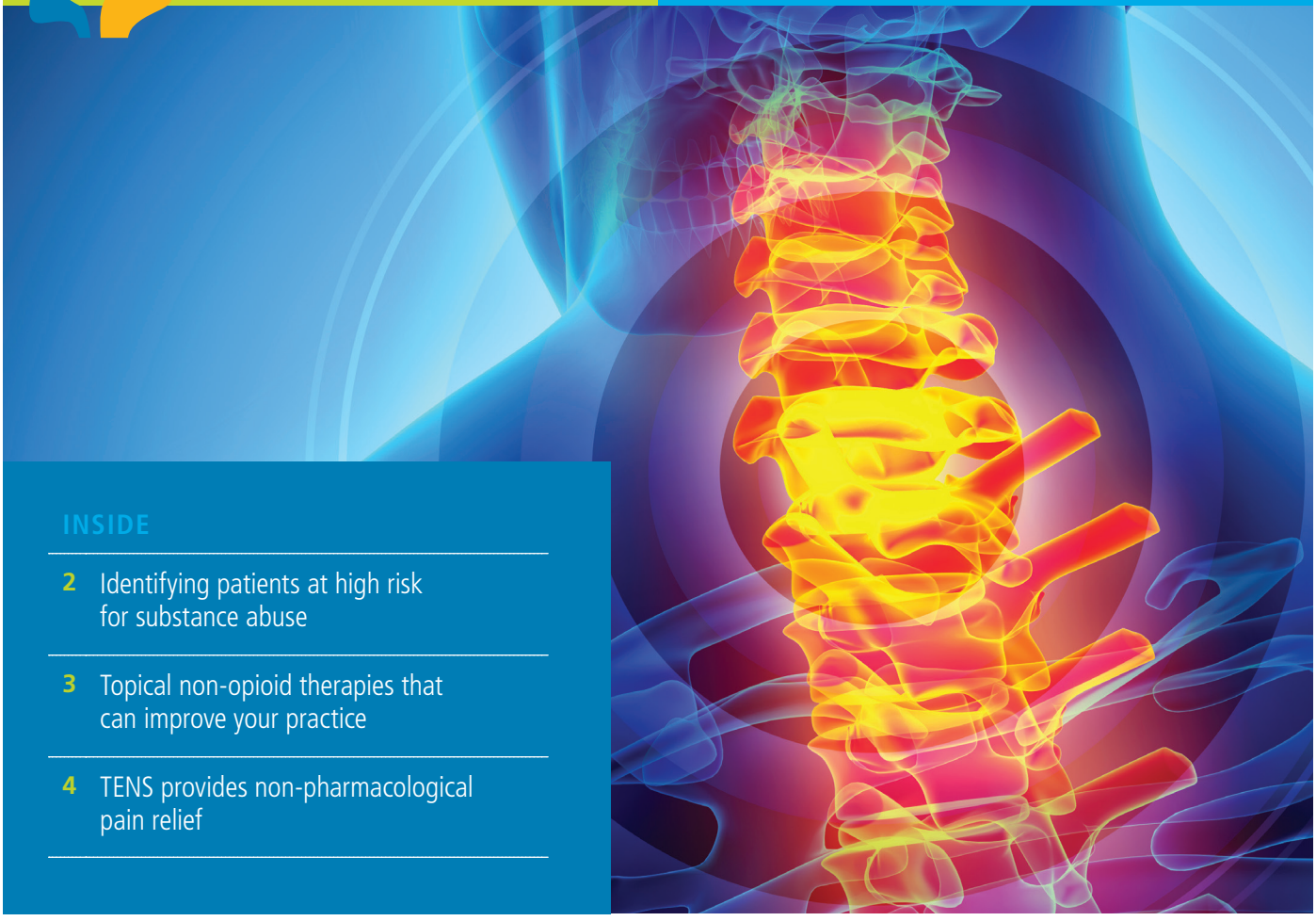
HEALTHCARE CONNECTION FOR BETTER PATIENT CARE

SUMMER 2017

CLINICAL CONNECTION



INSIDE

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Identifying patients at high risk for substance abuse

Casey Grover, MD, emergency medicine physician, Community Hospital of the Monterey Peninsula

As doctors, one of the most rewarding skills we have is to relieve pain in our patients. The severity of pain we treat is on a spectrum, from minor strains and sprains, nearly always treated with non-opioid therapy, to broken long bones and acute pancreatitis, in which opioids are routinely used.

It's the middle-ground cases that are much more challenging. Should we prescribe opioids for arthritis or chronic back pain? Further, are there some patients for whom opioids are less dangerous than others?

During the last few years of the opioid epidemic, we've learned a lot about who is at highest risk for addiction. There are some patients who simply are not good candidates for therapy with addictive medications, in the absence of an acute illness or traumatic injury. Identifying the patient, and discussing the risk of addiction with them, may prevent your patient from getting addicted.

There are four major risk factors for developing a substance-use disorder:

1. A current, active substance use disorder.

This seems like a no-brainer, but current abusers or misusers are prescribed addictive medications more often than you would think. Ask about current substance abuse — and screen for it, because many patients hide it.

2. A history of substance abuse.

There are countless stories about recovering alcoholics or addicts who get sick and are liberally prescribed addictive medication, and then promptly relapse. This one is pretty obvious as well, but if you don't ask about previous substance abuse, you may contribute to the relapse.

ONLINE RESOURCES FOR PHYSICIANS **chomp.org/prescribe-safe**

3. A family history of substance abuse.

While not directly inheritable, there is a genetic component to addiction; it tends to run in families. If you ask an alcoholic whether anyone in the family has a problem with alcohol or addiction, the answer is almost always yes. While this does not mean you must avoid potentially addictive medications, you should discuss it with the patient and proceed with caution.

4. Severe, untreated mental illness.

Patients with mental illness often manage symptoms by self-medicating with alcohol, marijuana, opioids, benzodiazepines, sleeping pills, etc. Patients with bipolar disorder and schizophrenia often have major impulse control issues, further increasing their risk of misuse. Addictive medications should only be prescribed with great caution and co-management by a mental health provider.

Topical non-opioid therapies that can improve your practice

Casey Grover, MD, emergency medicine physician, Community Hospital of the Monterey Peninsula

Opioids are killing us. Every day, 91 Americans die from opioid overdose. Yet, our patients still have pain, and ask for help. Here are some effective non-opioid options:

LIDOCAINE PATCHES

When formulated as a patch, the local anesthetic lidocaine can be absorbed transdermally, providing pain relief to superficial structures. As a prescription, it is available as a 5% patch (Lidoderm). While very effective, it can be expensive if not covered by insurance. A similar, but less potent formulation, 4%, is available over the counter at pharmacies. The medication can cause skin irritation, so it should only be applied over intact skin. Dosing is 1-3 patches, applied to the area of greatest pain, once daily. Patches should be removed after 12 hours.

DICLOFENAC GEL

Diclofenac gel is an NSAID that can be absorbed transdermally. There is minimal systemic absorption, reducing side effects such as gastric irritation and renal insufficiency. Only 6% of the drug is absorbed systemically as a gel, so it can be used in older patients and those who otherwise could not tolerate NSAIDs due to side effects. Diclofenac is available as a 1% gel (Voltaren). Dosing is 2 grams for upper extremities and 4 grams for lower extremities, applied four times daily.

DICLOFENAC PATCHES

Diclofenac in patch form has even less systemic absorption than the gel. This, again, allows NSAIDs to be used in patients otherwise intolerant. Patches are available as a 1.3% formulation (Flector). Dosing is 1 patch applied twice daily.

ARNICA

Arnica is a homeopathic therapy for pain and inflammation. It comes from the sunflower family, *Arnica montana*, and inhibits the body's cyclo-oxygenase system, much like NSAIDs. The most common preparation is a gel, available over the counter at pharmacies and online. Side effects and interactions are similar to topical diclofenac.

TIPS FOR USE

Topical medications are most effective for pain from superficial parts of the body, as they penetrate to a limited depth. Some can be combined to increase effectiveness. As topical NSAIDs and lidocaine work through different pathways, diclofenac gel and lidocaine patches may be used together for a synergistic effect. After review with our hospital pharmacists, using topical diclofenac gel, waiting 30 minutes, then applying a lidocaine patch appears to be the safest and most effective way to use topical therapies together. Patients should be careful to monitor for skin irritation.

These medications can also be used for patients already on chronic opioids. Combining topical therapies with existing opioid regimens may reduce pain enough that opioid dosages can be reduced.

TENS provides non-pharmacological pain relief

Casey Grover, MD, emergency medicine physician, Community Hospital of the Monterey Peninsula

Transcutaneous electrical nerve stimulation (TENS) therapy is an extremely effective treatment for acute and chronic pain. If you aren't using it in your practice, this therapy offers a fantastic non-opioid pain management modality for your patients.

HOW DOES IT WORK?

TENS therapy is typically done with a small battery-powered device that delivers low-voltage current to the affected area, using "gate control theory." All of the stimuli to the various receptors in the body — pain, temperature, vibration, etc. — transmit signals through the ascending fibers of the spinal cord to the brain. The pathways can't effectively transmit more than one type of stimulus at a time. So, stimulating other receptors with electrical current reduces the spinal cord's ability to transmit pain signals. Essentially, the spinal cord is being "distracted" by non-painful stimuli. When used regularly, stimulation by a TENS unit results in an increase in endogenous opioids at the site of use, helping to treat chronic pain as well.

WHERE CAN I GET USE A TENS UNIT?

TENS units, made up of a stimulus generator, wires, and electrodes, vary in complexity and cost. Inexpensive units can be bought online or in some pharmacies for as little as $20-$50.

HOW IS IT USED?

Electrodes are placed around the area of greatest pain. Some stimulus generators deliver a constant current, while others deliver pulses every few seconds. The patient determines the intensity, controlling it like the volume on a stereo, to see what works best. They may use a unit for up to 60 minutes, but should monitor for skin irritation for sessions longer than 20 minutes.

If electrodes are placed correctly, patients will experience a pleasant buzzing sensation that relieves or reduces pain. If muscle spasms develop, the intensity should be reduced or the electrodes repositioned.

WHERE CAN A TENS UNIT BE USED?

TENS units can be used almost anywhere on the body, with a few exceptions. Electrodes should not be placed anywhere that results in a trans-cranial or trans-thoracic current. Patients who are pregnant should avoid any current near the fetus. Patients with pacemakers should not use the electrodes near their pacemaker. Electrodes should be placed on intact skin only and not in any orifices.

Most physical therapists are trained on TENS units and can help you or your patients optimize lead placement and function.