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Contents

Editorial ........................................... 3
Primary Care Physician and Prescription Narcotics for the Treatment of Chronic Non-Malignant pain ..................... 4
Medical Marijuana......an Accident Waiting to Happen ......................... 7

Original Research Article
A Broader Examination of Outcomes in a Disabled Worker Population ... 11

CME Questions ..............................19-20
Answers To CME Questions From Vol 7, No. 3 ................................ 20

Commentary: Disruptions and Disconnects in Healthcare Today ........ 22
Author’s Guidelines ....................... 24
Discover Your Ideal Practice ............... 24

ADVERTISEMENTS:
Inside Front Cover-AMA
Lakeside Medical Centers ............... 20
Auburn Orthopedic Center ................ 21
Windy City Orthopedics & Sports Medicine .................................... 21
Inside Back Cover-ATI
Inside Back Cover-International Association of Personal Injury

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Welcome to our new Acquisitions Editor for the Journal of Disability Medicine
Changes afoot for the JDM!

The Journal of Disability Medicine has long been the respected voice of both the American Board of Independent Medical Examiners and the American College of Disability Medicine—as an internationally circulated journal acclaimed for bringing pragmatic insights to bear upon the practice of Independent Medical examiners/Expert witness and others who regularly confront impairment, disability assessment and medical-legal issues. It has long been considered a leader in the field and is now in its 20th year of publication, even though with some intermissions.

This issue represents a renewed energy for JDM that we are very excited about, and are confident that it will bring greater value to readers, the profession, and the literature. With this edition we welcome Dr. Chris Stout, a highly regarded author and editor with years of experience in scholarly publications. Dr. Stout is the Director of the Department of Research at ATI Physical Therapy. He is also on the faculties of the medical schools at the University of Illinois at Chicago & North Western.

We have also revised our Author’s Guidelines and are looking for high-quality manuscript submissions, book reviews and opinion pieces for subsequent editions of the Journal. In fact the new Author’s Guidelines appear in this edition of the Journal and will be on our website at http://www.abime.org/node/17. We also have instituted a new, formal Author’s Agreement Statement and an Author’s Disclosure Statement to ensure continuing high-quality ethical standards in scientific publishing as well. Authors that have articles that are accepted following our peer review process will be provided with a new and very helpful formatting template to use that will accelerate the getting-into-print process. Be on the look-out for special topical issues/special invited articles as well in upcoming editions.

The Journal of Disability Medicine will also soon have an International Standard Serial Number (ISSN). The ISSN is a unique eight-digit number used to identify a print or electronic periodical publication. JDM’s ISSN will then be registered in an international database which is accessible through the ISSN Portal and is considered to be the world catalogue of serials. It is the most comprehensive and authoritative source for the identification of serial publications worldwide and JDM will soon be listed and searchable. The ISSN is a key access and a control tool that facilitates automated document management. It has a significant interest for publishers, subscription agencies, booksellers, librarians, information scientists, and researchers. It is a necessary reference in the complex world of publications and we are proud to soon be a part of it.

Likewise, JDM will for the first time be listed in PubMed. PubMed is one of the largest scientific and medical databases in existence, accessing primarily the MEDLINE database of references and abstracts on life sciences and biomedical topics. The United States National Library of Medicine (NLM) at the National Institutes of Health maintains the database as part of the Entrez information retrieval system. PubMed comprises more than 21 million citations for biomedical literature from MEDLINE, life science journals, and online books. Again, being listed and searchable adds to the value of being published in JDM as well as being a reader.

The Journal will continue to seek articles and commentaries on topics of interest in disability medicine and related areas of law and policy. We will continue to address issues in disability medicine research and education and a broad range of other related topics, providing an even more authoritative and comprehensive coverage of the growing field of disability medicine.

We invite and welcome your submissions and look forward to your feedback on how we can continue to grow and evolve.

Mohammed Ranavaya, MD, JD, MS, FRCPI, FFOM
Editor in Chief, Journal of Disability Medicine
President, American Board of Independent Medical Examiners
Prescription narcotics use in primary care for maintenance of chronic non-malignant pain remains controversial because of the polemic nature of the problem. Everything about this issue engenders controversy except for the suffering it causes and the isolation, frustration and marginalization of the patients that must be addressed by the clinician. There is mounting evidence in the peer reviewed scientific literature that there is a severe epidemic of overuse, abuse and death involving prescription narcotics in chronic non-malignant pain patient population. This is in contrast to the Institute of Medicine declaration that millions of Americans with chronic pain are under treated and that pain is a public health issue.

According to the U.S. Centers for Disease Control and Prevention, opioids were involved in 14,800 overdose deaths in 2008, more than cocaine and heroin combined. This trend has continued and recently led a high level bipartisan United States Senate panel to launch a probe of possible links between three main drug makers and certain nonprofit medical groups that advocated for increasing the use of prescription painkillers, now the target of a nationwide law enforcement crackdown. The Senate probe hopes to find out if medical groups have promoted misleading information about the risks and benefits of opioid use while receiving financial support from drug makers.

Prescription narcotics for the treatment of chronic non-malignant pain in many cases may be an obstacle to the recovery and return to productive life. By prescribing narcotic pain medications for long term maintenance for non-malignant chronic pain, the primary care physician may iatrogenically be contributing to the problems of addiction, abuse and drug diversion leading to excessive and escalating health care costs, not to mention the concomitant suffering of the patient and their family members. The primary care physician would serve this patient population well by finding improved ways to detect this highly susceptible patient population instead of a quick fix of narcotic pain medication prescription. This includes establishing boundaries, preventing dependency and focusing on functional recovery thereby preventing delayed recovery.

Primary care physicians need to have an inward reflection about their own practice pattern and assure that they fully evaluate the prospective recipient of narcotic pain medication. They must assure themselves that they truly get to know their patients and their psychosocial dilemmas and the major life stressors which often contribute to or cause the medical complaint of chronic non-malignant pain. Prescription narcotics are certainly not the answer to a patient; who instead of saying that his life hurts, says that his neck or back hurts. This process of somatization expressing itself as a physical symptom belies the underlying true problem—an inability to cope with the stressors being experienced. This is well documented.
in the studies that have shown that a high percentage of patients presenting to their primary care providers with complaints of chronic pain either had no significant objective organic findings or the findings were primarily psychophysiological and related to stress in their lives. 5,6

Chronic pain research has well documented that a high percentage of these patients have evidence of depressive symptoms or other psychopathology mostly preceding the chronic pain complaints.7,8 The primary risk factors for chronic non-malignant pain is well documented in the peer reviewed scientific literature as psychosocial in nature. 9,10,11,12,13,14 Primary care physicians must approach a patient with a reported problem of chronic non-malignant pain with a bio-psychosocial social model, rather than resorting to the prescription narcotics as initial treatment option for chronic non-malignant pain. Reflexively prescribing narcotics in these cases leads to the problems of addiction, abuse and drug diversion.

Mortality from prescription narcotics abuse has exploded in the past decade in the USA.15 Prescription narcotics are known to be the leading cause of death among workers’ compensation population who have undergone spinal fusions.16 The CDC data shows that fatalities from prescription narcotics overdose (both from prescribed for the person as well as obtained from diversion and other illegal means) have not only surpassed the deaths caused by the heroin and cocaine combined, but also have overtaken motor vehicle accidents as the top cause of death among middle aged Americans.17 Recent data from CDC suggests that deaths from overdose of prescription narcotics are the only cause of death that continue to rise in the US.18

The primary care physician must be mindful that the promiscuous use of prescription narcotics for non-malignant chronic pain can paradoxically cause pain to worsen by causing hyperalgesia—an abnormally severe sensitivity to pain, which is caused by narcotics. This is shown in multiple studies including a recent prospective study of the effect of narcotic medications on pain sensitivity among chronic low back pain patients; all of the participants demonstrated increased vulnerability to pain after just one month of utilizing prescription narcotics.19 Other studies have shown similar outcomes including hyperalgesia effects of narcotic medication manifested in ways that include unexplained pain reports, diffuse pain complaints and pain complaints that are discrepant from previous complaints and a worsening of the specific pain for which the narcotics were originally prescribed as a treatment. 20,21

Additionally, the prescriber for narcotics for non-malignant chronic pain must keep in mind the well-known side effects of the prescription narcotics that include the endocrine disruption (hypogonadism) 22, erectile dysfunction and/or diminished libido 23,24 25,26; sleep abnormalities including central sleep apnea 27,28; immune system compromise 29,30 and cognitive impairment for which narcotics are a significant risk factor even when the narcotic consumer does not perceive that they are sedated. 31,32

In addition to the above mentioned harm to the narcotic consumer, substance abuse in and of itself is a great concern which is reported widely among patients with such prescription with finding of association between such prescription and substance abuse reported in greater than fifty percent of such populations.33 Additionally, the harmful effect of prescription narcotics goes beyond hyperalgesia, endocrine problems, sleep abnormalities, immune deficiency, cognitive impairment and substance abuse and drug diversion. There are numerous reports in the literature indicating that prescription narcotics use leads to significant rise in the rate of disability. 34,35,36

Based on the current peer reviewed scientific literature, it is difficult to justify the use of narcotics as a long term treatment for chronic non-malignant pain in primary care. Several well designed studies have shown lack of reliability of benefit from prescription narcotics for long term chronic nonmalignant pain. Several studies have reliably shown that narcotics did not demonstrate an advantage in reduction of pain compared to placebo on non-narcotic medication.37 In fact, some studies that had reported reduction in pain associated with narcotic use have flawed methodology and subsequent reviews have shown that available data as a whole failed to provide support for prescription narcotics as a treatment for chronic non-malignant pain. 38

A literature search for reports of addiction, dependence, aberrant drug taking, abuse, misuse and problematic opioid use among patients with chronic non-malignant pain identified twenty-five reports of chronic non-malignant pain patients, with a prevalence of addiction ranging up to fifty percent. Two well-
designed studies have also shown that most non-malignant pain recipients of narcotic pain medication are not compliant with medications.\(^{39,40}\) Both studies revealed non-compliance rate that exceeded seventy percent for chronic benign pain patients who received narcotic prescriptions. The nature of the non-compliance included the recipients of narcotic pain medication not personally consuming the medication, but diverting it by giving it to others or illegally selling it to others for10 therapeutic purposes. Given such strong and reliable evidence that there is high probability that any individual chronic benign pain patient is going to be non-compliant with the prescription for narcotics it is difficult to imagine how such prescription can be justified in primary care as a long term source of treatment for non-malignant chronic pain. 

Based on an extensive review of the scientific literature, American College of Occupational Medicine (ACOEM) recommended that the routine use of opioids for treatment of chronic non-malignant pain condition is not recommended, although selected patients may benefit from judicious use.\(^{41}\) Primary care physicians and others prescribing opioids for treatment of chronic non-malignant pain would benefit from the evidence based guidance for use of opioid for patients with chronic pain published by the ACOEM.

References

2. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research, 2011, IOM, Washington, DC
Medical Marijuana...an Accident Waiting to Happen

By: Maureen Bennington

KEY WORDS: Medical Marijuana, Legalizing, Laws, Employment

ABSTRACT:
This paper explores the idea of legalizing Medical Marijuana in the United States through a Systematic Review. Throughout this article the evolution of the Medical Marijuana industry, as well as the stance some states take on this issue is explored. The unfavorable outcomes were independent of the number of levels fused, length of follow-up period, and for repeat surgery.

Today, in the United States, there is a movement to legalize medical marijuana in a majority of states. Why is this movement strengthening; and, what are the potential unintended consequences of legalization? Before we can explore these concerns we must understand the evolution of the controlled substance and the efforts to limit cultivation and distribution of the drug by the United States federal government.

The plant, Cannabis Sativa, family Cannabaceae, is used to produce hemp fiber and marijuana. These plants have existed in the United States since settlers first arrived in the New World in the early 1600's. Hemp was used to manufacture rope, sails, clothes and papers. It was a main agricultural crop throughout the seventeenth and eighteenth centuries and not until the 1800's was there information about the medical use of cannabis. By the 1930's, there were a minimum of twenty-eight medical cannabis preparations for sale on the open market offered through major pharmaceutical companies that still exist today such as Parke-Davis, Squibb and Lilly. By this time the use of hemp for manufacturing was decreasing because less expensive alternative materials were available. It is believed modern recreational use of marijuana may have begun in New Orleans in the early 1900's. It is likely marijuana was brought to the United States from Mexico and was used as a cheap alternative to alcohol. By 1937, most states banned the drug and federal law declared cannabis a narcotic. Incarceration for use and distribution of cannabis was significant even for a first time offense. It was thought that marijuana caused users to lose control over their emotions causing them to become violent, promiscuous or crazy (Sussman, et al, 1996). Despite the implementation of these laws, individuals continued to obtain marijuana for medical and recreational use at great risk of incarceration if caught by law enforcement.

Pro-marijuana groups began to form in the 1960's. Pro-marijuana groups support the various uses of hemp in manufacturing and cite the therapeutic value of medical marijuana. Medical marijuana is used as an anti-nausea and appetite enhancer for cancer patients, a muscle relaxant, analgesic and anticonvulsant for individuals with chronic muscular and joint pain, and is considered a method to decrease intraocular pressure in glaucoma patients. Supporters also point out the economic benefits of medical marijuana. In other words, taxation of medical marijuana has the potential to create a significant new source of revenue for state and federal governments. Despite the attractiveness of additional revenue streams, neither this argument nor any of the others in support of legalization of marijuana has been recognized by the federal government. All drugs remain regulated through the Controlled Substances Act (CSA) of 1970. The CSA does not recognize a difference between medical and recreational use of marijuana. There are penalties levied against individuals who possess, cultivate or distribute marijuana. The CSA classifies marijuana as a Schedule I drug. The federal government views marijuana as highly addictive and having no medical value.

Despite the federal government’s position related to marijuana, many states are addressing the
possession, cultivation and distribution of marijuana in each of their jurisdictions. California became the first state to legalize marijuana for medical purposes. The State of California passed the Compassionate Use Act of 1996. The law provides a patient or primary caregiver the right to possess or cultivate marijuana for medical purposes. The patient must have written or oral recommendation or approval of a physician. If physician authorization is obtained than the individual is not subject to conviction for offenses related to possession or cultivation of marijuana. The intent of the law is to give “seriously ill” Californians the right to obtain and use marijuana for the treatment of cancer, anorexia, AIDS, chronic pain, spasticity, glaucoma, arthritis, migraines or any other illness for which marijuana provides relief.

The State of California has been in the forefront of news related to medical marijuana since implementation of this law. The Drug Enforcement Administration (DEA) is charged with enforcing federal drug laws. The DEA does not recognize any state law and marijuana patients, their caregivers and suppliers in the State of California are all equally at risk of arrest, property seizure, fines and jail time.

Since California passed the Compassionate Use Act of 1996, many other states have enacted medical marijuana laws. The states of Alaska, Arizona, Colorado, DC (Washington), Delaware, Hawaii, Maine, Michigan, Montana, Nevada, New Jersey, New Mexico, Oregon, Rhode Island, Vermont and Washington all have authorized the use of medical marijuana. As of January 25, 2012, sixteen additional states have pending legislation to legalize medical marijuana. The states are Alabama, Idaho, Illinois, Indiana, Iowa, Kansas, Maryland, Massachusetts, Missouri, New Hampshire, New York, Ohio, Oklahoma, Pennsylvania, West Virginia, and Wisconsin.

As the states continue to expand rights to use medical marijuana, the federal government and DEA continue to vigorously prosecute and wage war on the use of marijuana for any purpose throughout the United States. Until the federal government recognizes the state laws everyone is at risk when using medical marijuana. But the federal laws are not stopping the movement to legalize medical marijuana and its proof is in the thirty-three states currently allowing the substance in a controlled fashion.

The conflict between state and federal laws however puts physicians in a precarious position. In an effort to protect physicians, the Medical Board of California created a position statement in 2004. The statement provides guidance and protection to physicians who choose to prescribe medical marijuana for their patients. The California Medical Association on October 16, 2011 recommended legalization and regulation of medical and recreational use of cannabis. The association is the first state medical society to officially support marijuana legalization. The physicians made this decision for several reasons. Physicians are concerned about concentration, purity, labeling and dispensing standards. Physicians also view legalization as a way to properly study and regulate the product. And, while all physicians may not agree on the benefit of medical marijuana, legalization protects those physicians who believe there is a medical benefit to the product.

There will be on-going challenges from the state and federal level until a consensus is reached. Consensus is achieved by bringing unresolved issues to the ballot. For instance, in the State of California, SB129 was proposed by Senator Mark Leno of San Francisco. The law he introduced bars employers from using a positive drug test for hiring and firing decisions for individuals who are legally prescribed medical marijuana. Of course the law exempts certain types of employment such as health care workers, school bus drivers and operators of heavy equipment or any job considered sensitive. This bill was proposed in 2007 and again in 2011. The bill was proposed because an individual in the State of California was terminated for a positive drug test while legally using medical marijuana. The individual was legally prescribed medical marijuana for chronic back pain. Medical marijuana was only used at home and the individual did not take the substance during working hours. Employer mandated drug screening and subsequent random drug testing of the individual were positive for THC, the chemical substance in marijuana. The individual was terminated for drug use. He subsequently sued for wrongful termination. It was argued that this individual was not violating the law.
and his employer is obligated to provide reasonable accommodation related to his requirement to use medical marijuana. The California Supreme Court and the United States Supreme Court disagreed and found in favor of the employer. The court decision is in direct opposition to the California Compassionate Use Act of 1996. Also, the bill introduced twice by Senator Mark Leno to protect employees using medical marijuana was opposed vehemently by the California Chamber of Commerce and numerous labor groups.

There are many details to consider and to resolve as the majority of states enact legalization of medical marijuana. For instance, how does the introduction of medical marijuana affect the administration of workers compensation claims? It is inevitable physicians will provide prescriptions for medical marijuana either at the request of the injured employee or because the physician believes it is a beneficial therapeutic agent. Many states require utilization review of all treatment requests. It is highly likely utilization review will deny all requests for medical marijuana. But, what evidence based medical guidelines will support their denial of the request? There is literature outside the guidelines to support the use of marijuana. Our own U.S. Surgeon General, Jocelyn Elders, indicated “the evidence is overwhelming that marijuana can relieve certain types of pain. And, it can do so with remarkable safety. Indeed, marijuana is less toxic than many of the drugs that physicians prescribe every day” (Elders, 2004). The American Medical Association (AMA, November 2009), does not endorse any state-based medical marijuana programs or the legalization of marijuana. However, the AMA has called for the government to review its classification of marijuana, in order to ease the way for more research into the use of medical marijuana and a uniform approach to dispensing and labeling as a prescription. The American College of Physicians, Drug Enforcement Agents, Judges, Professors and a multitude of reputable individuals have supported the use of medical marijuana. How will utilization review, claims examiners and employers, with the ability to authorize medical treatment related to workers’ compensation claims address requests for medical marijuana?

How can you claim medical marijuana is harmful when prescription drug abuse and related deaths from overdose are in the news on a daily basis? According to the National Institute on Drug Abuse (NIDA), in 2010, approximately 7.0 million persons were current users of psychotherapeutic drugs taken non-medically. Medications most commonly abused are pain relievers, tranquilizers, stimulants and sedatives. There are many reasons for the abuse. First and foremost, individuals believe if they have a prescription for the medication than it must be safe. Users do not clearly understand the adverse health effects including overdose and addiction to these powerful prescription medications.

Prescriptions are easier to obtain today. According to NIDA, between 1991 and 2010, prescriptions for stimulants increased from 5 million to approximately 45 million and for opioid analgesics from approximately 75.5 million to 209.5 million prescriptions. Along with this increase in usage is an estimated two million people who meet abuse or dependence criteria for prescription opioids. Unintentional overdose deaths involving prescription opioids have quadrupled since 1999 and now outnumber overdose deaths related to heroin and cocaine combined. Is medical marijuana any more harmful than the pain relievers, tranquilizers, stimulants and sedatives being prescribed in ever increasing numbers?

Then there is the issue of secondary conditions caused by smoking. We are trying to curtail tobacco smoking while encouraging marijuana smoking? Yes, smoking tobacco is an individual’s personal choice and marijuana is “medical”. But, both carry the same health risks. NIDA has documented that marijuana has cancer causing compounds, can damage the brain, heart, lungs and immune system. Marijuana also impairs learning and interferes with memory, perception and judgment. Marijuana is already implicated in a high percentage of auto and workplace accidents. But, if marijuana is considered medical then does responsibility fall on the shoulders of the workers’ compensation carrier for the patient who is diagnosed with lung cancer secondary to medical marijuana smoking?

Employers are going to be even more challenged. Random drug testing has helped make the workplace safer. What if laws are placed on the books prohibiting drug testing of individuals using
medical marijuana? What if your employee needs to smoke or ingest marijuana on breaks to maintain pain control? You have no recourse yet you are liable for their injury and injury to others while this employee is “legally” under the influence. And, how do you determine which positions are exempt from the law without putting yourself in the position of being sued for wrongful termination? If you terminate someone for drug use when they are an authorized medical marijuana user can the employee file a discrimination suit under ADA? How are zero tolerance drug and alcohol programs adjusted to address the use of medical marijuana? How do you determine which employees are authorized users of medical marijuana without interfering with privacy laws (HIPAA)? Employers must address many of these questions through modified internal policy and procedures. They must also anticipate the many unanswered questions through modified internal policy and procedures. They must also anticipate the many unanswered questions may ultimately have very costly consequences within the workplace until these challenges are resolved legally.

There are so many gray areas and potential ramifications to employers and insurers that have not been considered as each state passes laws in support of medical marijuana. We know so little about the drug because minimal research has been conducted and the research that has been conducted has been inconsistently conducted with questionable results. It is possible a researcher’s private opinions regarding the morality of marijuana use may affect his or her selection of studies and discussion of the results (Schwenk, 1998). How can research results be trusted when the potential for manipulation of results exists based on the researcher’s personal opinion?

Medical marijuana is a highly sensitive and political subject but it is important to complete fair, unbiased research. It is critical the effect of medical marijuana is understood. Employers need to clearly understand how medical marijuana affects an employee’s motivation, productivity, psychomotor performance, attention levels, ability to learn and ability to retain what they learn while under the influence of medical marijuana. Overall, it is important to understand how the use of marijuana affects an employee’s job performance. It is equally important to explore the potential for increased workplace accidents for individuals using medical marijuana. This is largely unknown but with potentially devastating and costly consequences. Some estimate the use of marijuana and other illegal drugs costs American companies approximately $100 billion per year in lost productivity (Schwenk, 1998). Anticipate that increased workplace accidents will add to this already costly problem.

The numerous consequences to employers were not thoroughly evaluated by enthusiastic legislators as they passed legislation to legalize medical marijuana. It may take years to bring resolution to the many ethical and liability questions related to medical marijuana usage. There is a great deal of uncertainty and no clear answers in the foreseeable future. As states continue to enact legislation to legalize medical marijuana, the only recourse an employer has is to take steps to minimize legal risks while meeting the objectives of a drug free workplace.

References


INTRODUCTION

Clinical outcomes have evolved over time\(^{19}\). This is true in disability medicine as well as rehabilitation and likewise in workers’ compensation. Today, due to the physically demanding nature of injury prone jobs (e.g., firefighting or high-rise construction), workers are considered to be “industrial athletes”\(^{21}\), and like injured athletes, these workers need in addition to medical intervention, rehabilitation that is focused not only on healing and recovery from disability, but the rapid return to fully functioning at work, and ideally at their same type of work.

Thus, while a physician’s objective opinion may consider the outcome of a surgery was successful because a repair was completed, there was no infection of the site, and the wound has healed as expected\(^{19}\) there is added complexity\(^{15}\) due to the subjective outcome of an injured worker. That is, there are the additional concerns for general health aspects and perceptions of the patient, along with the impact a post-operative rehabilitation program has on the ability of the patient to return to work (at the same type of duties). If this outcome is poor there is a cascade of additional untoward and potentially costly results from disability\(^{18}\).

Economic as well as humane concerns of partial or total, temporary or permanent disability arise. Furthermore, cases may become litigated as employees may not feel that they are being dealt with appropriate to their needs. Some injured employees may be offered positions that are not as physically demanding as what was done prior to the injury. In such instances the worker then loses the status and ego-gratification of no longer being able to self-identify with their former peer group. And of course, there can be a concomitant diminution in income with such a position change.

All of these issues conspire to create poor outcomes by any measure—economic, personal, or
professional—for both employee and employer. They are literally life changing for the disabled worker\textsuperscript{17}. But on the other hand, when patients have a successful rehabilitation experience and are able to return to their prior position, the expectation is that they will concomitantly have improved outcomes in general health status and a diminution in fear-avoidance beliefs toward work (and activities of living as well). It has been the anecdotal observation of these researchers that such has been the case for injured workers that have completed an evidence-based sports performance work conditioning/hardening (SPWC/H) program. As such, this is the first study to apply a general health measure to assess the pre- and post-program impact. Additionally, pre- and post-fear-avoidance beliefs were also assessed.

Researchers\textsuperscript{3,4,9} have previously examined factors that were believed to correlate with increased risk of prolonged work absences based on patient demographics such as sex or age, or from clinical outcomes, finding little of predictive or prognostic value. Others\textsuperscript{1} found greater predictive value in the more psychological aspects of the patient—mood, coping strategies, health locus of control, and fear-avoidance beliefs.

A meta-analytic study by Lechner\textsuperscript{16} found that work hardening and conditioning interventions aid in increased return to work outcomes. Cole et al.\textsuperscript{2} found that managing injured workers’ expectations was an important aspect of maximizing recovery in patients with work-related injuries. These researchers went as far as to suggest that if patients’ psychosocial factors indicate the presence of uncertainty or negative expectations concerning their clinical outcome that specific psychological intervention should be considered in order to improve prognosis and facilitate clinical outcome. Rehabilitation’s impact on quality of life following a work related injury additionally manifests as a key area to consider vis-à-vis benefiting from a full recovery and having the capacity to RTW\textsuperscript{5}.

No prior study has empirically evaluated the pre- and post-program impact that a sports performance-based work conditioning/hardening (SPWC/H) program has on aspects of mitigating fear-avoidance beliefs in particular as well as concomitant impact on more wide-ranging health measures in general, in an injured workers’ population.

This is a critical area of inquiry as other studies\textsuperscript{2} have examined the role of injured workers’ expectations on clinical outcomes as well as how fear avoidance beliefs can prolong work restrictions\textsuperscript{6}. Herein researchers wished to examine how both rehabilitative and subjective outcomes could be optimized and fear-avoidance beliefs mitigated regardless of they type of patient disability or demographics if they participated in a sports performance-based work conditioning/hardening program.

**MATERIALS AND METHODS**

**Study Design**

This was a prospective, case series, observational study that took place in outpatient clinic settings. Thirty-seven clinics participated from Illinois, Wisconsin, and Delaware. Subjects were selected if they had been referred to the SPWC/H program between January 2010 and May 2011. Both clinicians and subjects were told that the survey was to evaluate their progress and had no bearing on their care, participation in the program, or legal gravity if they had a litigated worker’s compensation claim. All data were coded, aggregated and anonymous. Clinicians used a script to read to the subject to ensure consistency of message. Clinicians were not provided with any information as to the subjects’ responses to the questionnaires. No treatment was altered or withheld as a part of this survey process. All potential subjects were provided with informed consent prior to choosing to participate or declining participation.

**Subjects**

Subjects in this investigation included a total of 221 consecutive individuals who had experienced a work related injury and were admitted to a SPWC/H program. Of this population, there were 206 datasets with entire survey questionnaires completed. It is this latter group’s data that underwent analysis and is discussed herein. One hundred sixty three (79.1%) subjects were male, while 43 (20.9%) were female. The males’ average age was 43.2 years (SD=10.03, range=22-64) while the females’ average age was 43.4 years (SD=11.73, range=23-64). Eighty-two (39.8%) were married (male=69, female=13); 45 (21.8%) were single (male=30, female=15); 5 (2.4%) were divorced.
(male=5, female=0); and 74 (35.9%) did not answer this question (male=59, female=15). One-hundred and nine (53%) subjects underwent surgery, while 97 (47%) did not.

The majority of respondents (n=137, 66.5%) had been injured over six months prior to their participation in the program, while 64 (31.1%) were more acute and 5 (2.4%) were unknown. Most subjects had only one injury (189, 91.7%) and 17 (8.3%) had 2 or more injuries (only 2 of this group had 3 injuries and no one had four or more). One-hundred and thirty-two subjects (65%) were involved in a litigated workers’ compensation case. (It should be noted that this is not typical for general work conditioning/work hardening programs, thus implying those sampled are from a more challenging population.) The remaining 71 (35.0%) for whom we had data were non-litigated.

**Measures**

All participants completed a baseline set of questions that included basic demographics of age, sex, marital status, acuity of injury, number of injuries, and legal status of their workers’ compensation case. They also completed the Fear Avoidance Beliefs Questionnaire (FABQ) and the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36).

The SF-36 is a commonly used measure that examines 8 areas of health (i.e., General Health, Physical Functioning, Role-Physical, Role-Emotional, Social Functioning, Mental Health, Bodily Pain, and Vitality) and is a psychometrically rigorous and reliable tool for examining health-related quality of life aspects. Each of the 8 subscales range in value from 0 to 100; the higher the score indicates the better or healthier functioning of the individual.

The FABQ quantifies the level of fear of pain and beliefs about avoiding activities that patients may harbor. It is composed of 16 items having a range of 0 (no fear-avoidance beliefs) to 6 (highest fear-avoidance beliefs). Seven of the items comprise what is known as the Work Subscale. These items are specifically related to current and future disability in the work environment (e.g., “My work might harm my back”). This scale’s score range is 0 to 24. Lower scores indicate less fear in the areas measured by the FABQ. In this study the total score of all items in addition to the two subscale tallies was calculated. The total score could range from 0 to 96. The FABQ has been found to be a reliable instrument in physically injured patients and has been associated with current and future disability and work loss.

Work by Fritz and George found that the Work Subscale of the FABQ held strong predictive value thus suggesting that fear-avoidance beliefs may hold great causal influence concerning the ability of a formerly injured worker to return to work, or at least correlational prognostic value. Numerous studies that have looked at fear-avoidance in disabled worker populations have found that those with a high level of do much better in a supervised physical therapy exercise program.

**Intervention**

The sports performance-based work conditioning/hardening (SPWC/H) program is a rehabilitation program that employs the principles of sports performance training to improve patients’ physical lifting capacity. The program is individualized, based primarily around the injured worker’s presenting level of function, with an identified return-to-work end-goal in mind. Patients come to the program five days a week, and generally spend 5 hours a day. This lasts for 3 to 4 weeks, depending on the idiopathic needs and progress of the patient.

**The Program**

The program model used herein was developed with input from orthopedic surgeons, physical therapists, athletic trainers, exercise physiologists, and bio-mechanists in order to create an optimal return-to-work program. In the development of the SPWC/H program (formally known as Functional Integration of Rehabilitation and Strength Training, FIRST), research was conducted to validate the theory that improving lifting abilities in injured workers mattered. In a 2002 study presented at the 19th annual meeting of the North American Spine Society, ninety-six percent of lumbar fusion patients in the program achieved the medium physical demand level (able to lift 50lbs occasionally) or better. Forty-five
percent of the patients achieved the heavy physical demand level (ability to lift 100lbs occasionally). Patients were then assessed at both 1 year and 2 years post-program completion as to whether their improved physical abilities increased return-to-work rates. The results indicated that 97% of those patients went back to work, with half being able to return back to their prior occupation and concomitant physical demand level. Finally, re-injury rates were assessed for these patients two years following program completion and re-injuries were rare and occurred less frequently with greater physical abilities. (These data were presented and the North American Spine Society 17th Annual Meeting.)

The referral path for an injured worker to become a candidate for the program typically follows treatment in physical therapy if he/she has: reached a plateau in physical therapy, has strength/tolerance deficits (vis-à-vis his/her prior level of function), and has remaining occupational deficits (Physical Demand Levels, PDLs). The program is a group-based model and as such is conducted with multiple people attending the program simultaneously. This group model yields a diversity of clinical experiences as some clients are truly motivated by their injury to regain prior levels of functioning and they are motivated to return to work. Other clients injured at work become emotionally upset and frustrated. Some may not have received proper medical attention and by the time they get into this program they may be more motivated by anger towards their insurer, ambivalent feelings toward their attorney and/or toward their physician, a desire to return to work, and additional lifestyle considerations.

Regardless of the motivations, SPWC/H program providers work to manage their emotional motivations as well as their physical rehabilitation. The result of the positive peer milieu (if not culture) provided within the SPWC/H program is similar to what Scheelar’s research found in that a strong social support group is influential in successfully returning injured workers back to their jobs. It is important to note that such peer groups perhaps need not be known co-workers, but a cohort of those sharing a history of injury and rehabilitation. The proxy of work via participation in a work conditioning/work hardening program along with the kinship experienced by those in such a program appears to provide the necessary peer support that fosters mitigation of fear-avoidance beliefs as well as improving overall health perceptions.

**Data Analyses**

Descriptive statistics (mean average, standard deviation) were used for all variables examined. One-tailed, paired t-tests were performed to determine the impact of being in the SPWC/H program had on FABQ subscale scores, FABQ Total scores, and all 8 SF-36 subscale scores based on pre- and post-treatment findings. All descriptive and analytic statistical analyses were performed using SPSS for Windows 10.0 (SPSS, Inc., Chicago, IL).

**RESULTS**

Findings for the entire population sampled are provided in Table I, and also for separated male and female mean scores. All P-values were significant (P<.001) unless otherwise noted. The findings generally suggest that participating in a SPWC/H program can significantly mitigate participants’ fear-avoidance beliefs about work and physical activities. Similarly, when comparing patients’ attitudes prior to beginning the program and upon completion, there were across the board improvements at a statistically significant level (P<0.001). That is, patients’ perspectives concerning their personal health quality and expectation for the future significantly improved. Findings indicate that subjects herein had greater confidence in performing various physical activities, including bathing or dressing, as well as more vigorous actions such as stair climbing, without limitations due to their health. Likewise, positive feelings about work and other daily activities abilities vis-à-vis physical health status increased significantly along an improved emotional perspective with participating in these activities as well. Social functioning without interference due to physical or emotional problems was improved along with general mood state (e.g., nervousness, depression, peaceful, happy, calm…) and greater frequency of such. The absence of severe and extremely limiting pain increased for these patients, and they reported experiencing higher levels of vitality and more frequently experiencing more energy.

Next the data were separated by sex in order to...
discover if there were any differences when looking at all male subjects versus all female subjects. Again, for men, the findings on all measures showed statically significant differences (improvement) post-program completion (P<0.001). This held true for females on the SF-36 subscales of Physical Functioning, Role-Physical, Social Functioning, Mental Health, Bodily Pain, and Vitality. Statistically significant changes did not occur in the subscales of General Health and Role-Emotional for this sub-group. Both groups demonstrated statistically significant improvements in their FABQ scores overall as well as the Work Subscale and the Physical Activity Subscale.

When the sample was dichotomized based on the number of injuries sustained, findings indicated across all SF-36 subscales and across all FABQ scores that there were statistically significant (P<0.001) improvements post-participation in the SPWC/H program. However, for workers who sustained two or more injuries prior to their episode of care none for the FABQ scores showed improvement at a statistically significant level and on the SF-36 this also manifested on the subscale of General Health. In the subscales of Role-Physical, Social Functioning, and Mental Health they showed statistically significant change with P-values at the levels of 0.02, 0.03, and 0.04 respectively. These findings appear in Table II.

The subjects’ data were next parsed by the acuity of the work related injury. Findings across all subscales of the SF-36 and FABQ indicated statistically significant improvements (between P=0.02 for the Role-Emotional scale of the SF-36 for patients with having had in injury longer than 6 months prior, and P<0.001 for all others). Finally, data were run based on whether the injured worker’s case was litigated or not. It was discovered that improvement across all SF-36 and FABQ categories were at a statistically significant level (P<.0001).

DISCUSSION

The findings herein suggest that completion of a SPWC/H program can be additionally useful to patients suffering injuries at work by not only rehabilitating them to a level in which to be able to return to work, but it seems that such a program also helps to concomitantly improve their general health perceptions as well as diminish fear-avoidance beliefs concerning both work and non-work situations. A weakness of this study is that there is not a cohort control group, however, ethically, treatment could not be withheld in order to establish a non-treatment control group.

When sorting by sex, males demonstrated statistically significant improvements across the board on both the SF-36 and the FABQ. However, females did so with the exception of General Health and Role-Emotional subscale scores, but such issues which are not a consideration in returning to work. Some prior studies found through the state of Texas website, Texas.gov, have noted that injured female workers are at higher risk for delayed functional recovery and perhaps this phenomenon is manifesting in less General Health and Role-Emotional subscale scores changes, in spite of participation in a SPWC/H program.

When the sample was divided between subjects having only one injury versus two or more, none of those in the latter group had FABQ scores that showed a statistically significant improvement. This parallels findings in prior studies23 that found that multiply injured workers are at risk for delayed functional recovery. This would seem to indicate that regardless of having received services through a SPWC/H program, that the experience of multiple injuries has a very powerful effect on an injured workers’ fear of re-injury, which is logically understandable. Furthermore, this category itself could actually be a proxy for a more traumatic injury, and thus a more treatment resistant group, psychologically speaking. Support for this premise is found in the results of the SF-36 subscales for these multiply injured subjects as well. That is the Mental Health subscale had the least statistically significant change (P=0.04) of those not reaching the 0.001 level, and the General Health subscale did not reach a statistically significant level. This would suggest that those suffering greater physical trauma may have lingering psychological sequelae that will require additional intervention in order to best address these kinds of patients’ needs in addition to SPWC/H program participation. Findings across all subscales of the SF-36 and FABQ indicated statistically significant improvements regardless of the acuity of the work related injury, and likewise whether the injured worker’s case was litigated or not.

It is important to understand the findings of
this study in the context comprehending the additional therapeutic impact of an injured worker participating in a SPWC/H program following completion of physical therapy as many consider such programs to just be a continuation or variation of physical therapy. Physical therapy sessions and protocols do not focus on the return-to-work needs of injured workers who are in more physical, manually intense occupations (see Table III). The U.S. Dept. of Labor’s Dictionary of Occupational Titles defines approximately 13,000 job titles. Of those, there are only 15-20% (approx. 2000 – 2500) which require a person to lift 50lbs. or more on an occasional basis as part of their essential job tasks. Logically this makes sense—as American workplaces are becoming more and more automated and workers are becoming more sedentary. Today, most people just don’t have a high physical requirement as a barrier to return to work. Physical therapy is focused on the acute injury, returning range of motion, decreasing pain levels, making sure the person can complete their activities of daily living (ADLs), etc. If someone can do those things, then they can most certainly return to work as a salesperson, office worker, etc...but they would not be physically prepared to return to work as a carpenter, ironworker, or firefighter, for example. So, while physical therapy is perfectly adequate for the rehabilitation needs of 80% of the population, it is a poor fit for the 20% of people with physically intensive positions or who suffer from other physical deficits that prevent them from returning to their former occupations.

From the perspective of the rehabilitation professional, there is a successful completion of rehabilitation. Part of this is not just the physical healing and conditioning, but also the psychological as well. Siff 24 identified factors limiting strength production, including physical factors and biomechanical efficiencies that improve with proper exercise and training. However, most interestingly he discusses that pain (or fear-of-pain) and injury (or fear–of-injury) as key factors in optimal functioning. Pain and injury (and fear thereof) occur with every patient going through the workers’ compensation process—exacerbated by social and monetary stresses that naturally occur. Siff 24 notes: “It is often largely unimportant if medical assessment pronounces rehabilitation to be complete, return to top level performance will occur only if the (injured worker) perceives rehabilitation to be complete and fear of pain or re-injury is minimal.”

This certainly speaks to the power of the human mind, but also lends some insight into the lingering complaints of injured workers long after they have been deemed “healed,” “released,” or “fit for return to work.” Medical professionals may be ready for the case to close, but the injured worker may still have remaining concerns post-operatively. Thus, based on the overall outcome findings of this study, the additional participation in a SPWC/H program can be helpful in addressing the associated fears of re-injury upon retuning to work more quickly with the additional benefits of staying in their pre-injury job classification, mitigating legal costs for the employer, reducing re-injury likelihood, and optimizing rehabilitative outcomes.

As Hanney et al11 has pointed out, if a patient's fear avoidance beliefs dominate the ability to confront symptoms the result is greater inactivity which then contributes to progressive disability. In Truchon’s 25 adapted stress process model, fear of work plays a key (and perhaps not surprising) predictive role in work status. While the use of such theoretical models can lead to a better understanding of the development/avoidance of long-term disability, it is also helpful to know that SPWC/H programs can have a positive effect on this complex phenomenon. Indeed, screening for fear-avoidance beliefs may be useful for identifying patients at risk of prolonged disability and work absence, and thus using a differential therapeutic approach of referring such patients to a SPWC/H program.

While this is the first specific investigation of the impact of participation in a SPWC/H program on fear-avoidance beliefs and general health perceptions, the results are promising that completing such a program yields manifold benefits that go beyond returning to work and extend into other areas of physical as well as emotional functioning. It is incumbent upon all rehabilitation professionals to remember the complexities of physical injury also impact the psychological. It is the authors’ hope that more researchers will continue to further investigate this important area of inquiry.
Table I.
Findings for entire sample (SF-36 = Medical Outcomes Study 36-Item Short-Form Health Survey, FABQ = Fear-Avoidance Beliefs Questionnaire)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Possible Scale Range</th>
<th>Entire Sample (n=206)</th>
<th>Male (n=163)</th>
<th>Female (n=43)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Tx Mean</td>
<td>Post -Tx Mean</td>
<td>P &lt; .001 level</td>
<td>Pre-Tx Mean</td>
</tr>
<tr>
<td><strong>SF-36 Subscale Scores</strong> (Higher = Better)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Health</td>
<td>0 - 100</td>
<td>64.06</td>
<td>67.98 Yes</td>
<td>63.21</td>
</tr>
<tr>
<td>Physical Functioning</td>
<td>0 - 100</td>
<td>50.49</td>
<td>64.83 Yes</td>
<td>53.31</td>
</tr>
<tr>
<td>Role-Physical</td>
<td>0 - 100</td>
<td>9.43</td>
<td>27.21 Yes</td>
<td>10.05</td>
</tr>
<tr>
<td>Role-Emotional</td>
<td>0 - 100</td>
<td>39.80</td>
<td>53.56 Yes</td>
<td>39.19</td>
</tr>
<tr>
<td>Social Functioning</td>
<td>0 - 100</td>
<td>57.10</td>
<td>66.57 Yes</td>
<td>56.56</td>
</tr>
<tr>
<td>Mental Health</td>
<td>0 - 100</td>
<td>64.20</td>
<td>69.56 Yes</td>
<td>63.49</td>
</tr>
<tr>
<td>Bodily Pain</td>
<td>0 - 100</td>
<td>34.67</td>
<td>47.24 Yes</td>
<td>35.73</td>
</tr>
<tr>
<td>Vitality</td>
<td>0 - 100</td>
<td>43.17</td>
<td>54.90 Yes</td>
<td>43.36</td>
</tr>
<tr>
<td><strong>FABQ Score</strong> (Lower = Better)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Subscale</td>
<td>0 - 42</td>
<td>31.42</td>
<td>26.93 Yes</td>
<td>30.96</td>
</tr>
<tr>
<td>Physical Activity Subscale</td>
<td>0 - 24</td>
<td>16.31</td>
<td>13.98 Yes</td>
<td>16.25</td>
</tr>
<tr>
<td>Total Score</td>
<td>0 - 96</td>
<td>47.66</td>
<td>40.61 Yes</td>
<td>47.11</td>
</tr>
</tbody>
</table>

Table II.
Findings for sample by number of injuries (SF-36 = Medical Outcomes Study 36-Item Short-Form Health Survey, FABQ = Fear-Avoidance Beliefs Questionnaire)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Possible Scale Range</th>
<th>1 injury (n=189)</th>
<th>≥ 2 injuries ( n=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-Tx Mean</td>
<td>Post -Tx Mean</td>
<td>P &lt; .001 level</td>
</tr>
<tr>
<td><strong>SF-36 Subscale Scores</strong> (Higher = Better)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Health</td>
<td>0 - 100</td>
<td>64.61</td>
<td>69.06 Yes</td>
</tr>
<tr>
<td>Physical Functioning</td>
<td>0 - 100</td>
<td>50.11</td>
<td>64.44 Yes</td>
</tr>
<tr>
<td>Role-Physical</td>
<td>0 - 100</td>
<td>9.88</td>
<td>25.47 Yes</td>
</tr>
<tr>
<td>Role-Emotional</td>
<td>0 - 100</td>
<td>40.91</td>
<td>54.14 Yes</td>
</tr>
<tr>
<td>Social Functioning</td>
<td>0 - 100</td>
<td>57.61</td>
<td>66.67 Yes</td>
</tr>
<tr>
<td>Mental Health</td>
<td>0 - 100</td>
<td>64.22</td>
<td>69.54 Yes</td>
</tr>
<tr>
<td>Bodily Pain</td>
<td>0 - 100</td>
<td>34.6</td>
<td>47.0 Yes</td>
</tr>
<tr>
<td>Vitality</td>
<td>0 - 100</td>
<td>43.54</td>
<td>56.12 Yes</td>
</tr>
<tr>
<td><strong>FABQ Score</strong> (Lower = Better)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Subscale</td>
<td>0 - 42</td>
<td>31.32</td>
<td>26.76 Yes</td>
</tr>
<tr>
<td>Physical Activity Subscale</td>
<td>0 - 24</td>
<td>16.41</td>
<td>13.83 Yes</td>
</tr>
<tr>
<td>Total Score</td>
<td>0 - 96</td>
<td>47.73</td>
<td>40.33 Yes</td>
</tr>
</tbody>
</table>
Table III. Differences between Physical Therapy and Work Conditioning/Hardening

<table>
<thead>
<tr>
<th>Physical Therapy</th>
<th>Work Conditioning/Hardening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute injury emphasis</td>
<td>Strength/function</td>
</tr>
<tr>
<td>2-3 x per week</td>
<td>5 x per week</td>
</tr>
<tr>
<td>60 to 90 min/session</td>
<td>4 hours per session</td>
</tr>
<tr>
<td>• 2-5 hrs activity/week</td>
<td>• 20 – 25 hrs activity/week</td>
</tr>
<tr>
<td>• 5-10 min warm-up</td>
<td>• 40 to 60 min. cardio</td>
</tr>
<tr>
<td>• 10 – 15 min. stretching</td>
<td>• 30 min. stretching</td>
</tr>
<tr>
<td>• 20 min. strengthening</td>
<td>• 90 min. strengthening</td>
</tr>
<tr>
<td>• 20 min. manual PT Modalities</td>
<td>• 30 to 60 min. Work simulation</td>
</tr>
</tbody>
</table>

Dx specific

RTW specific

REFERENCES


How to Submit an Article for Publication:
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CME QUESTIONS FILE

THE FOLLOWING QUESTIONS ARE BASED ON THE FORGOING ARTICLES:
Primary Care Physician and Prescription Narcotics for the Treatment of Chronic Non-Malignant Pain (page 5)

Please pick the best answer of the 4 possible answers from the following.

1. What is the leading cause of death among worker’s compensation population who have undergone spinal fusions?
   a) Diabetes
   b) Pneumonia
   c) Prescription Narcotics
   d) Illegal Drug Abuse

2. What is the definition of hyperalgesia:
   a) Absence of pain in response to stimulation that would normally be painful
   b) Pain in a joint, due to arthritis
   c) Pain associated with a lesion of the central nervous system
   d) An abnormally severe sensitivity to pain which is caused by narcotics

3. If prescribed for narcotics for non-malignant chronic pain, what is NOT a well-known side effect of the prescription?
   a) Endocrine Disruption (hypogonadism)
   b) Sleep Abnormalities
   c) Immune System Compromises
   d) Over Eating

4. The association between prescription and substance abuse is reported to be ________ of such populations?
   a) Greater than 45%
   b) Greater than 50%
   c) Greater than 35%
   d) Greater than 55%

Medical Marijuana...an Accident Waiting to Happen (page 8)

Please pick the best answer of the 4 possible answers from the following.

1. In 1996, what state was the first to legalize medical marijuana?
   a) New York
   b) Illinois
   c) California
   d) Texas

2. Which serious illness does not allow the use of medical marijuana for treatment?
   a) Cancer
   b) AIDS
   c) Glaucoma
   d) Bi-polar disorder

3. According to the National Institute of Drug Abuse, in 2010, approximately how many individuals are current users of psychotherapeutic drugs taken non-medically?
   a) 7.0 million
   b) 2.5 million
   c) 9.25 million
   d) 4.0 million

4. When medical marijuana was passed in 1996, what was the act called?
   a) Medical Marijuana Use Act of 1996
   b) Compassionate Use Act of 1996
   c) Therapeutic Health Act of 1996
   d) Remedial Act of 1996

5. As of January 25, 2012, how many states legalized, or in the process of legalizing medical marijuana?
   a) 35
   b) 38
   c) 33
   d) 27
A Broader Examination of Outcomes in a Disabled Worker Population  (page 12)

Please pick the best answer of the 4 possible answers from the following.

1. What does an FABQ stand for?
   a) Fear Abstinence Beliefs Questionnaire
   b) Fright Avoidance Beliefs Questionnaire
   c) Fright Awareness Beliefs Questionnaire
   d) Fear Avoidance Beliefs Questionnaire

2. SF-36 is a commonly used measure that examines 8 areas of health. Which of the following is not measured?
   a) Emotional Functioning
   b) Mental Health
   c) General Health
   d) Physically Functioning

3. In 2002, the North American Spine Society has found that ____% of lumbar fusions patients in the program achieved the medium physical demand level (lift 50lbs occasionally) or better?
   a) 85%
   b) 96%
   c) 93%
   d) 72%

4. Due to the physically demanding nature of injury prone jobs, workers are considered to be what?
   a) Specialized Workers
   b) Business Machines
   c) Industrial Athletes
   d) Professional Players

5. Rehabilitation is a poor fit for what percentage of people with physically intensive positions or who suffer from other physical deficits that prevent them from returning to work?
   a) 25%
   b) 20%
   c) 23%
   d) 16%

Answer Key for CME Questions

Questions on page 17:

Questions on page 18 and 19:
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Disruptions and Disconnects in Healthcare Today

By: Chris E. Stout, PsyD

There are two thought-leaders (aka “wonks”) that I follow and that I have been fortunate enough to have met. The first is Clayton Christensen, a professor at Harvard Business School, and the author of The Innovator’s Dilemma which focused on the benefits of disruptive technologies. He’s now looking at the mess that is US healthcare today. He noted in a recent article that the “…lessons from the history of disruptive innovation are particularly important in the disruption of health care. The first is that while the technological enablers almost always emerge from the laboratories of leading institutions in the industry, the business model innovations do not. Almost always these are forged by new entrants to the industry. Regulators must beware, therefore, of attempts by the leading institutions to outlaw business model innovation. Regulation should facilitate it. What is in the interest of society most often does not coincide with the self-perceived interests of the leading institutions…(also)… disruption rarely happens piecemeal, where stand-alone disruptions are plugged into the existing value network of an industry. Rather, entirely new value networks arise, disrupting the old. Hence, disruptive business models such as value-adding process clinics, retail clinics, and facilitated networks must be married with disruptive innovations in insurance and reimbursement in order to reap the full impact in cost and accessibility. At the outset, knitting all these pieces together will require a much higher degree of integration than has been the norm in the health-care industry.” 1 I’d offer the opinion that this is amplified even more in disability medicine.

Absent from this is the issue of accountability. This is a tricky business in healthcare as there are some many moving parts. Maybe it is because it is so difficult to connect the proverbial dots of the components that comprise our healthcare delivery system. However, as medical-leaders it is incumbent upon us to best address the systemic issues in providing services as well the services themselves.

These I consider “disconnects” of those aforementioned dots. This leads me to my other favorite wonk, Princeton economics professor, Uwe Reinhardt. He was referenced in the Journal of the American Medical Association noting that if we consider what we providers do as analogous to a production process in the manufacturing of health, then research demonstrates that what healthcare “produces” accounts for only about 10 percent of health or health outcomes. This then begs the question, “if 90 percent of how healthy someone is has nothing to do with healthcare services (not including the wise but seldom paid for preventive services), then why are we on the hook for being accountable for an outcome of health?” This is Disconnect #1.

But even when we do measure outcomes (for example, via findings from the National Committee for Quality Assurance’s annual State of Health Care Quality report) we find that the use of even the most fundamental of preventive measures, we find wide variation. Anecdotally, I would venture a guess that it is likewise for the distribution curve of “evidence based practices” in healthcare. You guessed it, Disconnect #2.

Even if one plays detective and “follows the money,” what one finds instead of cash is Disconnect #3. The chairman and chief executive of Doctor Quality, Inc., David Shulkin, MD, noted that “despite the amount of resources that might be devoted toward improving healthcare quality, there is no economic alignment with those clinical resources. And until we get the economic and clinical alignment of healthcare, we are not going to see the business of healthcare focus on the quality of the product.”

Some speculate that getting data back out from a system of care is the problem (aka Disconnect #4). Perhaps the fear that full disclosure of medical errors will result in multi-million-dollar lawsuits keeps some mum, and thereby disconnects information from
awareness (thus also disconnecting the ability to self-correct).

Even our definitions of quality vary, which results in Disconnect #5. Some may consider quality as the delivery of the most comprehensive level of care. Others may consider quality to be similar to value, which is really a function of cost and outcome. Some consider the quality of a procedure or treatment (assuming that good treatments yield good outcomes), and others consider the quality of the outcome (assuming that a good outcome is the result of a good treatment). While sounding very similar, they are not.

I have always been concerned about the fundamental disconnect (#6) between the patient, the purchaser, the payer (usually an insurance company), the reviewer (an HMO or other managed care entity), and the provider of healthcare. Toss into this Byzantine mix various (and varying) state and federal regulations, on-again-off-again federal healthcare reform proposals, third party plan administration, HIPAA rules, diversity and cultural factors, risk management and liability considerations, professional ethics and licensing boards, accreditation requirements, and so on, and one quickly understands why we are in such the fine mess that we are in today.

What’s a medial leader to do?

It is always much easier to note what is wrong than to suggest successful solutions, we do need to first understand causal and contributing factors before we can start to formulate a response. I do not recommend a one-size-fits-all solution. While standardization has its place, it is not a panacea. Experimentation with new models (of care as well as delivery and payment) is good, but perhaps enhanced with better evaluation of efficacy (via measurement tools seamlessly built in at the start of care). Mechanisms for mid-course self-correction if the data indicate doing so would be nice. And incorporating the use of timeliness and clearly defined deliverables could serve as indicators as to continuing on or needing to develop a better model.

“Quality contracting” is a newer model that aligns financial reimbursement with outcomes of care and likewise in physical therapy and rehabilitation we are seeing more penetration of pay-for-performance as a facilitator of best practices. For those in leadership position who can do some of their own connecting, Nancy J Wilson, MD4, notes some clinic-culture aspects that I think provide wise direction. Here are a few:

- Actively promote a non-punitive environment for sharing information and lessons learned.
- Evaluate the competitive/collaborative environment for partners from whom you can learn and share information.
- Analyze adverse events or outcomes and look for common threads.
- Foster teamwork across disciplines and regardless of authority.
- Implement care delivery processes that avoid reliance on memory.
- Implement care delivery processes that avoid reliance on vigilance.
- Engage patients and providers in the design of care delivery processes.

Working together and bringing the diverse skills and ideas we all have in an organized way will be difficult, but I can not help but think it will be worthwhile. And ultimately we will come upon the most critical aspect—patient care improvement—and no disconnects, but maybe some disruption.

References
The Journal of Disability Medicine (JDM) is an internationally circulated journal, acclaimed for bringing pragmatic insights to bear upon the practice of physicians and others who regularly confront impairment, disability assessment and medical-legal issues. The journal includes articles and commentaries on topics of interest in disability medicine and related areas of law and policy. It also addresses issues in disability medicine research and education and a broad range of other related topics, providing authoritative and comprehensive coverage of the growing field of disability medicine.

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Authors should submit manuscripts to Dr. Stout at chris.stout@atipt.com

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Manuscript pages should be double-spaced with consecutive page numbers and continuous line numbers. The abstract should be included with the manuscript. Manuscripts should be 6000 words or fewer (including abstract and references). There are also limitations on figures, tables, and references; see guidelines below. Word format is preferred.

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Abstract

Abstracts should summarize the contents of the article in 350 words or less. The abstract should be structured in the following format:

**Background:** In one or two sentences, summarize the scientific body of knowledge surrounding your study and how this led to your investigation.

**Hypothesis/Purpose:** State the theory(ies) that you are attempting to prove or disprove by your study or the purpose if no hypothesis exists.

**Study Design:** Identify the overall design of your study. See list below:

**Methods:** Succinctly summarize the overall methods you used in your investigation. Include the study population, type of intervention, method of data collection, and length of the study.

**Results:** Report the most important results of your study. Only include positive results that are statistically significant, or important negative results that are supported by adequate power. Report actual data, not just P values.

**Conclusion:** State the answer to your original question or hypothesis. Summarize the most important conclusions that can be directly drawn from your study.

Clinical Relevance: If yours was a laboratory study, describe its relevance to disability medicine.

**Key Terms:** Provide at least 4 key words for indexing.

**What is known about the subject:** Please state what is currently known about this subject to place your study in perspective for the reviewers.

**What this study adds to existing knowledge:** Please state what this study adds to the existing knowledge.

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Study Designs

**Meta-analysis:** A systematic overview of studies that pools results of two or more studies to obtain an overall answer to a question or interest. Summarizes quantitatively the evidence regarding a treatment, procedure, or association.

**Systematic Review:** An article that examines published material on a clearly described subject in a systematic way. There must be a description of how the evidence on this topic was tracked down, from what sources and with what inclusion and exclusion criteria.

**Randomized Controlled Clinical Trial:** A group of patients is randomized into an experimental group and a control group. These groups are followed up for the variables/outcomes of interest.

**Crossover Study Design:** The administration of two or more experimental therapies one after the other in a specified or random order to the same group of patients.

**Cohort Study:** Involves identification of two groups (cohorts) of patients, one which did receive the exposure of interest, and one which did not, and following these cohorts forward for the outcome of interest.
Case Series: Describes characteristics of a group of patients with a particular disease or who have undergone a particular procedure. Design may be prospective or retrospective. No control group is used in the study, although the discussion may compare the results to other published outcomes.

Case Report: Similar to the case series, expect that only one or a small group of cases is reported.

Descriptive Epidemiology Study: Observational study describing the injuries occurring in a particular sport.

Controlled Laboratory Study: An in vitro or in vivo investigation in which 1 group receiving an experimental treatment is compared to 1 or more groups receiving no treatment or an alternate treatment.

Descriptive Laboratory Study: An in vivo or in vitro study that describes characteristics such an anatomy, physiology, or kinesiology of a broad range of subjects or a specific group of interest. Authors should choose the design that best fits the study.

The Editor will make the final determination of the study design and level of evidence based on the Center of Evidence Based Medicine guidelines.

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In general, follow the standard IMRAD (Introduction, Materials and Methods, Results, Discussion) format for writing scientific articles. The author is responsible for all statements made in the work, including copyeditor changes, which the author will have an opportunity to verify. Papers including human subjects must include a statement of approval by appropriate agencies in the text, and a copy of the approval letter must be uploaded with the submission. The institution should not be mentioned in the blinded manuscript, but should be added on acceptance.

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Discover Your Ideal Practice
(An edited excerpt from Getting Started in Private Practice, Wiley and Sons, 2004.)

Chris E. Stout, PsyD

As the healthcare marketplace grows more challenging, providers are finding it necessary to develop smarter business tactics in order to be successful. We are faced with shifting payment structures, increasing competition, complex funding mechanisms, the bankruptcy of managed care agencies, and growing malpractice liability risks, all against a backdrop of recessionary layoffs and dwindling economic resources.

Such a state of affairs makes it incumbent on some medical professionals to begin to think about working for themselves rather than an organization, or perhaps first working within a practice before venturing out solo. This article will cover what areas you should consider and how to approach them.

Today’s healthcare marketplace has created new challenges for medical professionals in every type of practice setting. In the past, doctors with offices in one or two locations could make an adequate living and enjoy the benefits of working independently. Today, however, it is difficult to thrive or even survive in independent practice, especially in areas where managed care has become a major force. There are new challenges for every type of practice, including medium and large groups.

There are a variety of models for you to consider when you prepare to set out on your own. Let's begin by looking at the most common types of private practices.

Independent Solo Practice

In this type of practice, you:

• Rent and furnish your own office space
• Work mostly on your own
• Do your own marketing
• Decide on the fee structure
• Find your own clients
• Do your own treatment
• Find your own supervision
• Get on managed care panels and lists
• Pay the cost of association memberships, subscriptions, publications, etc.
• Pay the cost of continuing medical education credits
• Pay for your own health and life insurance
• Design your own forms, stationery, handouts, etc.
• Pay all of the expenses associated with the practice
• Process the insurance reimbursement paperwork

In the past, solo practitioners answered only to themselves (while following the legal and ethical guidelines of their profession). Today, with the advent of managed care, solo practitioners may work alone but must fulfill the requirements of managed care organizations in order to obtain reimbursement for their services.

GPWW (Group Practices Without Walls): One-Stop Contracting

Group Practices Without Walls are the most common type of practice group today. A group of practices, from solo providers to larger practices of ten to 15 members, form a group. The individuals who work in most GPWWs maintain practice independence but offer a combined size that is appealing to contracting payers. Financial arrangements vary from group to group.

Some GPWW leaders decide to incorporate. They may consolidate support staff and standardize software, forms, and procedures. They operate with one tax identification number, standardize staff hiring and credentialing standards, and function like a large practice.
Primary practice “owners” may hold controlling positions, issue stock, set up a profit sharing plan, etc. Individual practices within the group may become less distinct from one another.

There is joint liability in any GPWW. As a GPWW is formed, members should seek the guidance of both an attorney and an accountant. Each person involved needs to have a clear understanding of his or her duties and responsibilities.

Benefits to the members

As a member of a GPWW, you may gain contracts and referrals that you would not obtain if you were not part of the network. You may also find that working with such a group provides more resources and a more professional atmosphere than working alone. There may be more opportunities to share resources, obtain supervision, and avoid isolation.

Benefits to payers.

Payers prefer to have a single contract with one unit that manages 30 or more providers covering a two- to five- county region. They also prefer to have one contract to negotiate, with one phone number to dial, and one contact person to reach if there is a problem. It is estimated to cost $100 to $150 per provider to manage contracts and credential providers, so it is less costly for a payer to work with a GPWW than with an individual provider.

Network or Anchor Groups

A network is typically owned by one individual. The network may cover more than one region and may offer more than one specialty. Similar to the GPWW, these practices appeal to payers due to ease of contracting, and lower costs, as described above.

Practices with such contracts are known as “anchor groups.” An anchor group is similar to the GPWW, since they are made up of several independent providers or practices. The group forms a network to provide services under a general contract type (e.g., behavioral healthcare) but there are separate contracts for each provider, practice, or site. Network models tend to be located in more rural or less provider-saturated markets, while anchors tend to be located in more urban/suburban venues.

Caveats When Joining a Group Practice

If you decide to join a group practice, use caution. Here are some suggestions to be aware of:

• Ensure that fee payments are within ethical and legal guidelines. Stay away from “fee splitting” or any payment method that could be interpreted as paying for a referral.

• Check out the other therapists in the group. Your reputation will be affected by their reputations.

• Have separate interviews with each member of the group. Try to learn as much as you can about their relationships with one another.

• Ask to see the record keeping system and evaluate the level of confidentiality that is maintained.

• Find out how often clients are billed and what percent become delinquent.

• Find out where the group’s referrals come from.

• Explore the group members’ ethics. Ask them questions to learn how they handle various ethical situations.

• Find out about managed care contracts and ask whether you will be added.

• Find out whether you would be able to refuse referrals from a managed care firm with whom the group is affiliated.

Independent Practice Associations (IPAs)

An Independent Practice Association (IPA) is a mega-group that has evolved from one or more large provider groups. IPAs tend to be well-financed and are often backed with venture capital or large financial contributions to cover start-up costs (see Chapter Two). IPAs are different from the other practice models in that they generally offer:
Stories From Real Life

From my experience as a doctor and also as an intellectual property attorney working with group practices, I’ve found that copyright, trademark, contract, and the Internet are often misunderstood. For example:

- Who owns what when a group of medical professionals join together to develop materials, patient education pieces, and marketing pieces?
- Who owns the name of the group practice when it dissolves?
- Failure to anticipate at the formation of a collective endeavor how it will terminate.
- Not having a written agreement among the members of a formal group practice, corporation, partnership, or even informal office sharing.
- Choosing a business name and marketing slogans that are within professional ethical guidelines and don’t infringe on others’ rights.

Hybrids and Mutations

There are a variety of species of practices today, and all are subject to the Darwinian forces of survival of the fittest in the marketplace. New types of practices are constantly emerging because the world is changing quickly. Some examples of these changes include:

- Changes in regulations (such as repeals of corporate practice of medicine laws)
- Changes in policy (such as the ability to take risk without an insurance license in direct contracting).
  Some states prohibit provider groups from functioning as non-licensed insurance entities and thus cannot assume risk.
- Changes in payment systems (such as capitation versus reduced fee-for-service versus case rate)
- Changes in practice (such as prescriptive authority for non-MD providers, expanding hospital admitting privileges, etc.)
- Changes in tax codes (e.g., service corporations versus private corporations versus limited liability corporations)

These kinds of changes will make life more complex for anyone in practice, and they also create opportunities for innovation.

Maximizing Your Appeal to a Group Practice

There are many clinicians who have recently finished professional training, residency, or fellowship or work within an established practice when they are getting started in medicine. This can be an excellent opportunity to get valuable on-the-job training. However, the marketplace in most parts of the country has a greater supply of clinicians than open positions. If you live in an area where jobs for physicians are scarce, there are several things you can do to make yourself as attractive a candidate as possible.

Tips for Successful Interviewing

If you decide to join a group, you will need to interview for the job. As with any job interview, you will increase your chances for success if you do the following:

1. Be humble. When you are interviewing for a position in a group practice, it is important to convey that you have skills and knowledge, but be careful to avoid bragging or sounding like a show-off.
2. Do your homework. Learning about your potential employer helps you assess the goodness-of-fit between your professional needs and wants and those of the potential employer. Doing some research will also provide you with information that you can discuss in the interview to demonstrate that
you have taken the time to learn about the practice or counseling center. You will be able to address the needs and priorities of the practice and offer your ideas for working with the group.

What Employers Look For

The following areas are critical to the success of a mental health practice. Therefore, it is important that you can demonstrate your competence in these areas:

1. **Availability:** You are available to see clients at times that meet their needs, not yours. For example, if you are going to treat children, you’ll need to be available during evenings and weekends, and not just during daytime hours.
2. **Balance:** You should be able to demonstrate your ability to manage both life and work demands without undue stress.
3. **Clear-headedness:** Absentminded professors may be charming, but this is not a positive quality for clinicians. Maintaining focus at all times is a must.
4. **Commitment and dedication:** Clinical practice is not a hobby for dilettantes or the under-invested. Professionalism is the rule.
5. **Diplomacy:** Many work situations require you to be able to consider alternative perspectives, be flexible and willing to compromise.
6. **Ethics:** This is the sine qua non (essential element) of any clinical practice. Be ready to demonstrate your understanding of ethics if you are asked a hypothetical “what would you do if...?” question during an interview.
7. **Flexibility:** Similar to diplomatic skills, being agile and adaptable to changing needs.
8. **Goal directedness:** Distinguish yourself by describing what you plan to do in your career as a medical professional and explain how joining this practice will help you achieve your goals.
9. **Innovation:** Describe the ideas you would bring to the organization or practice that could be of genuine help to them.
10. **Persistence:** Finishing graduate school is a good demonstration of persistence, but also be prepared to discuss how your persistence is relevant to your joining this group.
11. **Punctuality:** This quality is critically important in clinical practice. Demonstrate your punctuality during the interviewing process and always thereafter.
12. **Self-reliance:** Discuss how you are able to think on your feet and problem solve, even in ambiguous situations.
13. **Self-respect:** Demonstrate your professionalism by noting how well you manage yourself and your life’s challenges.
14. **Simplicity:** Show how you keep your work and your relationships simple and straightforward and avoid creating disorder.
15. **Surefootedness:** Potential employers seek a stable and reliable professional to join their team.

Besides looking for the traits discussed above, a potential employer will be evaluating you and considering the following:

1. Would this person relate to our practitioners and fit in well with the group?
2. Are this candidate’s goals compatible with the goals of our group?
3. Does this candidate bring expertise that will bring value to our practice?
4. Do the types of clients this candidate may attract fit within the current or desired client mix?
5. Would I trust this candidate’s ability to manage a crisis or cover my clients for me if needed?

Questions To Ask Potential Employers

When you are interviewing for a spot in a practice, keep in mind that the interviewing process is reciprocal. You are being interviewed and you are also interviewing the employer. Be ready to ask questions with a clinical and theoretical focus, and prepare a list of
non-clinical questions as well. Here are some examples of important things you will want to find out about:

1. What percentage of fees will I earn?
2. Are you (the employer) willing to provide an initial minimal “pseudo-salary?” That is, an advance on a pre-determined amount of the initial collections distributed over a pre-determined period of time (e.g., an advance of the first $X-thousand of collections distributed like a salary to you over the first six months) to provide a steady source of income for me during the early months of employment?
3. Do you expect me to work weekends, holidays and evening hours? If so, how will I be compensated?
4. How is on-call or emergency coverage handled?
5. How many hours are considered “full-time” each week? 40? 35? 37.5? Of these hours, how many are expected to be in direct client care/contact versus paperwork, marketing, etc.?
6. To what degree am I responsible for handling billing problems?
7. Are you willing to renegotiate our agreement if it is not working out well for you?
8. What expenses do you cover, such as travel, office, technology, etc.?
9. Do you provide professional liability coverage? If so, what are the coverage limits? Who is the carrier? Is it occurrence or claims made?
10. Do you provide life insurance? If so, at what level of coverage? Who is the carrier?
11. What about retirement benefits?
12. Will I be allowed to do additional work (such as teaching, part-time work at another practice, etc.)?
13. To what extent does the practice do marketing and seeking new patients for me, or is that solely my responsibility?
14. What provisions are there for continuing education (e.g. paid time off, paid registration fees, expenses)?
15. How are clients transitioned if I leave the organization/ practice?
16. Are there prohibitions or restrictions concerning “client stealing” in my employment agreement or contract?
17. Am I considered a consultant or independent contractor?
18. Will you help me gain membership within PPOs and MCO panels? If so, am I paneled only as long as I am employed with this organization or will I be independently credentialed? (It is better to be independently credentialed. If the panel identifies you with your personal Social Security number or tax ID, then it is independent. If it identifies only your employer, then it is not. When you leave the employer, it is likely that you will no longer be a provider on those panels.)
19. How many clinicians have remained with the employer/practice in the past five years?
20. How are supervisor-supervisee conflicts reconciled?
21. What are your policies concerning charting and chart “ownership”? For example, in the event of a future lawsuit, could you access the patient’s chart even if you no longer worked as part of this practice?

Your Employment Status and the IRS

It is important to properly identify your employment status with the Internal Revenue Service. In some cases, it is difficult to determine whether you are an employee, consultant or independent contractor. While this may seem like a semantic distinction, it is very important. It impacts whether you, a payer or employer is responsible for payment of federal and state income and employment taxes. If you have any question about your tax status when filing your taxes, consult with the Internal Revenue Service, your tax professional or attorney.

How to Decide What Type of Practice Is Right for You

When you consider the type of practice that suits you best, think about the advantages
Advantages of Being On Your Own

1. **Scheduling:** Freedom to set your own hours and time off.
2. **Decision making:** Freedom to set your own policies, fees, and work environment; make your own decisions.
3. **Flexibility and creativity:** The ability to choose which counseling methods to use with each client.
4. Financial freedom and potentially unlimited rewards.
5. Increased self-esteem from being on your own.

Disadvantages of Being On Your Own

These are some common reasons why people choose not to be in private practice:

1. **Financial risks:** Startup costs are high and success is difficult to attain.
2. **Isolation:** Working on your own as a therapist can be lonely.
3. **Multiple roles:** You must assume every role in your business, especially in the beginning.
4. **Family impact:** Significant others may struggle with the demands of your business.
5. **Unpredictable income:** As your client load fluctuates, so will your income.
6. **Liability:** Many solo practitioners find operating on their own sometimes feels a bit like walking a tightrope without a safety net.
7. **Lack of direction:** Without a boss to tell you what to do, you may feel lost.

Working In a Group Practice: Special Considerations

Many group practices are very successful, but others encounter serious problems and the group disbands. It is ironic that the professionals trained to be expert communicators, compromisers, and collaborators can become remarkably possessive, competitive and almost paranoid when working in a group. Sharing data, referral sources, income levels, and other information can become difficult, especially after being in solo practice where such information was kept private. If you decide to form a group, expect it to take a considerable amount of time to start and maintain it.

The primary issue is control. Who is in charge and who is the boss? Sometimes groups never get beyond this issue. Many practitioners with years of running a successful practice have a hard time believing that they may have a peer, let alone a possible superior, when it comes to practice management. It is difficult for many groups to discuss these issues in a forthright manner. Sometimes it helps to vote on who should be in charge, but votes may be cast based on a candidate’s charisma rather than on true management performance capability and real leadership skills.

A similar control issue is that of reporting relationships, chain of command, and organizational hierarchy. Who gets to tell whom what to do? This becomes a problem because most group members tend to be independent and is hard to get used to reporting to another clinician.

It can take hours to resolve simple issues such as whose answering service the group will use or whether to use voicemail instead. Arguments may rage over whether to use Mac or Microsoft so-to-speak, based on familiarity and favorites. Members will be upset after discussions about who gets a pager, whose cell phone is paid for by the practice, or who gets a “company” notebook computer or pad device.

When clinicians in separate practices join to form a larger practice, the issue of consolidation and eliminating duplication may be a challenge. Some staff members may have to be let go, and this is difficult to do. Discord may arise because each practice wants the other to let their staff go, not their own.
A Road Map Around Some of the Pitfalls

If you are looking to collaborate with other medial or healthcare professionals, don’t let the possible pitfalls keep you from giving it a try. However, you increase your chances for success if you are alert to possible obstacles from the beginning. Discuss the following issues with other group members as you are forming your team:

1. What is the group’s philosophy and mission statement?
2. How will the group be structured? Who will be responsible for what?
3. What is the group’s policy on sharing referral sources and how will you deal with members who don’t comply?
4. How will you deal with disciplinary concerns? Do they have a procedure for handling conflicts between supervisor and supervisee, or between peers? If so, what does it say? For example, is it binding? Is there any appeal process for times when you disagree with a supervisor’s opinion on a clinical directive?
5. How will cases be peer reviewed? For example, are they “blind” reviews in which the reviewer does not know whose records he/she is reviewing? How may biases based on different clinical approaches be reconciled when reviewing one’s treatment?
6. How will your different clinical specialties get along? What are the potential difficulties?
7. When there is an impasse about an issue, what will the process be for breaking the tie?
8. What risk management system will the group use? Are there regular chart reviews conducted? If so, do they just query if the records are current, or do they also look for quality of the content of the record? Are protocols in use and are all staff clear on confidentiality laws and exceptions, what to do in case of a clinical emergency, how to manage therapeutic non-compliance or potentially violent clients, etc.?
9. How will you get to know one another well enough to feel comfortable with triage, referral, case management, and shared liability risk?
10. What will happen if a principal owner or de facto leader becomes disabled, dies or leaves the practice for any reason?
11. Does everyone share a common view of business operations? How do you know?
12. How will you deal with group members whose personalities and styles conflict?
13. What are your contingency plans when Murphy’s Law takes effect? Do members of the group seek to help in taking care of one another? Can staff request and get episodic “stress-breaks” following some particularly challenging cases or times? Are retreats championed? Do members of the group support healthy lifestyles of all members of the practice and “practice what they preach”?
14. How will the group reconcile the risk-takers and those who are more conservative?
15. What is the process for bringing new members into the practice (Interviewing, checking credentials, orientation, etc.)?

If you find partners with whom you mutually wish to affiliate and have reconciled the group’s office and clinical operations, you will need to revisit your market.

Conclusion

As one can see there are many issues to consider when thinking about one’s professional career path and trajectory. It is hoped that this article is of some assistance in uncovering the myriad of points to consider and address in order to best develop a personalized approach to such important career decisions.
At the AIDC held in Madrid in September 2010, the AIDC Board of directors entrusted Canada for the organization of the 4th International Congress, with the title: “Ethics of the medical expertise”.

The main target of this congress, structured in invited lectures and free communications, is to establish performance standards and protocols to set a reference framework in our expertise work.

In order to achieve this, a high participation of associations, companies and professionals interested in injury assessment is required and we think that with your attendance, we can do it. Please note that on Sunday, September 9, 2012, ABIME will run an 8-hour workshop on the 6th edition of the AMA guide on the evaluation of permanent impairment, with possibility to write the ABIME examination the same evening.

François Sestier
President AIDC and
Local organizing committee

Mohamed Ranavaya
President ABIME and
Local scientific committee

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