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Rehab Continuum Report

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NOVEMBER 2001

VOL. 10, NO. 11 (pages 129-140)

Special Report: Focus on TBI Programs

Key factor in TBI recovery is substance abuse — not what caused the injury

Injuries due to violence had no greater impact on recovery

Researchers recently discovered a surprising fact about people who have suffered from a traumatic brain injury (TBI): Patients who were injured as a result of violence have just as good a chance for recovery as patients who were injured by some other cause.

Less of a surprise was the finding that TBI patients who have a history of substance abuse have greater difficulty benefiting from rehab care, according to findings published in the *Archives of Physical Medicine and Rehabilitation.*

"The fact that substance abuse has a strong association with outcomes is not surprising; that's something we've suspected for a while," says **Jennifer Bogner**, PhD, associate professor of physical medicine and rehabilitation at The Ohio State University in Columbus. Bogner was a co-author of the study.

"That we didn't find a strong relationship between violence and the outcomes we looked at was somewhat surprising," Bogner adds. "I have a feeling that violence does affect adjustment, but we didn't specifically

Executive Summary

Subject:
Traumatic brain injury (TBI) patients show similar outcomes whether their injury was violent or not, but if they abuse alcohol or drugs, their recovery might be negatively affected.

Essential points:
- ❏ A great percentage of TBI patients injured due to violence abuse substances, according to a survey.
- ❏ Rehab providers should screen TBI patients for substance abuse problems that could impair their recovery.
- ❏ A holistic approach that looks at a TBI patient's psychosocial status often is needed.

look at that type of outcome."

Investigators measured how TBI patients measured on these outcomes: community integration, ability to return to work, taking care of one's self at home, life satisfaction in general, and social integration.

Specifically, the study compared TBI patients who were injured by either an assault or a gunshot wound with those who were injured by some other means. All participants were screened for substance abuse, following criteria from the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).[1]

Violence correlates with substance abuse

The study found that individuals who had suffered a TBI due to violence were more likely to have a history of substance abuse; 79% of TBI patients with violent etiology had a history of substance abuse, compared with 55% of TBI patients whose injuries were not violent. The study included adjustments for this difference when determining how well TBI patients who had a violent injury adjusted after discharge.

A year after discharge from rehabilitation, investigators called TBI patients to ask them to complete telephone and mail surveys. In some cases, family members might have completed objective portions of the survey and assisted with communication. The outcomes measured included the patient's life satisfaction as measured by the Satisfaction with Life Scale; home competency as measured by the subscale score on the Community Integration Questionnaire; objective analyses of whether the patient was living independently, including living with a family; and whether the patient was productive as defined by working, attending school, or volunteering.

Researchers found that TBI patients participating in the study demonstrated less satisfaction with life if they also had a substance abuse history. That was not the case for victims of violence.

"The significance of this study is showing how important substance abuse is in predicting outcomes," Bogner says. "But I don't want folks to overlook the fact that violence is a significant source of TBI and is a significant concern with regards to prevention of TBI."

Nonetheless, rehabilitation facilities may want to incorporate substance abuse screening, referral, and/or treatment into their services, Bogner suggests.

Look at history of pre-injury drug use

"Rehab professionals should be prepared to screen for a history of substance abuse with all the folks who have had a traumatic brain injury," Bogner says. "And when screening, they should look at how much the patient used alcohol and other drugs before the injury."

For example, clinicians can find out if the patient had a high blood alcohol level at the time of injury and whether the patient previously had experienced use-related consequences, such as losing a job or a driving under the influence charge.

"What were the patient's social activities that involved substances?" Bogner recommends asking. "Does the patient's environment encourage substance abuse with other family members using substances, for example?"

Bogner suggests that rehab providers screen all TBI patients for substance abuse and make appropriate referrals based on their risk for continued abuse.

Ohio State's outpatient rehabilitation program includes a case management program called TBI Network, which is designed specifically for patients who have a history of substance abuse. The rehab team makes referrals to TBI Network when appropriate.

Launched in 1992 with a grant from the Ohio Department of Rehabilitation Services and the Ohio Department of Drug and Alcohol Services, TBI Network is certified to provide alcohol and drug treatment to people who have had

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a traumatic brain injury, says **Marty Wolfe**, LISW, program manager.

TBI Network has evolved into a multidisciplinary fee-for-service program that has a staff of 11 and is accredited by CARF…The Rehabilitation Accreditation Commission in Tucson, AZ. **(See story on TBI Network's program, below.)**

The university's rehabilitation program is designed to address a patient's psychosocial needs holistically. Its staff include Bogner, a social worker, and two case managers, who together work with TBI patients at discharge from rehab in assessing their needs. The team evaluates each patient's financial situation, psychosocial difficulties with adjustment, school re-entry, medical needs, family needs, and any other concerns the patient may have, Bogner says.

Patients and their families meet with a psychologist case manager and a physician at times when they already have other appointments in the rehab facility.

"Then we provide telephone follow-up to make sure they get the services they need," Bogner says.

Through a computerized resource tracking system, case managers can make certain a patient has met with TBI Network. A month after the referral was made, the system will give the case manager a computer message to check on the patient, Bogner says.

Reference

1. Bogner JA, Corrigan JD, Mysiw WJ, et al. A comparison of substance abuse and violence in the prediction of long-term rehabilitation outcomes after traumatic brain injury. *Arch Phys Med Rehabil* 2001; 82:571-577. ■

Special Report: Focus on TBI Programs

TBI patients who've abused substances need support

Linking patients to crucial services

A Columbus, OH, rehab program provides a special service to meet the unique needs of patients who have suffered a traumatic brain injury (TBI) and who have a history of substance abuse.

Called TBI Network, the nine-year-old program provides case management and alcohol and drug treatment services to TBI patients.

"Our philosophy is that after a brain injury, people should not use substances at all, because there are many behaviors and conditions of brain injury that look just like those associated with substance abuse problems," says **Marty Wolfe**, LISW, TBI Network program manager. TBI Network is part of the outpatient rehabilitation services provided by The Ohio State University.

The program has had some positive outcomes. In a survey conducted last year of patients who had been discharged three months previously, 71% of the TBI Network patients remained abstinent from substance use, 71% were productive, and 47% met life satisfaction goals. At discharge, all of these cases had met 100% of the goals, Wolfe says.

The program typically has 140-150 clients, with a caseload of 25 clients per case manager. The network typically receives 250 new referrals each year, Wolfe says.

Although the program originally was funded by grants at its inception in 1992, now it receives revenue by billing drug and alcohol case management services through three payers: Medicaid, a county board that manages drug and alcohol mental health funds, or the Bureau of Vocational Rehabilitation.

"We don't turn people away because of their inability to pay," Wolfe adds.

Services provided by TBI Network include the following:

- **Referral and screening.** Patients are referred from the university's rehabilitation and TBI service as well as by substance abuse providers in the community, Ohio's criminal justice system, other community mental health centers, and physicians.

TBI Network screens patients to meet three criteria. First, they must live in the community, which usually only includes Franklin County. If the patient is in a nursing home outside of the county, he or she must anticipate returning to the community soon. Secondly, the patient (who must be age 18 or older) must have had a brain injury that causes some kind of cognitive problem. Finally, the patient must be diagnosed as having a substance abuse problem, Wolfe says.

- **Case management assessment.** Each new patient is assigned to a case manager who will guide the patient through the program from intake to closure.

The program's staff will assess, plan treatment,

and provide for closure in the case. Although a team among the 11 employees has been involved in each case, the program is evolving to reduce the number of people with whom patients interact, Wolfe adds.

"People with cognitive problems have difficulty understanding why they are interacting with so many different people, so we're trying to cut that down," Wolfe says.

Case managers assess a patient's substance use, social functioning, involvement in the criminal justice system, employment history, medical situation, and other issues in his or her life.

• **Treatment.** The treatment plan typically includes abstinence, Wolfe says.

"Many people with TBI have reduced inhibitions, cognitive memory problems, and visual problems — which all are the same with TBI and substance abuse," Wolfe adds. "So it's putting yourself in double jeopardy if you have a head injury and use substances."

Case management is the primary treatment, and the program links clients to a variety of services in the community. Case managers advocate for their special needs, Wolfe says.

For example, if a patient needed intensive long-term drug and alcohol treatment, the program would refer the patient to another agency and stay involved in the process, forming a treatment team if possible, he says.

"So we facilitate communication between those folks dealing with the client and focus on what the client's needs are at any one time," Wolfe says. "Many substance abuse programs use case management, but we look at that as our treatment."

Individual counseling and group education are included in the TBI Network's treatment plans.

• **Referrals to community resources.** TBI Network is certified by the Ohio Department of Drug and Alcohol Treatment at the lowest level of care. When patients need more intensive care, the program will refer them to an inpatient treatment facility.

"We would start by working with the client to help the client understand why treatment is needed and how we do the referrals and how we will help with the process," Wolfe explains.

"Part of our whole concept here is that if a program already exists in the community, then we don't do it," he adds. "Our clients need a number of providers who work in a coordinated way and who each understand what piece they're focusing on."

Once the patient is admitted into another program, TBI Network staff will provide a wrap-around service of staying in touch with the patient and the outside program staff to make certain that the patient's brain injury is understood. TBI Network staff also help other providers working with the TBI patient understand how to help the client learn as much as possible, Wolfe adds.

Financial resources are another area of referral. "Clients typically have financial problems, and they often come to us unemployed," Wolfe says. "We refer them to financial assistance programs, and if they have no money for medical care, we try to link them to local jobs and family services and Medicaid."

When patients haven't had any medical follow-up care, the program will refer them to a community medical service or to physicians working through The Ohio State University.

Program makes mental health referrals

Sometimes TBI patients who abuse substances will have a history of depression or other mental health problems, requiring a referral to a mental health agency.

"These problems are intermingled, and pretty soon you see this whole map of problems the individual has, and we work very much in referring the patient to treatment for the mental health problem," Wolfe says.

• **Developing a purpose.** The program's philosophy is that for patients to maintain sobriety, they will need to lead productive lives with a meaningful purpose.

This is difficult for patients to accomplish when they are not working, so TBI Network staff will refer patients to local vocational rehab services and by other means help patients gain some level of productivity, Wolfe says.

"Some folks don't want to or can't go back to work, and so we focus on volunteer services," Wolfe says. So if a patient is afraid of losing Social Security benefits or has had physical and mental limitations that prevent him or her from returning to full-time employment, he or she can at least volunteer to help some local charitable organization.

"People with a brain injury need some kind of schedule or regimen," Wolfe says. "We have one job specialist on our staff, so if a patient is going to the Bureau of Vocational Rehabilitation, we can assist in helping the patient look at what their employment activities might be."

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• **Monitoring substance use.** TBI Network case managers monitor patients to see how they are handling issues of substance use. They check to learn whether patients are attending Alcoholics Anonymous meetings and to determine whether they are receiving any social support for their abstinence.

"We help them develop a relapse prevention plan," Wolfe says. "What's unusual about our program is that typically, when you leave one substance abuse treatment program, that agency closes your case, but we don't close the case; we stay open and involved while they're involved with other programs."

• **Discharge planning.** Patients are discharged based on three criteria: abstinence, productivity, and life satisfaction.

Occasionally there will be clients who are abstinent from drug or alcohol use and who have strong family support, but who do not want to be productive. So that client's case might also be closed, so long as the patient is satisfied with his or her life.

"The other reason to close a case is if the client says, 'I'm not interested in changing; I'm working now, but I'm still smoking pot, and I'm happy,'" Wolfe explains. "We say, "We think you will at some point need us again, but we'll discharge you for now.'"

Life satisfaction is measured using a six-point Life Scale questionnaire, which is measured at intake, monthly for three months, and then every three months until discharge.

"Every three months, we review the treatment plan with the client to see if the client has met the goals that the client set," Wolfe says. "If the client hasn't met the goals, we look at why not and whether we need additional goals in that particular area." ■

Special Report: Focus on TBI Programs

Program ventures into less-traveled territory

Group members support each other

A Lima, OH, day rehab program serving patients who have sustained traumatic brain injuries (TBI) provides extensive training in activities of daily living (ADL), job skills, and maintaining independence.

Relying on a multidisciplinary team working with a small group of TBI patients, the program has successfully launched patients into desired community roles and ADL tasks.

"The program allows for individuals within the group to be each other's support, so it doesn't always come from the therapist," says **Kelley Recker**, MS, CCC-SLP, administrative director for physical medicine and rehabilitation at St. Rita's Medical Center in Lima, OH. The hospital has 20 inpatient rehab beds.

Called the Ventures Program, it operates on a day rehab format with sessions lasting six hours per day, three days a week and involving speech therapy, occupational therapy, physical therapy, recreational therapy, neuropsychology, and a vocational specialist on a consulting basis.

Housed in the acute rehab facility, the Ventures Program has the Easy Street environment, which includes a simulated grocery store, bank, church, horticultural room, and workshop area, and a functional apartment that contains a kitchen and laundry area, says **Yvette Watson**, MSW, ACSW, LSW, case manager of the Ventures Program.

"A big component of our program, and this is why we're different, is the group format," Watson explains. "Typically we don't have more than five patients at a time in the program, because to accommodate more would be too overwhelming."

Most patients are in the program for one month to six weeks, and the same patients won't be there each day, although the groups typically consist of two to five individuals, Watson says.

The program mostly bills payers for the separate therapy services because most don't have a group rate for therapies, Watson says.

"In some fortunate instances, we were able to negotiate a daily rate," Watson says. "If there's case management involved or if the payer wants to do a group rate, we can negotiate a group rate."

The patients admitted to the program typically need only minimal physical assistance in moving. The few who have been in wheelchairs have been able to transfer themselves to bathroom facilities and are independent in bowel and bladder. Their TBI diagnosis typically has resulted in cognitive limitations, and the patients must be referred by a physician. Basic neuropsychological testing is provided.

Watson measures outcomes on a quarterly basis, and the program provides follow-up with patients at six months and one year. By six months, patients typically are back at work part time or attending school, even when they might not yet be driving. Also, most patients have returned to doing their normal activities by this time, such as yard work or church involvement.

Here's a typical weekly schedule of the Ventures Program:

• **Monday:** At 10 a.m., patients have an orientation to the time and day and then are involved in a thinking skills group led by a speech pathologist.

Patients review their goals and assess their progress, looking at making further plans and organizing their assignments for that day.

Problem-solving skills highlighted

As part of the thinking and problem-solving training, patients work on their reasoning skills and learn compensatory strategies and speech pragmatics. For example, a patient may be asked to read a particular newspaper article and present that information to the group, or the therapist may give patients some hypothetical situations to consider and ask them what they would do if these happened to them. "We'll use anything that involves problem-solving," Watson says.

At 11 a.m., there is a community lunch planning group that lasts from 30 to 45 minutes. This session is for planning the lunch outing that's held on Wednesday. It's followed by a 15-minute break.

From noon until 1 p.m., patients go into the dining room and learn dining or cooking skills, depending on the week.

"One week they'll go down to the cafeteria at St. Rita's and order through the line, and they have an hour for lunch on that day," Watson says. "On alternating weeks, they'll have cooking groups, and on alternating Fridays they go to a grocery store and purchase items for preparing a meal."

The occupational therapist teaches the group the dining room and cooking skills, including following a recipe.

After lunch, the group learns basic home management training in safety awareness, homemaking responsibilities, and other activities of daily living.

Then at 2:30 p.m., the group has a community exercise with the physical therapist, who takes the group to the outpatient facility's exercise room where they work with Nautilus equipment and other exercise machines.

"We also have a therapeutic pool, and they'll occasionally go into the pool for therapy," Watson says. "Patients have to be pretty mobile to come into our program, and they'll need additional physical therapy as well."

Patients are taught to improve their ability to move and do ADLs by engaging in home exercise programs when they are not at the rehab facility.

• **Wednesday:** At 9 a.m., the group begins the home management session, learning the same safety, financial planning, and problem-solving skills that they covered on Monday.

From 10 a.m. to 11 a.m., the orientation and thinking skills group is run jointly by the neuropsychologist and the speech therapist.

The community re-entry planning group plans the Friday lunch outing at 11 a.m., spending half an hour making phone calls, reviewing maps, and covering other details.

The Wednesday lunch outing begins at 11:45 a.m. and lasts until 1:45 p.m. These outings sometime take place outside the Lima area, so two hours are allotted to give the group plenty of travel time. "We have money allotted for lunch outings, and the therapists rotate on who takes them out," Watson notes.

After lunch, from 2 p.m. to 3 p.m., the neuropsychologist leads a coping skills group in which patients are taught to adjust to their brain injury. The group essentially has a psychotherapy-style session in which patients can discuss how their families are dealing with them, as well as their thoughts and feelings about changes in their daily lives, Watson says.

• **Friday:** Fridays also begin at 9 a.m. with an orientation and thinking skills group led by the neuropsychologist. At 10 a.m., the occupational therapist holds the home management group. From 11 a.m. to noon, there is recreational instruction. Patients play different board games, such as Scrabble and Life.

"We try to purchase games that will challenge

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them mentally, and we incorporate something a little lighter for them," Watson says. "They have to be responsible for leading the group in reading instructions or teaching the game to another participant."

From noon to 1 p.m., the group learns dining room skills with the physical therapist, either by going to the hospital's dining room or to a restaurant that is within walking distance of the hospital.

From 1 p.m. to 3 p.m., the community re-entry group goes on an outing. The groups have visited local libraries in Lima and in neighboring towns. They've also visited museums and have even gone bowling when that was what the group members desired.

"We've had gentlemen who have worked with their hands and done woodworking, so the group will go to Lowe's and purchase products for making something within the group, or they'll price items for a project they're doing at home," Watson says.

Other trips have gone to area malls, including Christmas shopping in December, and the group has taken tours at area manufacturing plants or the newspaper building.

The group has also visited a go-cart park, played video games, and played miniature golf.

• **Tuesday and Thursday:** Patients who desire to return to work or school sometimes will meet with the vocational specialist on Tuesdays or Thursdays. Then the vocational specialist will meet the patient's employer or college counselor and work out a plan for the patient's return.

"The major tenet of the program is to have patients either in school or working to get them back into some type of normal routine when they leave the program," Watson says. "A lot of times they are not immediately ready to go back, but working with the vocational counselor makes it easier for them to return to work or school."

The vocational specialist teaches employers and school counselors about the TBI patient's limitations and helps them decide how to make special modifications, such as providing a tutor or permitting the student to take longer in examinations.

• **Reunion:** During the holiday season, the Ventures Program invites past graduates to return for a reunion with light refreshments. Staff members attend, which gives them an opportunity to find out how former patients are doing with their recovery. Attendees can bring their spouses and children. The reunion is typically held in December and is provided on a drop-in basis. ■

Osteoporosis doesn't have to be inevitable

Screenings focus on prevention

Osteoporosis, or porous bone, is not a natural part of the aging process, as so many believe. It is a preventable and highly treatable disease.

"As you get older, it is normal to lose some bone, but the severe bone loss associated with osteoporosis is not a normal condition," says **Lynn Chard-Petrinjak**, senior communications coordinator for the National Osteoporosis Foundation in Washington, DC.

Bone mass is built until approximately age 30. Then, as part of the natural aging process, bones begin to break down faster than new bone is formed. Therefore, a healthy lifestyle that builds strong bones before age 30 and keeps bones strong later in life is the best method for preventing osteoporosis. The Foundation recommends an across-the-life span approach to health that includes a well-balanced diet with at least 1200 mg of calcium and up to 800 IU of vitamin D daily, weight-bearing exercise, and avoiding tobacco and excessive alcohol.

Education about nutrition, activity, and lifestyle choices should target girls as young as 10 years old, says **Felicia Cosman**, MD, clinical director for the National Osteoporosis Foundation. Cosman also is an osteoporosis specialist at Helen Hayes Hospital in West Haverstraw, NY, and associate professor of medicine at Columbia University in New York City. While adult women need to know

these same preventive measures, they also need to understand the risk factors and who should be tested. If women have the disease, they need to be taught the treatment options, says Cosman.

Who is at risk? Women are more at risk than men. In fact, 80% of those diagnosed with osteoporosis are women. In the United States, about eight million women and two million men have osteoporosis, according to the National Osteoporosis Foundation. Other risk factors include a thin or small frame, advanced age, a family history of osteoporosis, being postmenopausal, abnormal absence of menstrual periods, anorexia or bulimia, an inactive lifestyle, cigarette smoking, a diet low in calcium, use of certain medications such as steroids, and excessive alcohol use.

The only way to determine whether a person has osteoporosis is by administering a bone mineral density (BMD) test. There are several machines used for testing, but the two main types are central machines, which measure bone density in the hip, spine, and total body, and peripheral machines, which measure bone density in the finger, wrist, kneecap, shin, and heel. "Osteoporosis screening is exceedingly important. You can't tell that you have the disease in its early stages unless you get a bone density test," says Cosman.

Don't wait until symptoms appear

Women between the ages of 50 and 65 should get a BMD test if they have any of the known clinical risk factors for osteoporosis, and all women at age 65 and above should be tested. Those treated for osteoporosis should be re-tested every one to two years, and those in the normal range should consult their physician about when they should be re-tested, according to the National Osteoporosis Foundation. "It is important to uncover osteoporosis in the early stages of the disease, because there are no warning signs until someone breaks a bone. If it is diagnosed and treated early, a person may never break a bone," says Chard-Petrinjak.

Bone fractures can be debilitating, especially for seniors. The two most commonly occurring fractures for people with osteoporosis are of the hip and spine. Only 10% to 20% of seniors over the age of 65 who break their hip are able to resume their former lifestyle once the fracture has healed, says Cosman.

With spine fractures, the bone tends to compress in on itself. This means that people who have this injury not only lose height, but the shape of the spine and torso change, explains Cosman. People end up with their head pointing downward, which makes it difficult to walk and causes them to fall more often. They frequently have back pain, chronic neck pain, and abdominal discomfort, and are at greater risk for dying of pulmonary causes such as pneumonia. Osteoporotic spine fractures can occur spontaneously just by walking, reaching for a dish, or turning in bed. "The fractures have a big impact on the quality of life and also life span," says Cosman.

While Cosman advocates testing, she is not generally in favor of public screenings at health fairs. Peripheral machines are usually used to do the BMD tests at health fairs, and these are not as accurate as the central machines, she says. "There is no other test that is as good as the central DXA [Dual Energy X-ray Absorptiometry] test, and I think that sometimes people may be misled by the peripheral test. It is a good test if you don't have access to the central test," explains Cosman.

Another problem Cosman sees with community osteoporosis screenings is that younger women are being tested. These tests are inappropriate, because there are no medications available for the young age group. Sometimes young women are traumatized if they find out they have very low bone density, even if it is within the normal range, because the bell curve includes people with both very low and very high bone density. Osteoporosis-related fracture occurs infrequently in the young age group, says Cosman.

"We shouldn't routinely test premenopausal women. Some premenopausal women with certain underlying diseases or those taking specific drugs that can adversely affect the skeleton should be tested, but in general, we do not advocate testing in that young age group," says Cosman.

There is also the quality control issue. People who are tested at public screenings often are handed their results on a piece of paper, and they have no idea what to do with it. There isn't good follow-up, says Cosman. Yet, she does concede that some health fairs are well-run.

While people who are not always appropriate candidates due to their age or risk factors take advantage of the screenings at health fairs, their presence provides great opportunities for education, says **Brenda Covert**, RNC, women's services coordinator at Sacred Heart Medical Center in Spokane, WA. "We really want to increase

awareness in younger women that osteoporosis is something that you think about now," she says. It is especially important because many young women do not eat well and some have eating disorders. They also tend to drink a lot of soda, which has phosphorus that pulls calcium out of the bone, says Covert.

However, it is important to emphasize that the screenings are a service rather than a diagnostic procedure and are meant to identify people that may be at risk for osteoporosis, says Covert.

The vital part of a community outreach screening is education. Ten to 15 minutes are spent with each individual for this purpose during the osteoporosis screenings conducted at the University of Missouri Health Care's health information center located in Columbia (MO) Mall. "Registered nurses go over the medical history for each individual and their risk factors as well as current methods of prevention and treatment. We work with the state Osteoporosis Education Program and provide lots of handouts," says **Janet Hale**, RN, manager of the health information center in Columbia. People at risk are referred to their physicians for follow-up and are given the computer printout from the DXA heel scan.

Education during the osteoporosis screenings conducted by women's services at Sacred Heart Medical Center is both verbal and written, says Covert. Many pharmaceutical companies produce pamphlets on osteoporosis; these are distributed, as well as materials produced by the health care facility in conjunction with its orthopedic department and physicians within the community. These materials cover risk factors and ways to prevent osteoporosis focusing on diet and lifestyle. There is some mention of medications that build bone or prevent bone loss, but people are told to ask their pharmacist or health care provider for this information.

If it is a large event and 200 people are being screened each day, there's little time for individual education, says Covert. Written materials are always given to people who receive screening. The results of the screening are explained, and people are told if they need to follow up with their physician, says Covert. However, participants at most screenings are asked to fill out a brief history that includes questions about their diet and lifestyle, medications they are taking that might put them at risk for osteoporosis (such as steroids), and whether or not they have a physician. The information helps with education and follow-up. Those who don't have a physician are given a list of clinics they can go to.

Women's services at Sacred Heart Medical Center conducts the screenings wherever they are asked to. Screening locations typically include senior wellness conferences, retirement facilities, schools, and corporate health fairs. They also carry the DXA scan machine on the coach they use for medical outreach so they can do an osteoporosis screening at other times as well.

When screenings are offered at the health information center in Columbia Mall, the promotions recommend that women entering menopause and men over 65 be screened, but anyone can participate. The first time the screenings were offered, 400 people took advantage of them. Now they are offered at the center every three months.

If a person is diagnosed with osteoporosis, the education at the physician's office should include a review of all the available medications, says Cosman. The education process should help the patient make an informed decision by determining what is appropriate based on the individual's personal history, family history, other medical conditions, and personal preferences, she says.

While there are pros and cons to community outreach osteoporosis screening, it does provide an opportunity to draw attention to a disease that is often misunderstood, says Hale. "One pro is

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that we have people's attention to discuss prevention of osteoporosis and promote healthy lifestyles. The screening brings in people who may not just come in for health teaching," she says. ■

Group lectures provide facts for behavior change

Tools for a lifetime of chronic pain management

When chronic pain sufferers enroll in the outpatient pain management program at the Chronic Pain Care Center of the Rehabilitation Institute of Chicago, they are hoping for a miracle because nothing else has worked.

What they get in the four-week program is a series of group lectures as well as individual work with a physical therapist, occupational therapist, psychologist, and physician. "The pain management program teaches them the tools they can use for the rest of their life," says **Elizabeth Granfeldt**, RN, CRRN, patient education coordinator at the Chronic Pain Care Center.

Those who enroll in the pain management program usually suffer from chronic low back pain, knee pain, headaches, fibromyalgia, complex regional pain, and myofacial pain syndrome. However, not all chronic pain sufferers are accepted into this program. Every candidate for the program is evaluated, and only those who are motivated to learn and make behavioral changes to control pain are accepted.

Patients who complete the program have follow-up appointments at one month, three months, six months, and one year after completion. At each follow-up appointment, patients are evaluated to determine whether they are putting into practice the things they were taught. For example, the physical therapist will ask them to demonstrate the exercises they learned.

An important part of the program is a series of educational lectures conducted by nurse educators that cover medication, sleep, sex, nutrition, and laughter. These topics all play a part in pain control and quality of life. The information and tips covered in these lectures include the following:

• **Medication.**

In this lecture, patients learn about endorphins, the body's natural painkillers. "The body makes these natural painkillers when there are small amounts of pain and stress in a person's life. Endorphins tend to get slowed down by chronic pain, stress, nicotine, caffeine, and long-term use of narcotics," says Granfeldt. Patients learn how to increase production of endorphins, and one of the main ways to do this is through aerobic activity.

Also covered in the lecture is information on how narcotics and non-narcotics work to reduce pain and what some of their side effects are. The program teaches that the fewer narcotics used for chronic benign pain, the better. "Most are in this program because the narcotics have failed. I tell patients to save the medicine for the bad times," says Granfeldt.

Instead of using medication, patients use such techniques as pacing skills. For example, rather than mowing the whole lawn, they can mow three strips of grass, go inside and use a heat pack for their pain, and then go mow six strips.

• **Sleep.**

Sleep deprivation increases pain, so patients are taught how to sleep well at night. The lecture covers things that interfere with sleep, such as caffeine and nicotine. It also covers sleep hygiene, which encompasses establishing a regular time to go to bed and get up, limiting TV watching and reading in bed because they stimulate the brain, and stopping thoughts from racing when trying to go to sleep by imagining a big stop sign or writing down the thought in a journal and then going back to bed.

During the class, participants also take a bedroom inventory, evaluating lighting, bedding, and other factors that could influence whether or not they get a good night's sleep.

• **Sex.**

Chronic pain often impairs people's sexual activities and therefore their quality of life, which is why the topic is included in the educational lectures. "I emphasize communication and experimentation. People must be willing to talk with their partner and experiment with different sexual techniques and postures. I tell them that almost anything they are learning about therapy, they can apply to sex," says Granfeldt.

• **Nutrition.**

This lecture covers the importance of eating a good, balanced diet based on the food guide pyramid. Also covered is a discussion of herbs, because many people ask about herbs and herbal medicines. The policy of the center is that until there is a double-blind placebo-controlled study

Need More Information?

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that shows the value of an herb, the center will not advocate the use of it, says Granfeldt.

• **Laughter.**

Lots of jokes and funny stories are told during this lecture to get participants to laugh. Information on the health benefits of laughter is provided. For example, laughter is good therapy for stress and chronic pain, and it improves circulation.

Each discipline at the Chronic Pain Care Center builds on the education provided at the basic lectures. For example, psychology teaches people how to deal with stress, fear of helplessness, and feelings of loss of control, which are moods that go along with pain.

"In our program, we treat the whole person, not just back or neck pain," says Granfeldt. ■

Hospital to study effect of electronic medical records

Patients will have access to records via Internet

The University of Colorado Hospital in Denver has announced two new grants for controlled studies of how patient care is affected by electronic access to medical records. The announcement of The Commonwealth Fund gift of more than $282,000 plus a significant grant from CaP CURE was made at a University of Colorado Hospital Authority Board of Directors meeting by **Dennis Brimhall**, president and CEO.

With support from the Commonwealth Fund grant, researchers Steve Ross, MD, and C.T. Lin, MD, will manage a study of the effect of patient access to electronic medical records (EMRs) on the attitudes, expectations, and experiences of patients and physicians at a specialty clinic for heart failure at the hospital.

Researchers will conduct a controlled study of patients with congestive heart failure who are provided access to their EMRs via the Internet and will evaluate the effect of EMR availability on patients' understanding of their conditions, their ability to provide self-care, and their confidence in the care they are receiving. Physicians' views on medical record access also will be studied.

The grant from CaP CURE will help fund a study of about 30 prostate cancer support group members to determine how their use of the Internet affects their medical care. The grant will help patients communicate directly with their physicians at any time via the Internet. Michael Glode, MD, will direct that study. ■

Rehab Continuum Report™, including **Rehabilitation Outcomes Review**™, (ISSN# 1094-558X) is published monthly by American Health Consultants®, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid at Atlanta, GA 30304. POSTMASTER: Send address changes to **Rehab Continuum Report**™, P.O. Box 740059, Atlanta, GA 30374.

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Subscription rates: U.S.A., one year (12 issues), $545. Outside U.S., add $30 per year, total prepaid in U.S. funds. Two to nine additional copies, $436 per year; 10 to 20 additional copies, $327 per year; for more than 20, call (800) 688-2421. Missing issues will be fulfilled by customer service free of charge when contacted within one month of the missing issue date. **Back issues**, when available, are $91 each.(GST registration number R128870672.)

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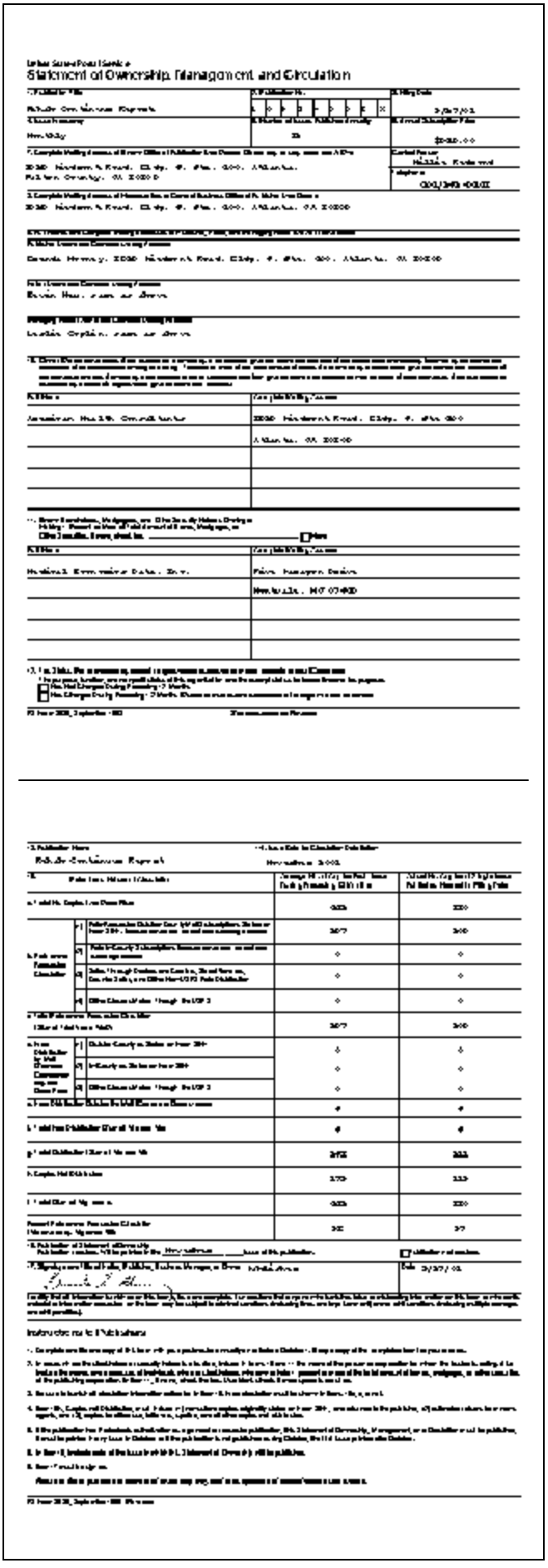
Hospital profit margins show negligible increase

Current margins unsustainable in long run

Operating profit margins at U.S. hospitals flattened at an annualized average of 3.69% in 2000, indicating only a slim degree of financial health, according to a report by Solucient, a provider of benchmark information on health care.

Hospital operating margins increased 0.41% over 1999 and remained relatively low, a full 36.6% lower than in 1997. Solucient president **Gregg Bennett** says margins of 3% to 4% are not sustainable in the long run, especially given the pressure from increasing drug costs and hospital labor shortages. Bennett also says hospitals are still feeling the sting of the 1997 Balanced Budget Act and its clamp on Medicare payments. ■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