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INSIDE

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Prospective payment system for rehab enters new stage of development

Staff-time studies to begin in February

The first few months of this year should provide some long-awaited answers for rehabilitation providers about the prospective payment system (PPS) for Medicare patients scheduled to go into effect Oct. 1, 2000. In the most recent developments:

• The team chosen by the Health Care Financing Administration (HCFA) to develop the classification system for patients in rehabilitation hospitals and units will present the final version of its work plan, sampling frame, and data collection procedures for the research study this month. The team is from Aspen Systems in Rockville, MD, and Muse & Associates in Washington, DC.

• The Research and Training Institute at Hebrew Rehabilitation Center for the Aged in Roslindale, MA, is expected to submit its final report to HCFA by Feb. 1 on the Minimum Data Set-Post Acute Care (MDS-PAC), the assessment instrument to be used in the PPS. At press time, field testing on the MDS-PAC was scheduled to be completed in late 1998. **(For details on the Hebrew Rehabilitation Center for the Aged research, see *Rehab Continuum Report*, August 1998, p. 101.)**

• From February through June, the Aspen Systems / Muse &

EXECUTIVE SUMMARY

The development of a prospective payment system for rehab is progressing.

- Staff-time studies are scheduled to start in February.
- Final version of Minimum Data Set-Post Acute Care patient assessment instrument is due.
- The American Medical Rehabilitation Providers Association urges the Health Care Financing Administration to make sure case-weights accurately reflect the rehabilitation population.

Associates research team will be conducting staff-time studies at a sampling of rehabilitation hospitals and units. Using the MDS-PAC assessment instrument, the researchers will determine a patient classification system based on resource allocation. **(For details on the research process, see story on p. 3.)**

• By late 1998 or early 1999, HCFA is expected to appoint a Technical Experts Panel made up of clinicians and representatives of provider organizations and the research community.

The panel will be asked to give feedback at each step of the development of the patient classification system. Its initial meeting is to be held Jan. 11.

The American Medical Rehabilitation Providers Association has had a series of meetings with HCFA officials to give input into the development of patient classifications and case weights.

Because Medicare accounts for 70% of admissions to rehab units and hospitals, a flawed PPS could have dire consequences for patients and providers, says **Kenneth Aitchison**, president and chief executive officer of Kessler Rehab Corp. in West Orange, NJ. Aitchison is chairman of the PPS task force for the American Medical Rehabilitation Providers Association.

Balanced Budget Act requirements

The Balanced Budget Act of 1997 requires that a PPS based on case mix be phased in for inpatient rehabilitation hospitals and units beginning Oct. 1, 2000. The budget act mandates that the case mix system be fully implemented by Oct. 1, 2002. Payments are to be adjusted for hospital case mix using patient classification groups, area wages, inflation, and outlier and special payments.

Thomas Hoyer, director of the chronic care purchasing policy group at the Center for Health Plans and Providers of HCFA, has stated that his objective is to develop an integrated payment approach for payment of rehabilitation services across all settings in the post-acute continuum, including rehab hospitals, long-term care hospitals, skilled nursing facilities, and home health agencies.

Although there still are a lot of decisions to be made about the rehab PPS, providers can draw a sigh of relief now that HCFA officials have confirmed that the agency does not intend to use the same Minimum Data Set-Resource Utilization Group (MDS-RUGS) used in skilled nursing facilities as a resource allocation tool for a rehab PPS.

Providers had feared that the MDS-RUGS being used as the patient classification system in skilled nursing facilities would not accurately reflect the needs and resource consumption of rehabilitation patients.

MDS-PAC tested

"A lot of people think that because they hear that it is going to be a RUGS-like system, the plan is to adapt the PPS that is in place for skilled nursing facilities. That is not true," says **Robert E. Burke**, PhD, vice president at Washington, DC-based Muse & Associates and principal investigator for the HCFA's patient classification system project.

The MDS-PAC is designed to measure resource allocation among post-acute patients with short length of stay but who consume high amount of resources, Burke says.

The current draft of the MDS-PAC being tested by Hebrew Rehabilitation Center for the Aged contains about 300 items and incorporates the essence of the Functional Independence Measure (FIM) developed by the Uniform Data System for Medical Rehabilitation in Buffalo, NY, sources say. The draft has not been released to the public.

Meanwhile, the American Medical Rehabilitation Providers Association has urged HCFA to make sure that the case weights are as accurate as possible, says **Carolyn Zollar**, JD, general counsel for the Washington, DC-based association.

"If the case weights are not as accurate as possible, it could lead to incentives that we are afraid would deny access to care, particularly for the

COMING IN FUTURE MONTHS

- Longer therapy hours help patients maximize their gains
- How you can plan for new reimbursement systems
- How some facilities are using telemedicine techniques
- Rehabilitation services for oncology patients

SOURCES

For more information on the prospective payment system for rehab, contact:

The American Medical Rehabilitation Providers Association, 1606 20th St. NW, Third Floor, Washington, DC 20009. Telephone (888) 346-4624. Fax: (202) 833-9168. Recorded news line: (888) 802-5712. Fax-on-Demand line: (888) 632-8023. E-mail: Czollar@13x.com. World Wide Web: http://amrpa.firminc.com.

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highly acute disabled Medicare beneficiary," Zollar says.

Concerns from rehab association

Members of the American Medical Rehabilitation Providers Association are concerned that current plans call for developing classifications based on a small sample of patients, and that the staff-time studies will not measure the cost of non-therapy ancillary services such as drugs and medical supplies, Aitchison says.

He estimates that non-therapy ancillaries account for about 43% of all ancillary costs.

"There are great variations in cost of ancillary services among rehab patients. For example, a stroke patient with complications will require more medications than a post-op hip case without complications," Aitchison adds.

The task force has proposed that HCFA incorporate the research done by the Santa Monica, CA-based Rand Corp. in earlier work on a PPS for rehabilitation using the Functional Independence Measure-Function Related Groups (FIM-FRGs.) HCFA officials decided not to base its reimbursement system on the FIM-FRGs because skilled nursing homes use a RUGS-based reimbursement system, and the goal is to have a single assessment system across venues.

In a letter to Hoyer, Aitchison urged HCFA to combine the staff-time work by the Aspen / Muse team on a limited number of patients with the Rand research and data on about 180,000 Medicare patients from 533 rehabilitation hospitals and units delivered to HCFA by the Uniform Data System for Medical Rehabilitation.

"We believe this approach would produce an accurate system of case classification, weights, and payments that would serve the interest of patients, providers, and the Medicare Trust Fund. Because of the limited number of cases to be assessed, the RUG-III approach is very unlikely to do so," Aitchison says. ■

Research will decide resources for rehab

Sampling of hospitals and units will participate

The staff-time studies on the prospective payment system for rehabilitation involve a classic resource allocation model to study what resources are being used by patients in rehabilitation hospitals and units, says **Robert E. Burke**, PhD, vice president at Washington, DC-based Muse & Associates and principal investigator for the Health Care Financing Administration's (HCFA's) patient classification system project.

A Technical Experts Panel is scheduled to meet this month to give input on the work plan, sampling frame, and data collection procedures for the research study by an Aspen Systems / Muse & Associates team, which has the contract from HCFA to develop the patient classification system. Aspen Systems is located in Rockville, MD. Muse & Associates is in Washington, DC.

After the research methodology is in place, the researchers will go on location to a selected number of rehab hospitals and units to do the staff-time measurement studies. The studies will be done at facilities for one week at a time.

"There are approximately 200 rehab hospitals and 800 rehab units within the hospital. We want

EXECUTIVE SUMMARY

Subject: How staff-time studies for establishing the rehab prospective payment system will be conducted.

Essential Points:

- A sampling of hospitals and rehab units will participate.
- Data will be collected on patient characteristics and resource use.
- A patient classification system will be developed.

to make sure our sample reflects what is out there," Burke says.

Facilities will be selected because they meet the sampling frame, Burke says. The team plans to select a representative sampling of providers including facilities of all sizes and those that take patients at all levels of acuity.

During the staff-time measurement studies, the researchers will collect data on patient characteristics and patient-specific resources. They will analyze the data, using the Resource Utilization Groups (RUGS) methodology to determine which patient characteristics are the best indicators of facility resource use. The RUGS system uses patient characteristics such as functional status, need for medical services, cognitive deficits, and behavioral problems to predict resource use.

Hand-held computers

Each clinician at the study sites will use a hand-held personal computer to record the time they spend treating patients.

Using these data, the researchers will determine how much staff time was spent on each patient. For instance, one patient might have received 45 minutes of occupational therapy, an hour of nursing, and 22 minutes of speech.

The researchers will use the Minimum Data Set-Post Acute Care (MDS-PAC) tool, scheduled to be finished on Feb. 1, to assess each patient. These data will be used to come up with a classification system to accurately reflect the level of acuity, or needs of the resident.

"We expect to be able to look at the results of the MDS-PAC and determine a classification model for patients," Burke says.

The researchers will look at how much staff time it takes to treat the various patient classifications to determine the amount of resources used by each classification.

The Aspen / Muse researchers anticipate collecting data in the field, starting in February and ending in June 1999. The goal for completing their analysis is April 2000. ■

Y2K problems possible with biomedical equipment

10% of rehab technology may be affected

(Editor's note: This month's issue includes the second part of a two-part series on preparing your rehab program for Year 2000 [Y2K] compliance. In the last issue, we told you how to ensure that your computer systems are up to date. In this issue, you'll learn how to check your biomedical equipment and what contingency plans you need to make to be ready for Y2K.)

If you are a typical rehab provider, you can expect that about 10% of your biomedical equipment may be subject to potential failure when Jan. 1, 2000, rolls around, some Y2K experts say.

About 10% of the biomedical equipment used in rehabilitation facilities will be subject to Y2K problems, compared to about 30% of equipment in acute care hospitals, says **Evelyn Wright**, CBET, RN, district service manager for ISS in Plymouth Meeting, PA. ISS performs preventive maintenance and repair for hospital-based equipment and computers. **(For types of equipment that may be affected, see story, p. 5.)**

If your patients are on ventilators, heart monitors, infusion pumps, or critical care equipment, you must be particularly careful to ensure that patient lives won't be endangered by malfunctioning equipment, Wright says.

Gayle Finch, director of the office of information technology analysis and investment for the Department of Health and Human Services, says, "Most biomedical equipment tends not to have a Y2K compliance problem, but for machines that do, it can be a big problem."

For instance, your hospital may occasionally experience the failure of an infusion pump or a ventilator, but if all of them go out at once, there can be catastrophic results. **(For more on Y2K**

EXECUTIVE SUMMARY

Subject: Checking biomedical equipment for year 2000 problems

Essential Points:

- 10% of equipment used by rehab providers is subject to the "millennium bug."
- Ventilators, infusion pumps, and monitoring equipment are most likely to be affected
- Contact vendors to find out if your equipment is in compliance.
- Budget funds to replace equipment that can't be fixed.

contingency plan, see story, p. 11.)

The Food and Drug Administration (FDA) has mailed letters to about 13,000 manufacturers of medical devices asking them to send in information assuring that their products are year 2000 compliant, or if they're not, explaining what they're going to do to fix them. A database of manufacturers' replies to the FDA directive is available on the internet at the FDA Web site, www.fda.gov/cdrh/yr2000/y2Kintro.html.

"Only a small percentage of the equipment they manufacturer has an electronic component, and only a subset of that will have any problems," Finch says.

Federal experts on Y2K recommend that providers get in touch with the manufacturers of the equipment they use and obtain letters of assurance that the equipment will not malfunction in the year 2000.

"With biomedical equipment, we think the onus is on the manufacturer to be responsible for compliance since they are responsible for functionality," says **Jaren Doherty**, program manager at the National Institutes of Health.

For instance, the technology staff at National Rehabilitation Hospital in Washington, DC, is working with its clinical instrumentation contractor to compile a list of all equipment that may have problems, says **Michael Rosen**, PhD, director of rehabilitation engineering services. This list includes all biomedical equipment that has built in microprocessors, microcomputers, or micro controllers that may have a problem with a date-sensitive embedded chip. The hospital has sent certified letters to manufacturers asking them for assurances that their equipment is Y2K-compliant and, if not, asking for any remedies that are available. **(For tips on how to make certain your equipment is compliant, see story, p. 6.)**

As the letters are received, the technology staff check that piece of equipment off the list.

A Y2K committee comprising people from throughout Shepherd Center in Atlanta started in late 1997 to check every possible piece of equipment and system in the specialty rehabilitation hospital for compliance, says **Gary Ulicny**, PhD, chief executive officer.

The committee represents a cross-section of staff that includes clinicians, computer experts, financial managers, and representatives from the heating plant and maintenance department.

The committee compiled a list of every potential piece of equipment that could be affected, from elevators and computer-controlled lighting systems to ventilators and the equipment that monitors the heat in the therapy pools.

Shepherd has contacted every vendor for every piece of equipment and asked for letters of compliance. The committee expects to have completed its

The Y2K bug could affect these items

Here is a list of some of the kinds of equipment typically used by rehab providers that may use embedded microprocessors with date-sensitive logic:

- **Ventilators.** Many of these are run by microprocessors. If you have ventilator-dependent patients, you must make sure this equipment is thoroughly checked.
- **Critical care equipment.** Some rehab hospitals are taking patients who have not been weaned from critical care equipment. These systems, including monitoring equipment at nurses' stations, are subject to Year 2000 failure.
- **Infusion pumps and intravenous drips.** Some models that require regular maintenance to keep working may shut off in the year 2000, even if they have just been serviced. Others may deliver inaccurate medication doses.
- **Heart monitors.** If your facility has an inpatient cardiac rehab unit and patients are on monitors, check out that equipment.
- **Diagnostic equipment** such as X-ray and diagnostic imaging equipment.
- **Dialysis equipment.**
- **Laboratory equipment.**
- **Monitoring equipment** such as telemetry and electrocardiograph monitors.
- **Evaluation equipment** that uses software or interfaces with a computer.

Other hospital systems, not directly involved with patient care, but that are critical to your operations include:

- pharmacy dispensing equipment;
- elevators;
- heating and cooling systems;
- health club equipment;
- communication systems such as telephones and pagers;
- fire alarm systems;
- time-controlled lighting systems;
- electronic door locks;
- uninterruptable power sources.

Sources: The President's Council on Year 2000 Conversion, Washington, DC; The Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL; Rx2000 Solutions Institute, Minneapolis.

work by June 1999, Ulicny says.

Many manufacturers are offering a patch for their noncompliant products, and sometimes it's free, Finch says. She advises providers to check their contracts with vendors to see what the manufacturers are required to perform in terms of preventive maintenance and general system maintenance. In some cases, Y2K compliance may be included.

Replacing equipment

Some of the smaller companies may go out of business rather than spend the money it will take to make their equipment compliant, or they may declare that the equipment is obsolete and refuse to fix it, Wright warns. In that case, providers have no choice but to purchase replacement equipment.

If your equipment is 10 years old, you can assume that the embedded chip won't be Y2K compliant, Doherty adds.

A good rule of thumb is that if 10% of your equipment inventory is subject to Y2K problems, plan on spending 10% of your capital budget for the next two or three years on upgrading or replacing that equipment, Wright suggests. ■

SOURCES

For more information on the Y2K problem contact:

Jaren Doherty, Y2K Program Manager at the National Institutes of Health, Center for Information Technology, Office of Information Resources Management, 6100 E/2B-03, 6100 Executive Blvd., MSC7505, Bethesda, MD 20892-7505. E-mail: jarendoherty@nih.gov. World Wide Web: http://www.oirm.nih.gov/y2000/.

Standards Division, **Joint Commission on Accreditation of Healthcare Organizations**, 1 Renaissance Blvd., Oakbrook Terrace, IL 60181. Telephone: (630) 792-5900. Fax (630) 792-5942. E-mail: smcbeth@jcaho.org. World Wide Web: http://www.jcaho.org.

The Presidents Council on Year 2000 Conversion, Room 115, Old Executive Office Building, Washington, DC 20502. Fax: (202) 456-7172. World Wide Web: http://www.y2k.gov.

Food and Drug Administration, Attn: Y2K Medical Devices Coordinator, Center for Devices and Radiological Health, Mail Code HFZ Y2K, 9200 Corporate Blvd., Rockville, MD 20850. World Wide Web: http://www.fda.gov/cdrh/yr2000/y2Kintro.html.

ISS, 525 Plymouth Road, Suite 305, Plymouth Meeting, PA 19462. Telephone: (610) 825-7900.

Steps for making equipment Y2K-compliant

To prepare for potential problems with your equipment being year 2000-compliant, consider the following advice:

• Check your serial numbers against the Food and Drug Administration database (www.fda.gov/cdrh/yr2000/ y2Kintro.html) to find out if your equipment is compliant or needs a maintenance upgrade between now and the year 2000, suggests **Jaren Doherty**, Y2K program manager at the National Institutes of Health.

• Check your equipment by serial number and not model number. Equipment manufacturers buy microchips from a variety of sources. That means that identical equipment could have different microchips.

• If your equipment isn't date-sensitive, check it anyway. Some manufacturers use recycled chips, which means your equipment could have a dormant date chip that may malfunction anyway.

• Be prepared to replace some of your equipment if the manufacturer declares it's obsolete and will no longer support it.

• Remember that the closer it gets to December, the more difficult it is going to be to get new equipment because manufacturers are going to be backlogged with orders.

• Don't test your biomedical equipment on your own before checking with your legal department to make sure that you are not taking on the manufacturer's liability in case a piece of equipment fails, warns **Gayle Finch**, director of the office of information technology analysis and investment for the Department of Health and Human Services.

"Typically, manufacturers' testing protocols are considered to be proprietary information. Most of them are still covered by a nondisclosure agreement, and even if you want to test, you may not be able to," Finch says.

• Make sure that any new equipment your purchase includes a written guarantee that it is year 2000-compliant, Finch adds. ■

Develop contingency plan for potential Y2K problems

The contingency planning you do today will make life at your rehab facility a lot less hectic when 12:01 a.m., Jan. 1, 2000, rolls around.

"A contingency plan is a key issue because there are a lot of potential points of failure that should be addressed," says **Joel Ackerman**, chief executive officer of RX2000 Solutions Institute, a nonprofit clearinghouse in Minneapolis on the millennium bug for health care providers. **(For contact information, see source box, p. 12.)**

All the hospitals in your community should join together to come up with a contingency plan in the event that a system fails in one hospital, suggests **Leon A. Kappelman**, PhD, co-chair of the Society for Information Management Year 2000 Working Group. Kappelman also is associate professor of business computer information systems and associate director of the Center for Quality and Productivity at the College of Business Administration, University of North Texas in Denton.

He advocates developing a contingency plan among all health care providers in a community because, he says, there are bound to be glitches in the system, no matter how much checking everyone does.

"Nobody is going to have the time to fix everything. We should dispense with that fantasy and focus on where we can do the most good in terms of taking care of the community," says Kappelman.

While you won't have time to fix everything, you should check to make sure your computers, biomedical equipment, building systems, and other technology are year 2000 (Y2K) compliant. Providers must also anticipate what could go wrong with all their outside vendors, Ackerman and other experts say.

"Contingency planning is important even if you think you are going to be ready," says **Jack Gribben**, chair of the President's Council on Year 2000 Conversion in Washington, DC.

Make a list of all the outside organizations on which you depend, and identify what you can do in the event of a failure in one of their systems, Gribben advises. These organizations include suppliers, utilities, communications equipment, payers, and contractors. **(For other steps in your contingency plan, see story on p. 12.)**

"Until now we were talking about how to prepare. There is a growing realization that we haven't planned enough or prepared enough and we need to start talking about the recovery period," Ackerman says.

Think through what would happen if your facility can't obtain certain supplies, he advises.

"If a food service or linen service or medical supply distributor has a Y2K problem, providers should think about how that will impact their level of operation," Ackerman says.

For example, think through what you will do if certain kinds of medication can't be delivered because of a disruption in transportation or the manufacturing process. **(For an example of how to think through a problem, see p. 12.)**

Many rehab providers keep only limited supplies of equipment on hand and have a "just-in-time" arrangement with vendors. If a critical vendor's manufacturing, inventory control, or delivery system has a glitch, your hospital could find itself without vital supplies, such as splinting materials, assistive technology, or electrodes.

Power outages, communication failures

Some worst-case scenarios being discussed suggest that the Y2K bug could cause power outages, communications failures, and other glitches in utility systems. In that case, you'd better have a disaster management plan in hand.

The Joint Commission on the Accreditation of Health Care Organizations and CARF . . . The Rehabilitation Accreditation Commission already require that accredited organizations have a disaster contingency plan in effect.

"Providers need to understand the full scope of the problems and should include Y2K problems,

EXECUTIVE SUMMARY

Subject: A contingency plan for Jan. 1, 2000.
Essential Points:
- Identify all the systems that can fail.
- List all the outside vendors and contractors on which you depend.
- Plan what you will do in the event each one fails.
- Revise your facility's disaster plan.
- Arrange to check all your equipment on Day 1.

Make backup copies, then check and recheck

More suggestions for the millennium

You can't be too prepared for problems that may occur when Y2K rolls around, experts say.

Here are their suggestions of items to add to your contingency plan:

- Prepare now for a rash of telephone calls from potential patients and their families, and former patients who are concerned about what will happen in the year 2000.
- Make paper copies ahead of time of the files of your patients, particularly critical care patients who are anticipated to be in the hospital on Dec. 31, in case you can't retrieve the electronic files.
- If you use a mainframe computer for anything in your hospital, make extra copies of those files in PC-readable form in case something happens to the mainframe computer.
- On Jan. 1, 2000, be prepared to check all of your equipment to make sure it is operating correctly, advises **Gayle Finch**, director of the office of information technology analysis and investment for the Department of Health and Human Services.

The National Rehabilitation Hospital in Washington, DC, has already put its internal engineering staff and contractors on notice that on Jan. 1, 2000, they will be doing checks to make sure that all of the equipment is operating.

"We need to determine if the assurances we have received from manufacturers or the fixes the manufacturers have made are all valid," says **Michael Rosen**, PhD, director of rehabilitation engineering services. ■

such as utility failures, in their overall operations disaster planning," says **Susie McBeth**, associate director of the department of standards for the Joint Commission.

While they won't be surveying for compliance, Joint Commission surveyors will be asking organizations applying for accreditation what they are doing and if they have tested their contingency plan, McBeth says. ■

SOURCES

For more information on contingency plans for potential year 2000 (Y2K) compliance problems, contact:

Rx2000 Solutions Institute, 4620 W. 77th St., Suite 245, Minneapolis, MN 55435. Telephone: (612) 835 4478. Fax: (612) 830 0931. E-mail: info@rx2000.org. Web site: http://www.rx2000.org. Rx2000 Solutions Institute is a nonprofit organization that acts as an information clearinghouse on issues relating to Y2K compliance in the health care industry. The organization offers a variety of services, primarily through its Web site. The Rx2000 Web page includes checklists for Y2K compliance, how-to advice, and links to other Y2K internet sites.

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Pay attention to details in your contingency plan

Any kind of year 2000 (Y2K) glitch in the system, even if it involves small items, can have significant ramifications for your facility, asserts **Joel Ackerman**, chief executive officer of RX2000 Solutions Institute, a nonprofit clearinghouse on the millennium bug for health care providers. **(For information on how to contact RX2000, see source box at left.)**

Start now to look at every potential place for failure of a system and plan how you will handle it, he adds.

Ackerman cites a simple case in point as an example of how providers should outline their contingency plan: What would happen if your supplier of disposable bedpans can't deliver?

The simple answer is to go back to using reusable, metal bedpans. If that happens, here are some things you need to think through:

- Do you have reusable bedpans in inventory?
- What infection control measures have to be used with reusable bedpans?
- What equipment and supplies will you need to sanitize the bedpans?
- What effect will it have on the labor force? ■

Joint replacement rehab stays on track with path

Plan popular with physicians, therapists, patients

A flexible critical pathway for joint replacement patients has paid dividends for the rehab unit at DuBois (PA) Regional Medical Center.

The combination knee and hip replacement pathway, designed for patients without medical complications who have single joints replaced, combines all the common aspects for total hip replacement and total knee replacement patients. It also has a check-off portion for specific treatments for each diagnosis and the preferences of the orthopedic surgeon. **(See copy of pathway enclosed in this issue.)**

The document has fit so well with the needs of the patients that there have been no changes since the rehab unit started using it in January 1997. **(For details on how the pathway was developed, see article on p. 14.)**

'Clear-cut and organized'

"Now that we've been using the pathway, we have found that it is excellent for all parties involved," says **Martin Schaeffer**, MD, medical director for the department of physical medicine and rehabilitation. "Everyone knows what they are supposed to be doing. It is very clear-cut and organized, and the patient is getting better care."

Schaeffer spearheaded development of the critical pathway.

EXECUTIVE SUMMARY

Subject: Critical pathway for hip, knee replacement patients
Provider: DuBois (PA) Regional Medical Center
Essential points:
- Pathway combines treatment for hip and knee replacement patients.
- Check-off section has space for orthopedic surgeons' preferences.
- Design allows flexibility in lengths of stay.
- Pathway is popular with patients, staff, and surgeons.

Orthopedic surgeons like the pathway because it tells them exactly what will happen to their patients on rehab and how long it will take, he says. Patients are happy because they know what to expect, and it allays fears that they will be incapacitated for a month, Schaeffer says.

The referring physicians find it useful because they can plan patient discharges. The pathway makes also it easier for the rehab hospital to plan admissions and discharges because it sets out the length of stay for these patients. The young therapy staff are also happy with the pathway because it sets out exactly what the patients are supposed to do and when, Schaeffer says.

There hadn't been a rehab unit in the area, so rehab as a specialty was very unfamiliar. Some of the therapists had experience in outpatient treatment but no inpatient experience, Schaeffer says.

"Because we are a relatively young rehab unit, we have a very young therapy staff. We found that some therapists actually were looking for specific expectations of therapy. The pathway tells them what is expected on each day, and they like that," Schaeffer says.

For example, seasoned therapists know from experience how much joint replacement patients should be able to walk, but the therapists who were just out of school had some uncertainties, Schaeffer says.

"When it was open-ended, these therapists would work with the patients, but they didn't know what goals to set for each day. The pathway eliminated that problem," Schaeffer says.

Combined diagnoses

Instead of creating a separate pathway for hip replacement patients and knee replacement patients, Schaeffer combined the two.

"Because our unit was so young and new, I didn't want to introduce two critical pathways at once, so I combined them into a hip and knee replacement pathway," he says.

Much of the treatment is the same for knee replacement and hip replacement patients, Schaeffer says. The physical therapy and occupational therapy treatments overlap to a great extent. Patients receive the same medication, the same education, and the same kind of discharge planning, he adds.

"There is so much overlap that it's possible to combine the pathways and simplify things," Schaeffer says.

SOURCES

For more information on DuBois Regional Medical Centers critical pathway for joint replacement patients, contact:

Martin A. Schaeffer, MD, Medical Director, Department of Physical Medicine and Rehabilitation, DuBois Regional Medical Center, Suite 300, 145 Hospital Ave., DuBois, PA 15801. Telephone: (814) 375-4660. Fax: (814)375-5206.

Any differences in treatment procedures are noted on the pathway. For instance, because hip replacement patients generally don't require treatment on a continuous passive motion (CPM) machine, the physiatrist would simply write "no" in the CPM box. He or she can check off "total knee precautions" or "total hip precautions."

The check-off portion of the pathway includes standard admitting orders with areas for dietary considerations, laboratory orders, wound care orders, and other areas in which the physiatrists or referring orthopedic surgeons have individual preferences.

Two-day segments

Instead of developing a pathway that lists activities and goals day by day, Schaeffer decided to create a range that could accommodate variations in patients' activeness and motivation.

The eight-day pathway is broken into four segments: Day 1-2; Day 3-4; Day 5-6; and Day 7-8. This allows more motivated and functional patients to progress faster and be discharged earlier.

Because of the flexibility in days, the staff is able to accelerate a patient's progress on the pathway. For example, if the therapy evaluations show that a patient is on a high functional level, the staff has the option of combining the activities on Day 1-2 with the activities on Day 3-4.

Because of the option for an accelerated pathway, some patients have been discharged as early as Day 4-5 if they have met all the goals for Day 8, Schaeffer says.

Most of the patients are discharged by Day 7, although the pathway goes through Day 8. Patients who stay a day longer are likely to have been admitted on a Friday. DuBois offers limited therapy on weekends. ■

Critical pathway is a combination of ideas

Other providers, surgeons, therapists had input

The joint replacement critical pathway being used by the rehab unit at DuBois (PA) Regional Medical Center is a combination of pathways from other providers, preferences of referring orthopedic surgeons, and input from the staff.

The effort was spearheaded by **Martin Schaeffer**, MD, medical director for the department of physical medicine and rehabilitation. Before he started development of a critical pathway for hip and knee replacement patients, Schaeffer collected as many orthopedic pathways as he could from other hospitals. He also used materials provided by HealthSouth Corp. Managed Services, a division of HealthSouth Corp., based in Birmingham, AL, which manages acute inpatient rehabilitation units. "I took the best from each one and was able to draw up a pathway that incorporates the individuality of our orthopedic surgeons," he says.

Most of the pathways Schaeffer studied were longer than the one he came up with, and most providers had separate pathways for hip replacement and knee replacement patients.

Schaeffer started his work creating the pathway by meeting separately with each orthopedic surgeon and finding out their preferences for treating their patients in the rehab unit. Among the questions he asked were:

- what settings they preferred for the continuous passive motion device following knee surgery;
- what their deep venus thrombosis precautions

EXECUTIVE SUMMARY

Subject: Developing a joint replacement pathway
Provider: DuBois (PA) Regional Medical Center
Essential points:

- The best practices from other critical pathways were chosen.
- The pathway is tailored to preferences of orthopedic surgeons.
- Therapy staff members were consulted for input.

were for hip surgery patients;

- what kind of dressing their patients needed;
- when they could take showers;
- whether they wanted their patients to use compression stockings.

Schaeffer took the areas in which there was common ground and put them into the pathway for all knee or hip replacement patients. Other areas of the pathway are check-off boxes where individual physiatrists can indicate the protocols they want used with their patients.

An advisory team of staff from the rehab unit was set up to assist in drafting the pathway. Representatives of all disciplines reviewed the document and suggested changes. Instead of starting with a critical pathway in the early months of the rehab unit's existence, Schaeffer waited until the staff became more familiar with the inpatient rehab process.

"Since inpatient rehab was unknown to many on the staff, and nursing and therapists had never worked together, we had to educate the staff first," he says.

Schaeffer began discussion with the staff during the second year the rehab unit was open and developed the pathway over several months. ■

Patients bypass admitting, go directly to rooms

Start evaluation within 20 minutes

When new patients arrive at Kernan Hospital in Baltimore, they go directly to their rooms and are seen by a staff member who starts the evaluation process within 20 minutes of arrival.

EXECUTIVE SUMMARY

Subject: Admissions office eliminated
Provider: Kernan Hospital, Baltimore
Essential points:

- Patients go directly to their rooms.
- Evaluations are started immediately.
- Referring hospital shares discharge information.
- Post-acute network facilitates care among venues.

The decision to eliminate the admission office was made when the 129-bed rehab facility was created three years ago following the merger of Kernan Hospital and Montebello Hospital in Baltimore, both part of the University of Maryland Medical System.

"We took into consideration what the customers want. We had focus groups of former patients and current patients who gave us input. We looked at it not only from a clinical perspective but from a patient and family perspective," says **Linda Hutchinson-Troyer**, MGA, patient therapy manager of the brain injury unit.

Here's how the admissions process works: Referral sources call a central referral number at the post-acute care network office if they would like to admit a patient to Kernan Hospital. The referral staff take basic demographic, medical, and insurance information during the initial call.

A nurse liaison from the post-acute care network visits the patients at the community hospital or University Hospital and obtains additional medical

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information that is faxed to the doctors on the unit where the patient will go for rehabilitation. The physicians at Kernan review the information, ask questions, and approve the admission based on the information they receive.

Discharge summary forwarded

At that point, the nurse liaison and the case manager from the referring facility work on a transition date into rehab.

The referring facility is asked to send the discharge summary to Kernan with the new patients.

On the day the patient is due to arrive, his or her first name and last initial is posted on an arrivals board on the unit, along with the time the patient is scheduled to leave the discharging hospital.

The senior therapists can look at anticipated arrivals and decide if additional staff members need to be assigned to the unit.

Hospital security meets the patient at the ambulance entrance to the hospital and accompanies the patient to the floor where he or she is met by the unit's administrative associate. She directs the patient to the room and alerts the treatment team that the patient has arrived.

The patient's evaluation begins within 20 minutes after he or she arrives in the room. If the patient arrives without a discharge summary, the unit administrative assistant calls the referring hospital and asked for it to be faxed. There is a fax machine on every unit at Kernan, to facilitate an easy flow of information.

The Kernan staff use the discharge summary for the discharging hospital as a way to reduce redundancy. For example, if a particular test was performed at the discharging facility, the therapist looks at the results and decides whether to evaluate further, rather than just routinely repeating the test.

"It's cost-effective, but it also is expeditious and efficient for the patient," Hutchinson-Troyer points out.

Having the discharge summary helps all the staff determine the patient's functional level without waiting for the evaluations. In the past, the staff wouldn't let patients walk until the physical therapist had evaluated them to find out their level of ambulation. Patients would complain that they could walk to the bathroom at the other hospital.

At Kernan Hospital, planning starts before the patient enters the door.

The Kernan staff has set up a post-acute network that facilitates easy movement from one level of care to the next.

The hospital developed a form that the nurse liaisons use when they send information on patients who are to be admitted. Information includes whether the patients need a specialty bed or specialty wheelchair so the staff can have it ready when they arrive. Special medications and special care, such as suctioning, are noted.

"As part of our work redesign, we determined what we need to know about patients before they even hit our door so we can be prepared," Hutchinson-Troyer says.

At the initial team conference, the team identifies whether the patient will need care in another venue, such as an outpatient clinic or day treatment program. The case manager works within the network to start the pre-authorization so the patient will be able to move to the next step without any difficulties. ■

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