



# Insights

**ScottCare — The Leader in Cardiopulmonary Rehab  
Patient Monitoring**

January 2004  
Volume 2, Issue 1

## Upcoming Trade Shows

### February 19-20:

NCCRA  
Greensboro, NC

### March 26-28:

VACVPR  
Charlottesville, VA

### March 26-27:

ISCHR  
Normal, IL

### April 16-17:

Tri-Network  
Sioux Falls, SD

### April 22-23:

CSPR  
Long Beach, CA

### April 24:

WISCVPR  
Wisconsin Dells, WI

### October 7-10:

AACVPR  
Long Beach, CA

## Ensuring Customer Satisfaction

It was great seeing many of you at the AACVPR meeting in Kansas City last October. I would like to thank those who stopped by our booth to see our new system, discuss user issues, or just to say hello. It is extremely important that we obtain user feedback, both good and bad, to help identify how we can serve our customers better, whether through better training, user tools, or software revisions.

The ScottCare User Appreciation Reception was a great opportunity to interact on a more casual level, exchange ideas, as well as satisfy our thirst and appetite. If you missed it, plan on attending next year's reception at the AACVPR annual meeting in Long Beach, California.

With 2004 upon us, it gives us time to pause and thank you for your support of ScottCare in 2003 and prior years. Please do not hesitate to let us know if we fail to meet your expectations and how we can serve you better. As always, you have our commitment that we will do our best to respond to ensure your satisfaction.

Have a healthy and happy 2004!

— Ken Zajackowski, President

## ScottCare introduces HL7 Interface Module

ScottCare now offers an HL7 hospital network interface solution for use on the TeleRehab™ *Advantage* monitoring system. This non-invasive interface tool allows *Advantage* users to send and receive discrete data and send reports to hospital networks via HL7 minimal layer protocol over a TCP/IP connection.

Features of the new software include:

- An easy-to-use graphical user interface (GUI) that allows users to select and define data and fields to meet specific requirements
- Connects via any port number, LAN or VPN
- Data encrypted for secure transport
- Up to 82 discrete data items available for export from *Advantage*, and up to 34 discrete data items available for input to *Advantage*
- All reports, including saved strips, can be transmitted and saved in native format
- Allows for patient registration from the hospital information system
- Information systems friendly

ScottCare provides a comprehensive range of installation and support services to users who wish to outsource their integration projects.

For pricing information on the HL7 interface module, please contact your sales representative at 800-243-9412 ext. 116 or for technical information and implementation questions, contact 800-243-9412 ext. 103.



## Right Click vs. Double-Left Click

With the number of options available in the ScottCare TeleRehab™ Advantage Monitoring Program, it can be difficult to remember if accessing an option requires a **RIGHT** click or **DOUBLE-LEFT** click with the mouse. If a feature is not mentioned in the descriptions below the user is required to use a **SINGLE-LEFT** click with the mouse.

During patient monitoring, features that require a **DOUBLE LEFT-CLICK** include the following:

1. Assigning a patient's name to a monitoring channel.

2. Printing a hard copy ECG strip.

During patient monitoring, features that require a **RIGHT-CLICK** include the following:

1. Starting/Stopping patient displays simultaneously.

- Once a name(s) is loaded onto the screen, perform a right click on one of the buttons across the bottom of the screen.

2. Starting/Stopping patient recordings simultaneously.

- Once a name(s) is loaded onto the screen, perform a right click on one of the buttons across the bottom of the screen.

3. Starting/Stopping a patient display within the patient channel.

- Once a name is loaded onto the screen, perform a right click on IDLE.

4. Starting/Stopping a patient recording within the patient channel.

- Once the display has been started, IDLE is replaced with NOT RECORDING. Perform a right click on NOT RECORDING.

5. Placing the patient "on hold" during exercise.

- Perform a right click on the time located to the right of the exercise modality name.

6. Saving a strip for all patients simultaneously.

- Perform a right click on the strip chart icon located in the patient's channel.

7. Disabling heart rate alarms and arrhythmia alarms simultaneously.

- Perform a right click on red or blue bell as it appears during a recorded session.

8. Increasing the gain, speed or display background for the ECG trace.

- Perform a right click on the ECG display as it appears in the patient's channel.

9. Entering data directly from options displayed on the monitoring status line.

- Perform a right click on RBP, RHR, SPO2, RPE, WEIGHT and Session #.

10. Accessing a patient's blood pressure field directly from a patient's individual monitoring channel.

- Perform a right click on the "NA" located next to BP in the individual patient channel or on the BP value as it appears in the patient channel.

11. Accessing patient's exercise functions directly from a patient's individual monitoring channel.

- Perform a right click on the "NA" located next to METS in the individual patient channel or on the MET value as it appears in the patient channel.

12. Accessing the THR field directly from a patient's individual monitoring channel.

- Perform a right click on the "NA" located next to THR in the individual patient channel or on the THR value as it appears in the patient channel.

13. Altering the Hi and Low limit for the Heart Rate alarms during monitoring.

- Perform a right click on the HR number as it appears on the patient channel.

14. Manually entering a pulse rate during monitoring.

- Perform a right click on the HR number as it appears on the patient channel.

**NOTE:** Once you have activated the feature utilizing a **RIGHT CLICK**, all selections from this point forward require a **LEFT CLICK** (i.e. selecting a gain that is greater or selecting "keep" after entering a blood pressure).

### Automatic Protocol Updates

*This feature applies to GOLD, PLATINUM, AND ADVANTAGE users.*

In order for a patient protocol to automatically update throughout a monitored session, the following must occur simultaneously:

- Under the Setup/Options menu, the following must be selected — *Update Protocols from Monitoring.*
- During a monitored session, a patient protocol must be followed in the exact order for which it was designed. To use a protocol correctly, right click on the modality displayed in the patient's monitoring channel and select *Next* to move the patient to the next modality listed.



## What is a TeleRehab™ Heart Rate?

There are often questions raised that deal with the heart rate data included in the TeleRehab™ software. The TeleRehab Monitoring System will provide different heart rates depending on the point of measurement during and after a monitoring session.

### Heart Rates While Monitoring

While monitoring, the heart rate displayed on the monitoring screen is the **Current Heart Rate** as calculated on a running average of four beats. This average number is updated every beat. Any time the current heart rate is not accurately definable (due to artifact or arrhythmia) the color of the heart rate number being displayed will be blue. Blue normally indicates that the heart rate being displayed is invalid because of inaccurate beat data. In order for a valid heart rate to be displayed, there must be four consecutive beats that the computer can identify as valid.

While monitoring, the **Resting Heart Rate** is displayed in the Monitoring Status Line as RHR. Resting Heart Rate is defined as the Heart Rate saved in memory when the first strip (normally saved prior to exercise or at rest) for that patient is saved. Likewise, the **Ending Heart Rate** is the rate saved in memory when the last strip for that patient is saved.

### Heart Rates on Strips

The heart rate appearing on a **printed strip** from the strip chart recorder is the heart rate saved in memory at the time the request to print a strip was initiated (left click on the strip icon). Please note that this heart rate may be different that what appears on the

saved image of the same strip. (See below.)

The heart rates appearing on a **saved strip** (including the first or last strip) is the **Weighted Average Heart Rate** of the R to R intervals on the strip. Since there are generally several options for calculating the rate on a strip, the system simply calculates the average. *(Note that this number will likely be different than what was being displayed when the strip was saved given the rate will fluctuate during the period reflected on the strip versus at one point in time. Also, heart rates deemed invalid (blue) are not used by the computer in calculating the average which means invalid rates caused by artifact are not a consideration.)*

### Heart Rates on Session Reports

The number appearing in the **Max HR** column in the modality section of the session report is the highest number recognized during the duration of exercise on that specific modality. This number is not related to a rate displayed on a saved or printed strip. *(Note that the number appearing in this column as the max HR for the initial rest period is NOT THE RESTING HEART RATE but the maximum HR seen during that rest period. The same holds true for the Ending Heart Rate.)*

The **Average Heart Rate** column in the modality section of the session report displays the weighted average of the heart rates seen during the duration of exercise on that specific modality. *(Note that heart rates deemed invalid (blue) are not used by the computer in calculating the average which means invalid rates caused by artifact are not a consideration).*

## Static Control

A combination of cooler, dryer air with static-causing surfaces (i.e. carpeted floors) may create an increased risk for static electricity interfering with the components of your computer.

To reduce the chance of experiencing static related complications with your computer, it is recommended that you discharge yourself from static before touching the computer components. Recommendations include an anti static keyboard mat or floor mat.

## Uninterruptible Power Supply

It has been reported that data loss and/or corrupt data has occurred due to irregular power supplied to the system. This can be in the form of a power outage, brown outs or power spikes. To avoid the possibility of this happening to your system, the installation of a UPS — or an Uninterruptible Power Supply — is a good idea. This will supply your system with constant clean power for a certain amount of time, regardless of what the power is doing from the wall outlet.

If you have questions regarding which UPS is best suited for your system or any other questions regarding this matter, please call **1-800-243-9412** and select option 2 for Technical Support.

## User Profile: St. Mary Medical Center, Langhorne, PA

### Scott Hartman, Cardiology Manager

Located in Langhorne, PA, just outside of Philadelphia, St. Mary Medical Center is the region's premier healthcare facility.

Founded in 1973 by the Sisters of St. Francis of Philadelphia, St. Mary's has evolved from an acute-care community hospital to the most comprehensive medical center in Bucks County. It is affiliated with Catholic Health East, a Catholic healthcare system with a regional focus, and the Mercy Health System of Southeastern Pennsylvania.

An innovative physician-supervised program is part of St. Mary's holistic approach to heart care. Cardiac rehab is designed to improve the functional capacity, control symptoms and improve outlook for cardiac patients and those at-risk. Each patient is evaluated, and a program is developed according to their needs and capabilities.

Scott Hartman is Cardiology Manager for St. Mary's, working on behalf of the Cardiac and Pulmonary Rehabilitation Department and the Diagnostic Cardiology Department.

St. Mary's provides an innovative, highly comprehensive program for patients with known heart disease including: monitored exercise in a spacious, attractive 3,000 square foot facility with a large exercise floor; education to support nutritional needs, stress reduction, smoking cessation and lifestyle changes; and maintenance programs, with an option to continue in the St. Mary Holistic/Wellness and Sports Care Center. The program is now celebrating its 20-year anniversary. St. Mary's achieved national certification from AACVPR in 2003.

On a given day, the program serves 70-80 monitored patients and 120 maintenance patients (Phase III or non-monitored). Several heart transplant patients go through the program each year as well.

"Our compliance rates are good as far as patients staying with the program, and we pride ourselves on that," said Hartman.

In addition to Hartman, who has a Masters degree in Exercise Physiology, the program's staff consists of: three Exercise Physiologists (all with Masters); one full-

time nurse; and, two part-time nurses. The staff conducts 8 monitored classes a day, and each typically includes 8-12 patients.

St. Mary's recently upgraded from ScottCare's Gold system to TeleRehab™ Advantage. With the Gold system, the staff was limited to eight channels. The program was growing, and the number of patients they could serve at one time was limited.

"The new system is a major enhancement to our program. It accepts data much quicker, and it's great for comparing previous sessions," said Hartman. "The upgrade has allowed for ease of use which reduces our amount of work. The added sessions are very worthwhile too."

Hartman uses Outcomes to track progress and for various assurances and data on a regular basis. He commented that Outcomes has also been good for capturing and utilizing data they need to supply to their third party payers.

"ScottCare's customer service has been excellent. We were very pleased with the support from their team and how quickly they helped us out," added Hartman. "That's one of the reasons we stayed with them. We looked at other packages, and they didn't compare to ScottCare."

St. Mary's uses the ScottCare system for pulmonary rehabilitation patients as well.



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Pictured below is the St. Mary's Cardiac Rehab staff —  
Seated left to right:  
**Leslie Kitchen** and  
**Heidi Edelman**  
Standing left to right:  
**Adam Blumenthal,**  
**Carrie Blumenthal,**  
**Amy Larson** and  
**Scott Hartman**

