



SHARE THE RISK MODEL

Physicians prescribing opioids for pain relief and, in particular, non-malignant pain, are being sued for giving too little, giving too much, or even murder.^{1,2} Several publications have made the statement that “17% of doctors who treat pain are investigated each year and a pain treating physician is arrested and charged criminally somewhere in the U.S. daily.”^{3,4}

The Share the Risk Model (STR) has evolved in response to these problems. The basic theme is a call for action. The model addresses the opioid phobia that continues to manifest itself among physicians, patients, the media, and various government entities. The goal has been to unite physicians and other health care professionals who treat chronic pain in the San Diego area. It is axiomatic that patients with chronic and intractable pain are among the most complex and difficult to treat in all of medicine. They invariably have multiple and often esoteric somatic problems, predictably complicated by layers of social and emotional stress, or by concurrent anxiety and personality disorders. In recognition of these realities, the

Share the Risk Model’s fundamental premise is that no physician—no matter how well educated, confident, compassionate, committed, or meticulous—can adequately meet all the needs of the patients with chronic and intractable pain. Instead, the model calls for a multi-disciplinary team approach to treat the chronic pain patient.

Dr. Joseph Shurman first developed the model’s basic principles in January 2002 in San Diego. Inter-disciplinary teams have been shown to improve patient care in a number of complex clinical situations and also deliver the best possible care to this challenging population. A variety of perspectives can be a source of strength and creativity, as well as contribute to goal-oriented coalitions across disciplines.

Chronic pain is a significant problem in the U.S. today. Approximately 35% of the population suffers from chronic pain. Over 50 million Americans are partially or totally disabled by chronic pain. Over the age of 50, one out of two people experience chronic pain. Under-treatment of chronic pain runs as high as 50%.⁵

Treatment is often inadequate and associated with a high economic and psychological cost. This population will be increasing rapidly over the next several decades. The effects of under-treatment of pain can be devastating, leading to depression (suicide), anxiety, loss of sleep, social and sexual dysfunction, loss of work, weakness, fatigue, gastrointestinal distress, hypertension, and tachycardia.⁶ The JCAH has made pain management a major criteria for the accreditation of hospitals and pain is now recognized as the fifth vital sign.⁷

In the late 1980’s and early 1990’s, a major breakthrough occurred when opioids began to gain acceptance as a legitimate therapy for chronic non-malignant pain. Opioids are the most effective analgesics known to mankind and have been used for thousands of years. When opioids are titrated properly, patients can achieve excellent pain relief. This may lead to a dramatic improvement in the quality of life and often enables patients to return to a productive lifestyle. Opioid therapy for non-malignant pain is gaining national acceptance but is still controversial.

Originating in San Diego, this practice model is an example of successful collaboration among doctors to mitigate professional risks while improving care for pain patients.

By Joseph Shurman, MD; John Sack, MD; Gloria Shurman, PhD; Bradley Schnierow, MD; and Ceasar Gabriel, BSP

On May 19, 1998, the Federation of State Medical Boards published the *Model Guidelines for the Use of Controlled Substances for the Treatment of Pain* (revised in 2004).⁸ These Guidelines recognize that “controlled substances,” including opioid analgesics, may be essential in the treatment of acute pain due to trauma or surgery and in chronic pain — whether due to cancer or non-cancer origins.

In their October 23, 2001 Consensus Statement, the DEA and 21 healthcare organizations agreed that “effective pain management is an integral and important aspect of the quality of medical care and pain should be treated aggressively.” They also noted that opioids are often “the most effective way to treat pain and the only treatment option to provide significant relief.” They further stated “that focusing only on the abuse potential of the drugs, however, could erroneously lead to the conclusion that these medications should be avoided when medically indicated, generating a sense of fear rather than respect for their legitimate properties.”⁹

Despite these encouraging developments, physicians prescribing opioids for chronic non-malignant pain have been under increasing pressure over the past several years. On the one side, they are under pressure from patients who demand and expect adequate pain relief. On the other side, are families, insurance carriers, or other third parties who may argue that the patient is over-medicated. When the situation becomes adversarial, the doctor may be sued for over-prescribing. In some cases, where deaths have occurred, physicians have even been prosecuted for murder. And despite its stated support for adequate pain relief, the DEA continues to investigate and prosecute doctors—in particular, those who prescribe high doses of opioids. All these realities have had a “chilling effect” on the practice of pain medicine and often place the prescribing physician in a no-win situation.

Share the Risk Model

The Share the Risk Model has evolved in response to these problems. The core of the STR model is elaborated through the five P’s, as follows:

- P1** — Professional Pain Management Delivery System
- P2** — Patient Advocacy & Educational Support
- P3** — Paperwork
- P4** — Precautions
- P5** — Physical Therapy & Integrated Techniques

P1 — Professional Pain Management Delivery System

This category includes pain specialists, psychologists/psychiatrists, pain addiction specialists, pharmacists, and other agents and organizations. The following sections describe these contributors.

Pain Specialist. The core of the STR model is a second or third pain management opinion. The authors prefer, if possible, to use a specialist who is not associated with the referring physician. For example, the senior author, Dr. Joseph Shurman, is an anesthesiologist who uses second and third opinions from a neurologist and a physical medicine specialist. These specialists review the patient’s medication plan and may offer other perspectives and alternative treatments. The authors have tried to unite competing pain specialists within the region and assure them that when a second opinion is rendered; the patient will not be transferred without the approval of the referring physician.¹⁰ In today’s litigious climate, having a second opinion — even within your medical group — is better than going it alone. In more remote areas, the authors recommend networking with the closest regional group, preferably within an hour’s car ride.

Psychologist/Psychiatrist. The senior author recommends that all patients on high dose opioids see a psychologist and/or a psychiatrist who, if possible, has some pain management expertise. In the majority of cases, the patients concur and see a therapist (the senior author makes it mandatory). Some patients are initially resistant but, over time, are grateful for the referral.

Patients with chronic non-malignant pain have a higher risk of suicide than individuals with malignant pain. Many have a long life ahead and are at risk for depression. With recurrence of severe depression, the suicide rate may reach as high as 15% in this population.¹¹ The psycho-therapist spends many quality hours with the patient and family members as a keen observer and can recognize problems that can be missed by the pain specialist. Identifying and treating new disorders, anxiety disorders, personality disorders, sexual dysfunction, and other co-morbid disorders is essential for proper pain management. In addition, because of their more frequent contact and intimate level of relationships, this group of professionals are often the first to recognize abuse. They alert the pain physician, especially where there is a network of multidisciplinary specialists who are en-

couraged to have a high level of contact with each other. The psychiatrist/psychologist often treats the family as well as the pain patient. This contributes to the education and well being of others involved with the daily care of the pain patient. The importance of psychological and/or psychiatric care can hardly be over emphasized.

Pain Addiction Specialist. First and foremost, the addiction specialist will evaluate the patient for potential addictive or pseudo-addictive behavior. This is one of the core management issues in pain management. He or she will also discuss opioid tolerance and will educate the patient (and if possible, the family) regarding the difference between physical dependence and addiction. This often reassures the patient and addresses the family's fear regarding narcotic addiction.

“Pharmacists can be an excellent observer of your patient’s behavior... Pharmacists also play a back-up role for the doctor. For instance, they can choose not to fill a prescription if the patient’s behavior appears questionable.”

The addiction specialist will help to formulate a specific dosing regimen that takes into account the patient's prior substance abuse history, if any. The formulation and medication regimen should be tailored to the patient's pain pattern and lifestyle. The authors also recommend opioid rotation. If the patient has a history of addictive behavior, slow release medication is recommended. Keep in mind, however, that these medications can be crushed and used orally or snorted to defeat the slow release component.

Opioid analgesics are widely accepted as appropriate treatment for chronic non-malignant pain. A recent article from Mass General questions the long term efficacy of high dose opioids and claims that such therapy may induce hyperalgesia—a paradoxical increase in pain.¹² However, this information was derived primarily from animal studies and the topic is currently being debated in the pain treatment community. Until more conclusive data are available, the authors recommend individualizing (rotating) and trying different combinations of slow release and immediate release medications.

It should be remembered that opioid use itself does not cause addiction. Addictive behavior is a product of genetic pre-disposition and socio-environmental factors. A history of substance abuse or dependence does not necessarily imply that an individual will abuse medication prescribed for chronic pain. Many patients with a history of addictive behavior are able to comply with the prescribed opioid regimen. However, these patients should be monitored closely and followed at intervals by the addiction specialist.

When aberrant behavior is identified, pseudo-addiction must also be considered in the differential diagnosis. When pseudo-addiction is mistaken for addiction, the patient may be unjustifiably terminated and therefore suffer grievous harm through double injustice.

In the vast majority of cases, the addiction specialist will find

that opioids are being taken as prescribed and their use is appropriate. Those patients who cannot control their opioid use, or when their side effects become intolerable, can be detoxified and transferred back to non-opioid pain management. For some of these pain patients, buprenorphine may be a reasonable alternative. The use of buprenorphine for detoxification and subsequent maintenance, if necessary, may be the next major breakthrough for pain management.

Pharmacists/Other Agents and Organizations. The authors recommend only using pharmacists you know well. Make them a participant in the pain management community. Make yourself available for any problems they might encounter. Invite them to attend your CME meetings and round table conferences and make them part of the team, so they do not become the ones who call the authorities when they are frustrated with the patient (or you). Pharmacists can be an excellent observer of your patient's behavior (the more eyes the better). Pharmacists also play a back-up role for the doctor. For instance, they can choose not to fill a prescription if the patient's behavior appears questionable. Communication with other agents involved in the patient's care—with the patient's permission—is important. These may include worker's compensation adjusters and insurance agents, etc. You should also make use of various societies to provide literature and education for patients and their families. For example, the Reflex Sympathetic Dystrophy Syndrome Society, American Pain Society, and other pain management websites are informative.¹³

P2 — Patient Advocacy and Educational Support

It is important to have a family member or close friend attend many of the sessions with your patient. The authors know that individuals who have no support system, live alone, or have financial hardships, may be more predisposed to alcohol or drug abuse. Since 9/11—with the reduction of illicit drugs coming into our country—there has been an increase in the illicit use of prescription drugs. Family members or friends may steal the patient's drugs either for personal use or for sale on the street. A disturbing statistic is that as many as 20% of high school students have experimented with Oxycontin.¹⁴ The authors recommend that patients keep their medications locked. Family members, along with pharmacists, are the groups that tend to be most critical of physicians and report them to authorities. Frequently, friends or family members will view the patient as a “drug addict.” Such attitudes are shaped by a variety of factors including media exposure (for example, the Oxycontin media blitz and Rush Limbaugh coverage). Education for patient, family, and friends can be most helpful in redefining their perception of the patient's pain and enlisting their support for aggressive treatment.

P3 — Paperwork/Documentation

Pain Management Agreement. Most pain clinics use an agreement. The senior author has an extensive pain management agreement drawn up by legal consultants. Primary care physicians, pharmacists, physiatrists/ psychotherapists and other attending physicians sign the agreement whenever possible. The use of the pain management agreement is debated by some physicians. Some believe that it is discriminatory as it is not used with other medical treatments. However, the authors find it to

be helpful and educational for the patient. It is also valuable when deciding to do urine or blood screens. Also, when necessary, this structure clarifies and substantiates termination of treatment.

In California, most of the STR members use CURES (Computerized Drug Monitoring Program) to monitor prescription practices in the state. It is used to look for “Doctor Shopping” and to help measure compliance. Coming soon, NASPER (National All Schedules Prescription Monitoring Program Law)—passed by the House of Representatives in 2004 and reintroduced to the Senate in early March 2005—represents another significant advance for the future of pain medicine.¹⁵

Past Records, Ongoing documentation, and Outcome Studies. It is important to get previous records of patients whenever possible before you place them on opioids. This is an important pre-screening tool. The model also includes documenting the diagnosis of intractable pain. The senior author advises doing some type of outcome studies. Presently the senior author uses the American Society of Anesthesia Outcome Measures.¹⁶ The authors also advise ongoing documentation including the patient’s response to therapy, improved function, and the need for continuation of opioids. Some of the authors use the Oswestry Disability Scale to measure functionality.¹⁷

P4 — Precautions

Driving and Sleep. To evaluate the patients driving ability, the authors use the Epworth Sleep Scale. If the score is high, action is taken to reduce the medication dosage. Medications such as Modafinil (Provigil®) may be used to enhance alertness. Most patients on opioids can drive safely if their dose is titrated upward slowly. When the opioid dose is being increased or when opioids are being rotated, the patient should be advised not to drive or operate machinery until they have developed a tolerance to the change. This usually takes about a week, but may take longer depending on the individual.

Assessing patients for driving safety is paramount to the welfare of both the patient and the community at large. From a liability stand point, the key is to document, in the medical record, that the physician considered the question of safety and made the best decision based on available evidence. The authors routinely document that the patients have been instructed to never drive when groggy, to avoid alcohol, to refrain from nighttime driving, and to assure time for adequate sleep each night. When the authors suspect that a patient is unsafe to drive, they are referred to the Department of Motor Vehicles. The authors are especially cautious when opioid doses are being increased, or when opioids are being rotated.

Studies indicate that 20 to 25% of individuals driving on the road have taken at least five drugs in the past week.¹⁸ The authors’ patients are often taking 4 or more drugs daily. Adding alcohol and/or cell phone usage increases the risk for accidents, and so the patients are educated accordingly. The authors prefer that patients not use alcohol at all, but when they consume alcohol on special occasions, they are advised to limit their intake to a maximum of one drink per day and not to drive or take any pain medications at all within 8 hours of any alcohol use.

Patients are routinely assessed for impaired alertness based on the Epworth Sleepiness Scale.¹⁹ When objective testing is de-

sired, a Performance Vigilance task (PVT) is employed. The PVT takes 10 minutes to complete and is easily administered in the office environment. It is also the most sensitive neuropsychiatric test available to assess for daytime sleepiness.

The senior author consults sleep disorder specialists who test the patients cognitively and will evaluate them for driving. The specialist also focuses on improving the quality of sleep, which is so important for a chronic pain patient — especially for those who have sleep apnea. The goal is to identify and treat any sleep disorder problems in order to enhance overall pain control. It is known that interrupting normal sleep patterns of pain patients—who otherwise have their pain under control — will cause many to start complaining of pain. In addition, some seem to have significant sleep apnea problems while on opioids.²⁰ Possibly some of the overdoses and suicides one reads about may be related to a sleep disorder issue in combination with the medication—rather than medication alone. The plan is to treat the sleep disorder problem (with CPAP or supplemental oxygen thereafter) while simultaneously treating the pain. Any sleep disorder (i.e. obstructive sleep apnea) or life style choice (i.e. shift-work) that leads to impaired alertness will likely be magnified in patients using opiates.

Periodic Urine Screening and Occasional Blood Testing. The senior author recommends drug screening on all patients initially and randomly thereafter. Urine monitoring, in particular, is an important tool in a risk management program for chronic pain patients. In the pain management arena in the past

“When the opioid dose is being increased or when opioids are being rotated, the patient should be advised not to drive or operate machinery until they have developed a tolerance to the change.”

few years, there has been a focus on teaching pain management physicians about abuse and addiction and teaching addictionologists about the benefits of opioids in moderate to severe non-malignant pain. The majority of leaders in the pain management addiction world are recommending drug screens in all patients on long term opioid therapy. At the present, most advise using urine as the routine screening test medium, as opposed to blood testing.²¹⁻²³

Benefits of Drug Testing. The use of a drug-testing program for all patients receiving long term opioid therapy is essential. Testing patients can reveal other co-morbidities, depression, addiction, and poor adherence or compliance. A well-designed drug-testing program will allow the physician to determine whether the patient is using illegal drugs or using additional prescription drugs (from multiple prescribers). Patients tend to under-report illicit drug use. The abuse of other drugs also increases the risk of adverse drug reactions, overdose, and treatment failure.

Drug monitoring can help provide answers to the following questions:

- Is the patient taking only the specific drugs prescribed?
- Is the patient taking other drugs that, in combination, could be harmful?
- Is the patient not taking the prescribed drugs?

The urine drug test serves as documentation that the physician is evaluating the prescribing of drugs to his patient. An ongoing monitoring program provides information that helps the physician provide better patient care, helps identify drug seekers and patients with possible addiction issues. The Columbia University Study on Substance abuse, (CASA) published in July 2005 identified the following statistics:

During the period from 1992 to 2003 the total US population increased 14% while the number of people abusing controlled prescription drugs increased 94%.

“The urine drug test serves as documentation that the physician is evaluating the prescribing of drugs to his patient. An ongoing monitoring program provides information that helps the physician provide better patient care, helps identify drug seekers, and patients with possible addiction issues.”

The study also estimated that 15.1 million people actually admit to abusing prescription drugs. This is more than the combined number of those who admit to abusing cocaine, hallucinogens, heroin, and inhalants.

The benefit of using urine as the medium to monitor is that it retains medication longer and can provide a more comprehensive look back at the medications the patient has taken. In addition, the collection of a urine specimen is not invasive. The authors recommend testing all patients so there are no biases. Emphasize to your patients that your treatment protocol requires that everyone be tested and that the ultimate goal is to achieve patient safety, excellent care, and optimal pain relief. It is also important to point out that several studies have shown that model patients may often produce an abnormal screen.²⁴ Venipuncture is one of the most common causes of Iatrogenic Mononeuropathy.²⁵

There is a balance between safety, patient care, and being a “policeman.” This can be difficult for both the patient and

the physician. A major dilemma for most physicians is what to do with abnormal results. Many physicians fear having to make this decision. The authors suggest the following guidelines:

1. Be careful with your initial analysis and interpretation. Consider repeating the studies or doing multiple random tests.
2. Talk to the lab toxicologist.
3. Consult an addictionologist and/or psychotherapist. Use the screen as a tool along with your exam and input from the psychotherapist, pharmacist, and other treating physicians.
4. Insist on frequent office visits and provide limited supplies of medication. Favor the use of long acting drugs with low street value.
5. Be aware that certain food items such as poppy seeds can produce false positives—especially if the lab-

oratory uses a low cutoff value; even one or two poppy seed bagels can trigger a positive result.

6. False negatives are also an important consideration. For example, a patient who has escalated his/her dose early in the month may have run out of medicine days before the tests. Pseudo addiction is an issue that is frequently missed and, unfortunately, patients are often declared addicts and terminated when in reality they are pseudo addicts.

Forest Tennant, editor of *Practical Pain Management*, and a group of collaborators—one being the senior author—recently collected opioid blood levels on high dose opioid patients.²⁶ The study demonstrated that these patients were cognitively alert and were able to function despite having levels that would be interpreted as toxic for opioid naïve patients.

No drug testing program can take into account all the factors that may influence the test result. Therefore, whenever the results are inconsistent, don’t rush to terminate the patient before consulting a

toxicology specialist and/or referring the patient to other clinical specialists such as addictionologists or psychotherapists. If you do decide on termination, be aware that this is a high risk time for the patient. Consult your state medical society or medical board guidelines regarding termination.

The majority of leaders in the pain management and addiction world are recommending urine screens on all patients on long term opioid therapy. Most are recommending that it be done randomly and multiple times. Use a lab that complies with testing for those substances you prescribe and at a minimum is CLIA (Clinical Laboratory Information Act)-certified. The lab should include standards for chain of custody and sample handling. Examples of CLIA-certified labs are the following: Ameritox, Dominion Diagnostics, Quest, Aegis, and LabCorp. The senior author and some other practitioners in the STR model use Ameritox because of its RxGuardian technology. This service tests for both prescribed medications and illicit drugs using low “cutoff” detection and specific quantitative levels. What makes this service different is that it determines expected quantitative ranges in the urine specimen for each individual patient, based on their prescription, dosage and personal demographic information. Such information is very helpful in identifying diversion/supplementation. It also maintains a clear ongoing patient history.

P5 — Physical Therapy, Exercise & Integrated Techniques

The authors recommend physical therapy and, in particular, warm water therapy—including the use of various water products such as: buoys, aqua joggers, and weights. The authors also use snorkeling equipment for people with neck problems and thus eliminating the need to turn their head from side to side. Many of these patients use biofeedback, traction, Pilates, and yoga since exercise can raise endorphin levels and provide a sense of well being. Naturally, this needs to be modified in accordance with the individual’s limitations. The authors also use cervical and lumbar traction units when indicated (two of the original members of the STR group are Physical Medicine Specialists).

Scripps Clinic in La Jolla has an Integrated Medical program. One out of three

people—including health care professionals—seek alternative forms of care. At Scripps Clinic, the program offers a variety of integrated services including acupuncture, electrical stimulation (TENS), massage, medication, and nutritional guidance.

Summary

This article has described a group of pain specialists—including the authors—who meet quarterly, on average, in the San Diego area. These meetings are supported by various pharmaceutical groups, CME programs, and MedTech companies, resulting in more effective communication and collaboration between Industry and the medical community. As the group has evolved, the authors have brought together various specialists from all regions of the city. The authors encourage them to use each other for second and third opinions. The group includes anesthesiologists, physiatrists, psychiatrists, psychologists, addictionologists, rheumatologists, sleep disorder specialists, neurologists, orthopedics, otolaryngologists, internists, nurses, and physician assistants.

The group has also begun to reach out to primary care physicians. The authors have included lectures on coding and compliance. And recently—with much effort—the authors have had three local DEA agents participate in one of our meetings. It should be noted that in the South, a large pain management clinic was investigated by the DEA. In a positive way, the equivalent of a state DEA agent worked with a clinic nurse manager to improve the clinic's documentation and substantiation of treatment of opioid-dependent patients. The nurse manager and agent have been giving educational lectures in their region. The authors look forward to more of these types of constructive interactions.

The Share the Risk model is a "call for action" and ultimately results in better care for the chronic pain care patient. At the core of the model are the 5 P's: P1—Professional Pain Management Delivery System, P2—Patient Advocacy & Education Support, P3—Paperwork, P4—Precautions, and P5—Physical Therapy & Integrated Techniques.

The STR model is a work in progress and continues to evolve. On a national level, the STR model was a catalyst for the development of an educational program

called Emerging Solutions In Pain. Emerging Solutions has a comprehensive design to assist pain management physicians in overcoming the challenges they encounter by providing practical tools and resources. Emerging Solutions in Pain has an advisory board of national leaders in pain management and addiction. The program includes a toolkit and a website and is especially valuable for physicians who don't have access to other specialists (EmergingSolutionsinPain.com).

The ultimate goal of the STR model is to bring together the various resources—clinical, industry, and community—in the interest of providing the best overall care for the chronic pain patient.

In the application of the Share the Risk model, using any part of the model is better than being out in the community alone. Documentation is important but outside consultation, if possible, should be part of your risk management program. The Share the Risk model continues to expand and to offer assistance for both physicians and patients in the treatment of chronic pain. ■

Acknowledgements

Thanks to Louis Ciampi, Marcia Elfendbaum, MD, Michael Moon, MD, (three of the original four members).

Dr. Shurman is currently Chairman of Pain Management at Scripps Memorial Hospital in La Jolla, CA and also a Board Member of the Whittier Institute which has a strong interest in the pain associate with diabetic neuropathy. Dr. Shurman has authored numerous publications in the field of anesthesiology and pain management. He formerly served as Chairman of the Department of Anesthesia at Scripps Memorial. Dr. Shurman is a consultant to Ameritox, Ltd., Alpharma, Cephalon, Endo, Emerging Solutions, Ligand, Organon, Purdue, and Pfizer.

John Sack, MD is an addictionologist specializing in chronic pain and opioid dependence. He previously served as drug abuse consultant to the athletic department at San Diego State University, medical director of the Recovery Plus Program at Charter Hospital, chairman of the Physician Health and Well Being Committee at Scripps Memorial Hospital in La Jolla, chairman of the Western Regional Test Development Committee of ASAM, and lecturer on substance abuse at Scripps Center for Executive Health. He has been a staff physician at Scripps McDonald Center for Alcoholism and Drug Addiction Treatment since 1982.

Gloria Shurman, PhD is a former chairman of Psychology at Scripps Memorial Hospital and a Board Certified Sex Therapist (Masters-Johnson Trained).

Bradley Schnierow, MD is Assistant Clinical Professor, Department of Psychiatry, School of Medicine, UC San Diego.

Cesar Gabriel, BSP is Pharmacist in Charge at the Medical Center Pharmacy, San Diego, California.

References

1. www.painreliefnetwork.org. Last visited September 2006.
2. *Pain Medicine Anesthesiology News*. February 2006. page 17.
3. www.painreliefnetwork.org. Last visited September 2006.
4. *Pain Medicine Anesthesiology News*. February 2006, page 17.
5. American Pain Society website. www.ampainsoc.org. Last visited September 2006.
6. Chronic Pain In America: Roadblocks to Relief. Roper Starch Worldwide Survey sponsored by the American Pain Society and American Academy of Pain Management. *Janssen Pharmaceutica*. Dec. 1998.
7. Joint Commission on Accreditation of Healthcare Organizations. Pain Management Standards. Effective January 1, 2001.
8. Model Guidelines for the Use of Controlled Substances for Treatment of Pain. Federation of State Medical Boards. 2004.
9. DEA Press Release. Oct 23, 2001.
10. Ballantyne JC and MaO J. *NEJM*. November 13, 2002. 349: 20.
11. Janicak D. *Principles and Practices of Psychopharmacology*. 2001. pp 215-326
12. Ballantyne JC. *New England Journal of Medicine*. 2003. 349: 1943-1953.
13. Reflex Sympathetic Dystrophy Society: www.rdsd.org, American Pain Society: www.ampainsoc.org Each last visited September 2006.
14. Personal Communication with Dr. Steve Passik. July 19, 2006.
15. Fishman SM. Pain Matters: Finding a Collective Voice. *Pain Medicine*. 2005.
16. www.asahq.org/Newsletters/1997/08_97/Outcomes_0897.html. Last visited September 2006.
17. www.chirogeek.com/001_Oswestry_20.htm. Last visited September 2006.
18. Kaufman K et al. Recent Patterns of Medication use in the Ambulatory Adult Population in the the U.S. *JAMA*. January 12, 2002. 287:342.
19. www.cdha.nshhealth.ca/sleep/lab/epworthSleepinessScale.pdf. Last visited September 2006.
20. Webster L. Opioid Analgesia. *Pain Medicine*. June 2006. p 29.
21. Block B. John Hopkins School of Medicine - CME Course, *Multidisciplinary Pain*. June 25, 2003.
22. Heit HA and Gourlay DL. Urine drug testing in pain medicine. *Journal of Pain and Symptom Management*. Mar 2004. 27 (3):260-267.
23. Katz NP et al. Role of Urine Toxicology Testing in the Management of Chronic Opioid Therapy. *The Clinical Journal of Pain*. 2002.
24. Ibid.
25. Ballantyne J. *Handbook of Pain Management*. Massachusetts General Hospital. 2006. p 341 .
26. Tenant F et al. Tennant Blood Study. *Practical Pain Management*. March 2006. 6(2):28-29.