ReNews®
A Publication On Dialyzer Reprocessing

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renalog III

We Asked, You Answered: How do you use Renalog® III?

One of the most significant milestones in the development of dialyzer reuse was the introduction of computer software that could manage reprocessing data and track reuse trends. Today, data management programs such as Renalog® III save dialysis staff countless hours by automating record keeping and translating reprocessing data into concise, easy-to-read reports. Reuse software is also the most powerful tool available to target areas of concern for your patients and your program. Data management programs can compute reuse averages and reveal hidden problems with heparinization schedules, rinseback procedures, and dialyzer cost-efficiency. In this edition of ReNews, we take an in-depth look at the benefits of data management software, tips on troubleshooting through data analysis, and other reuse-related computer issues.

Nephrology, Inc. is a four center dialysis provider based out of Mishawaka, Indiana. Their reuse program serves approximately 460 hemodialysis patients and 100 CAPD patients. Mike Burlingame, Director of Technical Services recently talked to Renal Systems about how Renalog® III enables Nephrology, Inc. to meet their reuse goals.

RS: *What kind of dialyzer reprocessing equipment do you use?*
MB: "We have a total of ten Renatron® stations at our centers, and each center is equipped with a Renalog® III program. We hope one day to network all four of our center's patients together into a single Renalog® III database."

RS: *What Renalog® III reports does your center run regularly?*
MB: "I run the "Dialyzer Failure Group by Failcode/Detail by Model" report at the end of each quarter. The report helps us see what our trends are, and evaluates dialyzer performance. If one model of dialyzer is giving better reuse numbers than another, and the clinical results of both are similar, that data would help us choose the more cost-effective solution.

We also generate the "Dialyzer Failure Group by Month Detail by Model" monthly. I pull a separate report for each model that we have and Renalog® III automatically calculates the average number of uses, the average number of reprocesses, and the number of dialyzers failed. It gives us individual averages for each month and then quarterly averages to look at trends."

RS: *How do you use Renalog® III to troubleshoot your reuse and dialysis programs?*
MB: "The thing that impacts reuse more than anything is heparinization. However, it may not be reflected in your reuse averages, because the people in reuse are pre-cleaning like mad to remove the clotting and pick up the slack. But that just means that we're wasting supplies and we're wasting the patient's blood."

"Renalog®'s pre-clean report has been very valuable in helping us to identify heparinization issues. I generate reports with the number of monthly pre-cleans for each of our four centers. At the end of the quarter, I use that data to calculate a pre-clean percentage for the quarter. If I see that in a particular unit the percentage of pre-cleans is going up and up, it is a good indication that we may want to look at the heparinization schedule there. For example, in January, one of our units pre-cleaned 68% of their dialyzers. That told me that there was a problem, and I soon found out that they stopped using the heparin prime. When they went back to using it, their pre-clean numbers went back to normal levels."

"Burlingame" Continued on Page 2

In This Issue:

Meeting the Millennium:

Renalog® III and The Year 2000

Minntech Corporation has been moving steadily towards resolving year 2000 (Y2K) issues. This initiative is a top priority and has the highest level of commitment and support by senior management. In 1998, Minntech established a task force to coordinate, identify, and implement Y2K solutions.

The Renalog® software program has been tested to the best of our abilities and has been found to be Y2K compliant when it is installed on a computer and disk operating system (DOS) that is Y2K compliant. All of the date functions in the Renalog® III software rely on the computer's internal clock to supply date information. To verify that your computer system and DOS version is Y2K compliant, check with the hardware or software manufacturer. For your convenience, a list of manufacturer resources is provided below.

Northgate:
Northgate went out of business several years ago and is not available to provide support. If you have a Northgate computer, you should have it upgraded or tested by a qualified computer service center.

Compaq:
According to Compaq, all Compaq PC products will accept the year 2000 as a date, but the roll-over may not occur automatically. You should consult with Compaq to determine if your computer is Y2K compliant. Compaq can be reached at 1-800-OK-Compaq (1-800-344-4825), or online at http://www.compaq.com/.

IBM:
According to IBM, all IBM PCs manufactured since the PC.AT model have the ability to accept the year 2000 as a date. However, some IBM PCs may require user intervention to roll over to the year 2000. You should consult with IBM to determine if your computer is Y2K compliant. Contact IBM by calling 1-800-426-4968, or visiting their Web site at http://www.pc.ibm.com/year2000.

CompUSA:
All of the CompUSA computers sold with the Renalog® III software program were supplied with a certificate of Y2K compliance from CompUSA.

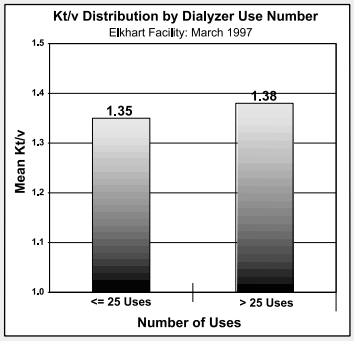
DOS (Disk Operating System):
You will need to verify your version of DOS. According to Microsoft, DOS versions 5.0 and higher are Y2K compliant with minor issues. Minntech has verified Renalog® III software with DOS version 5.0 and higher and found it to be compliant. If your version of DOS is lower than 5.0, you should upgrade. To determine your version of DOS, follow these steps:

1. Exit Renalog® III to the DOS prompt (C:\>).
2. Type VER and press the Enter key.
3. A message will appear indicating the DOS version.

Minntech has also established a Y2K section on our internet Web site at www.minntech.com. The site is updated with the latest information about our Y2K compliance program. Minntech Corporation is committed to achieving year 2000 compliance, in order to ensure an uninterrupted supply of quality products and services to our customers. We look forward to maintaining our valuable business relationships into the next millennium.

"Burlingame" Continued From Page 1

"At our centers, if a dialyzer retains 80% of its starting volume and passes visual inspection, we reuse it. Our reuse average is currently 19.2, but our maximum reuse number is 99. Occasionally we have dialyzers that make it that far.



We calculated the mean Kt/v for dialyzers reused less than 25 times and dialyzers reused over 25 times, and found that starting with a brand new dialyzer does not improve Kt/v significantly. In fact, the dialyzers with the highest number of reuses had the best Kt/v performance. This follows, because if you're using a dialyzer 80 to 90 times, clotting is not a problem."

-- Mike Burlingame, Director of Technical Services, Nephrology, Inc.

Focus On: Renalog® III and Your Computer

Q: Why is archiving data important? How and when should I do it?

A: Archiving data is the process of removing old, unused reprocessing files from the Renalog® III database and storing them elsewhere. Removing these obsolete files reduces the size of your database, which in turn speeds up the operation time of the Renalog® program. Archived files can be stored on a folder in your hard drive or on a floppy or other removable disk or tape. Always archive old files instead of deleting them. You never know when you might need access to a prior year's reuse data.

Minntech recommends that you archive data annually after producing your facility's year-end reuse reports. The procedure may take as long as an hour to complete, so plan your archiving session accordingly.

To archive your data:

1. Open the Renalog® Edit Program using a 4th level password.
2. Press the [Alt] and [F1] keys simultaneously to access the *Managers Menu*.
3. Select the **Archive Renalog® Data** option.
4. Enter the starting and ending dates for the period of time you wish to archive data for, and click the *Accept* button to start the archive process.

Q: Do I really need to back up my Renalog® III data?

A: Backing up your database is extremely important. A back-up disk or tape ensures that you have a clean copy of all of your Renalog® III data in the event that a power failure, computer virus, or human error wipes out your original database. Minntech recommends daily back-up of your Renalog® III data.

Q: How often should I change the floppy disks I use to back up Renalog® III data?

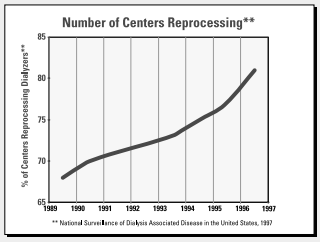
A: Switch out your backup disks once every six months to ensure the safety of your data. Consider alternating two sets of disks or tapes to back up data, so if one set becomes damaged you can retrieve your data from the other. To keep your disks or tapes in good condition, always store them in a dry, secure area.

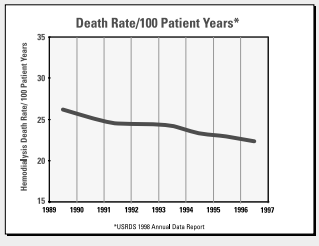
Q: I entered the wrong identification number for a new patient. Can I change it?

A: Renalog® III makes it easy to edit patient ID numbers. To edit the number:

1. Open the Renalog® III Edit Program.
2. Select **Edit Patient ID Number**. A list of patients will appear.
3. Select the patient you wish to edit the ID number for.
4. Enter the new patient ID number in the "New ID Number" field.
5. Use the down arrow to move to the "Technicians Initials" field, and enter your initials.
6. Click on the **Accept** button. The computer will display a *Please Wait* dialog box while it is processing your request.
7. The system will then give you the option to print dialyzer labels for the patient. Follow the prompts to generate the necessary labels.

Did you know? .....





Over the past decade, the percentage of U.S. dialysis centers that practice dialyzer reuse has increased dramatically, while the dialysis patient mortality rate has steadily decreased.

Back Issues of ReNews

To receive a personal copy of future issues, or any of our back issues, call Minntech Renal Systems Customer Service at:

1-800-328-3340

Issues of ReNews are also available on-line at the Minntech Renal Systems Web site at www.minntech.com. Just click on the Services menu option under Renal Systems. Volumes include:

Volume 5, Number 2, 1998
"Special Question and Answer Edition: Top Reprocessing Questions"

Volume 5, Number 1, 1997
"Dialysis in the Developing World"
"Meet Renal Systems' Technical Service Department"

Volume 4, Number 2, 1997
"How Well Do You Know Your Unit's High Purity Water System?"
"The Facts on Latex Allergies"

Volume 4, Number 1, 1996
"Mortality Data and Reuse Presented at EDTNA"
"Interview: Allan Collins, M.D., FACP"

Volume 3, Number 2, 1995
"Reuse Labeling"
"Renatron: The People Behind the Product"

Volume 3, Number 1, 1995
"The Impact of Anticoagulation Techniques on Dialyzer Reuse"
"What IS a Sterilant, Anyway?"

Minntech Renal Systems On-Line:

WWW.MINNTECH.COM is the address for Minntech on the Web. Minntech has expanded its internet presence with dynamic content about our products, services, and other company information. The site is organized by Minntech divisions, with sections for Renal Systems, Cardiosurgery, Fibercor, and Minntech International, as well as a section for Corporate & Financial Info. The Minntech site is rich with the latest news, photos, links to other sites, and even a few animations added for effect.

Just click on the "Renal Systems Division" button on the left index of the home page to access information about products, services, e-commerce, as well as contact info.

The Renal Systems site is your around-the-clock connection to:

- The latest dialysis product and service updates.
- Full-text back issues of *ReNews*.
- Reuse bibliography service.
- Calendar of upcoming reuse seminars & workshops.

For the latest updates on our Web site, click to the What's New section. New content is being continually added, so check back often.

Web Site Tips

- To easily return to the Minntech Web site frequently, add the Web site address to your list of Favorites. When you're at the Minntech home page, go to the top menu in Internet Explorer to "Favorites", then select the "Add to Favorites" option and click "OK". The process is similar in Netscape.
- Most of the current web browsers will let you use addresses in the form "www.minntech.com" without the "http://" prefix.
- While browsing through Web pages, keep an eye out for all the links to other pages or files. These may appear as text links, identified as blue underlined text, as in www.minntech.com. Links may also come from any graphic or photo on the page. As a general rule, use your mouse to scan over the content and graphics on the page, looking for links.

Renalog® III Data Analysis Workshop

Renal Systems offers practical, hands-on workshops for technicians and supervisors designed to help you maximize the efficiency of your reuse program. Our instructors will teach you how to read and interpret your facility's Renalog® III data in order to define reuse trends and troubleshoot reprocessing problems.

Workshop attendees will learn:

- How to integrate Renalog® III's report compiler reports into your reuse program.
- How to generate and interpret Renalog® III reports.
- How to use the Renalog® III report compiler to troubleshoot reuse problems.
- How to create trend analyses and calculate true reuse averages.

At the conclusion of the workshop, attendees will have the ability to analyze their facility's data to reveal information that can help increase the maximum number of dialyzer uses and point to other ways to improve both efficiency and patient care.

How to sign up
Workshops are scheduled at convenient regional locations throughout the U.S. For more information, call (800)328-3340 or e-mail lwells@minntech.com.

Positive Impact: Testimonial from Workshop Attendee

Jill Saxton, a Nurse Manager, summarized the benefit she received from attending the Milwaukee Data Analysis Workshop in March.

> *"I truly feel the Workshop was critical in assisting me to more quickly assess and improve reuse outcomes at [my facility]. The Workshop gave me an opportunity to learn about the reports and from them gain the focus to where it was needed in our facility." She also stated that the week after the Workshop she worked further on analyzing her unit's data and began implementing some changes based on the data. "I love the [Workshop binder] section on data analysis. It helps me to zone in on the correct report I want to track or isolate any issues we are having. Also it has many helpful troubleshooting lists that are good to review, especially if a drop is noted in reuse."*

She also found that poor reuse did correspond to a decrease in dialysis adequacy. After evaluating her analysis of the data by utilizing the Report Compiler, Changes were implemented that resulted in increasing reuse averages from 11 in March to 14.27 in April, then up again to 20.08 in May. As of June 21, 1999 their reuse average was 21. Treatment adequacy also showed an increase from URR averages of 67.64% in April to 71.06% in May.

Setting dialyzer reference volumes for the Renatron® II

Renal Systems recommends that the reference volume of a reprocessed dialyzer be set to 80% of the dialyzer's original priming volume. Because of variations in test methods, the actual priming volume of a new dialyzer may differ from the manufacturer's advertised volume by as much as 20%. For best results, new dialyzer volume should be measured on a calibrated Renatron® II system to determine the actual new dialyzer priming volume.

To measure the volume of:

- Low flux dialyzers with a Kuf of less than 8 - run program code OO.
- Mid-range/high-efficiency, and Hemophan type dialyzers with a Kuf of 8-15 - run program code CH.
- High-flux dialyzers and hemofilters with a Kuf of over 15 - run program code HF.

ReNews

Calendar Of Events

Event	Date	Location	Contact
Renal Systems: Renatron Service & Maintenance Seminar	September 13-14, & September 15-16, 1999	Seattle, WA	Minntech Renal Systems Amy Erickson: 800-328-3345 ext. 504
Contemporary Issues in Dialysis Conference 1999	October 8, 1999	Midway Sheraton Minneapolis, MN	Hennepin County Medical Center at 612-347-4456
NANT, Essentials of Dialysis Regional Meeting	October 21-22, 1999	Holiday Inn Airport Louisville, KY	NANT at 800-607-NANT
NKF 49th Annual Meeting	November 4-7, 1999	Hyatt Regency Miami, FL	NKF at 800-622-9010 www.kidney.org
ASN 32nd Annual Meeting & Scientific Exposition	November 5-8, 1999	Miami Beach, FL	ASN at 202-857-1190 www.asn-online.com
NANT, Essentials of Dialysis Regional Meeting	December 2-3, 1999	Regency Plaza Hotel San Diego, CA	NANT at 800-607-NANT

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