

# 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 software interface. At the top, there is a menu bar (File, Edit, View, Tools, Help) and a toolbar with various icons. Below this, there are three main data tables:

Name /	MRN	Cath Date	Cath No.	Staff Name	Role
Deere, John	1234567	09/24/1995	783	Matherne 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 bottom section of the screen is divided into three panels:

- Diagrams:** Shows a diagram of a heart with catheters inserted. The diagram is labeled "Diagram 1 of 1" and "post-valvuloplasty".
- Calculations:** Displays hemodynamic data for "Set 1 of 2: Pre-valvuloplasty". A red warning message states "Some Calculation Values Overridden".  
Qp = 2.97 L/min (5.82 L/min/m<sup>2</sup>)  
Qs = 2.58 L/min (5.06 L/min/m<sup>2</sup>)  
Rp = 2.19 units (1.12 units x m<sup>2</sup>)  
Rs = 26.72 units (13.63 units x m<sup>2</sup>)  
Qp/Qs = 1.15 : 1  
Rp/Rs = 0.08
- Diagnoses / Procedures:** Lists "85. Pulmonary Valve Stenosis" and "537. Balloon Pulmonary Valvuloplasty".

Additional panels include "Comments" (Bicuspid pulmonary valve, Moderate pulmonary insufficiency, Hyperdynamic outflow tract, No residual outflow tract gradient) and "Diagnosis / Procedure Comments".

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 caths (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.

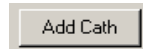
**Patient Record** [Close]

**First Name:** Jane  
 Middle: A  
**Last:** Doe  
**MRN:** 12345678  
**Date of Birth:** 12/31/1994 [Calendar] [Time]  
**Gender:** Female [Dropdown]  
 Race: White; Native Hawaiian/Pacific Islander (Native Hawaiian) [Dropdown]

[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**:

**Edit Cath Report** [Close]

File Edit View Tools Report Components

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**Patient Information**

First Name: Jane Middle Name: A Last Name: Doe  
 Medical Record Number: 12345678 Date of Birth: 12/31/1994 Gender: Female

**Case Information**

Cath Date: 09/24/1995 Weight (kg): 12.3 Height (cm): 82.0  
 Cath Number: 1234 Account Number: [Empty]  
 Set Access [Button] Vein: Brac 12fr, RFem 9Fr Artery: Right carotid 4fr  
 Fluorotime (min): 16.00 Contrast Total (cc): 45.00 Rad Dose (mGy): [Empty] Total DAP (μGy-M2): [Empty]

**Hemodynamic Sets**

Set 1 of 2: Pre-valvuloplasty [Add Set] [Delete Set]

Calculations: Some Calculation Values Overridden

BSA = 0.51 m2  
 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

[View Calculations] [Calculation Override]

**Report Components**

[Dx] [Camera] [Print]

**Personnel**

Name	Role
Matherne MD, Paul	Attending
Heller MD, Felice	Fellow

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**Hemodynamics**

Heart Rate (bpm): 128 Hemoglobin (gm/dL): 12.5 pCO2: 39.0  
 Inspired O2 (%): 21 O2 Consumption (VO2/m2): 198 pO2: 89.0  
 Thermo CO (L/min): [Empty] Blood pH: 7.37 HCO3: 22.0

**Right**

O2%	Site	Sys/A	Dias/V	Mean
75	SVC			
77	RA			4
78	RV	68	5	
78	PA	18	10	13
	RPA	17	9	12
	LPA			

**Wedge**

Right Mean: 6 Left Mean: 7

**Left**

O2%	Site	Sys/A	Dias/V	Mean
	LA			
98	LV	95	6	
	aAO	96	50	72
98	dAO	103	48	73

Administrator 06/02/2017 18:53:02 | 6

## 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.

Choose **Both** for the Access Location to add both Venous and Arterial access data. Select the access site and enter the sheath size for the largest sheath used on the Venous Access tab.

If more than one access site was used, click the Override button within the Report Text section next to Vein and enter the access data as you would like it to appear on the report.

Click the Arterial Access tab and choose Right Carotid. Enter 4fr for the sheath size.

You can optionally choose Closure Methods from a Pick list here as well (those are currently collected by the IMPACT Registry and currently not shown on the PedCath report).

## 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.

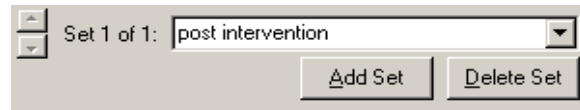
To remove personnel from a cath, click on the **Remove Personnel** icon.



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.

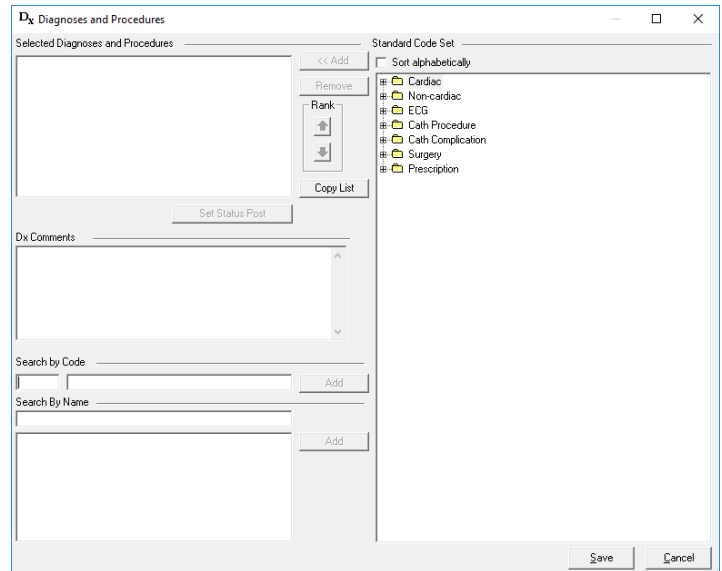
Hemodynamics					User Fields		Measurements		
Heart Rate (bpm)	68		Hemoglobin (gm/dL)	10.9		pCO2	41.0		
Inspired O2 (%)	21		Oxygen Consumption	118		pO2	91.0		
Thermo CO (L/min)			Blood pH	7.42		HCO3	26.0		
Right					Wedge				
O2%	Site	Sys/A	Dias/V	Mean	Right Mean	6			
71	SVC				Left Mean	6			
	RA	16	12	11	Left				
	RV				O2%	Site	Sys/A	Dias/V	Mean
71	PA			15	96	LA			
	RPA					LV	110	8	
	LPA					aAO	108	62	83
					96	dAO	105	58	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.

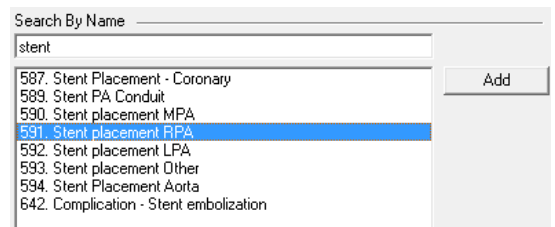
Note: This tutorial assumes you are using the diagnostic code set shipped with the PedCath demo CD. If your screen has a different list on the right, you are using one of the alternative codes sets available with PedCath. You will still have the tree list and search capabilities described below, but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

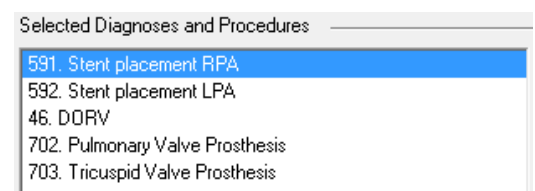
Now search by code. In the select code box, enter 46. DORV should pop up next to it. Click the Add button to place it in the procedures box.



### 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*

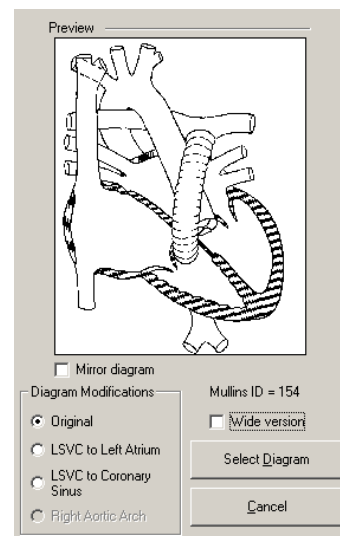
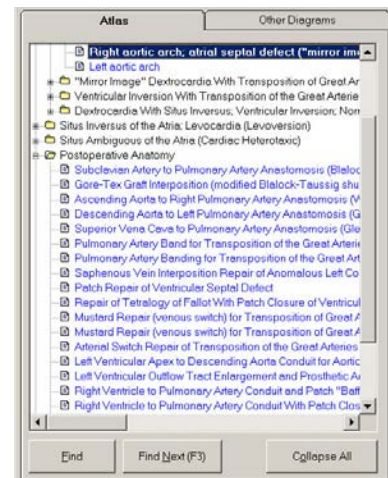
The selected diagram will be shown in the Preview window. There are a number of built-in variations of each diagram as well. These include wider versions with extended pulmonary arteries, mirrored versions for dextrocardia patients, and variations that include a LSVC (to either the Left Atrium or Coronary 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 **Freehand Tool** icon.  Next click on a medium sized line.



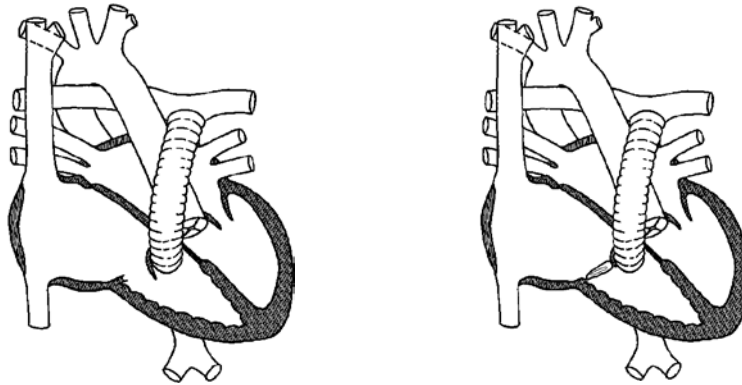
Now click on white to select it as a foreground color and right-click on white to also select it as a background color.




### Freehand Drawing

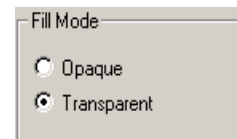
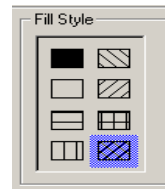
With the **Freehand Tool** set to white, erase part of the Tricuspid Valve by writing over it.

Change the foreground color to black and choose a smaller line width. Sketch a prosthetic tricuspid by drawing a loop where the original valve was.

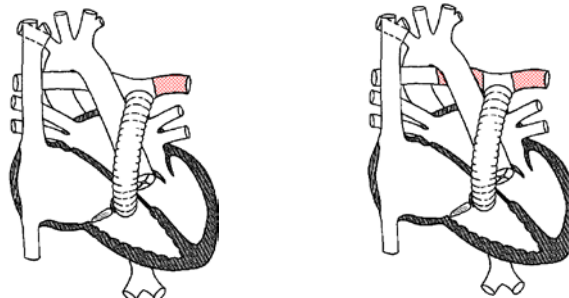


### The Blob Tool



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

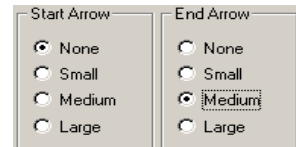
### Saving Diagram Templates

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 cath for this patient.

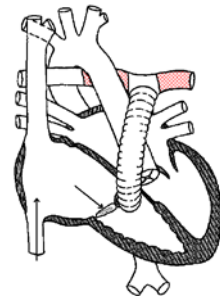


### Using Arrows

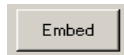
To show the path or direction of the catheter, click on the **Line Arrow Tool** . Select a line width, no **Start Arrow**, and a medium **End Arrow**.



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).

