

# HOSPITAL CASE MANAGEMENT™

the monthly update on hospital-based care planning and critical paths

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Part I of a three-part series

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## Managing the Diabetic Patient

### Part I: How Hospital CMs Impact Care

## Detect early, refer early: Good maxims for good diabetes case management

*Hospital case managers are key to effective continuum care*

**M**ost successful diabetes programs rely on hospital case managers to coordinate comprehensive care for patients, especially for those who have severe disease or who are at high risk for complications. In some programs, a care coordinator performs risk assessments and enrolls patients in education programs. She works closely with patients in making necessary lifestyle changes and furnishes essential links with providers. In other programs, case managers make initial assessments, determine education and counseling, and give patients reminders for screenings.

What all diabetes programs seem to have in common are effective diabetes registries and suitable education programs, and what these both rely on is input and referral from hospital case managers.

**Cathy Reardon**, certified diabetes educator (CDE) at Winchester (MA) Hospital, depends upon her hospital's case managers for many things, but near the top of the list is identification of diabetes patients who may be slipping through the system unrecognized. (**See article on Winchester's Casefinder program, p. 204.**) Even if the glucose test administered upon admission shows normal readings, she says, it could merely mean a diabetic's glucose is under control. Or an error may be made on a chart.

"It's up to case managers as well as nursing staff to notice signs," she says. "Some symptoms of high sugar are excessive thirst, frequent urination, weight loss, and blurred vision. A signal can be as routine as when a patient complains to her case manager, 'I can never get the nurses to keep my water pitcher filled.'"

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### Diabetes must be treated aggressively, ADA says

Ever since the American Diabetes Control and Complications Trial and the United Kingdom Prospective Diabetes Study demonstrated that lowering blood glucose in patients with both Types 1 and 2 diabetes slows or prevents development of diabetic complications, the American Diabetes Association (ADA) in Alexandria, VA, has stressed vigorous treatment of diabetes.

The association's latest clinical practice recommendations for diabetes management were published this year. A summary of "Standards of Medical Care for Patients With Diabetes Mellitus" can be found on the Internet at [www.diabetes.org/DiabetesCare/Supplement199/S2.htm](http://www.diabetes.org/DiabetesCare/Supplement199/S2.htm). The entire document is at [www.diabetes.org/DiabetesCare/Supplement199/S32.htm](http://www.diabetes.org/DiabetesCare/Supplement199/S32.htm). In addition, the American Heart

Association (AHA) in Dallas recently published a "Statement for Healthcare Professionals" on diabetes and cardiovascular disease as well as an additional statement from the AHA, the ADA, the National Heart, Lung, and Blood Institute, the Juvenile Diabetes Foundation International, and the National Institute of Diabetes and Digestive and Kidney Diseases.<sup>1,2</sup>

#### References

1. Grundy SM, Benjamin IJ, Burke GL, et al. Diabetes and cardiovascular disease: A statement for healthcare professionals from the American Heart Association. *Circulation* 1999; 100:1,134-1,146. Internet: [circ.ahajournals.org/cgi/content/full/100/10/1134](http://circ.ahajournals.org/cgi/content/full/100/10/1134).
2. Diabetes mellitus: A major risk factor for cardiovascular disease. A joint editorial statement by the American Diabetes Association; the National Heart, Lung, and Blood Institute; the Juvenile Diabetes Foundation International; the National Institute of Diabetes and Digestive and Kidney Diseases; and the American Heart Association. *Circulation* 1999; 100:1,132-1,133. ■

**Maria Barnwell**, president of E2M Health Services in Dallas, agrees: "Clinicians aren't always automatically aware of a diabetic's condition once he's admitted. The admissions panel will catch an acute situation, but that's just a snapshot. In the same way that an EKG won't catch heart disease, the initial chemistry panel won't catch diabetes." And, she says, only about 1% of diabetics' inpatient admissions list diabetes as a principal diagnosis.

Barnwell says the case manager is a problem-solver. "When we go into a health system, we evaluate a hospital's process of diabetes care. When we see room for improvement, we re-engineer their system. To do that, one of the first things we do is look at what they are doing in case management."

Reardon also works with Winchester's case managers when the time for discharge draws near and patients need diabetes education. "Teaching inpatients is not usually productive," she says, "because they have too much else going on." Case managers have to make sure diabetic patients are connected at discharge with appropriate resources, says **Susan Burke**, RN, BSN, diabetes program manager for Blue Cross Blue Shield of the Rochester (NY) area. "Getting them connected with home care at discharge is

important. Even if a patient doesn't meet home-bound criteria, there are times when it's still a good investment to plug in home care services so a nurse can evaluate what's going on that impacted that admission — the patient's eating habits, for example, or his process of medication." She strongly recommends that the newly diagnosed patient receive home care follow-up as soon as possible after the disease has been identified. "Those newly diagnosed patients are overwhelmed with information," Burke says.

Burke says case managers can also ensure that in-house staff are educated on appropriate coverage for their surgical patients on insulin. "It would be rare for any admission not to be somehow impacted by a patient's diabetes," says Burke. "Whatever brought the patient in — uncontrolled hypertension, problems with heart disease, chest pain, chronic ulcers — those conditions are closely tied to their diabetes management and poor glucose control. Even for the patient who is admitted for a condition unrelated to diabetes — trauma as a result of a car accident, for example — if the diabetes isn't appropriately managed, healing is slowed due to erratic sugar levels."

She says when someone comes in for an ambulatory surgical procedure, for example, if house staff haven't communicated with the patient's doctor about diabetes management, they may write orders that take the patient off normal meds. If they put him on sliding scale insulin, they may not think to provide coverage for when he eats. "That scenario is particularly common for Type 1 patients," says Burke. "Then when, for example, the patient comes up with a blood sugar of 400 mg/dl, staff will say it's uncontrolled diabetes, and they end up chasing their tails."

Reardon adds that inpatients' glucose levels are generally 70 to 80 points higher than if they were at home — about 220 to 230 mg/dl as opposed to <140 to 160 mg/dl at home. The reason: Inpatients are in what she calls a sterile environment — they are fed the same amounts every day at the same time — which is quite different from how they eat at home. "Some eat very little while they're in the hospital because the food is so different from what they're used to, and their activity level is almost zero."

Even if someone is admitted with a stroke — probably related to diabetes, because they go hand in hand — Burke says it's surprising, but house staff often don't make the connection. And sometimes a patient who's had a stroke and is hemiplegic as a result is discharged without instructions on how to compensate for his new disability in order to administer his insulin. "There are lots of places where plugging in a diabetes staff educator makes sense," she says.

The most important function the case manager has, according to **James Rosenzweig**, MD, director of disease management at the Joslin Diabetes Center/Joslin Clinic in Boston, is to coordinate diabetes education to ensure the patient is able to self-manage following discharge.

"We find that having a Joslin case manager double as a diabetes educator is a helpful tool," Rosenzweig says. "For example, if a patient has out-of-control diabetes because her blood glucose meter is malfunctioning or because she has not been taught how to adjust insulin doses appropriately, or if a patient has a new insulin dosage as a result of being in the hospital, she has to be educated anew so she knows exactly what she is supposed to be doing. The case manager should make sure that patient gets her education and has her insulin supply, and should see if a visiting

nurse should come in to check glucose levels and adjust insulin doses." He points out that elderly diabetics especially need support services at home immediately after discharge, and it is the case managers at Joslin who coordinate that.

Rosenzweig gives as an example an elderly patient with poorly controlled diabetes. The patient may be confused or demented and stops taking her insulin. She develops high blood glucose and is admitted to the emergency department in a coma. She is put on IV insulin. Theoretically, that patient can be brought under control quickly, but if the patient can't manage by herself because her cognitive skills are weak, she needs support. She may be able to self-administer her insulin, but she may not be able to handle testing and recording her blood sugar levels. Someone has to assess how well she does on her own and what kind of support she needs and is getting, such as coordinating visits to the eye doctor after discharge. That someone is the case manager, says Rosenzweig. "She can be involved in all those things."

Another example is a patient with poorly controlled diabetes who comes into the hospital with a foot infection due to nerve damage and

### Residents' Type 2 care falls short, survey finds

Researchers recently surveyed internal medicine residents at a large urban outpatient clinic on their care of patients with Type 2 diabetes. They discovered that residents did not follow guidelines in five areas<sup>1</sup>:

Referral for dilated eye exams	60%
Measurement of lipids	50%
Screen of urine for proteinuria	65%
Performance of foot exams	52%
Inquiries about glucose self-monitoring	80%

Ideally, the responses should have been 100% in each area. A chart review revealed that 61% of patients had two or fewer HbA<sub>1c</sub> measurements over the previous year.

#### Reference

1. Bernard AM, Anderson L, Cook CB, et al. What do internal medicine residents need to enhance their diabetes care? *Diabetes Care* 1999; 22:661-666. ■

peripheral vascular disease. He sees a vascular surgeon who does bypass surgery to restore circulation to the foot, or who may amputate. That patient needs ongoing services after discharge. His diabetes has to be brought under control or else the foot or amputation site won't heal well. An endocrinologist may start the patient on a new regimen, and the patient needs education for that. "It is the case manager who coordinates those services so everything can be done expeditiously," says Rosenzweig.

Diabetic patients with conditions seemingly unrelated to diabetes need special management by the case manager as well. Her role in the case of the patient with a head injury, for example, is to follow that case through surgery. The patient's diabetes needs to be controlled on a regular basis. If the patient is not eating, his insulin has to be adjusted. Sometimes an endocrinologist must be ordered to follow blood sugars, and the case manager has to expedite all the processes that are going on so last-minute problems don't come up.

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## Casefinder program IDs 1,500 at risk for diabetes

*Project improves HbA<sub>1c</sub>s for most patients*

When a case manager at Winchester (MA) Hospital identifies a diabetic patient, she refers him immediately to the hospital's diabetes center. But as much as that case manager is helping, **Kathleen Beyerman**, RN, CNA, EdD, director of the Community Health Institute, a department within Winchester, says her group felt there still were a lot of undiagnosed diabetics out there who needed to be found.

The Institute implemented an innovative approach to diabetes disease management that has been so successful that it is now being expanded to other chronic diseases. Beyerman is in charge of the Diabetes Casefinder Program and explains why she thinks it is important: "We extrapolated national data to our service area and came up with the estimate that, based on the fact that the American Diabetes Association [ADA] in Alexandria, VA, says half of the diabetics are undiagnosed, we probably had 17,000 undiagnosed diabetics in our service area. How could we find them?" Institute staff decided a good way would be to work with local medical offices and help them find their own undiagnosed diabetics.

The staff of Winchester's diabetes unit consist of a CDE who serves as the case manager for the unit,

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an endocrinologist, a dietitian, and two nurses. “Periodically, a case manager may be called into the center to see a patient,” says Beyerman, “but that doesn’t happen often because her visit is not reimbursed.” It also depends on how fragile the patient is: “He could come in here when he is discharged, or the CDE might go to see him in the hospital.”

### *Teaching focuses on self-management*

The pilot program involved an RN prevention specialist who reviewed medical records in physicians’ offices to identify people at risk for diabetes. She used agreed-upon guidelines for diabetes and sent notification letters to identified patients, enclosing laboratory slips for appropriate testing. Test results were sent to the physicians’ offices, and the offices notified patients of their results. Patients found to have diabetes were asked to participate in a diabetes education program where teaching is done by certified diabetes educators (CDE). Teaching content focuses on self-management strategies, including a healthy lifestyle, blood glucose self-monitoring, and medication administration and adjustment. The education program also offers support groups and exercise and weight loss programs.

From nearly 5,500 records reviewed, the pilot program identified 1,500 at-risk patients and 42 newly diagnosed cases. It also turned up 136 patients previously diagnosed with diabetes whose blood sugar was not in control and who had not had an HbA<sub>1c</sub> (glycosylated hemoglobin) in the previous 12 months. The program generated nearly \$350,000 in additional procedure and visit revenues and nearly \$300,000 in radiology and lab revenues for the hospital. Within six months:

- 82% of the patients in the education program had improved HbA<sub>1c</sub> levels;
- 67% showed successful weight loss;
- 72% maintained a successful exercise program;
- 60% complied with blood sugar monitoring;
- 59% complied with their medical regimen.

Winchester, located about 10 miles from Boston, is one of 11 hospitals in Massachusetts whose diabetes education program is accredited by the ADA. **Cathy Reardon**, CDE at Winchester, says the process of getting accreditation “involves

lots of paperwork. That was before my time here, but we’re getting ready for reaccreditation now, and we have to collect data for six months on many different criteria such as HbA<sub>1c</sub> readings before and after education. There’s a lot of tracking involved. Representatives of another facility told me that it took a full-time person close to four months to accomplish ADA accreditation. You absolutely need administrative support to do this.”

But it’s worth the effort, she says, because accreditation benefits a hospital. “Once you have the recognition, you’re never questioned about reimbursement. Medicare will only reimburse for diabetes education if it takes place at an ADA-recognized program.” Also, once accredited, the ADA puts that hospital on a list for referrals.

Winchester’s center focuses on self-management, Beyerman says, and the most common patient is the senior with Type 2 disease who is struggling with managing his blood sugar. “If a diabetic patient has exacerbations and complications are becoming a problem, he is seen by nurses and the dietitian to determine how lifestyle issues are impacting him, but those patients are referred to specialists for care for their renal failure or peripheral vascular problems. The patient totally cared for within the center is one without severe complications.

### *Gestational diabetes poses challenge*

“Our program for women who develop diabetes during pregnancy is small but very important,” says Beyerman. “Women with gestational diabetes pose our biggest challenge.” Subsequent to delivery, most new mothers return to normal blood sugar levels, but those women have a 66% risk for developing Type 2 disease during their next pregnancy and a 40% to 60% risk for developing Type 2 disease later in life. “Our goal is to prevent diabetes in those women,” she says. Her team works with them on nutrition and exercise. “If they can keep their weight down, they can delay or avoid Type 2 diabetes later in life, either in their next pregnancy or later on.” Beyerman also supports the new mothers with breast-feeding, because that’s a good way to get down to prepregnancy weight.

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Next month, Part 2 of this series will look at innovative programs to better care for the patient with diabetes. Included will be the award-winning Diabetes Episodes of Care program developed by Lovelace Healthcare Innovations in Albuquerque, NM.

## GUEST COLUMN



# Resolving social work vs. case management conflict

*It can be a discharge planning dilemma*

By **Karen Zander**, RN, MS, CS, CMAC, FAAN  
Principal  
Center for Case Management  
South Natick, MA

**S**ocial work in the acute care setting has lost its bearings, and assuming discharge planning under the case management umbrella is not the surest avenue to a strong professional identity. Hospital case management currently takes many forms. It has evolved recently to encompass functions that enable the facility to manage legal, financial, and quality risks:

- **denial and utilization review** — matching payer with day-using criteria (may include quality assurance and coding);
- **utilization management** — justifying appropriate utilization of resources per day based on criteria;
- **discharge planning** — managing the stay from door to door, collaboratively determining level of care, and working with social work services to connect the patient to postacute services;

- **episode recovery** — period from crisis to recovery or stabilization and tracking across time and venue (includes continuous quality improvement);

- **continuum** — an infinite time frame, which includes a person's health and lifestyle (may include chronic but stable states such as well-maintained diabetes or handicaps, includes disease management and long-term care).

Typically, the functions are limited or dispersed in a structure that does not require one person to complete all the functions. Nurses have traditionally filled all the functions while social work has led the way in community-based case management — the health and prevention sphere — for specific client populations such as healthy seniors. Pertinent to this discussion is the all-too-common practice of pigeonholing social workers into discharge planning rather than full use of the profession's clinical expertise. (See the October issue of *Hospital Case Management* for its story on turf battles, p. 169.)

Discharge planning is a legally regulated function that has increased exponentially in complexity since the onset of managed care, the Balanced Budget Act, and proliferation of new levels of care and services.<sup>1</sup> With shorter lengths of stay and more postacute options, more patients require use of continuing nursing services in some capacity. Therefore, discharge planning should be the responsibility of nurse case managers who can best determine the level of care needs that will ensure recovery, stabilization, or a comfortable death.

Accurate discharge planning cannot occur without in-depth knowledge of each family's concerns and needs. Unfortunately, social workers, under the name of case management, have been so bogged down handling utilization review, placement calls, ambulance arrangements, finances, and a multitude of clerical activities, they have neither the time nor, in many hospitals, the staff to independently and thoroughly assess and risk-stratify every family. Instead, social workers respond *after* staff nurses, physicians, or case managers alert them to overt needs, subsequently spending the majority of time with the patient, the referral agencies, and the payer rather than the family.

As a result, families become isolated and feel unprepared for consequences of the physician's and hospital's discharge decision. Without an

*(Continued on page 215)*

# CRITICAL PATH NETWORK™

## Chest pain rule-out MI clinical pathway saves \$183,000

By **Linn Kight**, BSN, RN  
Clinical Path Coordinator  
Valley View Hospital  
Glenwood Springs, CO

Valley View Hospital is a private, nonprofit organization located in the Rocky Mountains between Aspen and Vail, CO. The hospital is licensed for 80 beds and has 73 active and consulting physicians, including 24 specialties. The hospital offers a wide range of services, excluding transplants, cardiac surgery, and neurosurgery.

Valley View began its clinical pathway program in the fall of 1994, and successful implementation of a pneumonia path occurred the following year. Sixteen paths have been developed and implemented, using continuous quality improvement and/or rapid cycle plan-do-study-act methodologies. The original clinical pathway teams have evolved into three collaborative care teams: surgical, medical, and perinatal/pediatrics. The teams have a variety of clinical responsibilities, as well as responsibilities for pathway development and implementation, staff education, data review, and pathway revision.

The acute myocardial infarction (AMI) path was implemented in June 1997. A chart review on the diagnosis of chest pain was completed that fall and revealed the chest pain population to be high volume, high length of stay (LOS), high charges, and high risk. The review also showed that a large portion of that patient population is from out of town, coming from low elevation to high elevation and presenting in the emergency department (ED) with chest pain. The medical collaborative care team decided it was

important to develop a chest pain pathway and a bridge order set so patients could be easily bridged from the chest pain path to the AMI clinical path. This medical collaborative care team is multidisciplinary and includes representatives from all clinical departments, as well as three physicians representing the ED, internal medicine, and the laboratory department.

Physician involvement is extremely important to the pathway process, and especially for the chest pain path, because most patients present in the ED and are admitted to the hospital for observation. The physicians involved in the medical collaborative care team were pivotal in evaluating and trialing new blood tests that could aid in making a definitive diagnosis within eight to 12 hours.

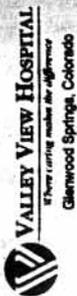
### Areas of Improvement

	Pre-Pathway	Pathway	Saved
LOS	40 hours	26.6 hours	85 days (total)
Average charge per patient	\$5,300	\$4,100	\$183,000 (total)

Source: Valley View Hospital, Glenwood Springs, CO.

The team did an extensive literature search, looked at examples of other chest pain pathways, and studied the ACC/AHA Practice Guidelines for "Management of Patients With Acute Myocardial Infarction" prior to pathway development, which began in 1997. The chart audit established current practice patterns at Valley View. Bridge orders from the chest pain rule-out MI

(Continued on page 210)

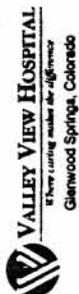


**CHEST PAIN R/O MI CLINICAL PATHWAY**

Discharge Date: \_\_\_\_\_  
 Physician: \_\_\_\_\_  
 Case Manager: \_\_\_\_\_  
 Addressograph

Admission Date: \_\_\_\_\_  
 COR Status: \_\_\_\_\_  
 Clinical Pathways do not represent a standard of care, nor do they constitute or replace physician orders.  
 They are guidelines which may be modified to individual patient needs.

Categories (FOCUS)	Time/Initials		Date	CCU Time: ADMISSION (0-8 HOURS)	Time/Initials	6 - 18 Hours
	23-07	07-15				
Consults Assessment/Monitoring Gas Exchange - 39 Cardiac Output - 15 Fluid Volume - 38 Airway Clearance - 4				<ul style="list-style-type: none"> <li>MI alert</li> <li>Case Manager</li> <li>Initial chest pain assessment</li> <li>Continuous cardiac monitoring</li> <li>Cardiovascular assessment (CV) every 2 hrs and PRN</li> <li>I&amp;O q shift</li> <li>Weight on admission</li> <li>BP both arms on admission</li> <li>STAT EKG (within 5 min) and with chest pain PRN</li> <li>STAT portable chest x-ray</li> <li>STAT cardiac profile</li> <li>CKMB q6 x 3 from time of initial labs</li> </ul>		<ul style="list-style-type: none"> <li>Ongoing chest pain assessment</li> <li>Continue cardiac monitoring</li> <li>CV assessment every 4 hrs and PRN</li> <li>I&amp;O q shift</li> </ul>
Diagnostic Testing - Lab Procedures Lab - 56 X-ray - 99 Procedures - 72				<ul style="list-style-type: none"> <li>Oxygen 2l/nasal cannula; titrate to chest pain &amp; SPO<sub>2</sub> ≥ 90%</li> <li>18g HL (2nd line for chest pain/unstable)</li> <li>Pain assessment/pain scale</li> <li>NTG .4mg S.L., may repeat x 3 for chest pain</li> <li>MS 1-5 mg IVP PRN/Demerol 25 mg IVP PRN (if allergic to MS)</li> <li>NTG paste</li> <li>NTG qtt - titrate for chest pain and SBP &gt; 100</li> </ul>	<ul style="list-style-type: none"> <li>EKG PRN chest pain/arrhythmias</li> <li>CKMB (at 6, 12, &amp; 18 hrs) from 1st CKMB drawn</li> <li>Repeat Troponin 6 hrs after 1st Troponin drawn</li> <li>Schedule GXT if second set of enzymes negative</li> <li>Regular Cardiolite Adenosine</li> </ul>	
Treatments/Procedures				<ul style="list-style-type: none"> <li>Oxygen 2l/nasal cannula; titrate to chest pain &amp; SPO<sub>2</sub> ≥ 90%</li> <li>18g HL (2nd line for chest pain/unstable)</li> </ul>	<ul style="list-style-type: none"> <li>Discontinue oxygen after 6 hrs if pain/arrhythmia free and SPO<sub>2</sub> ≥ 90%</li> <li>HL(s)</li> </ul>	
Pain Management - 65				<ul style="list-style-type: none"> <li>Pain assessment/pain scale</li> <li>NTG .4mg S.L., may repeat x 3 for chest pain</li> <li>MS 1-5 mg IVP PRN/Demerol 25 mg IVP PRN (if allergic to MS)</li> <li>NTG paste</li> <li>NTG qtt - titrate for chest pain and SBP &gt; 100</li> </ul>	<ul style="list-style-type: none"> <li>Pain assessment/pain scale</li> <li>NTG .4mg S.L. x 3 PRN chest pain</li> <li>Morphine 1-5 mg IVP chest pain/Demerol 25 mg IVP (if allergic to MS)</li> <li>Continue NGT (gtt or paste)</li> </ul>	
Medications				<ul style="list-style-type: none"> <li>ASA 4 81mg tabs (chewed within 10 minutes)</li> <li>Begin Heparin 5000 every 12 hrs (STAT Heparin qtt if unstable angina)</li> <li>Ativan 0.5mg IV/PO every 6 hrs PRN</li> <li>Ambien 5mg PO HS PRN (MR x 1)</li> <li>ACLS protocol</li> </ul>	<ul style="list-style-type: none"> <li>Continue Heparin SQ IV</li> <li>Ativan 0.5 mg IV/PO every 6 hrs PRN</li> <li>Ambien 5 mg PO HS PRN (MRx1)</li> <li>ACLS protocol</li> </ul>	
Activity/Safety Activity - 2 Injury Risk - 50				<ul style="list-style-type: none"> <li>Bedrest until pain free then per physician order</li> <li>Notify physician if chest pain recurs and doesn't resolve within 30 min</li> </ul>	<ul style="list-style-type: none"> <li>Per physician order (if second CKMB negative call for updated order)</li> <li>Notify physician if chest pain recurs and doesn't resolve within 30 min</li> </ul>	
Nutrition - 62				<ul style="list-style-type: none"> <li>NPO until pain free, then low sodium and low cholesterol diet or per physician order</li> </ul>	<ul style="list-style-type: none"> <li>Low sodium and low cholesterol diet or per physician order</li> <li>Consider diet for stress test</li> </ul>	
Patient/Caregiver Education Knowledge Deficit - 54 Teaching - 89 Communication - 20				<ul style="list-style-type: none"> <li>Instruct patient to verbalize any chest pain or discomfort and to use pain scale</li> <li>Orient patient/significant other to care routine</li> </ul>	<ul style="list-style-type: none"> <li>Reinforce CCU routine with regard to medications/tests</li> <li>Review patient pathway</li> <li>Initiate teaching of risk factors/basic disease process to patient/significant other</li> </ul>	
Psychosocial/Emotional Needs Anxiety - 77, Spirituality - 88 Coping - 22, Self-Esteem - 79				<ul style="list-style-type: none"> <li>Encourage patient/significant other to discuss anxieties about hospitalization</li> <li>Evaluate patient's present coping mechanisms and explore successful methods</li> </ul>	<ul style="list-style-type: none"> <li>Encourage patient/significant other to discuss anxieties</li> <li>Evaluate patient's present coping mechanisms and explore successful methods</li> </ul>	
Discharge Planning - 27 Case Conferences - 16 Expected Patient Outcomes				<ul style="list-style-type: none"> <li>Patient will be pain free within 30 min of arrival to ED/CCU</li> <li>Patient will notify staff of recurring chest pain/discomfort</li> <li>ASA given within 10 min</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate patient support system</li> <li>Preliminary discharge plan</li> <li>Patient will notify staff of recurring chest pain/discomfort</li> </ul>	



### CHEST PAIN R/O MI CLINICAL PATHWAY

Admission Date: \_\_\_\_\_  
 Discharge Date: \_\_\_\_\_  
 Physician: \_\_\_\_\_  
 Case Manager: \_\_\_\_\_  
 Addressograph: \_\_\_\_\_

COR Status: \_\_\_\_\_  
 Clinical Pathways do not represent a standard of care, nor do they constitute or replace physician orders.  
 They are guidelines which may be modified to individual patient needs.

Categories (FOCUS)	23-07	07-15	15-23	18 - 36 Hours	23-07	07-15	15-23	36 Hours → DIC
Consults								
Assessment/Monitoring				<ul style="list-style-type: none"> <li>Ongoing chest pain assessment</li> <li>Continue cardiac monitoring</li> <li>CV assessment every 4 hrs and PRN</li> <li>I&amp;O q shift</li> <li>Daily weight</li> <li>A.M. EKG and PRN chest pain/arrhythmia</li> <li>GXT/stress test: __ Regular __ Cardiolylte __ Adenosine</li> </ul>				<ul style="list-style-type: none"> <li>Ongoing chest pain assessment</li> <li>Continue cardiac monitoring</li> <li>CV assessment every 4 hrs and PRN</li> <li>I&amp;O q shift</li> <li>Daily weight</li> <li>A.M. EKG and PRN chest pain/arrhythmia</li> <li>GXT/stress test: __ Regular __ Cardiolylte __ Adenosine</li> </ul>
Diagnostic Testing - Lab								
Procedures Lab - 56								
X-ray - 99								
Procedures - 72								
Treatments/Procedures				<ul style="list-style-type: none"> <li>PRN oxygen, titrate for chest pain/arrhythmias and/or SPO<sub>2</sub> ≥ 90%</li> <li>D/C HL at discharge</li> </ul>				<ul style="list-style-type: none"> <li>PRN oxygen, titrate for chest pain/arrhythmias and/or SPO<sub>2</sub> &gt; 90%</li> <li>D/C HL at discharge</li> </ul>
Pain Management - 65				<ul style="list-style-type: none"> <li>Pain assessment/pain scale</li> <li>NTG 0.4 mg S.L. x 3 PRN chest pain</li> <li>MS 1-5 mg IVP for chest pain/Demerol</li> <li>Hold nitrates (long acting) prior to stress test</li> </ul>				<ul style="list-style-type: none"> <li>NTG 0.4 mg S.L. x 3 PRN chest pain</li> <li>MS 1-5 mg IVP for chest pain/Demerol</li> <li>Hold nitrates (long acting) prior to stress test</li> </ul>
Medications				<ul style="list-style-type: none"> <li>Continue ASA 325 mg QD</li> <li>Surfak 240 mg QD PRN</li> <li>Continue Heparin: __ SQ __ IV</li> <li>Continue Alivan 0.5 mg IV/PO</li> <li>Ambien 5 mg PO HS PRN (MRx1)</li> <li>ACLS protocol</li> <li>For GXT stress test, hold nitrates/beta blockers (for adenosine, also hold xanthines)</li> </ul>				<ul style="list-style-type: none"> <li>Continue Heparin: __ SQ __ IV</li> <li>Continue Alivan 0.5 mg IV/PO</li> <li>Ambien 5 mg PO HS PRN (MRx1)</li> <li>ACLS protocol</li> <li>For GXT stress test, hold nitrates/beta blockers (for adenosine, also hold xanthines)</li> </ul>
Activity/Safety								
Activity - 2								
Injury Risk - 50								
Nutrition - 62								
Patient/Caregiver Education								
Knowledge Deficit - 54								
Teaching - 88								
Communication - 20								
Psychosocial/Emotional Needs								
Anxiety - 7								
Spirituality - 86								
Coping - 22								
Self-Esteem - 79								
Discharge Planning - 27								
Case Conference - 16								
Expected Patient Outcomes				<ul style="list-style-type: none"> <li>Per physician order</li> <li>Notify physician if chest pain reoccurs and doesn't resolve within 30 min</li> <li>For regular stress test, light breakfast</li> <li>For cardiolylte/adenosine, NPO except sips</li> <li>Diet as ordered after test</li> <li>Risk factor booklet</li> <li>View video/warning signs given</li> <li>Complete discharge instruction sheet</li> <li>Encourage patient to discuss anxieties</li> <li>Continue to reinforce successful coping strategies</li> </ul>				<ul style="list-style-type: none"> <li>Per physician order</li> <li>Notify physician if chest pain reoccurs and doesn't resolve within 30 min</li> <li>For regular stress test, light breakfast</li> <li>For cardiolylte/adenosine, NPO except sips</li> <li>Diet as ordered after test</li> <li>Risk factor booklet</li> <li>View video/warning signs given</li> <li>Complete discharge instruction sheet</li> <li>Encourage patient to discuss anxieties</li> <li>Continue to reinforce successful coping strategies</li> </ul>

## Chest Pain Sticker Used in ED

### INITIAL CHEST PAIN ASSESSMENT

ONSET OF PAIN (TIME/DAY) \_\_\_\_\_ QUALITY (SHARP, DULL, ETC) \_\_\_\_\_  
CONTINUOUS \_\_\_\_\_ INTERMITTENT \_\_\_\_\_  
INTENSITY ON ADMIT TO ED (0-10 SCALE) \_\_\_\_\_  
LOCATION \_\_\_\_\_  
RADIATION \_\_\_\_\_  
ASSOCIATED SYMPTOMS: N/V \_\_\_\_\_ SOB \_\_\_\_\_ LIGHTHEADED \_\_\_\_\_  
PAIN ALLEVIATED BY: \_\_\_\_\_  
(POSITION CHANGE, ETC)  
WORSENER BY: \_\_\_\_\_  
RISK FACTORS: SMOKER \_\_\_\_\_ PCKYR HX: \_\_\_\_\_  
DM \_\_\_\_\_ HTN \_\_\_\_\_ ELEVATED CHOL \_\_\_\_\_  
PREV HX: CAD \_\_\_\_\_ MI \_\_\_\_\_ PROCEDURES \_\_\_\_\_  
FAMILY HX: FATHER \_\_\_\_\_ MOTHER \_\_\_\_\_  
SIBLINGS \_\_\_\_\_

Source: Valley View Hospital, Glenwood Springs, CO.

(Continued from page 207)

pathway were also developed to move a patient from the chest pain path to the AMI path efficiently and without duplication.

Other considerations include:

- **Chest pain sticker.** The sticker is used on the ED record to aid in rapid cardiac assessment and identification of risk factors. (See sticker, above.) Duplication of critical information has decreased completely, and treatment occurs sooner. Use of the chest pain sticker is at 97%.

- **Time of arrival in the ED to the time the patient receives aspirin therapy.** Aspirin administration time pre-pathway was 72 minutes, and today it has decreased to 15.4 minutes. More patients are receiving aspirin prior to presenting to the ED. Patients are taking aspirin at home, in the physician's office, or in the ambulance. In addition, there has been a nationwide campaign to educate people about early administration of aspirin and its role in preventing or decreasing the damaging effects of a heart attack.

- **Treadmills and patient education.** Documentation of the treadmill process and patients receiving stress tests prior to discharge has shown improvement. More consistent patient education, which includes viewing a video on chest pain prior to the treadmill, allows physicians to address any patient questions.

- **Standardization of the cardiac panel.** Since adding troponin I to the panel, physicians are ordering it 100% of the time. Troponin I has

enabled physicians to rule out MI within eight to 12 hours, thereby helping decrease charges and LOS.

- **Additional procedures.** The incidence of other diagnostic procedures being performed for patients who've been determined not to have had a heart attack has decreased markedly. For example, esophagogastroduodenoscopy is being done on an outpatient basis rather than during the inpatient stay.

Implementation of the chest pain pathway has resulted in many positive outcomes. Through monitoring clinical outcomes, we have been able to demonstrate an improvement in care, as well as a decrease in LOS and charges. The pathway program is expanding into other areas of health care such as acute rehabilitation, home health/hospice, and physician offices.

For more information, contact:

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Valley View Hospital, Glenwood Springs, CO.  
Telephone: (970) 945-3312. ■

**Clarification:** The October issue of *Hospital Case Management* included a critical pathway for total hip replacement. Accompanying the pathway was a phone number for the American Academy of Orthopaedic Surgeons in Rosemont, IL, for readers who wanted more information on the pathway. The academy would rather have people write, not call, for information. Your patients can write for a brochure on total hip replacement by sending an SASE to:

Total Joint Replacement  
American Academy of Orthopaedic Surgeons  
P.O. Box 2058  
Des Plaines, IL 60017

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# AMBULATORY CARE

QUARTERLY

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## Electronic medical record could save millions

*Cincinnati hospital's technology saves time*

Rehabilitation hospitals will need every advantage they can get from technology to help cut costs and maintain the quality of patient care in coming years under the prospective payment system (PPS). For instance, suppose your hospital's leadership believes it's a good time to expand by opening new satellite offices in underserved areas. How can you do this without greatly increasing support staff costs?

One solution might be to upgrade your information technology and become fully computerized with an electronic record that makes it easy for therapists to update charts and access patient information. An electronic record can eliminate the need for transcriptionists and support staff as long as it is developed with guidelines for each discipline and staff are trained to type in a few notes and follow computerized pathways instead of dictating or writing notes in longhand.

It can be done, and Children's Hospital Medical Center in Cincinnati has done it. The hospital's joint occupational therapy-physical therapy (OT-PT) department created a complicated but financially rewarding electronic record that enabled the hospital to open seven sites without funding new support staff positions, saving the hospital \$1.12 million a year in potential salaries.

"It allowed us to expand quickly and grow rapidly without adding tremendous support staff," says **Rebecca D. Reder**, OTR/L, director of OT-PT. "We've been able to do that because we've centralized all operations from the base hospital, using the same support staff. All referrals are received centrally, so we have five core people who do the clerical and office administration tasks for 80 people at seven locations for OT and PT."

The electronic record, which the OT-PT department began to use in 1995, also eliminates the

need for transcription services, saving the hospital money and saving therapists several hours of dictating and proofreading reports each week. Instead of dictating their reports and sending them to a transcriptionist, therapists type their reports directly into the computer, but instead of typing in every word, therapists can choose various links that automatically call up treatment details. Because the reports are faxed to physicians immediately after they're created, six weeks have been shaved off the traditional transcription process, which included extensive proofreading and rewriting before reports could be faxed to physicians. The hospital had to train the staff to use the new electronic reports, but that only involved a four-hour inservice session.

Also, the electronic record has saved employees a considerable amount of time in making and reviewing schedules. "Everyone's schedule is right on-line, so no matter where they work, they can access their schedule with the stroke of a key," Reder says. She explains how an electronic medical record works and the areas in which it provides the greatest improvements:

- **Tracking patients and documenting care.** The electronic record enables departments to automate the entire patient care cycle. Providers fax patient referrals into the system, and department employees enter demographic, referral, and insurance information as soon as referrals are received. Therapists track the patient's progress through the initial evaluation, treatment, and discharge. Everything is tracked on-line, including patient charges, insurance authorizations, and appointment history. The system easily identifies unbilled appointments and expiring insurance authorizations, and it can compose standardized letters to parents, insurance companies, and physicians.

The record contains databases pertaining to patient documentation, scheduling, and referrals. Children's Hospital managers and clinicians helped develop more than 35 standard evaluation forms that allow therapists to compose reports on the computer.

"We asked clinicians to compose templates for each area, and we said, 'Tell us what you most commonly say when you look at range of motion. What grids do you use? And what are the most common mistakes?'" Reder says.

Part of the electronic record's charm is that it allows all department locations to share data instantly. Patient documentation is signed electronically and can be faxed immediately to physicians or insurance companies. Therapists use laptop computers while in the field and then copy their work to the system when they return to the office. The software includes a database that shows, for each therapist, when a patient was seen and when the patient's report is due. The department requires therapists to complete reports within one week for outpatient cases and within eight working hours for inpatient cases.

"We can monitor turnaround time in a report," Reder says. "If you have a therapist who is not performing, this tells you who that therapist is."

She notes that just having an electronic and public means of checking up on employees has resulted in better performance. "People are affected by peer review, and they know anyone can pull up their documentation information if they're late with a report."

- **Tracking patient charges.** The record eliminates the possibility of losing charges because of misplaced paperwork or a therapist's omission. Once a case is entered into the system, the record automatically creates a charge form and progress note. All patient information is carried from the initial reports to the charge form and subsequent reports, so therapists never have to enter the same data twice, Reder says.

- **Tracking unbilled charges.** Managers can check regularly for unbilled charges and then remind therapists to complete the charges. When therapists complete a progress charge form, the electronic medical record refers to the referral form for demographic information. It also includes progress note findings, both subjective and objective, and it includes the actual charge section that shows the services provided, the numbers of each service, the charges per unit, and the amount of charges.

"All the therapists have to add is how long they saw the patient that day, the services they provided, and the response of that patient to the treatment in the progress note," Reder explains.

In addition to making it easier to track charges, the electronic record has resulted in better reimbursement, she says. Department staff can pull

up authorization information to make sure a visit or service meets an insurer's guidelines, and the electronic reports show insurers exactly how well patients progress in treatment. "Because we can send them such comprehensive documentation, it's easily reauthorized," Reder says.

The software sends reminders to therapists each time they complete a charge for a patient. The reminders tell them how many visits they have left and when the visits expire. When therapists see that the visits are about to expire, they can let the department's insurance specialist know reauthorization might be necessary.

### ***Giving payers electronic documentation***

"We've saved hundreds of thousands of dollars through better collection of billed services because we can substantiate the services provided," she says. "Now when we have audits, we can provide back-up documentation for when the patient was seen, how many units of care were provided, and what were the outcomes of care." Before the department switched to an electronic record, it never could provide such extensive details to payers, she adds.

- **Patient care.** "Of all the things we were attempting to do, that was the biggest," Reder says. "The major improvement in clinical care is we can get the patients into appointments faster because of electronic scheduling." The department can track when patients don't show up for appointments and exactly what has happened from their referral into the system until their discharge. That ability to track patients proved essential when the hospital opened its satellite offices. "When you open up satellites, you usually have a problem of patients showing up at suburban locations while their charts and referrals are somewhere else," Reder explains. "The electronic record eliminated that problem because all of the charts are at the touch of a finger."

Wherever a patient shows up, the therapist can pull up a scanned copy of the physician's referral and use that for reference. "And it has improved clinical care as well, because we are able to get back to the physician much more quickly with the patients' outcomes," she says.

Overall, the electronic record has helped keep the departments flexible in a changing rehabilitation environment, she adds. "We have been able to respond to changes in health care without having to increase our expenditures, and, in some cases, [we've been] able to decrease them." ■

# 'Telerehabilitation' may be in future of rehab care

*Atlanta hospital uses video education, consulting*

When Atlanta-based Shepherd Center's length of stay (LOS) dropped within the past five years from about 70 days to 25 to 40 days, it became clear to the center's administrators that something needed to be done to help patients and their families during the transitional period after discharge.

"Our rehab functional outcomes are better than they were five years ago, but the incidences of secondary complications and difficulties of families in the transition period were big problems," says **Gary Ulicny**, PhD, president and CEO of the 100-bed specialty hospital.

Due to managed care pressures, it's likely the hospital will continue to experience a decrease in its LOS, which will accentuate the need for more efficient, less expensive follow-up care. "As we were looking for alternative ways to support these families at a lower cost, the telemedicine idea came up, and we began to explore it as a research project," Ulicny says.

"Our undertaking was motivated by a desire to find different ways to continue to provide services despite the managed care environment," says **Ann Temkin**, MA, ACSW, a senior researcher.

Shepherd Center has both a med-surg floor and an ICU. The facility serves as a hospital for catastrophic injuries, including spinal cord and brain injury, and treats patients with multiple sclerosis and other neurological problems. The hospital's patients arrive from all over the southeastern United States, and some live in rural areas where follow-up health care is not readily available. So, telemedicine has the added advantage of being a convenient way for patients to receive services.

The hospital recently began a three-year telerehabilitation study in conjunction with Emory University School of Public Health, also in Atlanta. The study is funded by a grant from the Centers for Disease Control and Prevention (CDC) in Atlanta. It will look at the cost-effectiveness and quality of care provided by telerehabilitation to patients who've been discharged from the hospital. The results aren't in yet, but hospital officials say they have every reason to believe telemedicine will improve patients' outcomes.

For example, one small pilot study showed promising results. The study evenly divided 75 discharged patients into three categories: those who had regular telephone contact with the hospital, those who received the hospital's standard care, and those who received telerehabilitation. "We found that among the 25 who received telerehabilitation, half of those people were back to work within one year of their injury," Temkin says. "Nationally, only 23% of people are back to work after as many as five years."

Moreover, the telephone-supported group also had a high back-to-work rate, although not as high as the telerehabilitation group, and those who received no telephone or video follow-up care had a back-to-work rate of 15% to 17%.

"We thought the people who received regular intervention from us through telerehabilitation got a quicker sense of being able to manage their lives, so they were able to move on with things like work," Temkin says.

Here's how Shepherd Center's telerehabilitation program was developed:

- **Start telemedicine on a trial basis, carefully selecting equipment.** "We experimented with different technology before purchasing anything," Temkin says. At first, the center rented video telephones that provided a still image to use with wound care patients. Patients took the phones home, and when a wound care nurse called them, patients pointed the phone's camera to the wound. The nurse would see a clear image and be able to provide instructions on how they should treat it, Ulicny explains. They also could use the still-photo telephone cameras to help families fix mechanical problems with equipment, such as wheelchairs that needed adjustment. The videophones cost \$10,000 for both the receiving and transmitting pieces of equipment. After a trial period, the center decided it was worthwhile to buy seven sets.

- **Revise and update as technology changes.** As technology advanced, the center soon added other less expensive cameras. Shepherd Center now has nine videophones made for health care use. They include a speakerphone and TV monitor, costing \$5,000 to \$6,000 per unit, says **Richard Burns**, telerehabilitation engineer. The videophones have additional features, including blood pressure cuffs, so the patient can send readings to nurses. Also, the hospital bought eight additional videophones costing less than \$1,000 each that are suitable for some short-term telerehabilitation cases.

Despite having cameras with moving images, the hospital still has use for the first cameras they

bought, says **Roxanne Hauber**, PhD, RN, CNRN, manager of the telerehabilitation program. "If we're looking at pressure ulcers, they give us a very high-definition picture with a clear image," she explains. Likewise, the hospital makes good use of several different types of video cameras with moving images. "Now there's a wide range of devices, so if we have a case where we may need the videophone for one use, then we may send the inexpensive phone because that will work for one application,"

### ***Patient education proves easy***

- **Train staff and patients.** When the telerehabilitation program first began, Burns visited each home where a videophone would be placed and set up the phone. The hospital had only one, and managers were unsure how best to train families to install and use the equipment. Now Burns and other staff teach patients and families how to use the videophones before they leave the hospital. "I learned a lot about the home environment from clinicians here and from working with people in their homes and seeing realistic barriers," he says. "It helped me to develop a process where we can train other people in our telerehabilitation program." Also, Shepherd employees now are so skilled at teaching patients and families how to set up and use the equipment that the whole training process takes about 15 minutes, Burns says. "We have patient-teaching down to a science."

The typical training session involves having the patient use the videophone at the hospital by having them connect it themselves and then transmit information to a videophone set up in another room in the hospital. So far, patients have adapted easily to using the equipment, Burns says. The hospital also has trained employees how to use the equipment, but learning the mechanics of the video cameras proved easier than the philosophical change they required, Hauber says. "The human factors play in this very strongly when working with clinicians," she explains. "For many clinicians, it's a problem if they can't lay their hands on patients." The hospital reinforced the importance of using telerehabilitation as a way to improve quality of care by helping patients stay out of the hospital after they are discharged.

- **Study outcomes.** The hospital's telerehabilitation study with the CDC should yield a variety of outcomes data. The study will compare post-discharge follow-up costs and care quality between standard care and telerehabilitation. The hospital

is studying a third use for telemedicine by having therapists work by videophone with patients who have language and communication problems. For example, a speech therapist is working with patients who have communication problems because of severe disabilities such as a spinal cord injury or cerebral palsy.

This type of therapy offers such patients a great convenience and extra therapy time, Hauber says. "The first individual we worked with has severe cerebral palsy, and he lives in a group home," she says. His disability makes it difficult to transport him to even one therapy session a week. But because the therapist now can train him through telerehabilitation, he doesn't have to come into the center, and he receives two therapy sessions a week. In coming years, the hospital will have outcomes data collected from these various projects and may be able to use that information to show payers how efficient telerehabilitation is.

- **Market program and seek new payer sources.** Reimbursement is a big question. "It's still very much up in the air in terms of how [telerehabilitation] will be reimbursed," Hauber says. Medicaid reimburses for certain telemedicine services in some states, including Georgia, she says. Shepherd Center also has received grant money to cover some of the program's costs. But while managed care companies are continuing to apply pressure for rehabilitation hospitals to decrease patients' inpatient stays, they haven't fully embraced telerehabilitation as a safety net alternative.

The hospital accepts responsibility for patients' readmission in exchange for a fee contract that allows the hospital to provide for patients whatever post-discharge services they need, Ulicny says. For some patients, that might mean nurses simply will call them to see how they're doing; for others, it might involve video teleconferencing. "What we're saying is, for X number of dollars, we will follow this person for a designated period of time, and if they have a preventable secondary complication, we'll use this money to pay for it," Ulicny explains. So far, the hospital has signed some pilot partnership contracts with national workers' compensation payers. Because there are no outcomes data to share yet, the payers have agreed to let the hospital study outcomes on these cases.

Shepherd Center will continue to develop its telerehabilitation program because hospital officials see this as the wave of the future, Hauber says. "We can't have a gap in care, and this is a wonderful way to address the issue of extending the continuum of care." ■

(Continued from page 206)

independent social work assessment, issues that can cause a real problem for patients often go undetected. Discharge planning continues to be a crisis, and readmission rates are at levels that should cause acute care professionals to be alarmed and ashamed.

The crisis is largely created by the custom of anticipating whether patients will have simple or complex postacute needs, with "simple" situations referred to nurses and "complex" situations referred to social workers. Rather, social workers who are clinically oriented should be instrumental in helping the team determine if cases are simple or complex based on a family assessment. They also should be involved with any family or patient needing psychosocial support for reactions to hospitalization, the meaning of the illness, the implications of the diagnosis, and the proposed treatment plan including guardianship, regardless of discharge planning needs.

Health care desperately needs clinical social work to offer compassion, problem-solving, and initial healing through individual, family, and group interventions. Common ground between nurse case managers and social workers is the story of the patient-family: who they are and what they need as a result of this hospitalization. The case manager's focus is the patient, payer, and physician. The social worker's focus is the family and the services in the community.

The result is that each patient and family is assessed in person — not second-hand via charts — and collaboratively risk-stratified for problems with meeting self-care outcomes at the conclusion of acute care. The case manager negotiates level of care (activities of daily living) with the payer, while the social worker determines services (instrumental activities of daily living) for those patients and families not moving to continuing nursing care. Both must be assisted by high-level clerical staff who research and book placements, compile patient and community information, and schedule appointments.

In summary, here are six ways to resolve the conflict over discharge planning:

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**1. Establish the social worker as ambassador of the hospital to the families of your community. In many instances, the social worker is the only consistent contact for families.**

**2. Pair social workers with case managers, but hold the nurse case manager accountable for the accurate discharge plan, specifically determining the level of care.**

## COMING IN FUTURE MONTHS

■ Alternative medicine impacts diabetes care

■ Rapid recovery could save more than \$7 per case

■ Don't get broadsided by your new software

■ Your colleagues speak out on the crackdown on SNFs

■ Lower-extremity amputations and frail elders

3. Refocus social workers on assessing the need for postacute services based on the family/significant others' information in collaboration with the physician, case manager, and direct care staff within 24 hours of admission.

4. Set productivity standards for social workers' overall caseloads, volume per day, and groups per week.

5. Provide upgraded, intensified clerical support to the case management and social work departments.

6. Improve the use of discharge planning rounds, requiring that social work have all family information by the first rounds following admission to enable the team to conduct a precise stratification of risk.

*Karen Zander is principal and co-owner of The Center for Case Management in South Natick, MA, an international consulting firm dedicated to tools, roles, and systems that produce outcome-driven patient care. In addition, Zander maintains a private practice in psychotherapy. Contact: (508) 651-2600.*

## Reference

1. Birmingham J. *Discharge Planning: The Rules and Reality*. South Natick: Center for Case Management; 1999.

*[Editor's note: How do you feel about the points the author of this article made? Are they valid? How do they pertain to your particular situation? We'd like to hear your reaction. Contact editor Dorothy Pennachio at (201) 760-8700; fax: (201) 760-8709; or e-mail: dorothy.pennachio@medec.com.] ■*

# NEWS BRIEF

## Heparin shots as good as IV

A new study shows that subcutaneous injections once or twice daily of low-molecular-weight heparins (LMWH) seem to be as safe and effective as conventional IV unfractionated heparin for treatment of acute deep venous thrombosis.<sup>1</sup> Unlike IV heparin, subcutaneous injections do not require lab monitoring of blood clotting

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times or dose adjustments. Also, it may be possible to administer IV heparin on an outpatient basis. That would save money despite LMWH's higher cost — \$236 more per patient for the initial course than IV heparin.

## Reference

1. Gould MK, Dembitzer AD, Doyle RL, et al. Low-molecular-weight heparins compared with unfractionated heparin for treatment of acute deep venous thrombosis. *Ann Intern Med* 1999; 130(10):800-809. ■

## CE objectives

After reading each issue of *Hospital Case Management*, the nurse will be able to do the following:

- identify particular clinical, administrative, or regulatory issues related to the profession of case management;
- describe how those issues affect patients, case managers, hospitals, or the health care industry in general;
- cite practical solutions to problems associated with the issue, based on independent recommendations from clinicians at individual institutions or other authorities. ■

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