

Dear Steve Miller,

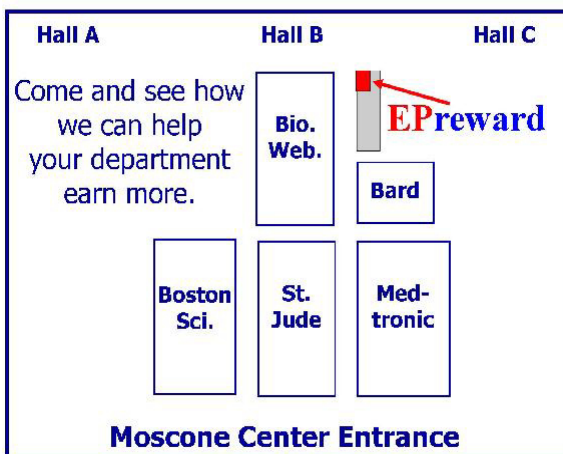
Increased costs and lower reimbursements are financially strangling EP Labs. Here are some steps towards improving your budget, including a close look at Reprocessing.

Electrograms are confusing for many EP staff. We have clarified several involved with AVNRT diagnosis and ablation.

Our growing relocation program now purchases **used** diagnostic EP catheters, offering greater payments than Platinum Recovery. Learn more below.

Thank you and please come by and meet us at HRS.

**Respectfully,
Steve Miller, RN**



Contents

- Team Up on Your Finances
 - Reprocessing Considerations
 - AVNRT: A Practical Approach to Electrograms
 - Used Catheter Relocation pays more than Platinum Recovery.
- Next Issue: EP Finance Series & SVT's.

Upcoming EP Classes

5/14-17 San Francisco, CA; 5/28-30 Sydney, Australia; 18-21/6 Nice, France; 6/21 Louisville, KY; 7-8/7 London, England; 7/12 Seattle, WA; 7/26 Denver, CO. [Full Calendar.](#)

AVNRT- Clarifying the Electrocardiogram's

This case is brought to you by Ed Donovan, Clinical Nurse II at the Columbia Presbyterian Hospital in New York, NY. Thank you Ed.

Case Presentation: A 60 year old male with a history of SVT and palpitations presents to the EP Lab for RF ablation ([H & P and EKG eval](#)).

After informed consent, baseline vital signs were obtained and IV access placed. The patient was brought to the procedure room and prepared and draped in the usual sterile fashion. [Slide 1](#) shows the baseline 12-lead EKG. Sedative medications were given IV in the form of Versed and Fentanyl, and tapered to stable vital signs and level of consciousness 1-2. 2% Lidocaine was

Financial Teamwork & Reprocessing Re-visited

Department budgets are a growing challenge for EP managers. Rising expenses and lower reimbursements have put many historically income producing departments into the red for the first time. The next several Newsletters will focus on a variety of ways to address and correct revenue/expense imbalances.

If you do not currently have a "team" that is addressing budgetary issues on a regular basis, you are probably struggling. Creation of this team is the essential step. There is simply too much to look at and work with for one person to do it efficiently. Remember also, that successful changes in a department process will require the cooperation of everyone involved with that process.

First, the Medical Director, or another prominent Physician needs to be involved. As they are also customers of the department, their input is essential and it is important that all changes satisfy their needs as practically as possible. If necessary, educate them to the financial impact of the choices they make. Hospitals have budgets, and Physicians have an enormous effect on those budgets which can provide benefits to them and their patients. Help them see this and you will have an ally. For example, if your MD only uses \$3,000 irrigated tip catheters for all of his cases, he will not get the Ultrasound system that could be purchased if he used the \$1,200 catheters for AV Node and Atrial Flutter ablations.

As the Manager of the department, it is generally your task to organize and guide the group. The Director or VP over the department can be very helpful by pulling together ideas and resources from other areas of the hospital, incorporating their own experience, and giving the effort credibility in front of the Physicians and other departments. The Director or Manager of Materials Management provides a different perspective and expertise in many of the involved issues. The primary EP Lab purchasing person is also invaluable. Treat them like honored guests, not like someone who is forcing you on a diet. Send them this article after you read it and they will be

used for local anesthesia in both groins. In the RFV, a 5 FR quad was passed into the right ventricular apex (RVA), the 6 FR quad passed up to the high right atrium (HRA), and the 6FR sheath was left open as a placeholder for later upgrade to an 8 FR sheath for the RF catheter. The LRV 5 FR quad was passed up to the His Bundle area and the 6.5 FR steerable octopolar was placed in the coronary sinus.

[Slide 2](#) shows baseline interval measurements for intracardiac signals. Atrial pacing maneuvers found the AV Wenckebach to be at 300 msec. ([Review of Baseline Measurements and EP Study](#)).

Ventricular pacing revealed a VERP of 280 msec (Ventricular Effective Refractory Period, normal= 230 - 450 msec). SVT was unable to be induced with atrial or ventricular pacing maneuvers. Thus, an Isoproterenol infusion was started.

S1-S2 atrial pacing was repeated on 1 mcg/min of Isoproterenol, and SVT was induced at 240 ms ([Slide 3](#)). An A-H jump was seen when the pacing interval was shortened to 240 ms with S1-S2 atrial pacing, suggesting dual AV-Nodal physiology which is normal in 40% of the population. The SVT was "typical" AVNRT. Atrioventricular Nodal Reentrant Tachycardia is where the impulse travels antegrade down the slow pathway and retrograde back up the fast pathway in the AV Node (this activation sequence is "typical" in 90% of AVNRT's). There were also midline intracardiac signals (ie. the earliest atrial signal is in the middle of the heart rather than the left or right side of the heart, this would further indicate the AV Nodal area as the origin) and there were no discernible P-waves as would be the case with an Atrial Tachycardia or Atrial Flutter. Ventricular overdrive pacing



appreciative.

A view from the trenches is essential. You will want the inventory person(s) responsible for managing the department stores, and at least two EP staff (RN and Tech). If you have a new staff member who worked in a lab elsewhere, bring them in for outside ideas. Also, you can include or telephone conference a manager from an affiliated hospital. There, you are on your way. Start with brainstorming and collecting every possible idea on how to improve the department's finances. Prohibit nothing, everything is a possibility, then begin working.

We will help out by starting your evaluation on reprocessing. If you already do it, take a closer look. If not, then why not? Validate your current choice.

Reprocessing EP Catheters

The decision for a hospital to participate in EP catheter reprocessing is a challenging one. Historically, reprocessing took place within the hospital, but in 2003 the FDA instituted new requirements for a hospital, manufacturer, or third party company that reprocessed single use devices called the [Medical Device User Fee and Modernization Act of 2002](#). These [stringent requirements](#) caused hospitals to cease this practice. Since then, third party reproprocessors who were able to satisfy these requirements have aggressively marketed their services to EP Labs espousing a 50% savings over the catheter purchase price. Distinguishing the true benefits and detriments of these programs is not easy and other options may be considered.

Closer analysis reveals the actual savings may be significantly less than advertised. "The biggest portion of the savings comes from the first and second reprocessing procedures. After two times, the returned volumes get smaller, as do the further savings." The author demonstrates an [interesting equation](#) for calculating the true savings of a reprocessing program and may be worth closer examination.

There are two main EP catheter reprocessing companies in the United States, [Ascent Healthcare Solutions](#) of Phoenix, AZ and [SterilMed, Inc.](#) of Maple Grove, MN. Meet with sales persons from each company to compare pricing, and

during SVT revealed a V-A-V response during the post pacing interval (PPI), thus ruling out atrial tachycardia which would have returned a V-A-A-V response ([Slide 4](#)).

The 6 FR "placeholder" sheath in the RFV was upgraded to an 8.5 FR SRO sheath for better stability of the ablation catheter. A 7 FR Mariner (Medtronic) ablation catheter was then inserted via the SRO sheath and a slow pathway ablation was performed. For fluoroscopic approximation, "The [site of successful slow pathway ablation](#) was consistently about 13 mm from the site recording the proximal His-bundle deflection" in the the [triangle of Koch](#). Several RF applications produced slow junctional rhythms with return to sinus rhythm ([Slide 5](#)). It is critical that RF application is halted at the hint of A-V dissociation or rapid junctional rhythm. The patient was further sedated with IV Versed and IV Fentanyl prior to the start of RF applications and tolerated the procedure well.

Post-ablation, the Isoproterenol infusion was restarted at 1 mcg/min once again. SVT was no longer inducible despite aggressive atrial pacing maneuvers. Post RF intervals (i.e. HV & AH) were unchanged from baseline ([Slide 6](#)). The procedure was considered a success. All catheters and sheaths were removed from both groins and pressure held by the MD until hemostasis was achieved. The patient remained alert & oriented throughout the procedure. Dressings were applied to the right and left groin puncture sites and the patient was transferred to the telemetry unit for overnight observation. The patient was discharged the following morning without complication.

Are you interested in writing an article? [Contact us](#) for more information. We pay \$100 when published.

Customer Feedback

service. Use this article to help generate questions. Also, check with your associated hospitals about their experiences with each of these companies. If you use a reprocessor now, please give us a [quick summary](#) of your experiences so that we may organize and anonymously share them in a future Newsletter.

Once you have spoken with the sales people, talk with your primary catheter manufacturers and let them know that you are seriously looking at reprocessing. "For two hospitals we contacted [manufacturers offered to reduce the price](#) of new EP catheters by as much as one-half, matching the price of third-party reprocessing, if the facilities would agree to not reprocess the devices." Even with prices not being equal manufacturers offer education to Physicians and Staff, research to advance the profession, and ...

Platinum Recovery:

"I also wanted to thank you for being so reliable. I am hearing more and more about companies who are not and I am so thankful we chose you." EP Lab, Michigan

Catheter Relocation:

"I can't tell you how pleased we are with this service; we've saved \$5000 in the last 6 weeks! And my Director is ecstatic! Thanks." EP Lab North Carolina

EP Catheters For Sale

Unopened, Inspected, & Warranted

Bio Web Navistar- 4 mm & 8 mm-
Most Curves- \$1,200-\$1,500 ea.

Biosense Webster P Supra CS - \$147
& \$184 ea.

EPT Polaris X - \$195 & 325 ea.

110 others available, [see them here](#).

Reprocessing cont.

... customer support for products. These additional benefits have a value worth considering.

Reports received thus far vary from complete satisfaction with cost savings and service, to frustration with turnaround times, wrong catheters being returned, non-intact sterile wrappers, fewer than expected reuse cycles, and the erratic pickup of catheters.

If you are leaning towards reprocessing Physician acceptance is of paramount importance. Many Physicians protest against reprocessing stating the catheters perform poorly. However, studies have shown that "reprocessed EP catheters exhibit electrical, mechanical and safety characteristics which are [equivalent to their new counterparts](#)." It has been reported anecdotally that Physicians handed a reprocessed and a new EP catheter cannot distinguish between the two. However, other reports indicate that an increase number of reprocessing cycles causes a deterioration in the physical properties of the catheter causing some hospitals to limit their reuse cycles to 2 or 3 rather than the total allowable of 6.

Here is a good [literature review](#) about reprocessing.

Diagnostic EP Catheter Reprocessing for Reuse

Pro's	Con's
Pay +/- 50% of the list price of a brand new catheter	OEM may match pricing
The threat of reprocessing may cause the OEM to reduce their sales price	QC issues- receive wrong catheters, & packaging integrity problems reported.
Reprocessing lessens the financial and environmental burden of waste disposal	You need to maintain a 3-4 week inventory to account for turnaround time for reprocessing
Written reports provide data on numbers of failed items, reuse cycles, etc.	Actual number of reuse cycles may be less than marketed- est. average 3-4.
Studies demonstrate "like new" performance of reprocessed devices	Physicians may not "like" the feel of reprocessed catheters
	Takes 15 seconds for each case
	Reprocessing an <u>unused</u> catheter costs 50% of the list price to have it continue to sit idle
	Reprocessing does not kill uncommon infectious agents, ie. "pirons"
	Disinfectant/sterilizing residue remains on catheters. Effects unknown.
	Reduced Platinum Recovery payments on diagnostic catheters

Catheter Relocation Pays More for Used Diagnostic EP Catheters

Through expanded Catheter Relocation service, EP Labs will see their past Platinum Recycling payments increase by 20% to 50%. This will be done by our paying a set price for used diagnostic catheters that may be twice to ten times their platinum value. Here is a list of prices.

Category I EP Catheters: \$6.60 each.

These are fixed curved catheters. Quads through Deca's.

Category II EP Catheters: \$13.30 each

These are Steerable catheters, Quadrapolar through Decapolar.

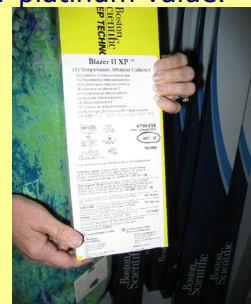
Category III EP Catheters Platinum Value. See Pricing menu.

Used Ablation catheters can not be relocated. However, we are able to offer you the best Platinum recycling prices available.

Category IV EP Catheters: \$17.40 each

These are Steerable DuoDeca, Halo and Lasso type catheters.

AcuNav, ICE, and CartoSound Catheters: \$50.00 each



[Contact us](#) to request a collection container and further information to maximize the

payment you receive from your specific catheters. 561-375-8034.