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INSIDE

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Resource Bank
2001 Reader Survey

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Professional Development: Results of a National Survey

Setting CM caseloads requires perfect balance of many factors

Experts identify factors and how to determine correct balance

Caseloads are a primary factor in the quality of case management outcomes. Setting appropriate case management caseloads has always been a hotly debated issue. In December 2000, American Health Consultants in Atlanta, publisher of *Case Management Advisor*, and the Case Management Society of America (CMSA) in Little Rock, AR, conducted a national survey of case managers to help clarify some of the issues surrounding the caseload debate.

More than 520 case managers responded to the 2000 Case Management Caseload Survey. **(For a breakdown of respondents by practice setting and description of our methodology, see the box on p. 59.)** Now that the results have been tabulated, *Case Management Advisor* has asked industry leaders to help decipher their significance.

When URAC in Washington, DC, added a caseload standard to the case management organization accreditation it launched in 1999, the caseload issue took on greater and more immediate significance. "URAC deliberately kept the standard broad," notes **Catherine Mullahy**, RN, CRRN, CCM, president-elect of the CMSA and president of Options Unlimited, a case management company in Huntington, NY. Mullahy served on the committee that developed the URAC case management standards.

"There are so many divergent practice settings, it is simply not possible to say for all organizations, 'This is the correct number of cases a case manager should manage,'" explains Mullahy. "What the standard requires is that case management organizations have a reasonable, established policy for setting case management caseloads that fit the organization's practice setting and case management goals."

URAC drew attention to the caseload issue but did little to settle the questions being debated by the industry. Specifically, URAC's case management standard does not answer the all-important question: How many active cases should case managers manage each month?

"It's important that URAC thought caseload was important enough to include in their case management standards," notes **Lesia C. Stuart**, RN, BSN, CCM, a member of the national board of CMSA who helped develop the caseload survey tool. "I think many case managers had hoped that the URAC standard's final language would set a magic caseload number."

Stuart adds, "They [members of URAC case management standards' committee] discovered, as we did in the 2000 Case Management Caseload Survey, that there is no such thing as that magic caseload number that fits every case management organization. URAC placed its emphasis right where it belongs — on the importance of organizations developing a methodology to ensure quality when assigning case management caseloads."

When it comes to setting case management caseloads, the magic number lies somewhere between 16 and 75 active cases each month, according to the 2000 Case Management Caseload Survey. Specific findings include:

- 12.3% of respondents reported managing one to 15 active cases each month.
- 23.9% reported managing 16 to 30 active cases each month.
- 14.8% reported managing 31 to 50 active cases each month.
- 21.6% reported managing 51 to 75 active cases each month.
- 10.5% reported managing 76 to 100 active cases each month.
- 16.9% reported managing more than 100 active cases each month.

What are our goals?

Finding that perfect caseload for case managers in your own organization depends on exactly how you define case management, as well as your case management goals, say industry leaders. "In addition to being a primary factor in the outcomes of case management, caseloads also are a measure of workload and productivity," says **Sandra L. Lowery**, RN, BSN, CRRN, CCM, president of CCMI Associates (formerly Consultants in Case Management Intervention) in Francestown, NH, and president of CMSA. "They can negatively impact outcomes if they are set too high and the cost of case management services if set too low."

Lowery explains that finding the appropriate case management caseload that optimizes both case manager productivity and case management outcomes depends on factors that include:

- level of preparation for the case management role;
- the need for case managers to perform multiple roles within their organizations;
- the work environment;
- the use of tools for case management;
- the availability of resources.

"We also intuitively know that the acuity of the population served will have an impact on the number of cases a case manager can effectively manage," says Lowery. "The relationship between the variables and the outcome is truly the only reliable way to demonstrate what functions are necessary for effective case management, which can the set the standard for an organization's caseload determinations."

Mullahy stresses that setting case management caseloads begins with an organization's philosophical approach to case management. "You cannot set case management caseloads without first defining exactly what case management is within your organization," she cautions.

"If your definition of case management includes working individually and collaboratively with at-risk patients and their families, monitoring patient progress, supporting the patient's family, changing services when necessary, and working with financial intermediaries on behalf of your patient, then you are going to be able to handle fewer cases per month than another organization with a less comprehensive

COMING IN FUTURE MONTHS

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- Mainstreaming spiritual care into treatment plans
- How will the graying of America impact workers' comp?

CMs respond to national survey

The first annual American Health Consultants / Case Management Society of America Case Management Caseload Survey was distributed in the December 2000 issues of several American Health Consultants newsletters, including *Case Management Advisor*. In addition, the survey tool was available on-line at www.ahcpub.com and www.cmsa.org through mid-January 2001.

A total of 522 case managers representing a wide range of practice settings responded either on-line or by fax. The largest response rate came from acute care case managers who composed 36.5% of the total respondents, compared to home health case managers, who composed less than 2% of the total.

Here are some other characteristics of case managers represented in the data set:

- Roughly 3% were corporation- or employer-based case managers.
- Nearly 13% were employed by independent case management companies.
- Just less than 2% were Medicaid or Medicare case managers.
- Roughly 22% were health plan or health insurance case managers.
- Just less than 2% were disability or long-term care case managers.
- Roughly 13% were workers' comp case managers.
- Nearly 5% were skilled nursing facility or rehabilitation facility case managers.
- Roughly 3% were community or physician-based case managers.

We will continue to analyze the survey results and ask industry experts to help you understand their significance in the "Professional Development" section of the newsletter. An executive summary of the entire data set will be available on-line at the end of March. To find the executive summary, visit www.ahcpub.com or www.cmsa.org. In addition, a white paper analyzing the data set by practice setting will be released in June 2001. ■

approach," Mullahy says, adding that her own case managers handle an average caseload of 25 to 30 cases per month.

Naturally, the number of cases a case manager can manage comfortably also depends largely on exactly how the case manager interacts with patients and providers, say experts. It's simply common sense that a telephonic case manager will manage a larger monthly caseload than an on-site case manager.

It seems that even in this technological age, most case managers still have at least some face-to-face contact with patients and providers. **(The survey also reveals that case managers face an alarming technology gap; see p. 60 for further discussion.)** Findings from the 2000 Case Management Caseload Survey include:

- Roughly 11% of case managers reported spending none of their time on telephonic case management.
- More than 35% of case managers reported spending between 1% and 25% of their time on telephonic case management.
- Roughly 20% of case managers reported spending between 26% and 50% of their time on telephonic case management.
- Roughly 33% of case managers reported spending between 51% and 100% of their time on telephonic case management.

The resources case managers have access to and the tools available to them also affect the number of cases they can manage effectively, says Stuart, a case manager in Chattanooga, TN. "My own organization introduced a case management module to our information system in the 1990s with a goal of moving to a paperless documentation system, which we stepped in over a period of time." Stuart adds that she knows many case managers who continue to keep paper notes, even when their organizations have electronic documentation capabilities. "I know that in our own experience, we've found that our technical capabilities help our case managers effectively manage more cases."

The majority of case managers who responded to the 2000 Case Management Caseload Survey reported that they also use a combination of paper and electronic records. Specific findings include:

- 23.1% of case managers reported using paper records only.
- 15.6% of case managers reported using electronic records only.
- 61.3% of case managers reported using a combination of paper and electronic records.

In addition to case manager / patient interaction, the severity or acuity of patients in an organization's population must be weighed when setting caseloads, say experts. "For each individual case manager, we look at the mix between simple cases which are progressing smoothly and are expected to close without incident and more complex cases which require much more attention," says Stuart.

"The severity and types of conditions that end up in someone's case mix are reviewed constantly in our organization," says Mullahy. "We look at each case manager's case mix and allow the needs of the cases in that mix to dictate how many cases we assign each case manager. In a given month, one case manager may have 35 active cases, even though our average caseload is 25 to 30, because the cases themselves are stable and uncomplicated. Another case manager may only be carrying 20, but each case in that 20 is a complex case demanding special attention."

No matter what magic number your organization sets for its case management caseloads, care must be taken to assess whether that number is realistic and allows case managers to maintain quality standards, note experts.

"We review our case manager's notes to make sure each case is progressing reasonably and that quality of care is being maintained," notes Mullahy. "If I don't see movement in a case, I start to question whether the case manager is so overwhelmed by her caseload that she's only doing crisis management rather than problem identification and resolution. One of the best contributions of case management is prevention of problems and promotion of better outcomes. You can't do that if your work load is so high, all you have time for is plugging holes in the dike."

Patient satisfaction surveys also are a good indicator of whether your case management caseload is set appropriately, say Mullahy and Stuart. "We ask patients questions which include, 'How many times were you called by your case manager?' and 'Were you called too frequently?' If our patients are happy with our case management services, it's likely that we have set an appropriate caseload," says Mullahy, adding that Options Unlimited also periodically speaks directly with patients as part of its own quality assurance effort.

"Patient satisfaction scores can provide an organization with useful feedback on its case management caseloads," agrees Stuart. "If the case manager's caseload is too high, she may appear rushed when she speaks with patients on the phone, and that may negatively impact patient satisfaction scores."

In addition to patient satisfaction surveys, Stuart looks at her case managers' individual quality audit scores to assess the appropriateness of case management caseloads. "We set quality standards for specific case management tasks. If a case manager's caseload is too high, she may have difficulty meeting those standards."

As industry leaders continue to analyze the results of the 2000 Case Management Caseload Survey, they hope that the data help organizations promote both case manager productivity and desirable case management outcomes. "Analysis of this leading-edge data will open opportunities for insight into the range of caseloads currently being assigned in various practice settings," notes **Jeanne Boling**, MSN, CRRN, CDMS, CCM, executive director of CMSA. "The information and best practice benchmarks will be helpful to accrediting organizations such as URAC to assist in evaluating appropriate and best practice."

"The caseload survey data will provide comparative data relative to what others in the field are setting for caseload expectations," adds Lowery. "It will sensitize case management programs to consider the multiple variables that can affect productivity measurement, such as the travel factor involved in on-site and field case management, and electronic vs. paper documentation, and hopefully spur them to evaluate their current practice model relative to these variables." ■

Case managers face Web technology gap

Surf's up! It's time to get your feet wet

Navigating the Internet is a skill most elementary school students master by the second grade these days. Consumers are logging on daily to gather medical information. Yet case managers who are charged with the responsibility of guiding those same consumers to make informed decisions about treatment options lag far behind the average American consumer when it comes to surfing the Web, according to the

results of the 2000 Case Management Caseload Survey from American Health Consultants in Atlanta and the Case Management Society of America (CMSA) in Little Rock, AR. **(For more information on the survey, see story on p. 57 and box on p. 59.)**

Of 522 case managers responding to the survey, only 22.4% reported that they currently use the Internet in their daily practice. Even more alarming, 78% reported that they recommend the use of the Internet as a resource to their patients, indicating that there is a huge technology gap between case managers and their patients, say experts.

"Navigating the Web is quickly becoming a fundamental skill for case managers, not only for operational efficiency but for credibility with consumers," says **Sandra L. Lowery**, RN, BSN, CRRN, CCM, president of CCMI Associates (formerly Consultants in Case Management Intervention) in Francestown, NH, and president of CMSA. "Case managers not only need to know how to access information on the Internet but how to evaluate and use it, as well."

Unfortunately, notes **Catherine Mullahy**, RN, CRRN, CCM, president-elect of the CMSA and president of Options Unlimited, a case management firm in Huntington, NY, case management is often "one of the last areas to receive the latest technology." She explains, "When case management receives Internet access and other information resources will depend on how case management is positioned within an organization. Case management is most often part of the nonprofit side of an organization; the nice offices and latest technology often first go to the profit areas, such as marketing and sales."

Lesia C. Stuart, RN, BSN, CCM, a director of health care operations in Chattanooga, TN, and a member of the national board of CMSA who helped develop the caseload survey tool, notes that all of the case managers in her department have Internet access at their desks. "As part of their training, our case managers learn how to navigate the Web and receive a list of recommended Web sites that provide information relevant to their jobs. In addition, most conference and seminar presenters now include a list of Internet resources on their subject matter for those in attendance to take away with them. Helping patients find credible and appropriate Web sites for their particular disease or disorder is now part of the case manager's job, which has always included patient counseling and education."

Many case management organizations, including Options Unlimited, are adding Internet knowledge and related computer skills to the list of qualifications they look for in a case management job applicant. "I've started advertising job openings on Monster.com, an Internet job posting site. If a job applicant responds to me from the Monster.com listing, I know they know how to get the job done in this technological age. It's now one of the things I look for when hiring new case managers," says Mullahy. "Another is keyboard skills. We enter our notes electronically. A case manager without strong keyboard skills will not be productive in this environment."

Some case management supervisors worry that case managers will spend too much time on-line, but Stuart and Mullahy note it's fairly simple to monitor Internet use and make sure that it's not impacting case management productivity.

"It's important to set strict Internet policies and procedures that define appropriate use of the Internet," says Stuart. "It's also important that violation of the policy leads to disciplinary measures."

Fears of Internet abuse unfounded

Organizations also may add options to their information systems that track the amount of time case managers spend on-line and even which sites they visit, notes Stuart. "I think as managers we were fearful when we provided our case managers with Internet access at their desks about two years ago, but those fears have been unfounded. We set guidelines, and they've been followed. The Internet is simply a necessary tool for case managers to do their jobs in 2001."

"I simply tell case managers that I can't bill clients for the time they spend surfing the Internet," says Mullahy. "It makes them much more conscientious about getting in and getting out with the information they need. If they don't get their work done, they can't bill their hours, and it becomes apparent fairly quickly that there's a problem. There are definitely management issues surrounding Internet access for case managers, but need far outweighs any concerns about possible abuse."

"Consider the value of a case manager who can click and access information about a clinical trial and explain it to a client within a few minutes," Lowery points out, ". . . or the value of a case manager who can quickly locate a service provider for a client who is moving out of state." ■

Seniors have special pharmacy needs

Experts urge CMs to support better care

Medicare drug benefits were a central theme of last year's presidential election. While then-Texas Governor George W. Bush and Vice President Al Gore struggled to find the policy that would win them the most votes, health care advocates fought to keep the health issues surrounding pharmaceutical care for seniors central to the debate.

Now, the debate continues in Congress as legislators work to shore up the beleaguered Medicare system. Researchers from the Office of Health Policy and Clinical Outcomes at Thomas Jefferson University Hospital in Philadelphia are urging case managers to add their voices to those debating the future of health benefits for American seniors and to make sure any Medicare drug benefit adopted by the federal government recognizes the special pharmaceutical needs of this patient population.

Seniors lack coordination of care

"The problem is that many seniors are on multiple medications, and no one is coordinating their pharmaceutical care — no one owns this piece of the health care system," says **David B. Nash**, MD, MBA, FACP, associate dean of Jefferson Medical College, director of the Office of Health Policy and Clinical Outcomes at Thomas Jefferson University Hospital, and principal author of *Why the Elderly Need Individualized Pharmaceutical Care*.

Nash and co-author **Mary Lou Chatterton**, PharmD, fellowship and project director with the Office of Health Policy and Clinical Outcomes, note that the pharmaceutical needs of the elderly are unique for the following reasons:

• **High incidence of comorbidity.** Most Americans over age 55 have more than two chronic conditions, says Nash. Roughly 30% of patients 75 or older with two or more chronic conditions take at least five prescription drugs daily, he adds.

"Patients with multiple conditions require multiple medications," explains Nash. "Not only does this mean the elderly run a high risk for drug interactions," he notes, "but it also increases the likelihood that the patient is seeing more than one physician and that no single physician and no single pharmacy has access to information about all the medications the patient is taking."

• **Physiological changes.** As the body ages, age-related changes affect the outcomes of drug therapy, says Chatterton. "Drug absorption rates fluctuate as the organs age," she notes. "For example, changes in the gastrointestinal tract affect the absorption of drugs taken orally, and drugs taken through the skin may be slowed due to decreased vascular function."

Liver function changes in elderly

Slower blood-flow through the liver is also common in older patients. Drugs that depend on blood-flow through the liver, such as lidocaine, should be started at lower doses in the elderly and then increased as necessary to reach the desired therapeutic effect.

In addition, Chatterton and Nash say the body maintains less lean body tissue and more fatty tissue as it ages, which affects the dosage needed to produce the desired therapeutic effect.

• **Variation in drug actions.** The elderly react uniquely to medications, say Nash and Chatterton, adding that for any single drug, an elderly patient may experience an enhanced effect, a diminished effect, or an adverse affect due to factors associated with the aging process.

"As a group, the elderly have unique reactions to many common medications," explains Nash. "That simply means that a strict formulary will not work for an elderly population, and as we draft health care policy for the elderly we must keep this in mind."

Chatterton adds that a policy change that provides reimbursement for pharmaceutical counseling would also help improve drug therapy outcomes in the elderly. "Pharmacists aren't compensated for patient counseling except for certain exceptions which provide counseling for groups, such as diabetics," she notes. "Time is a real barrier to patient counseling. If a pharmacist spends 30 minutes or more counseling an elderly patient on their prescription drugs, that's time spent away from dispensing."

Chatterton and Nash stress that case managers

must gain a better understanding of the differences in how the elderly react to medications. In addition, Nash notes that case managers are in a position to play a vital role in helping their older patients become better-educated pharmaceutical consumers. "You must provide good patient education on these issues. Part of your responsibility as case managers is to promote consumer education," he stresses.

Nash and Chatterton suggest several steps case managers can take to help older patients receive better pharmaceutical care:

- Encourage patients to ask their physicians about their prescriptions.
- Help patients develop a list of questions to ask their physicians.
- Direct patients to reputable Web-based information on pharmaceuticals.

An unexpected change in the health status of an elderly client may signal a drug-related issue, Chatterton says. "One of your first lines of attack should be to eliminate the possibility of a drug reaction or interaction," she says.

Chatterton recommends case managers ask their patients these questions:

- Have you seen a new physician?
- Have you started a new prescription, supplement, or over-the-counter medication?
- Have you stopped taking a prescription?
- Can you list all of your current prescriptions, over-the-counter medications, herbal supplements, and vitamins?
- Have you changed your dosage of any prescriptions, over-the-counter medications, herbal supplements, or vitamins?

If there is a single message that Nash and Chatterton hope is received by policy-makers, consumers, and health care professionals who read their recently released paper, it's this: Elderly people react uniquely to medications and require a wide range of choices to get a good therapeutic fit.

"Monetary issues are always a concern," admits Chatterton. "But, as we continue the debate over Medicare drug benefits, I hope that the special pharmaceutical needs of the elderly are put above those monetary limitations."

For more information about the report *Why the Elderly Need Individualized Pharmaceutical Care*, contact the Office of Health Policy and Clinical Outcomes, Thomas Jefferson University, 1015 Walnut St., Suite 115, Philadelphia, PA 19107-5099. Telephone: (215) 955-6969. Fax: (215) 923-7583. ■

Internet improves CHF outcomes, study shows

Costs come down as compliance rises

More than four million Americans suffer from congestive heart failure (CHF). This costly and debilitating disease most often affects the elderly, and the fatigue and shortness of breath associated with CHF keep its victims isolated and inactive without the energy to participate in social activities.

CHF is not only a costly disease, leading to multiple hospitalizations and emergency department visits; the isolation it causes often leads to depression.

One California disease management company launched a pilot program to see if it could successfully integrate its proven disease management approach with high technology. It found that good things happen when seniors with CHF go on-line.

"We weren't sure seniors would embrace the Internet. More than 90% of the seniors we enrolled in the one-year pilot had never used a computer before," explains **Christine M. Ruggerio**, RN, MSN, manager of clinical Web programs for LifeMasters Supported SelfCare in Newport Beach, CA. "Not only did the technology engage the patients, but compliance with daily data entry was greater than 80%."

The perfect blend

The study population was a group of 69 patients with moderate to severe CHF who were randomly placed into either an Internet group or an interactive voice response (IVR) group. The Internet group used a personal computer to enter their vital signs and symptoms into the LifeMasters database via the Internet. The Internet group also was able to access disease-specific content, community chat, and e-mail correspondence with a LifeMasters nurse. In addition to entering their vital signs, patients were asked a series of questions to determine their health status. If their answers or vital signs indicated a potential problem, patients received a call from their LifeMasters nurse.

The IVR group used a touch-tone phone to enter similar measurements into the LifeMasters database and answer the same series of questions. Like the Internet group, if the vital signs or answers indicated a potential problem, patients received a telephone call from their LifeMasters nurse. IVR users had access to printed disease-specific patient education materials and telephonic interaction with a LifeMasters nurse.

Both the Internet and the IVR groups received CHF management education from a LifeMasters nurse during scheduled telephone calls. Topics covered during the eight-week education module include:

- diet;
- exercise;
- medications;
- psychosocial/coping;
- pathophysiology;
- symptom management;
- risk factor reduction and behavior change.

Patients in both groups were patients of Physicians Medical Group of Santa Cruz County, CA. A third group did not participate in either the Internet or IVR groups but received traditional CHF care as offered by the medical group.

Ruggerio notes that both intervention groups did much better than the traditional care group. LifeMasters also found that the Internet group had a slight edge over the IVR group in every area measured.

Findings include:

— The Internet group had 20 hospitalizations, compared to 39 for the IVR group.

— The Internet group had a total of 149 hospital days, compared to 258 days for the IVR group.

— The Internet group had a reporting compliance rate of just below 88%, compared to roughly 76% for the IVR group.

— The Internet group had an overall per member per month savings of $6.78, compared to a $15.63 increase in per member per month costs for the IVR group. However, these figures do not accurately reflect the overall cost savings for each group, cautions Ruggerio.

"When we looked more closely at claims costs, most of the increases in claims costs were due to diabetes and end stage renal disease — not cardiac or CHF-related claims," she says. "Both groups had a decrease in cardiac costs. The decrease in cardiac costs for the IVR group was $164.93 per member per month compared to $246.52 for the Internet group." Cardiac claims for the unenrolled population increased by $134.87 per member per month.

Both groups reported satisfaction with the program, says Ruggerio. "The overall patient satisfaction rate was 83% for both groups, and 73% of patients in both groups reported that the program 'made a difference' in their care," she notes.

Learning curve

Computers for the Internet group were provided by LifeMasters. Ruggerio personally went to each patient's home to help set up the computer and help seniors learn how to use the computer to access the Internet and input their vital signs on the customized Web site. "Repetition was very important. I made sure that patients used the Internet to enter their vital signs once or twice with me watching," she notes. "I also sat with them while they learned to e-mail and do research on the Internet."

Not only did the Internet group experience better outcomes than the IVR group; seniors in the Internet group embraced their new computer prowess. "Roughly 90% of patients in the Internet group elected to continue using the computer for Internet entry of vital signs, health care monitoring, and other purposes," says Ruggerio. "It only takes about four or five minutes for patients to enter their vital signs on the Web site, but patients in the Internet group spent an average of 37 minutes on-line each day. They told us they used the Internet to e-mail friends and family, watch stocks, research their interests, chat, and play on-line games." **(See related story on p. 69.)**

In fact, Ruggerio encouraged seniors in the study to use the computer to play games like Solitaire in order to learn how to use a mouse. "Most of the patients had never used a computer before, and playing games helped them practice with the mouse," she says. "It helped increase their flexibility."

LifeMasters learned through trial and error how to make the Internet user-friendly for seniors. Ruggerio shares these tips for making the Internet more accessible to older patients:

- **Use large 17" monitors.**
- **Place monitors at a proper distance and angle to be used with bifocal lenses.**
- **Increase font sizes used on Web sites.**
- **Include plenty of white space on Web sites.**
- **Use dark buttons on Web sites.**

"Patients with diabetic retinopathy have difficulty seeing light pastels," Ruggerio points out.

(Continued on page 69)

Reports From the Field™

Pediatrics

ADHD kids cost more, sustain more injuries

Children with attention-deficit/hyperactivity disorder (ADHD) have higher medical costs than children without ADHD, according to a recent study reported in the *Journal of the American Medical Association*. Researchers found that children with ADHD had more injuries and more illnesses than other children and total medical costs more than double those of other children.

Researchers followed 4,880 children born in Rochester, NY, between 1976 and 1982 and followed them through 1995 using school and medical records to identify those with ADHD. Among the 4,119 children who remained in the Rochester area through 1995, 7.5%, or 309, met criteria for ADHD.

Researchers compared children with ADHD to those without and found the following:

- 59% of children with ADHD had major injuries, compared to 49% of children without ADHD.
- 22% of children with ADHD had asthma, compared to 13% of children without ADHD.
- Inpatient admissions were 26% for children with ADHD, compared to 18% for children without ADHD.
- Hospital outpatient admissions were 41% for children with ADHD, compared to 33% for children without ADHD.
- Emergency department (ED) admissions were 81% for children with ADHD, compared to 74% for children without ADHD.
- The nine-year median costs for children with ADHD were $4,306, compared to $1,944 for children without ADHD.

Higher costs remained true even for ADHD children without hospital and ED admissions. For the subset of children without admissions, the median 1987 medical costs were $128 for children with ADHD compared to $65 for patients without ADHD.

[See: Leibson CL, Katusic SK, Barbaresi WJ, et al. Use and costs of medical care for children and adolescents with and without attention-deficit/ hyperactivity disorder. *JAMA* 2001; 285:60-66.] ▼

Follow-up care reduces costs in high-risk infants

Outcomes also improve with follow-up

A program of comprehensive neonatal follow-up care after hospital discharge for inner-city high-risk infants reduces life-threatening illnesses and appears to reduce medical costs by more than $3,000 per infant, according to a study published in the *Journal of the American Medical Association*.

Researchers at the University of Texas Southwestern Medical Center at Dallas found that when high-risk infants received comprehensive follow-up care, 47% fewer of them died or developed life-threatening illnesses that required admission for pediatric intensive care. High-risk infants were defined as those weighing less than

1,000 g at birth or those weighing 1,001 to 1,500 g who required mechanical ventilation.

Comprehensive follow-up care for high-risk infants was defined as 24-hour access to highly experienced caregivers and five-day-a-week follow-up care, which included well-baby care, treatment for acute and chronic illnesses, and routine follow-up care. Routine follow-up care was available two days per week and included well-baby care and chronic illness management.

For all care between discharge and one year, the estimated average cost per infant was $6,265 for comprehensive care and $9,913 for routine care.

[See: Broyles RS, Tyson JE, Heyne ET, et al. Comprehensive follow-up care and life-threatening illnesses among high-risk infants: A randomized controlled trial. *JAMA* 2000; 284:2070-2076.] ■

Oncology

Oral drug fights cancer; Kiss infusion good-bye

Capecitabine, an orally administered anti-cancer drug that mimics 5-fluorouracil (which requires infusion), offers great promise for treating women with breast cancer that fails to respond to chemotherapy agents, according to a new study released in *The Oncologist*.

The author looked at the results of two large, multicenter phase II studies with more than 230 patients. In these studies, capecitabine showed a response rate of 20% to 25% in patients who had failed treatment with other chemotherapy agents.

As an oral agent, capecitabine is more convenient for patients and clinicians and permits more home-based therapy. In addition to added convenience, capecitabine has another advantage over the drug 5-fluorouracil: It is activated by an enzyme that is more active in tumors than in normal tissue, meaning it can generate more of the cancer-killing 5-fluorouracil directly into the tumor, reducing certain side effects such as hair loss and bone-marrow suppression.

[See: Blum JL. The role of capecitabine, an oral enzymatically activated fluoropyrimidine, in the treatment of metastatic breast cancer. *Oncologist* 2001; 6:56-64.] ■

Disease Management

Pravastatin reduces diabetes onset

Cholesterol drug prevents type 2 diabetes

Scottish researchers at the University of Glasgow have discovered that pravastatin, a drug widely prescribed to lower cholesterol and reduce the risk of heart attack and stroke, may also prevent the onset of diabetes in patients at risk for developing type 2 diabetes, according to a study in the journal *Circulation*.

The study of 5,974 men with elevated cholesterol levels and no history of heart disease showed that men randomly assigned to pravastatin therapy experienced a 30% reduction in diabetes risk. Researchers took the following baseline predictors of the transition from normal glucose control to diabetes:

- body mass index;
- log triglyceride;
- glucose;
- log white blood cell count;
- systolic blood pressure;
- total and HDL cholesterol.

Researchers found that men receiving placebo had about a 3% chance of developing diabetes over the five-year study — a normal maturity for onset of type 2 diabetes. Men receiving pravastatin experienced a 30% reduction in their risk of developing diabetes.

[See: Freeman DJ, Norrie J, Sattar N, et al. Pravastatin and the development of diabetes mellitus. *Circulation* 2001; 103:357-362.] ▼

Drug option dissolves clots in catheters

May eliminate need for surgery

Surgery remains one of the few options for restoring blood flow to a long-term, indwelling catheter blocked by blood clots. Now, a researcher at the University of Nebraska Medical Center in Omaha reports that recombinant tissue plasminogen activator (t-PA) effectively dissolves blood clots and restores function without surgery.

William Haire, MD, presented results of the six-month, randomized, double-blind study of 150 patients with blocked catheters at the recent International Symposium on Endovascular Therapy in Miami. Patients in the study were randomized into two groups. In one group, patients were first given a dose of placebo in their catheter. If catheter function was not restored, patients received one 2-mg dose of t-PA. In this group, researchers found that 17.1% of patients had full function of their catheter after receiving placebo. In patients who received the placebo followed by t-PA, 90% regained full function of their catheter.

In the second group, each patient first received a 2-mg dose of t-PA, followed by another dose if the catheter remained blocked. Researchers found that 73.9% of patients had full function of their catheters after one dose of t-PA. Of patients whose catheters remained clogged, 90% regained full function after a second dose of t-PA.

No serious drug-related adverse effects were experienced by either group as a result of treatment, and there were no cases of intracranial hemorrhage or embolism. ■

Women's Health

Delivery time shorter with vaginal inserts

Drug also results in more vaginal births

Oxytocin administered concurrently with sustained-release dinoprostone vaginal insert significantly shortens delivery time and results in a higher proportion of vaginal deliveries within 24 hours with no apparent increase in maternal/fetal risk, according to a study presented at the recent Society of Maternal-Fetal Medicine 2001 Annual Meeting in Reno, NV.

Researchers from the University of New Mexico Health Sciences Center in Albuquerque randomly assigned 71 women with singleton pregnancies greater than 36 weeks and with no prior difficulties to one of two groups. One group received a low-dose of oxytocin infusion started 10 minutes after placement of a dinoprostone vaginal insert (the immediate group). The second group received a low-dose oxytocin infusion started 30 minutes after removal of the dinoprostone insert (the delayed group). In both groups, the vaginal insert was left in place for up to 12 hours. During this time, fetal heart rate and uterine activity were continuously monitored.

Findings include:

- Average induction to delivery time was 582 minutes shorter in the immediate group than in the delayed group.
- The proportion of vaginal deliveries within 24 hours was 93% in the immediate group compared to 55% in the delayed group.
- No uterine hyperstimulation or increased risk of fetal heart rate or other negative outcomes were observed. ▼

Study finds low rate of breast-conserving surgery

10 years later, few heed NIH advice

A clinical study released by the Solucient Leadership Institute in Evanston, IL, finds that 10 years after the National Institutes of Health in Bethesda, MD, recommended breast-conserving surgery (BCS) for eligible patients, only women at the nation's top-performing hospitals receive less invasive procedures. In addition, the report reveals wide variance in the treatment of breast cancer based on geographic and demographic variables.

Specifically, Solucient found that:

- Women in Southern states are 21% less likely to receive BCS and women in the Western states are 17% less likely to receive BCS than women in the Northeast.
- 46% of Hispanic women receive BCS compared to 47.5% of African-American women, 48.5% of Asian American women, and 51.1% of White women.
- Women insured by Medicaid are 69% less likely than privately insured women to receive immediate breast reconstruction following mastectomy.
- Immediate reconstructive surgery following mastectomy is more common in teaching hospitals than in community hospitals.
- Patients are more likely to receive radiation therapy following BCS in top-performing hospitals, as well as in hospitals in the Western United States.

• Younger patients are more likely to receive radiation following BCS than older patients.

"An area of concern identified in this study is that women on Medicaid are significantly less likely to have immediate reconstructive surgery than privately insured women," notes **Jean Chenoweth**, executive director of the Solucient Leadership Institute. "This underscores the fact that women with breast cancer may not be offered the same options, and that some treatments may not reflect best practice and follow-up care."

The study, "100 Top Hospitals' Clinical Research Program: Management of Breast Cancer," compared the performance of 100 top performing hospitals as identified by Solucient, formerly the HCIA-Sachs Institute, to other hospitals on each of the following three outcomes:

• use of BCS;
• use of radiation therapy following BCS;
• performance of immediate breast reconstruction following mastectomy.

Excerpts from the study and ordering information are available on the institute's Web site at www.100tophospitals.com. ■

Women's Health

Video helps patients make decisions

Better education may reduce back surgery rates

Back surgery rates in the United States are rising rapidly, according to the Agency for Healthcare Quality and Research in Rockville, MD. A recent study in *Medical Care* finds that an interactive video helps patients make better decisions about whether or not to undergo elective back surgery.

Researchers randomly assigned 171 patients with a range of back problems including herniated disks and spinal stenosis into two groups. One group saw an interactive video and received an educational booklet about surgery for their condition; the second group received the booklet alone.

Symptom and function outcomes at three months and 12 months were similar for the two groups, but the overall surgery rate was 22% lower in the video group. Patients with herniated disks in the video group who learned that their problem usually improves with non-surgical care had a surgical rate of 32% compared to 47% for the booklet-only group. Patients with spinal stenosis in the video group who learned their condition would probably stay the same for years without surgery had higher surgery rates than the booklet-only group — 39% compared to 29%.

The video had little effect on patient satisfaction, but patients in the video group felt better informed than patients in the booklet-only group, researchers note.

[See: Deyo RA, Cherkin DC, Weinstein J, et al. Involving patients in clinical decisions: Impact of an interactive video program on use of back surgery. *Medical Care* 2000; 38:959-969. ■

New Drug UPDATE

Drug expands options for schizophrenia treatment

Pfizer in New York City recently received FDA approval for ziprasidone HCl capsules, an antipsychotic medicine for the treatment of schizophrenia.

Ziprasidone is a serotonin and dopamine antagonist that is effective across its dose range in treating both positive and negative symptoms associated with schizophrenia, including visual and auditory hallucinations, delusions, lack of motivation, and social withdrawal.

In placebo-controlled, short-term clinical trials, ziprasidone (20 to 100 mg twice daily) was statistically superior to placebo for treatment of positive and negative symptoms in patients with acute exacerbation of schizophrenia and schizoaffective disorder.

In a one-year placebo-controlled study in chronic, stable inpatients, ziprasidone was shown effective in delaying time to and rate of relapse. In addition, ziprasidone does not appear to cause the weight gain associated with other antipsychotic medicines. ■

(Continued from page 64)

"We finally went to dark blue buttons with yellow printing, which were easy for patients to see."

In some ways, older patients embrace the Internet more readily than younger ones, she adds. "We found this group of older patients was much more tolerant of the slow speed than younger patients we've worked with on Internet disease management programs," she explains. "It was quite refreshing, really. The site itself works fairly quickly, but accessing the library can take time, and seniors were much more patient than younger patients."

LifeMasters is encouraged by the results of this pilot and plans to continue working to integrate the Internet into its disease management programs. "We have several younger populations, such as diabetics, who could benefit from this type of Internet monitoring and education intervention," Ruggerio explains. "Our diabetics are mostly working people. They are not going to make a phone call from work and tie up the phone line, but they can quickly access the Internet, enter their data, and continue with their own work. The Internet offers people alternatives for disease management and monitoring. I'm very pleased with both the clinical and anecdotal evidence of how the computer not only provides effective disease management but also serves as a lifeline for patients with chronic disease." ■

Plugging in helps seniors reconnect

Elderly find Internet anything but isolating

The media often portrays the Internet as a phenomenon that isolates people from the outside world. But a California disease management company found that for elderly patients with congestive heart failure (CHF), the Internet helps them reconnect — not disconnect.

"CHF patients are often cut off from the outside world," notes **Christine M. Ruggerio**, RN, MSN, manager of clinical Web programs for LifeMasters Supported SelfCare in Newport Beach, CA. "This is especially true if they are using oxygen and can't move around easily."

During a pilot program to deliver disease management and monitoring services to CHF patients using the Internet, LifeMasters found that the Internet can provide a vital lifeline that links house-bound patients to family and friends. "One patient used to teach. One of his former students saw an article about his old teacher participating in the Internet CHF program in a magazine, and started e-mailing him," says Ruggerio. "The old student told him he was now a successful man and that it was largely due to the inspiration of his old teacher. That man would never have known the impact he made on his students if it hadn't been for the Internet program. Soon he was corresponding regularly with several of his old students via e-mail."

Eighty-three-year-old **Jack Watt**, who participated in the CHF trial, keeps in touch with his relatives on-line. "My granddaughter is away at college and we e-mail all the time. I also play around with investments on-line. The computer has been really positive for me."

Watt, who has participated in both the Internet and interactive voice response (IVR) disease management programs, prefers the Internet. "I put in my vital signs, and the Web site gives me a graph that shows how my vital signs compare to my past readings. It gives you a real sense of security." **(See article on p. 63 for information on the effectiveness of the Internet and IVR management programs for CHF.)**

LifeMasters nurse **Diva D'Allesandro**, RN, says the Internet is an efficient disease management tool. "It provides patients more control over their vital signs entry than the IVR. If they make an error, they can easily correct it on the keyboard. If they make an error entering their vital signs on the IVR system, it shows up as an error, and we have to call the patient to clarify the data," she notes. "And, as Jack says, it provides instant feedback in a nice graph. The Internet provides more positive reinforcement than the IVR system."

Ruggerio can relate many examples of the Internet's power to reconnect seniors housebound by CHF with their friends and family. "I had one patient who told me he couldn't sleep at night since his wife died," she recalls. "Now, when he can't sleep, he gets up and uses the Internet to e-mail and do research. He says he no longer feels so alone at night."

Perhaps the most moving example was a woman who was devastated because her CHF progressed to the point she could no longer go to the senior center during the day to play Bridge. Ruggerio showed her how to play Bridge on-line,

and she really enjoyed being able to continue playing the game she loved. "She also started to e-mail her son. She had lost touch with him and they hadn't spoken for years," says Ruggerio. "From that first e-mail message, they developed a daily e-mail correspondence that continued to the day she died."

After the woman's death, Ruggerio received an e-mail message from her son. "He e-mailed simply to say thank you. He was convinced they would never have built that bridge if she hadn't had Internet access."

The seniors in the LifeMasters CHF Internet management program have been "an inspiration" for Ruggerio. "It brings me satisfaction and happiness to know that I was able to help do something that was so worthwhile. It's wonderful to see these patients embrace this technology and take off with it." ■

Workers' Comp/Disability Management

Use experts to fit clients with costly devices

Certified professionals find cost-effective solutions

Appropriate assistive technology helps disabled people regain independence and function. The right mobility device can mean the difference between total disability and a successful return to the workplace. And while many clients achieve excellent function with standard equipment, there are other clients whose unique needs require case managers to seek the assistance of certified specialists if they want to ensure optimal outcomes.

Many patients don't require the special skills and expertise of a certified assistive technology supplier or practitioner, says **Jean Minkel**, PT, a seating and mobility specialist in Cornwall, NY, and chair of the professional standards board of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) in Arlington, VA. "A large volume of stroke and orthopedic patients may have a temporary, or even permanent, need for home care equipment, such as a cane, walker, or bath seat. If the client and the case manager understand the client's needs, there are not many choices, and a large number of suppliers can adequately provide the necessary items without any special considerations."

Rehabilitation technology comes into play when the client has specific needs that require a trained practitioner to assess the needs and a skilled supplier to fulfill those needs, she says.

LuRae Ahrendt, RN, CRRN, CCM, nurse consultant with Ahrendt Rehabilitation in Norcross, GA, works with severely disabled clients with a wide range of complex and specialized needs nationwide. "I always want to get the best long-term benefit from any equipment I invest in for a client," she notes. "As a case manager, I look for solutions which are reasonable, cost-effective, and have the longest-term results. There's nothing worse for a payer than investing in expensive assistive technology that doesn't benefit the patient in the long run."

If a client requires a piece of equipment that is quite complicated technologically, Ahrendt looks for suppliers and therapists certified by RESNA as assistive technology suppliers (ATSs) or assistive technology practitioners (ATPs). "When I come into a new community where I have never worked before, I consult the RESNA directory for a certified vendor," she notes. "For example, selecting an electric power chair with integrated computer capability requires quite complex rehabilitation skills. I look for certified therapists and vendors because I realize the purchase will be costly and I have to assure the client and the payer that the equipment is appropriate for the client now and can be adapted as necessary if the client's needs change." **(For more information on RESNA certification, see the story on p. 72.)**

Minkel and Ahrendt say case managers should consider consulting with a certified assistive technology supplier or practitioner on certain types of cases, including, for example:

• **A young paraplegic highly motivated to return to work and remain independent.** "If you have a young, physically fit, healthy paraplegic who is provided with a non-adjusted seating device, he may as well be an 85-year-old man recovering from a stroke," stresses Minkel. "He simply won't be able to accomplish his goals or regain his independence with that standard chair in the same way he could with an adjustable chair."

"It's not always the most complicated case that requires the most creative solutions, but the most visionary case," notes Ahrendt. "It may not be

your client's intensity of impairment, but the intensity of his goals that dictates that you call on the services of a certified assistive technology professional. It's the clients with the brightest future and most visionary rehabilitation goals who need our support to reach those high goals for maximum independence and function."

• **A person with a degenerative disease.** "A patient with multiple sclerosis [MS] who has been readmitted to the hospital three times in 12 months has probably been fitted with technology that is not flexible enough to meet her needs as her situation deteriorates," says Minkel.

Weesie Griffin, ATS, CRTS, branch manager for the Atlanta office of Chattanooga, TN-based National Seating and Mobility, agrees. "One of our biggest battles is with young patients with degenerative conditions, like MS, who want to use a three-wheeled scooter," she says. "That scooter is fine today, but a year from now, that client may not be able to sit up safely in that scooter. Payers don't want to pay $3,000 for a scooter and then have us come back two years later and ask for an adjustable chair."

Will the chair fit in the car?

Working with certified suppliers and therapists ensures that case managers will find cost-effective solutions that meet their clients' long-term needs. "We look at the clients' entire environment," says Griffin. "Do they live in a three-story walk-up apartment? If so, what would they do with a power chair? Or, what good is a chair, if it doesn't fit in the family car?"

Griffin stresses that the goal of a certified supplier, or ATS, is to "provide exactly what the client needs — nothing more and certainly nothing less. My relationship with the client really begins the day the equipment is delivered. If I don't get it right, I'll hear about it!"

• **A person with a closet full of unused equipment.** "It doesn't take an economist to figure out that if an expensive piece of assistive technology is sitting in the closet, it's not worthwhile," says Minkel. "For our own survival, assistive technology suppliers and assistive technology practitioners must work closely with the client to provide the correct solution for the individual's unique needs."

The RESNA code of ethics hangs on the wall of the Atlanta office of National Seating and Mobility, adds Griffin. "People know that they are working with certified individuals when they come to us, and if we get it wrong, they know they can file a complaint with RESNA. I think that's important," she stresses. "The biggest compliment I receive is when a past client calls to say they need a new chair and they want to come back to us."

Proof is in the details

When case managers consult with a certified ATS or ATP, they should receive not simply a description of the recommended assistive technology, but a thorough explanation of the specific needs the equipment meets, says Minkel. She adds that case managers should find the following components in the ATP's report:

• thorough assessment of the client's current function;

• impact of the client's disability on the client's function;

• future impact of disability on the client's function;

• anticipated outcomes from access to appropriate technology.

"It's important that the ATP not only include a description of the recommended assistive technology but a thorough explanation of what needs will be met by the technology," she says. "If the ATP recommends a more expensive joystick be installed on a power chair, there should be an explanation as to why the standard joystick that comes with the chair is not suitable to the client. For example, the lower-cost power chair may come with a small joystick box which doesn't give the client adequate room to stabilize his hand."

To further ensure a "good fit" of client and assistive technology, Griffin says it's best for the ATS to come into a seating clinic or therapy clinic and work together with the client and the client's therapist. "This is not an 'out of the box' or 'out of the catalog' experience," she says. "Clinics have a wide range of chairs and cushions to try out. That's very important when you are trying to select between a wide range of choices."

Griffin works with the client and the therapist in the seating clinic to write up a "spec" for the client's chair. She takes her notes back to the office and works with a technician to integrate the necessary components and make them all work together.

"It's truly a team effort," she notes. "In addition, we try to be realistic about funding options. We know what we can get funding for and what we'll have trouble with. I don't like to tell a client they can't have the equipment they want because

it costs too much," notes Griffin. "If I think that it's what the person really needs, we'll go for it. If we can't get it funded, it's because we didn't do an adequate job explaining to the funding source, describing the client's specific needs and how the technology will meet them."

"As a case manager," says Ahrendt, "working with individuals who are certified reduces my liability. And, ethically, finding the appropriate and qualified individuals to help clients meet their rehabilitation goals is what I'm required to do."

As a RESNA member, Ahrendt carries the RESNA directory with her to help her find certified suppliers and practitioners when she works with clients in a community she's unfamiliar with, she notes. In addition, the RESNA Web site at www.resna.org has a member locator service which is constantly updated. ■

RESNA exams establish core knowledge base

It's not as easy as it sounds

Helping clients with sensory, physical, or cognitive disabilities select the assistive technology that will improve both their functional capabilities and quality of life has become increasingly challenging as new, more sophisticated technology floods the market. Finding the proper tools requires a complete understanding of the client's diagnosis, prognosis, functional goals, and the available products and technological capabilities.

The Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) in Arlington, VA, developed two certification exams that were first offered in late 1996. Currently, 808 professionals hold the assistive technology practitioner (ATP) certification, and 527 suppliers hold the assistive technology supplier (ATS) certification, according to **Jody Chavez**, director of professional services for RESNA. **(See story on p. 70 for benefits of working with certified professionals.)** She adds that people need not be RESNA members to be eligible to sit for the exams and that not all RESNA members are certified.

"Most people who have been doing seating and positioning for years fell into the work with no special training or education," says **Weesie Griffin**, ATS, CRTS, branch manager for the Atlanta office of Chattanooga, TN-based National Seating and Mobility. "When I started in this field more than 20 years ago, I knew every product on the market — I can't say that today. It's daunting today, the range of assistive technology products on the market. Some of it is wonderful equipment and some of it is not. It takes an experienced supplier and an experienced therapist to know which products are good and will meet a client's needs and which aren't."

There is no licensing required, or currently available, for the assistive technology industry, notes Griffin. "For example, anyone can present themselves to a case manager or a client as a seating specialist. The RESNA certification is a good first step to safeguard consumers and assure quality, cost-effective service."

Case manager **LuRae Ahrendt**, RN, CRRN, CCM, adds that working with certified suppliers and therapists is especially beneficial for telephonic case managers. "It gives the telephonic case manager the sense that she is dealing with a certain level of expertise — an individual with a certain body of knowledge and quality of service that has been established by a national professional organization. When you are relying on someone else to be your eyes and ears, it's important to know you've selected an individual you can trust."

Knowledge base covers 10 areas

Certified individuals must adhere to the 21 standards in the RESNA Standards of Practice and the organization's code of ethics. More important, people who sit for the ATS or ATP exam must demonstrate their understanding of a core knowledge base, which Chavez explains includes the following 10 content areas:

1. Psychology and sociology: attention span and memory; motivation; motor development; language development; cognitive development; sensory development; normal aging development; cultural values; interpersonal relations.

2. Human anatomy: central and peripheral nervous system; oral motor and respiratory systems; cardiopulmonary systems; skin and soft tissue; musculoskeletal system common to specific functional movement; biomechanics of human posture, movement, and function.

3. Basic etiologies and pathologies: physical disabilities; communication disabilities; sensory

disabilities; cognitive disabilities; learning disabilities; behavioral disabilities; interaction of environment and disability; aging with functional disability; degenerative or progressive changes in functional disabilities.

4. Principles of learning and teaching: learning styles and differences; task analysis; instructional strategies and methods; measurement of task mastery.

5. Assessment procedures: current use of technology; critical functional abilities and limitations; ability to function in different environments; progress in training on technology; methods of measurement to document device or solution mastery.

6. Service delivery systems and funding for assistive technology: types of procurement systems and payers; principles of quality assurance; services and facilities that may be helpful to users and how to locate them; roles of individuals with disabilities; roles of primary physicians and therapists; roles of personal caregivers and family; roles of distributors and suppliers; roles of manufacturers' representatives and manufacturer; roles of designers and fabricators; sources, procedures, and documentation for third-party payment; sources, procedures, and documentation for other types of funding; legislation and regulation for funding; differences in funding sources for community, outpatient, or facility-based consumers; sources and techniques for shared funding.

7. Principles of design and product development: universal design concepts; design process; architectural accessibility; environmental considerations related to design; factors that contribute to the cost of custom products; mechanics and strength of materials; electronic components; limitation and violations of warranty; preventive maintenance and repair schedules for mechanical, electrical, and electronic equipment.

8. Basic product knowledge of assistive technology devices: categories of available assistive technologies; assistive technologies characterized by features and correlated with potential applications; compatibility requirements needed to integrate technologies.

9. Integration of person, technology, and the environment: access methods to operate appropriate devices including benefits and limitations; range of appropriate interventions; relationships between therapy, therapy goals, and assistive technology interventions; impact of assistive technology on access to education, employment, and independent living.

10. Professional conduct: RESNA's code of ethics and standards of practice; standards in an individual's primary discipline or field; roles and responsibilities of other professionals; sources of information regarding product information, service delivery options, funding, and public policy / legislation.

Sample questions

Griffin studied hard before sitting for RESNA's ATS certification exam in 1997. "Many people were shocked to find out how difficult the exam was when it was first introduced," she notes. "I solicited help from the therapists I work with, and I studied hard for the first time in years. Even with nearly 20 years of experience in seating and mobility, I couldn't have passed the exam without studying."

The sample questions below, found on the RESNA Web site at www.resna.org, may explain why Griffin and others take preparing for this exam seriously. (The correct answers are given after the sample questions.)

1. Which of the following abilities is necessary for development of skilled upper extremity movements?
   A. equilibrium reactions in the standing position
   B. ability to cross midline
   C. good postural control of the trunk and head
   D. pincer grasp

2. A 12-year-old male with Duchenne's muscular dystrophy is being evaluated for a mobility system. The therapist notes that he has lateral bending of the trunk and leans to the left. The most appropriate next step is assessment for:
   A. kyphosis
   B. lordosis
   C. left-sided weakness
   D. scoliosis

3. An architect with C-4 / C-5 quadriplegia would like to use a computer-assisted design (autoCAD) system when he returns to work. The most appropriate first step is assessment of the client's ability to use:
   A. mouth stick
   B. eye blink switch
   C. alternate mouse input
   D. sip-and-puff switch

[Answers: 1-C, 2-D, 3-C.] ■

Report reveals unhealthy state of U.S. workers

Heart disease is No. 1 cause of lost productivity

Absenteeism due to health-related causes results in an estimated $65 billion in lost wages annually, according to a newly released report titled "The Health Status of the United States Workforce." This report is the first of its kind to evaluate the overall health status of American workers, and the rather discouraging results have strong implications for case managers working to increase productivity and reduce lost work days for American employers.

The high level of undiagnosed and uncontrolled chronic conditions in the workplace greatly increases the risk of serious illness in America's work force, says the report's primary author, **Robin P. Hertz**, PhD, occupational epidemiologist and senior director of outcomes research and population studies for Pfizer Pharmaceutical Group in New York City. "As many as 90,000 heart attacks and vascular events among workers each year in the U.S. may be due to elevated blood pressure and cholesterol, based on projections from the Framingham Heart Study equations," she notes. "Smoking, another major risk factor, may be associated with as many as 74,000 cases of acute coronary events per year in the work force."

The report is one of several in the "Pfizer Facts" series and is the result of several years spent analyzing the data from the National Comorbidity Survey (NCS), 1990-1992, from the Institute for Social Research at the University of Michigan in Ann Arbor and two large national studies conducted by the Centers for Disease Control and Prevention in Atlanta — the Third National Health and Nutrition Examination Survey (NHANES III), 1988-1994, released in 1997, and the National Health Interview Survey (NHIS), released in 1996. Approximately 8,000 people were interviewed for the NCS survey. NHANES III is a representative survey of roughly 34,000 people, and NHIS is a nationally representative survey of roughly 24,000 households representing 63,000 people.

These are very large data sets, notes Hertz. "We culled the data sets down to Americans between the ages of 18 and 64, who account for the majority of employed persons in the United States," she explains, adding that 118 million Americans between the ages of 18 and 64 are employed, accounting for 73% of the adult population in that age group.

"Most studies linking health and productivity are limited to a single disease and small populations," says Hertz. "Analysis of major national surveys has enabled us to expand our knowledge base and communicate new information that will serve the interests of both employers and employees."

Overall, injury remains the leading cause of lost work days in men and the second-leading cause of lost work days in women. Annually, injuries account for 1,820 lost work days for every 1,000 men and 1,194 lost work days for every 1,000 women. Respiratory disease and symptoms rank first for women and second for men, with 1,454 lost work days for every 1,000 women and 937 lost work days for every 1,000 men.

Hertz says many employers, risk managers, and payers focus solely on reducing and managing occupational hazards that cause injury, and few understand and address the prevalence of disease in the work force. "One of my concerns as an occupational epidemiologist," she says, "is this need to look at the overall health status of the working population and find out what medical conditions workers are bringing into the workplace which impact lost work days and productivity."

Among the more interesting findings in "The Health Status of the United States Workforce" are:

1. Cardiovascular risk.

• Workers under age 55 who have heart disease are eight times more likely to experience reduced productivity than workers without heart disease.

• An estimated 37 million American workers have high cholesterol. More than 65% of Americans

Good news: Stroke kit still available

If you logged on to the www.ncspausa.org recently to download the free stroke education resources mentioned in the December 2000 issue of *Case Management Advisor*, you may have been disappointed to find they were no longer available on-line. The good news is that the stroke education tools from the National Coalition for Stroke Prevention Awareness (NCSPA) in Lisle, IL, are still available for a minimal fee of $5 for NCSPA members and $10 for nonmembers. For more information, call (314) 664-5429. ■

with high cholesterol are not adequately controlled. More than 40% of those with high cholesterol have not been diagnosed. These high rates of undiagnosed and uncontrolled disease put the worker and the employer at a disadvantage, notes Hertz.

• An estimated 18 million workers have high blood pressure. More than 75% of those with high blood pressure are not adequately controlled. Another 35% of those with high blood pressure have not yet been diagnosed.

• Ischemic heart disease (IHD) affects only 3% of American workers, but Hertz hypothesizes this low prevalence in the work force may be a reflection of the severe disability imposed by IHD, which forces workers to retire or apply for disability. More than 60% of nonemployed adults with IHD report that limitations associated with their disease prevent them from working. Of those who remain employed, 34% report that their disease limits the kind or amount of work they perform.

2. Migraines. American workers who suffer migraine headaches miss three times as many work days as workers without migraines. Workers under age 55 with migraine are twice as likely to be unable to be fully productive as workers under 55 who don't have migraines.

3. Mental health. Nearly 10% of American workers between the ages of 18 and 39 screen positive for major depression, but only 12% of these workers are treated with antidepressant medications. In addition, 2% of employed men and 5% of employed women have attempted suicide.

4. Back, joint, muscle, tendon, and bone disorders.

• More than 13 million Americans, or 11% of the work force, report having arthritis. American workers with arthritis are absent from work three times as often as workers without arthritis. Absenteeism is highest among workers between the ages of 35 and 44, the age group least likely to receive prescription medication for arthritis. In addition, arthritis poses a three- to fourfold higher risk of diminished work productivity and accounts for 24% of the reported conditions in this category.

5. Acute illness.

• Infectious diseases and respiratory, musculoskeletal, and digestive disorders account for 57% of total annual lost work days. As workers age, chronic conditions such as arthritis and heart disease become more prominent causes of lost work days and lost productivity, notes Hertz.

• Pneumonia and influenza are associated with more lost work days than any other respiratory disease. More than 700 days are lost to pneumonia / influenza each year for every 1,000 women in the work force and just less than 500 days each year are lost for every 1,000 men in the work force. Annually, acute respiratory infection accounts for 524 lost work days in for every 1,000 women in the work force and 287 days for every 1,000 men in the work force.

6. Diabetes.

• Almost 5 million workers, or 4% of the total work force, have diabetes. Workers under age 55 with diabetes are six times more likely to report work limitations than workers without diabetes.

• Diabetes is more prevalent among men than women. Hertz stresses, however, that underdiagnosis is a problem among both employed men and women in the work place. More than 40% of American workers with diabetes are undiagnosed.

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Editorial Questions

Questions or comments? Call **Lee Reinauer** at (404) 262-5460.

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Roughly 60% of working women between the ages of 18 and 34 are undiagnosed diabetics; 57% of men between the ages of 18 and 34 are undiagnosed. Of women age 45-55, 55% are undiagnosed, and among men age 35-44, 55% are undiagnosed.

Remaining competitive in the marketplace necessitates finding solutions for increasing productivity and encouraging employee retention, says Hertz. Pfizer hopes the report will increase awareness of disease prevalence in the work force and act as "a call to action" for employers and health care professionals to develop and support wellness, disease management, and prevention programs that target the problem areas identified by this analysis of these large national data sets, she says. "The report is an effort to understand health issues facing employers and employees and to encourage the development of programs and policies that lead to proper risk management, treatment, and prevention," she explains. ■

CE objectives

After reading this issue, continuing education participants will be able to:

1. Identify clinical, legal, legislative, regulatory, financial, and social issues relevant to case management.
2. Explain how those issues affect case managers and clients.
3. Describe practical ways to solve problems that case managers encounter in their daily case management activities. ■

Resource Bank™

A monthly compilation of news you can use from *Case Management Advisor*

Long-term care insurance: To buy or not to buy?

Revised guide outlines long-term care options

More than 65% of Americans say the cost of long-term care is a major threat to their standard of living. Yet, only 35% of Americans have planned for the potential need for long-term care. According to a survey by the National Council on the Aging in Washington, DC, more than 120 companies sell long-term care insurance policies, which may explain why so many Americans put off the complicated decision to buy long-term care insurance.

The 2001 edition of "Long-Term Care Planning: A Dollar and Sense Guide," published by the United Seniors Health Cooperative (USHC) in Washington, DC, provides a comprehensive overview of long-term care that removes much of the confusion surrounding the decision to buy long-term care insurance. The newly revised 100-page book covers financial and family issues related to home care, assisted living, nursing home care, private long-term care insurance, and other related topics.

The guide includes useful advice such as:

• Consumers should only buy long-term care insurance if they own assets of at least $75,000, excluding homes and automobiles.

• Consumers should only buy long-term care insurance if they have a retirement income of at least $25,000 annually.

• Consumers should only buy long-term care insurance if they can pay premiums without adversely affecting their lifestyle.

The large-format paperback sells for $19.50. To order by VISA or MasterCard, call (800) 637-2604, or send a check to: USHC, 409 Third St. SW, Suite 200, Washington, DC 20024.

In addition, USHC recently published a report, "Private Long-Term Care Insurance: To Buy or Not to Buy?" The report does not sell or endorse any insurance products, but does provide consumers with the questions they must answer when considering an appropriate long-term care policy. The report costs $3.50.

You may also send e-mail to USHC at ushc@erols.com, or visit the organization's Web site at www.unitedseniorhealth.org. ▼

See who made the grade

URAC releases accreditation directory

The American Accreditation Healthcare Commission / URAC in Washington, DC, recently released its 2001 edition of the Directory of Accredited Organizations, a 385-page overview of health care organizations that have met its accreditation standards.

For each URAC-accredited organization, the directory provides the following information:

- product offerings;
- accreditation status;
- geographic service area;
- size of program;
- company contact information.

In addition, the directory provides background information on URAC, including a summary of each of its accreditation programs, an overview of the accreditation process, and profiles of each of URAC's governing organizations.

The directory sells for $39. To order, call (202) 216-9010, or visit the URAC Web site at www.urac.org. ▼

Nursing home info from nation's top watch dog

Consumer Reports *provides free list*

Consumers Union in Yonkers, NY, now provides free consumer information on nursing homes in *Consumer Reports Online* at www.ConsumerReports.org. The free on-line data, shopping tools, and recommendations can help the elderly and their families select the best possible nursing home care.

Posting information includes a state-by-state nursing home watch list, listing nursing homes in each state with the most questionable patterns of deficiencies on state inspection surveys. The watch list was based on five criteria:

- citations for failing to provide adequate access to the survey report;
- high numbers of repeat deficiencies;
- substandard quality of care deficiencies;
- high number of total deficiencies.

The free on-line service also provides shopping tips for choosing a nursing home. Key decision points discussed include:

- how to investigate nursing homes before you or a relative needs one;
- how to obtain state nursing home surveys and read them carefully;
- how to find out the cost of extra supplies, services, and medications;
- how to be involved with the initial care plan, attend monthly meetings, and consult with staff about on-going care;
- how to solicit involvement of the long-term care ombudsman, if there is a problem.

To access the nursing home information, visit www.consumerreports.org, and type "nursing homes" into the Search box. ▼

Web site provides info on cancer pain

Here's how to spell 'relief'

The Association of Cancer Online Resources (ACOR) in New York, NY, recently launched www.Cancer-pain.org to provide cancer patients with the education and support they need to obtain effective relief from pain.

Cancer-pain.org features sections on the causes of pain, breakthrough cancer pain, pain treatment options, and tools to help cancer patients communicate effectively with physicians about their pain. The site also has a complete list of medications available to treat pain, information about complementary and alternative methods of pain control, and a section devoted to the special needs and issues of caregivers.

The site's news section provides patients with updates on developments in cancer pain treatments as well as links to other cancer sites. In addition, it provides updates on legislative issues affecting cancer research and treatment.

Site developers add that a "Healthcare Professionals Corner" is designed to help clinicians and other health care professionals exchange information on effective pain therapies, post relevant journal articles and new clinical research, and recruit patients for clinical trials. In addition, accredited continuing medical education courses on cancer pain treatment will be available soon on the site. ■

- June 5 - 9, Opryland Convention Center, Nashville, TN. "CMSA's 11th Annual Conference and Expo: Creating the Connection." Sponsored by the Case Management Society of America (CMSA) in Little Rock, AR. The conference is an approved continuing education provider for CCM, CDMS, CRC, NASW, and nursing contact hours.

Attendance cost ranges from $429 to $649, depending on CMSA membership status, military service, and date of registration. One-day passes, special events, and pre-conference workshops are also available. For more information, contact: CMSA, 8201 Cantrell Road, Suite 230, Little Rock, AR 72227-2448. Telephone: (501) 225-2229. Fax: (501) 221-9068. Web site: www.cmsa.org. E-mail: cmsa@cmsa.org. ■

Send us *Resource Bank* items

If you have a new resource, conference, or seminar of interest to other case managers, send items for publication to: Lauren Hoffmann, Editor, *Case Management Advisor,* P.O. Box 740056, Atlanta, GA 30374. Telephone: (770) 955-9252. Information on conferences and seminars must be received at least 12 weeks before the event to meet publication deadlines. ■