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Emergency Trauma Flow Sheet

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Herbal remedies and dangerous side effects: Fact or fiction?

Herbal remedies may cause or aggravate medical conditions

Use of herbal remedies has dramatically increased in the past five years, reports **Thomas Moss**, MD, a staff physician at Scottsdale Healthcare (AZ) and medical director of Core Healing International in Fountain Hills, AZ.

A recent study comparing current usage of herbal remedies with data from 1992 showed a 10% increase, he reports. "As of 1994, 8% of U.S. citizens had therapeutically used herbs in the past year. ED nurses will possibly be seeing more and more allergic or toxic reactions."

Many ED patients take over-the-counter herbal remedies on a regular basis and believe them to be safe, and though that's often the case, it isn't always.

"The greatest risk lies in the belief that herbal medicine is inherently without risk because it is natural," warns **Karen Sheeks**, RN, MS, CEN, a wellness consultant and educator at St. Joseph Health System Humboldt County in Eureka, CA. "There are risks involved in the use of any medications, whether herbal, homeopathic, or allopathic. Patients need to be well-informed about the actions, uses, and interactions of herbal medicines before they begin treatment."

EXECUTIVE SUMMARY

Over-the-counter herbal remedies can cause complications including rashes, allergic reactions, and hypertension.

- Weight loss products may contain the herb bladder wrack, which causes reactions in patients who are allergic to iodine.
- Patients with autoimmune diseases may develop a rash from taking Echinacea.
- Ma huang (ephedra) is used in the treatment of asthma, URIs, and edema, and is also the active ingredient in recreational "street drugs" such as herbal Ecstasy. Ephedra can cause acute myocardial infarction, stroke, seizures, psychosis, and depression.
- Saw palmetto, used for symptoms of benign prostatic hypertrophy, may cause GI upset.

Prolonged or excessive dosing can cause toxic reactions, notes Moss.

"Also, the potency of the herbs is increasing because of the standardization going on in the herbal industry," he explains. "For example, the manufacturer may discard the aqueous portion of saw palmetto to concentrate the herb. We may see some new toxicities that we did not expect before."

Inconsistency of quality is another issue that effects toxic reactions, Moss adds.

"More and more manufacturers are getting into the business, so the quality of the herbs varies widely," he explains. "Even once you standardize for a minimum level for a certain ingredient, a product may have quite a difference in dosage depending on the potency of the herb. Some of the active ingredients may be stronger in wild herbs than in those which are cultivated."

Keep concerns in perspective

Although interactions with herbal remedies do occur, they are relatively safe, stresses **Patty Campbell**, RN, MSN, CCRN, ANP, CS, a Phoenix-based emergency nurse practitioner and assistant editor of the *Journal of Emergency Nursing*.

"It's important to keep it in perspective," she says. "Last year, 100,000 people in the United States died from drug reactions, overdoses, interactions, and adverse side effects from prescription medications both in and out of the hospital."

In comparison, deaths from herbal remedies are much rarer, Campbell notes.

A recently published study in the *New England Journal of Medicine* reported six deaths attributed to "alternative therapies" but failed to compare the statistics for deaths from prescription drugs.[1]

"Relatively speaking, the herbal remedies are much safer than prescription medications," says Campbell.

Traditional pharmaceuticals block a single, pathological, biochemical/molecular pathway, while herbal medicinals affect multiple pathways, Sheeks explains.

"For example, bilberry contains 19 phytochemicals with antiarthritic activity, four analgesic compounds, five general antiarthritics, eight antiedemics, 13 anti-inflammatories, one antirheumatic, two antileukotrienes, one cyclooxygenase inhibitor, and three lipoxygenase inhibitors," she notes.

Still, suspect reactions to herbal medications if things don't add up, says Moss.

"If something doesn't make sense, that's a good time to ask what supplements the patient is taking," he says. "It may be overwhelming to try and understand all of the different supplements every patient you see has been taking, but if something triggers your memory, such as some sort of rash you've seen before when a patient was taking a particular vitamin or herb, it doesn't hurt to ask."

Some remedies may cause adverse reactions

Here are some potential responses to herbal remedies:

• **Bladder wrack.** Patients may not realize that weight loss products such as "The Patch" may contain the herb bladder wrack, which is a source of iodine. "One patient came in with a generalized maculopapular rash, and knew she had an iodine allergy. But she didn't know iodine was in the product," recalls Moss.

• **Chamomile.** A widely used herb, chamomile can also cause an allergic reaction in some patients, says Sheeks. "In rare cases, it can cause an allergic reaction in patients who have sensitivity to ragweed, asters, or chrysanthemums," she says.

• **Comfrey.** "Rare cases of hepatic disease have been linked to consumption of comfrey, which is widely used for topical treatment of sprains, boils, and skin ulcers," says Sheeks. "Canada has banned the use of comfrey root products, and Germany allows only low doses of the leaves and roots to be marketed."

• **Ginko biloba.** If a patient presents with any kind of unusual bleeding, subarachnoid or subcontact bleeds, or easy bruising, ask about herbal therapies, Moss advises. "There is some concern about bleeding diathesis from ginkgo biloba, which is used for dementia, circulatory disorders, and asthma," he says.

• **Echinacea.** Patients with autoimmune diseases such as lupus may develop a rash from taking Echinacea, an immunostimulant, says Moss. "One woman with rheumatoid arthritis improved after starting a new medication, and then started taking Echinacea on top of that. It got much worse, and after she stopped taking the Echinacea, she improved again. There are warnings against taking Echinacea if you have an autoimmune disease."

• **Niacin.** "A patient came in with episodes of

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profound facial and body flushing," recalls **Jay Kaplan**, MD, FACEP, chairman of the department of emergency medicine at Saint Barnabas Medical Center in Livingston, NJ. "It turned out that was among the vitamins the patient was taking, which can cause flushing and a general feeling of heat throughout the body."

• **Garlic.** "A woman who was breastfeeding brought her baby in because the baby was refusing the breast and was in danger of getting dehydrated," reports Kaplan. "The woman was taking excessive amounts of garlic and didn't realize the garlic was being transmitted to the breast milk."

• **Ma huang.** Ma huang (Ephedra) is used in the treatment of asthma, URIs, and edema, notes Sheeks. "This herb has ephedrine-like actions and has been used in combination to create recreational street drugs such as Herbal Ecstasy, as well as weight loss preparations," she says. "The FDA has received more than 600 adverse reaction reports on products containing this herb. Side effects may include acute myocardial infarction, stroke, seizures, psychosis, and depression."

Ephedra can be life threatening when used in combination with caffeine products, Moss stresses. "There have been at least 16 deaths reported from this ingredient," he reports. "We still see people with high blood pressure who ask if they should try a metabolite, and we tell them no, because it has ma huang in it."

Ephedra can also cause problems in patients with prostate problems, Moss says. "It can make you make you unable to urinate by stimulating the spincter muscle," he adds. "People with glaucoma, hyperthyroidism, or anxiety shouldn't use it."

• **Licorice.** Licorice can also cause high blood pressure or hypokalemia, notes Moss. "Licorice is often mixed with combinations in Chinese herbal preparations," he says. "I know of two cases of hypokalemia and elevated blood pressure in patients taking licorice candy daily for many weeks. However, patients would have to eat 30-40 grams a day to cause this."

Glycyrrhizin, a component of licorice root, has physiological effects similar to alsosterone and corticosteroids, notes Sheeks. "Some patients taking herbal combinations that contain licorice may experience headache, lethargy, sodium and water retention, and, in rare cases, hypertension and excess potassium excretion."

• **Saw palmetto.** "Saw palmetto, used for symptoms of benign prostatic hypertrophy, may cause GI upset," says Sheeks.

• **Pyrrolizidine.** Toxic alkaloids called pyrrolizidine may cause increased liver function tests (LFTs), says Moss. "They can cause venous occlusion known as the Budd-Chiari syndrome. This is caused by toxins, including pyrrolizidines," he says. "However, you don't see as much of this anymore, because a lot of companies took it off the market altogether to avoid possible problems. Manufacturers label herb bottles as 'pyrrolizidine free,'" he notes. "Some experts say not to use it at all; others say to only use for a short period of time. They're not sure how toxic it is, so patients should be prudent and stay away from them."

• **Peppermint.** "One patient had been eating peppermint candies, and she was coming in for heartburn and asked if peppermint can make it worse, and I told her, 'Absolutely,'" recalls Moss. "Some herbalists say you can still use it for reflux. There may be certain individuals that it may help if bloating, gas, or intestinal spasms is causing the reflux."

• **Tea tree oil.** "Australian tea tree oil is a great herb for many conditions, but it can cause contact dermatitis," Moss notes. "Also, the Chinese herbs lu shen wan and tien tu yao ging can cause contact dermatitis."

• **Chinese black balls.** "Patients may use Chinese black balls for rheumatoid arthritis or other problems," says Moss. It is an amalgam of herbs, non-steroidals, and non-plant medicinals available through mail order. "There may be non-steroidals in the herbs, such as ibuprofen, and [patients] can have a bleeding ulcer or any kind of gastritis from it. There are several reports of Cushing's syndrome in adulterated herbs with prednisone. They basically can cause any reaction that non-steroidals cause."

• **Goldenseal.** "Some herbs, such as goldenseal, can drop your blood sugar. Patients may be taking it to ward off colds, and may not know it can drop your blood sugar," says Moss. "If you are hypoglycemic or diabetic, you need to be very careful using goldenseal."

• **Feverfew.** Feverfew can cause mouth ulcers in up to 11% of patients taking that supplement, notes Moss. "It has been shown to suppress the frequency and intensity of headaches; but if you stop taking the feverfew, your headache intensity is usually the same or worse." he says.

• **Peppermint oil.** "Patients should not take peppermint oil in large quantities, if at all, because it can be toxic to the liver," says Moss.

• **Juniper oil.** "Juniper oil can be toxic to the kidneys, and there have been cases of renal dysfunction with long-term use," says Moss.

• **Aloe.** "A lot of patients don't realize that aloe can cause diarrhea. It depends on how it's processed. The clear part is very soothing, but the yellow latex is a very powerful cathartic," says Moss. "If you have a patient taking aloe for peptic ulcers, you have to be careful of the type they get. Because, if it has that yellow tint to it, it could cause him or her to have diarrhea and cramping."

• **Kava kava.** "Kava kava has caused dry, scaling skin in high doses, but the patient would have to be overdosing. They call it 'kavaism' in the Pacific islands when it occurs, but it doesn't happen with therapeutic doses," says Moss. "Other symptoms include yellowishness, skin discoloration, and red eyes. Drinking alcohol can make it worse."

Kava is used in the treatment of anxiety and insomnia, and may also interfere with the way the body handles dopamine, which may be significant for patients with Parkinson's disease," Sheeks says. "Kava may also increase the effects of benzodiazepines."

• **St. John's Wort.** "The active ingredient in St. John's Wort is hypericum, and it has the same action as the serotonin inhibitors. If a patient takes it along with a selective serotonin reuptake inhibitor (SSRI) such as Prozac and Paxil, they will be double-dosing," says Campbell.

St. John's Wort affects specific neurotransmitter levels and can interact with monoamine oxidase (MAO) inhibitors, causing hypertensive crisis, says Sheeks. "Patients on drugs such as Redux, Prozac, or other SSRIs may experience agitation, confusion, tremor, and muscle spasms when [they are] taken in combination with St. John's Wort," she explains.

• **Black cohosh.** "A woman with a history of migraines came in because they had increased in frequency," says Moss. "I found out she was taking black cohosh, which can cause an increase in migraines."

Here are some ways to address the issue of drug interactions:

• **Do a complete medical history of prescription medications, over-the-counter (OTC) herbal remedies, and food supplements.** "After you find out exactly what the patient is taking, it's a matter of having the expertise to determine if the symptoms they're having are caused by reactions to supplements," says Campbell.

The information is sometimes overlooked, adds Campbell. "Most patients assume the only thing they need to reveal is prescription medication; they may not think to reveal the other things they're taking," she says.

Patients taking Chinese herbal mixtures prescribed by acupuncturists and other eastern medicine practitioners may be unaware of the ingredients, notes Sheeks. "Some homeopathic remedies also come in compounds, which combine several substances; these compounds often have an identifying number or trade name, rather than a list of ingredients."

• **Use *Herbal Physicians' Desk Reference (PDR).*** A newly published reference, the *Herbal PDR*, is an excellent resource to have on hand, Campbell says. "This reference has an herbal/drug interaction guide, and will answer a lot of your questions about effects and interactions," she explains. "We have one in our ED that is very helpful."

• **Use poison control centers.** "Poison control centers have all the databanks on herbal medicine. If you ever have questions, they will be able to help you. The hospital pharmacy will also have information on drug interactions," says Campbell.

• **Be informed about alternative therapies.** "It's important that ED nurses become familiar with the therapies that their patients are using," advises Campbell. "Whether or not you personally believe in it, we have an obligation to educate ourselves about the therapies and the side effects, and that's the bottom line."

When a patient indicates that they have tried other forms of treatment before seeking help in the ED, find out whether or not it includes the use of medicinals, advises Sheeks. "Other types of therapies, such as massage, energy work, acupuncture, therapeutic touch, imagery, or Reiki, have little effect on allopathic treatments, and do not pose a risk [when used] in combination with Western medicine," she says.

• **Educate patients about possible side effects.** "The best way to educate patients about this issue is to have a reference that gives information the patients can take home and read," Sheeks recommends. "The newest and most complete data bank is called the Complete German Commission E monographs. Required by German law, the monographs were developed by a panel of physicians, toxicologists, epidemiologists, and scientists for the German government's Institute for Drugs and Medicinal Devices."

The reference has been peer reviewed by U.S. and German experts, Sheeks explains. "This monograph allows health care professionals easy access to clinical information on herbs and interactions for their patients who self-administer herbal medicines."

Reference

1. Angell M, Kassirer J. Alternative medicine: The risk of untested and unregulated remedies. *N Engl J Med* 1998; 339:839-841. ■

EXECUTIVE SUMMARY

- Alternatives should be used in the ED in conjunction with traditional methods.
- Massage therapy can reduce the impact of acute asthma attacks.
- Some hospitals have added herbal medicines to the formulary and use acupuncture.
- Music therapy can reduce anxiety in patients undergoing procedures.

How to apply these alternative approaches

As alternative therapies move to the forefront, possibilities for application in the ED may increase.

"There is a new trend in openness, brought on by a grassroots movement," says **Patty Campbell**, RN, MSN, CCRN, ANP, CS, a Phoenix-based emergency nurse practitioner and assistant editor of the *Journal of Emergency Nursing.* "As patients have increased their use of alternative therapies, this has made nursing and medicine take a closer look at it."

Alternatives should be used together with traditional methods, says Campbell. "People normally come to the ED to get medical care for acute illness or injury. Most of the therapies that are considered alternative should be done in conjunction with allopathic medicine," she explains." Allopathic medicine is the response to a disease or injury with active treatments, such as medicine and surgery. "We can't deviate from our purpose, which is to provide the best allopathic care," says Campbell.

Both approaches are effective in different ways, stresses **Jay Kaplan**, MD, FACEP, chairman of the department of emergency medicine at Saint Barnabas Medical Center in Livingston, NJ.

"There are certain things Western medicine does very well, such as [treating] acute trauma or infectious illness; although with overuse of antibiotics, there are some 'superbugs' out there calling that into question. But alternative medicine does a better job with chronic disease or autoimmune disease," he says.

Hospitals are becoming more open to alternative approaches, notes Kaplan.

"There are still issues of medical staff acceptance of new approaches," he notes. "However, some places are actually putting herbal medicines in the hospital formulary, and acupuncture is used in some hospitals."

Here are examples of alternative approaches that can be implemented in the ED:

• **Acupuncture.** "With chronic illnesses, where traditional medicine has failed to control a patient's pain, integrated therapy would be an excellent next step," says Campbell. "Instead of narcotics, maybe the next step for a patient with chronic back pain would be acupuncture or massage therapy."

Some hospitals have an acupuncturist certified and credentialed by the facility, notes Campbell.

"Several hospitals are proceeding in that direction. Many MDs are getting certified to incorporate acupuncture into their practice. Eventually, we will be seeing it in the ED," she notes.

Acupuncture could be an alternative for drug-seeking patients, notes Kaplan. "One of the most difficult patients we see in ED is the person with severe headaches who is allergic to every known drug other than a narcotic," he explains. "I would love to be able to offer that patient acupuncture as a therapeutic modality."

• **Visualization or guided imagery.** "Nurses can take classes to learn techniques such as visualization," recommends Campbell. "Sometimes patients are waiting long periods of time to be seen, which only increases their stress. Incorporating visualization techniques while patients are waiting for test results or to see a physician would be very beneficial."

Visualization can help patients in crisis, says Kaplan. "In addition to taking care of the strictly medical physiologic things going on, I will ask patients to visualize themselves in a favorite place, where they can feel totally comfortable and relaxed," he says.

Asthmatics with breathing difficulties can also be helped with visualization.

"Ask them to recognize that their lungs are in spasm, and try to think about how their lungs could relax. Ask them to grip your hand and feel the tight muscle, then relax their hand," Kaplan suggests. "Explain that right now their lungs are like a fist, and their lungs need to relax like an open hand."

Guided imagery involves visualization, but it's a longer process, Kaplan explains.

"You are taking a person on a journey by having them use their imagination," he says. "For example, you may have a patient close his or her eyes, and

Navapache Regional Medical Center

Therapeutic Touch Policy

Policy

Practitioners will use Therapeutic Touch within the scope of practice outlined by the Arizona State Board of Nursing.

It shall be the policy of Navapache Regional Medical Center (NRMC) that Therapeutic Touch may be practiced by any practitioner who has completed either of the following two training options:

1. At least eight hours of Therapeutic Touch training at Arizona State University or equivalent provider;
2. Level I of the American Holistic Nurse's Association Healing Touch Certificate program.

Training and continuing education documentation in therapeutic touch will be maintained by trainees and will be available to NRMC upon request. Approval to practice therapeutic touch will be obtained from the department manager upon providing proof of training.

Procedure

Explain the procedure and obtain verbal permission from patient or family whenever possible. A physician order is required for this procedure.

1. The practitioner centers by bringing the body, mind, and emotions to a quiet, focused state of consciousness.
2. Make the conscious intention to therapeutically assist the individual.
3. Assess the recipient's energy field using the hands and other cues to become aware of differences in the symmetry of the field. Hands are usually held 2-4 inches away from the individual's body and are moved in a head-to-foot direction over the front, then the back of the body.
4. Use calm, rhythmic hand movements (unruffling) to clear areas of energy imbalance in the field.
5. Use hands to modulate and direct energy as determined by the assessment.
6. Repeat prior phases as necessary (i.e., assessment, unruffling, directing, and modulating energy).
7. Finish when no further asymmetries are noted.
8. Allow recipient an opportunity to rest.
9. Verbally evaluate recipient's response and note physical changes.
10. Document procedure:
    a. Identify the presenting problem and describe it in the patient's words.
    b. Identify from assessment process any areas of block, congestion, and imbalance. (Consider using diagrammatic documentation.)
    c. List methods of intervention used and describe them.
    d. Evaluate the procedure using subjective observations (e.g., generalized feelings of warmth, spontaneous verbal response — a sigh or comment of "I feel relaxed;" description of change in pain or anxiety levels); and objective observations (e.g., lowering of the recipient's voice, slowing and deepening of recipient's respiration, subtle flush of skin [especially in areas treated], decreased pulse, and/or lowered blood pressure).

Source: Navapache Regional Medical Center, Show Low, AZ.

imagine they're in a very beautiful place, then help them to visualize that location."

• **Placebo effect.** "Most of the time, people think the placebo effect means you're trying to put something over on the patient. But you are actually helping to mobilize the patient's emotional and mental resources to help them heal," says Kaplan. "The mind can help the body heal. If you have a person who comes in with an injury and [he or she] says, 'How long will it take to get better,' and you tell the person three weeks, it may well take three weeks. But if you say, 'People heal at different rates, and you may feel better in three or four days,' that sets up an expectation that their body is beginning to work on getting better already."

• **Herbal medicine.** "By learning about herbal medicine, ED nurses can begin to raise the issue of what other kinds of medications they might potentially recommend to patients," says Kaplan. "Because by and large, you are dealing with substances less potent than prescription medications, they are less effective acutely but may be effective over time. But there certainly are some herbal remedies out there that can be very helpful to patients who really don't want to take traditional medications."

Many herbal remedies have been shown to be effective with specific conditions, notes Kaplan. "For example, studies in Europe have shown ginger to be as effective as medications such as Dramamine, in treatment of post-op

nausea and motion sickness," he says. "Gingko biloba has shown improvement in memory of Alzheimer's patients in randomized, double-blind studies." **(See section on ginko biloba in cover story on p. 90.)**

Saw palmetto can be helpful to men experiencing benign prostratic hypertrophy, Kaplan notes. "There are some good, controlled studies that show St. John's Wort is as effective as some of the antidepressant medications people are taking, at far less cost."

However, exercise caution and act as an educator, not an advocate. "If you tell a patient, 'I think that you should take feverfew to prevent your migraines,'" you are putting yourself at some risk," says Kaplan. "Instead, say, 'I've heard that this particular herb might be helpful, why don't you read about it a little more and see what you think.'"

• **Music therapy.** "We build up our tolerance to all the noise in the ED so we don't hear it, but our patients do, which increases their stress level," Kaplan notes. "If you decrease a person's stress level, you increase the body's capability to fight infection."

Portable CD players can be used with headsets at the patient's bedside, Kaplan recommends. "This isolates them from all the extraneous noise in a busy ED and has a calming influence," he explains. "Studies have shown that this lowered children's anxiety levels in a pre-op setting, so certainly it could be used on any patient in crisis or in pain. I've had anxious 50-year-old men with chest pain on a stretcher a curtain away from an active CPR, with their eyes closed and a smile on their face."

Music therapy is very effective in children undergoing an examination or invasive procedure, Campbell reports. "If they get to listen to a favorite tape and sing along, it really alleviates their anxiety," she says. "We put headsets on them and have them listen to therapeutic music. Studies have suggested that this may reduce their response to pain and enhance their healing. We are looking into expanding this into the adult population."

• **Massage therapy.** "There are case reports of guided imagery and massage therapy reducing the impact of an acute asthmatic attack," reports Campbell. "Once you start traditional therapies, you can add massage therapy or therapeutic touch."

• **Diet.** "A dietary regimen potentially can have a profound effect on the course of an illness," says Kaplan. "If patients have coronary artery disease, you can recommend they look into the Ornish diet. Patients with autoimmune diseases should be instructed to look into changes in their diet that can possibly help, such as becoming a vegetarian."

• **Therapeutic touch.** The ED at Navapache Regional Medical Center in Show Low, AZ, has a nursing protocol to incorporate therapeutic touch. Therapeutic touch involves using the hands to identify and correct energy imbalances, with the palms of the hands several inches away from the patient's body. **(See protocol on p. 93.)**

"After the patient's permission is obtained, we help the patient focus, and assess where their energies are low," says **Kathleen Kelly**, RN, an ED nurse at the facility. "The patient's response is documented on the chart." ■

Bring alternative medicine to your ED

Many hospitals are using some form of alternative therapy with inpatients, and the trend is also evident in the ED, says **Karen Sheeks**, RN, MS, CEN, a wellness consultant and educator at St. Joseph Health System Humboldt County in Eureka, CA.

"Some facilities use modalities such as therapeutic touch and imagery in the ED to assist patients with pain control and anxiety," she reports. "I know of one ED physician who exclusively uses imagery for suturing children, and his patients do not require local anesthesia for laceration repair."

Alternative approaches can empower patients, stresses **Jay Kaplan**, MD, FACEP, chairman of the department of emergency medicine at Saint Barnabas Medical Center in Livingston, NJ.

"These techniques can help patients to feel they can do something for themselves, which helps them take responsibility for their healing process with doctors and nurses as facilitators," he says. "That can only benefit patients."

Here are ways to integrate alternative medicine into your ED:

• **Educate yourself about alternative therapies.** "The National Center for Complementary and Alternative Medicine (NCCAM) at the NIH is an excellent resource," says Sheeks. "The NCCAM provides a clearinghouse of information on all current, controlled clinical trials involving the use of alternative therapies. There currently are 22 categories of therapies that the NCCAM is investigating. The Holistic Nurses Association is another wonderful resource for nursing education in alternative medicine."

• **Form a multidisciplinary committee.** "Mad River Community Hospital in Arcata, CA, has a complimentary medicine committee that meets monthly and educates nurses, physicians, and ancillary practitioners on different forms of alternative medicine," reports Sheeks.

Guest speakers present each month on a specific form of therapy and answer questions about its application in the hospital setting, Sheeks explains.

SOURCES

For more information about alternative medicine, contact the following:

- **Patty Campbell**, RN, MSN, CCRN, ANP, CS, 11830 Westline Industrial Drive, St. Louis, MO 63146. E-mail: Campbellnp@aol.com.
- **Jay Kaplan**, MD, Saint Barnabas Health Care System, Department of Emergency Medicine, 94 Old Short Hills Road, Livingston, NJ 07039. Telephone: (973) 322-5127. Fax: (973) 322-8055. E-mail: jakmd@aol.com.
- **Kathleen Kelly**, RN, Navapache Regional Medical Center, 2200 Show Low Lake Road, Show Low, AZ 85901. Telephone: (520) 537-4375.
- **Thomas Moss**, MD, BA, Family Care Fountain Hills, 11842 Desert Vista, Fountain Hills, AZ 85268. Telephone: (602) 675-4327. Fax: (602) 816-3120.
- **Karen Sheeks**, RN, MS, CEN, St. Joseph Health System Humboldt County, 6700 N. Highway 101, Suite B, Eureka, CA 95503. Telephone: (707) 677-3969. Fax: (707) 441-0177. E-mail: ksheeks@tidepool.com.

"As a result of this committee meeting regularly, the hospital nursing staff was able to create and obtain approval for policies and procedures for the use of alternative therapies in the hospital," she says.

• **Integrate alternative and traditional methods.** "The terms 'complementary' or 'integrative' are more accurate than 'alternative,'" notes **Patty Campbell**, RN, MSN, CCRN, ANP, CS, a Phoenix-based emergency nurse practitioner and assistant editor of the *Journal of Emergency Nursing*.

"The goal is to integrate the best of both worlds by using both alternative and traditional therapies."

Ask about alternative treatments used by patients. "Depending on the patient's chief complaint, you should ask about the use of chiropractors, homeopathy, and acupuncture," Campbell recommends. "Because when it comes time to discharge that patient, it may be appropriate to use that as part of the treatment plan."

• **Enlist administrators' support.** "You need to involve administration so they can support you with resources and training. A lot of people don't realize how many things we can do in our everyday practice," says **Kathleen Kelly**, RN, an ED nurse at Navapache Regional Medical Center in Show Low, AZ. "Nurses do a lot of things already, such as laying of hands, giving patients alternative ways to deal with pain and stress, and talking to them about lifestyles. But policies and procedures should be backed up by administration."

• **Use training programs.** "In order to be experts in this area, nurses need to be trained in alternative therapies," says Kelly. "Training ensures what we're doing is professional and meets the needs of the hospital."

• **Recognize that alternative methods can save time.** "There are so many issues to address in the ED in 10 seconds. People ask how we have time to do alternative methods," says Kelly. "But it actually saves time, because it alleviates the patient's stress, decreases blood pressure, and slows breathing. The patient is calmer and more cooperative, so you can start dealing with the symptoms you see right away."

• **Consider recommending alternative practitioners.** "A patient came in with an inflamed thyroid, and had seen multiple specialists. The solution that was being presented to her was that she should have her thyroid taken out. She came in after having a medication reaction to her prescription, and I suggested she see an acupuncturist who could possibly help with her symptoms."

Patients usually appreciate such recommendations, says Kaplan. "A lot of times, nurses are concerned that if you recommend a practitioner who has a different approach, the patient will be upset. In fact, patients appreciate that and don't like being told, 'There is nothing else I can do for you.' Over time, build-up a referral list of alternative practitioners." ■

Create a trauma flow sheet

A trauma flow sheet can streamline documentation and improve care, says **Carol Buschur**, RN, CEN, clinical coordinator for the ED at the University Hospital in Cincinnati.

"We created this flow sheet because we wanted a more consistent assessment and documentation form for our critical cases," she says. "We looked at many different forms and came up with a systematic approach."

Here are some components of an effective trauma flow sheet:

• **Less time spent writing narratives.** A standardized format for different categories and the preprinted findings help the nurse document a complete, accurate, and quick assessment.

"We took out a lot of the narrative pieces by using checks in boxes, prompts, and circles on a body graph. The nurse spends much less time writing it out, and

you get a head-to-toe picture of the patient."

• **Increased accuracy.** "We needed more accurate assessment and documentation," says Buschur. "We also had to consider the time element involved in adequate documentation of our practice. In our ED, we have 76,000 visits per year with a very tight staffing pattern, so we needed a user friendly but effective documentation tool."

To improve accuracy, the form features preprinted assessment findings with boxes in front of each finding. "The boxes can simply be checked for positive findings," Buschur explains. "Other essential assessment pieces that require more than a check are identified by a word prompt and a line for brief notation."

• **Improved assessment.** "When we have a critical care patient, we tend to focus on just the injury. Our goal with this form is to do a complete general assessment, looking at the whole patient," says Buschur. "We use functional categories as a systematic approach to assessment; first the ABCs, then the other assessment areas. Once we have the most life-threatening issues under control, we can complete our assessment of the entire patient/family."

The 10 functional categories used are respiratory, cardiovascular, injury/mobility, comfort/pain, sensory/perceptual, nutrition, elimination, skin/safety, coping, roles/relationships, and health perception/promotion.

"With the incredible pace we work at, a preprinted systematic format helps us assure that our assessments are complete," says Buschur.

• **Decreased length of stay.** The form decreases a patient's length of stay, notes **Embeth Bauer**, RN, also an ED nurse at The University Hospital in Cincinnati.

"The hospital stay for these critical patients can actually be decreased if we follow the assessment format on the ED flow sheet. From the time they come into the ED, we can begin planning discharge from the hospital, based on their individual needs," she explains.

The form helps nurses to identify patient and family needs. "Many families cannot stay through the ED process and the admission process. Often, the ED RN is the first to discover pertinent concerns from the patient or family before they are admitted into the hospital. We get ballpark ideas of what the family will need to discharge a patient based on the findings," says Bauer.

Prompting the nurse to assess and document this information can help expedite the resolution of psycho-social issues that need to be addressed before the day of discharge. "Family education and home situations need to be identified early on and communicated to social workers. That way, once the patient is admitted and treated, the process of discharge from the hospital can be smoother."

For example, a trauma patient may be the primary financial income for a family with three small children, notes Bauer.

"There may be a patient who comes in with angina for a ruleout MI, and they may be responsible for taking care of an elderly relative," she explains. "They may live on the third floor, or may need support to take care of them when they go home. The form allows us to immediately take these needs into consideration instead of on the day of discharge."

• **Better communication with floor nurses.** "As we increase documentation of our assessment, it is easier for other nurses to know how the patient presented and what we have done," says Buschur. "This form encourages a thorough and consistent initial assessment as a baseline for subsequent assessments, whether this takes place in the ED or on another unit."

A copy of the form goes with the patient to whichever unit they are taken, Buscher explains. "The form communicates our practice, which should be based on data and facts vs. assumptions and guesswork."

• **More involvement with other staff.** "The form is no longer just a nursing record. We made it a patient care record so the ownership isn't just nursing, it's multidisciplinary," Buschur explains. "There are areas on the form where physicians and other disciplines can document. If respiratory therapy comes down, they can write on this form to document their care and interaction with the patient, so it's not just a nursing process."

The form is designed to be user friendly for everyone, stresses Bauer. "The most frequent physician orders are written in, and have checkboxes for ordering. Other areas of the form include procedures, lab results, and medications."

• **More consistency.** A copy of the form always goes with the patient. "A patient in the ED may stay longer than we anticipate, so many nurses can be caring for the same patient," Buschur explains.

• **Easier to use.** At Lahey Hitchcock Medical Center in Burlington, MA, the ED staff noticed the trauma flow sheet was difficult to use because the recorder

EXECUTIVE SUMMARY

- A trauma flow sheet can streamline documentation of nursing assessment.
- Standardized formats using checklists instead of narratives saves time.
- By using the form to identify patient needs early in the process, a patient's length of stay can be decreased.
- Documentation should flow logically, from pre-hospital to admission to discharge.

SOURCES

For more information on creating a trauma flow sheet, contact:

- **Embeth Bauer**, RN, The University Hospital, 234 Goodman St., Cincinnati, OH 45267. Telephone: (513) 558-5281. Fax: (513) 584-2637.
- **Carol Buschur**, RN, CEN, The University Hospital, 234 Goodman Street, Cincinnati, OH 45267. Telephone: (513) 584-3379. Fax: (513) 584-2637.
- **Nicki Gilboy**, RN, MS, CEN, Emergency Department, Brigham and Women's Hospital, Boston. Telephone: (617) 732-4824. Fax: (617) 278-6977. E-mail: ngilboy@bics.bwh.harvard.edu.

had to jump from one area of the form to another to record information.

"Documentation was very frustrating, because the members of the trauma team would call out appropriate information, but the recorder would be unable to keep up," says **Nicki Gilboy**, RN, MS, CEN, former nurse educator at the Lahey Hitchcock ED and currently nurse educator in the ED at Brigham and Women's Hospital in Boston.

A new form was created based on a logical flow of events. **(See Emergency Trauma Flow Sheet, inserted in this issue.)** "The documentation now follows logically, from prehospital to admission to discharge," adds Gilboy.

• **Increased focus on patient's psychosocial needs.** At Lahey's ED, the trauma flow sheet specifically addresses the patient's psychosocial needs. "Our nursing staff felt strongly that specific information addressing the patient's psychosocial needs should be included, because that reflects one of nursing's focuses," says Gilboy. ■

Update on ACLS drugs

There are several exciting new developments in advanced cardiac life support (ACLS), which will result in new guidelines being published next year.

"We are reviewing proposals for additions and changes to the guidelines," reports **John Field**, MD, FACC, FACEP, associate professor of medicine and surgery at Penn State University College of Medicine in Hershey, PA. "That review process will continue until next September, when an evidence evaluation conference will be held in Dallas."

Revised guidelines to be compiled

All of the clinical evidence will be evaluated at that meeting, says Field. "Medicine in general is turning to outcome, evidence-based guidelines, with a core of randomized, controlled, clinical trials to the degree they are available. The Guidelines 2000 conference will be held in February. At the end of this process, revised guidelines will be published in *Circulation,* the official publication of the AHA."

Here are some changes in ACLS to be aware of:

• **Prevention and intervention.** There is an increased focus on prevention and intervention. "The focus in ACLS has definitely changed," says **Jean Proehl**, RN, MN, CEN, CCRN, current president of the Emergency Nurses Association in Park Ridge, IL. "They are focusing on prevention, not just resuscitation. That's a significant difference in the content of the class in the last 15 years."

Lectures now address stroke and acute coronary syndrome, says Proehl. "We have always talked about MIs but we're now talking about them in a lot more detail than we previously shared in the ACLS class, and the stroke content is totally new. The diagnostic and intervention pieces are more elaborate than they used to be."

Identifying, helping at-risk patients important

Educational focus has expanded to include prevention, notes Field. "There are two new chapters in the ACLS textbook, published in 1998. One focuses on acute coronary syndromes and the prevention of

EXECUTIVE SUMMARY

Many changes in ACLS are on the horizon, including new medications. Revised guidelines will be published in 2000. The focus has expanded from resuscitation to prevention and intervention, including thrombolytic management for MIs and strokes.

- A new ACLS-EP course for experienced providers is being pilot tested and developed.
- High-dose epinephrine has not shown any benefit in either the hospital or prehospital setting.
- Vasopressin has been studied in Europe and looks promising as a potential replacement for epinephrine.

SOURCES

For more information about ACLS drugs, contact the following:

- **John Field**, MD, FACC, FACEP, Penn State University College of Medicine, Division of Cardiology, H047, Penn State University College of Medicine 500 University Drive, Hershey, PA 17033. E-mail: jfield@med.hmc.psghs.edu or jfield@psghs.edu.
- **Joseph Ornato**, MD, FACC, FACEP, Medical College of Virginia, Department of Emergency Medicine, 401 N. 12th St., P.O. Box 980401, Richmond, VA 23298. E-mail: Ornato@aol.com.
- **Jean Proehl**, RN, MN, CEN, CCRN, Dartmouth-Hitchcock Medical Center, RR#2, Box 340, Cornish, NH 03745. Telephone: (603) 650-6049. E-mail: Jean.Proehl@Hitchcock.org.

complications of unstable angina, acute MIs, the use of thrombolytic drugs, and other reperfusion strategies such as angioplasty. Also, a new chapter was added that addresses reperfusion therapy in stroke patients who are eligible."

There will be increasing emphasis on the importance of identifying patients at risk for stroke and stroke in evolution, notes Field.

"All the educational materials will be revised at the end of the 2000 conference, and will encompass the text, slides, and guidelines," he says.

• **Advanced ACLS course.** A new ACLS-EP course for experienced providers is being pilot tested and developed, reports Field.

"The course will address questions such as, if you knew 10 minutes before the arrest that certain high-risk complications were present, what would you do to prevent the arrest?" he notes. "It will encompass various topics such as electrolyte abnormalities, hypothermia, and various types of toxicological problems." The other area under pilot testing and development is an introductory revision of the textbook, says Field. The first chapter of the textbook, *ACLS for Providers*, is being expanded specifically for the introductory provider. "These are in pilot testing and development and are not available yet."

The advanced ACLS course will be a potential option for advanced providers to recertify, says **Joseph Ornato**, MD, FACC, FACEP, professor and chairman of the department of emergency medicine at the Medical College of Virginia in Richmond.

"It addresses special situations and allows the providers to refresh their skills. It also allows them to extend their skills into case management where there are other issues to contend with, such as hypothermia or near-drowning resuscitation, or resuscitation and an overdose," he explains.

• **High-dose epinephrine.** High-dose epinephrine is clearly not showing a benefit, says Ornato. "In the last year or two, we have seen several trials indicating a lack of value in both the hospital and prehospital setting.[1] One of the things we discussed at the conference is what change in recommendation should be made based on this [evidence]."

Trials with high-dose epinephrine have been discouraging, Field says. "The European epinephrine study group, published in the *New England Journal of Medicine* last year, showed that repeated doses of epinephrine were no better in terms of resuscitation than standard doses."

There is no literature showing improved long-term survival rates, says Proehl. "It has been demonstrated that you can resuscitate more people in an acute event, but there is nothing that shows this makes a huge difference in long-term survival."

• **Vasopressin.** "Because the high-dose epinephine trials were discouraging, the question comes up: Is

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Editor: Staci Bonner.
Group Publisher: Brenda Mooney.
Managing Editor: David Davenport.
Associate Managing Editor: Suzanne Zunic, (suzanne.zunic@medec.com).
Production Editor: Nancy McCreary

Hours of operation:
8:30 a.m. - 4:30 p.m.

Editorial Questions

For questions or comments, call Suzanne Zunic at (404)262-5444.

there a better vasoconstrictor to use in resuscitation?" says Field. "There is some information available about vasopressin. This is one of the issues that is going to be discussed at the guidelines meeting."

Vasopressin has been studied in Europe and looks promising as a potential replacement for epinephrine, says Ornato. "This is a hot item for discussion," he adds. "However, for almost five years, there have been almost no successful clinical trials on resuscitation in the United States because of FDA regulations on performing such research. The rules are difficult and created a major problem. In effect, no clinical research is being done in this area."

• **Amioderone for V-fib treatment.** This treatment appears to be a very promising agent, says Ornato. "The 'arrest' trial from Seattle (presented at the American College of Cardiology meeting held March 1999 in New Orleans) indicates it increased survival to hospital discharge by 30%, compared to standard ACLS," he notes. "We have routinely been using it in our paramedic system since last April, and it's been on our code cart since it got FDA approval several years ago."

Lidocaine is currently the antiarrhythmia agent in the algorithm, notes Field. "[The] arrest trial is looking at amiodiorone, and there is interest in using it for refractory ventricular fibrillation. The 'arrest' trial has shown an improved survival return of circulation to the hospital ED. The issue of the optimal antiarrhythmic and its position in the algorithm will also be discussed, with specific reference to amiodirone."

• **Reperfusion.** "New strategies are being developed, such as two recently completed trials with single bolus agents, similar to t-PA," says Field. "These are actually genetically derived mutants of t-PA; they are TNK and lanatoplase. Efficacy trials have shown that these agents are as effective as t-PA, but are not yet approved by the FDA and have to go through that process. "

The issue of single bolus agents and prehospital administration of thrombolytic therapy on selected patients will be addressed, Field notes.

"Specific treatment of patients with large infarcts and cardiogenic shock in the context of direct mechanical revascularization will be further considered," he adds. "There still will be a continuing emphasis on very early treatment of patients with reperfusion therapy to limit infarct size and prevent episodes of ventricular fibrillation."

Reference

1. Gueligniaud P, et al. A comparison of repeated high doses and repeated standard doses of epinephrine for cardiac arrest outside the hospital. *N Engl J Med* 1998; 339:1,595-1,601. ■

CE Objectives

After reading this issue of *ED Nursing*, the CE participant should be able to:

1. Identify clinical, regulatory, or social issues relating to ED nursing.
2. Describe how those issues affect nursing service delivery.
3. Cite practical solutions to problems and integrate information into the ED nurse's daily practices, according to advice from nationally recognized experts.