patient.

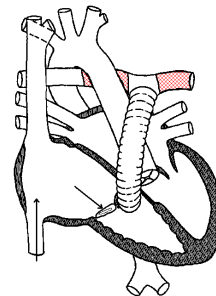


### Using Arrows

To show the path or direction of the catheter, click on the **Line Arrow Tool** . Select a line width, no **Start Arrow**, and a medium **End Arrow**.



Choose a black foreground and a white background. Now start the arrow at the beginning of the IVC and ending it in the RA. Draw another arrow beginning in the RA and ending in the RV.







### Embedding Hemodynamic Values into your Diagram

Click on the **Embed** button to insert all of the hemodynamic data into the diagram.

Your final diagram should look similar to this one. Close the Edit Diagram box, saving the patient diagram for this cath (right).

