The Integrated Disability Prevention (IDP) Approach: A Clinical Paradigm Shift
By J. Torres MD, MPH, FACOEM

A Need for Disability Prevention in the Clinical Setting
Chronic pain and disability continues to be an important occupational health frontier, where the impact on quality of life and numerous downstream negative effects create the “human toll” of this condition. The consequences can include physical, psychological, and social catastrophes for the individual. On a societal level, there is a significant economic impact. Research by Gaskin DJ et al (2012) estimates that the national cost of pain ranges from $560-635 billion - more than the cost of the nation's priority health conditions. Also, the value of lost productivity due to pain ranges from $299-335 billion. They state that given this economic toll on society, “the nation should invest in research, education, and training to advocate the successful treatment, management, and prevention of pain”.

In Opioid Abuse in Chronic Pain – Misconceptions and Mitigation Strategies (Volkow N et al. 2016), chronic pain, not caused by cancer, is described as among the most prevalent and debilitating medical conditions and among the most controversial and complex to manage. This is compounded by the overprescribing of opioid pain medication, and the associated alarming increases in diversion, addiction and overdose.

In occupational medicine, we continue to see injured patients who do not respond to standard medical treatment and progress to chronic pain and disability. In many of these cases, the medical provider and other stakeholders (e.g. other medical providers, employer, case manager, etc.) suspect the presence of a “hidden” primary factor affecting recovery, other than the primary physical injury. It is questioned whether the outcome would have been different if interventions occurred before the condition became chronic. Questions about disability prevention, as noted below, are beginning to be answered through research combined with the clinical application of disability prevention strategies.

► Can OM providers do more to prevent delayed recovery and disability?
► Can we effectively identify and stratify high-risk patients in a manner that allows us to make better clinical decisions, and do these decisions impact outcomes?
► Can we better explore and understand the potential factors that cause or contribute to delayed recovery in a

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AN OCCUPATIONAL DOCTOR STEPS OUT OF HIS COMFORT ZONE AND IS CHANGED

“HAITI”
By Reid Boswell, MD

For one week out of the year for the past four years, I have given up my role as an occ doc and pretended to be a tropical medicine specialist. I belong to an Episcopal Parish that has assembled a team of doctors (from various specialties), nurses, a pharmacist and several lay people to travel to Haiti. We raise all of our own money, buy meds from a super discount pharmaceutical company, and carry all of our meds and supplies with us (yes, customs can be dicey). We hire translators, as well as a family doc, a dentist and a nurse, all Haitian. We stay at a guest house converted from an old inpatient unit at a hospital in Leogane, which was the epicenter of the 2010 earthquake. Each day, we load our supplies and our team on honed Daihatsu flatbed truck and head out to various locations in rural areas in Leogane province, often in earthquake ravaged churches, mangrove groves, mountain schools, and, at least one year, a bayside bar complete with a cock-fighting

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manner that allows us to readily identify these factors and recommend specific treatment that could improve recovery?

Research is enhancing our understanding of the psychology of Workers’ Compensation issues and from this, we are gaining better insight as to why some cases suffer delayed recovery. Of course, there is much that we do not know and there are areas of research not yet explored. What does seem to be clear, however, is that we need to do more in the area of disability prevention in the clinical setting. What is not clear, however, is why we are not.

A 2013 NECOEM conference survey obtained audience responses to the following question: “If applicable, are you interested in implementing some level of disability prevention on your practice or work environment?” The responses were 92% Yes, 3% No, and 5% Maybe. Based on this data and discussions with colleagues, there appears to be a very high interest in our specialty to clinically improve in this area. However, despite educational efforts by organizations such as ACOEM and NECOEM, the estimated number of occupational health practices providing disability prevention approaches at any level remains extremely small and almost none are providing a comprehensive and fully integrated approach.

The goal of this article is to provide examples of how disability prevention can be applied in the clinical setting, while keeping it research-based and sensible. This also includes promising clinical approaches that are novel, but not well researched. The hope is that the clinician may begin to see the value in these approaches and begin to implement some level of disability prevention within their practices.

The Integrated Disability Prevention (IDP) Program ©St. Mary’s WorkMed

The Integrated Disability Prevention (IDP) Program is an evidence-based clinical approach (where research is available) designed to enhance patient care, improve recovery, prevent disability and decrease costs through early intervention. IDP is integrated into routine medical care and prioritizes what the patient needs to get better, including work-related and non-work-related factors. It addresses the varied patient responses to injury with a comprehensive biopsychosocial approach. Through all phases and timeframes of injury management, the goal is consistently directed towards optimal patient function and work.

Initial Visit: Spice Approach

All new patients presenting with a musculoskeletal injury are evaluated with the SPICE Model approach. See the box below for further details. For example, the medical provider will discuss the diagnosis in “simple” or in benign terms such as “mild muscle strain” as opposed to more complicated terms such as “torn muscle” or “you damaged your back”. The medical provider will also communicate the expected recovery timeframes for their injury. This approach will be an integral part of the standard initial medical evaluation, and will “plant the seed for recovery.” Some have called this a “mental vaccination”. Also, efforts are made to keep the injured worker connected to the workplace and as functional as possible.

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The SPICE Model (Collledge, 2000)

This SPICE Model addresses the balance between biological, psychological and social factors and presents an approach that highlights the importance of understanding psychological and social stressors and their impact on physical complaints, tolerance and recovery. For example, the authors describe how a relatively mild injury complicated by excessive psychosocial stressors may result in a medically acceptable diagnosis and by maintaining symptoms, these psychosocial concerns can be “legitimized”. The authors discuss how most medical providers are primarily trained to treat the musculoskeletal injury and when the patient has delayed recovery, most practitioners will increase and vary treatment, increase or vary medications. In cases where the primary drivers are more psychosocial rather than biological or physical, this excessive medical treatment while not assessing other factors can further add to the disability progression, validate the injury and reinforce the role of a claimant.

SPICE MODEL Key Concepts

Simplicity: The concept that simple, benign conditions, treated in a complicated fashion become complicated.

Proximity: The need to keep the worker associated with the workplace by building morale and support of employees.

Immediacy: The need to deal with industrial claims in a timely manner.

Centrality: All parties involved with workers share a common philosophy and ultimate goal of returning the individual back to gainful employment should be as quickly as possible.

Expectancy: The concept that individuals often fulfill the expectations placed upon them.

Most occupational medicine practices implement much of the SPICE Model, however, there appears to be benefit in using a systematic approach with these principles applied to all patients presenting for treatment of musculoskeletal injuries. At St. Mary’s WorkMed, this is our goal. We also document in our dictations for initial visits, “The SPICE Model Approach has been implemented at this visit”.

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Initial Visit: Screening Tools

An important disability prevention approach also includes stratifying disability risk at the first visit and using this risk assessment to make treatment decisions based on this risk. Much of the research in this area is with patients who present with back pain. Helpful tools that could be considered include the Keele STarT Back Screening Tool and the Back Disability Risk Questionnaire (BDRQ). Currently, St. Mary’s WorkMed is implementing the STarT Back Screening Tool and considering implementing The Back Disability Risk Questionnaire (BDRQ). More details on Screening Tools are beyond the scope of this submission. However, as an example of how an approach to stratify risk can be implemented in the clinical setting, the STarT Back Screening Tool application is presented in the box below.

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Keele STarT Back Screening Tool: Overview and IDP Application

The Keele Start Back Tool (http://www.keele.ac.uk/sbst/) is a 9-question tool, which was studied with patients presenting with low back pain within a primary care setting. Patients completed a survey at the first visit and were then placed in one of three risk stratification categories, Low, Medium, and High Risk, based on the survey results.

**Scoring:**

- If Total Score is 3 or less, this is Low Risk.
- If Total Score is 4 or more, calculate a Sub Score Q 5-9.
- If Sub Score is 3 or less is Medium Risk
- If Sub Score is 4 or more, this is High Risk.

**Treatment:** Recommendations were made based on stratified risk compared to a non-stratified best practice control group.

**Low Risk:** Advice on level of activity including return to work, received a pamphlet on exercise and self-help groups and watched an educational video.

**Medium Risk:** Referred for standardized PT, addressed symptoms and function.

**High Risk:** Referred for psychologically informed PT, addressed symptoms and function.

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**KSBT Approach for Low Back Injuries in the IDP Program**

**Low Risk:** Back injury education, minor activity modification, consider if medically appropriate, OTC meds, ice/heat, stretches.

**Medium Risk:** Back injury education, work restrictions, consider if medically appropriate, prescription meds, referral to PT or other manual therapy.

**High Risk:** Consider same as medium risk, plus behavioral intervention and comprehensive approach to pain, function and address psychological obstacles to recovery. Consider referral for brief CBT, EAP, IDP evaluation earlier than usual, consider having the patient followed by a more experienced medical provider in the practice/a provider more experienced in disability prevention.

**Research: Factors Related to Disability and Chronic Pain**

A 2011 publication (Nicholas et al.) reviewed a large number of research publications relevant to the topic of “Yellow Flags,” i.e. psychosocial factors that are predictive for the development of disability. This stated, “when whole, the evidence shows a clear relationship between psychological “Yellow Flags” and future clinical and occupational outcomes. Examples of “Yellow Flags” include pain behaviors, inconsistencies, psychosocial stressors, etc.

Research conducted by Sullivan M et al (2005) on psychosocial factors investigated psychosocial interventions to prevent prolonged disability. This discussed the current state of knowledge on this topic. This included the presence of biopsychosocial models as “the dominant conceptual framework” to explain and treat work disability associated with musculoskeletal disorders and the importance of addressing psychosocial risk factors that reside within the individual (Type 1) and those residing “outside” of the individual (Type 2). Examples of Type 1 factors included pain catastrophizing, pain related fears, beliefs about severity, poor problem solving abilities and poor expectancies for recovery. Examples of Type 2 factors included interpersonal conflict at work, coworker support, work stress, work autonomy, etc.

Early disability risk factors for low back pain, assessed at occupational health clinics (Shaw et al 2005), were studied with over 400 patients. The results showed that functional improvement and return to work were more strongly associated with employment factors such as job tenure, physical work demands, availability of modified duty, early reporting to the employer, and self-ratings of pain and mood more than history and physical examination. The authors concluded that early screening for disability risk factors might be helpful to identify those at increased risk from delayed recovery from occupational low back pain. They also concluded that interventions for high-risk patients might be improved by focusing on “job factors, pain coping strategies, and expectations for recovery”.

Shaw et al (2011) reported that multiple workplace variables that have been associated with back disability include the following: heavy physical demands (Perception), ability to modify work, job stress, time pressures (Control), social support, job satisfaction, return to work expectations, and fear of re-injury.

Shaw et al 2009 developed “The Back Disability Risk Questionnaire (BDRQ)” and administered it to 519 workers seeking medical treatment for work-related acute low back pain. They found that prognostic information from the questionnaire could be obtained. Six BDRQ questions were found to be predictive of outcomes including persistent pain, functional limitation, or impaired work status. These predictors, based on multivariate analysis included injury type, work absence prior to the medical evaluation, prior back surgery, worries about re-injury, expectation for early return-to-work, and stress. Interestingly and importantly, the initial clinical impressions did not correlate with outcomes.

Another study of work-related low back pain suggests that early intervention strategies might be more effective if varied to meet the individual needs of patients at risk for chronic pain and disability. (Reme S et al 2012). This study provided some evidence that early intervention could be helpful for at risk sub-groups probably by communication and intervention at the workplace, physical activation or cognitive-behavioral interventions to help address emotional distress and negative pain beliefs. In addition, emotional distress was found to be a salient factor in delayed functional recovery even very early after pain onset. Fear of movement was seen as a predominant factor in the emotional distress group.

Sleep has also been shown to be an important factor related to pain. There is a reciprocal relationship between sleep and pain, and disturbed sleep can adversely affect the treatment of painful conditions (Modolfsky H 2001).

**The Three-Phase Model of Low Back Pain Natural History**

A Three Phase model of LBP related disability was described by Frank et al (1996).

**Phase 1** Acute (3-4 weeks after symptom onset) patients have a good prognosis for recovery and need very little medical intervention. Overtreatment in this phase can increase sickness behavior.

**Phase 2** Sub-acute (4-12 weeks after symptom onset) patients are at greater risk for disability and more interventions during this phase are warranted.

**Phase 3** Chronic (beyond 12 weeks) patients have behavioral and possibly biological changes occurring where successful treatment becomes more difficult.

Although this model included patients out of work, it appears reasonable that the general concepts of “recovery phases” can be helpful when designing and implementing an Integrated Disability Prevention (IDP) Program.

These three phases guide the timing of assessment and treatment interventions and determine when those specific interventions may be more effective. In Phase 1, there is benefit to avoiding overtreatment and the keeping the approach simple/ benign (SPICE Model). The timing of a more comprehensive assessment and targeted interventions appear better suited for Phase 2 (4-12 weeks) unless other risk factors for disability have been identified earlier. The population of patients in Phase 2 is at considerable risk for chronicity and disability and therefore, it is reasonable that a comprehensive evaluation that includes a bio-psychosocial approach (IDP Evaluation) be utilized during that time. A “phase –specific” analysis is surfacing as important in the study and understanding of the factors associated with work disability (Dasinger et al 2000) and researchers have considered the sub-acute state (4-12 weeks) as a “critical period” in preventing LBP disability (Shaw et al 2005).

Consider Frank’s “Model of Work-Related

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Snapshots
AOHC 2016

*Special Guest*

Dr. Bernardino Ramazzini,
The Father of Occupational Medicine

New Fellow: Dr. K Arnold

New Fellows: Drs. M. Sracic and D. Sparhawk

Drs. A. Karandikar and R. Blum
sparring at ACOEM Jeopardy

Lily Cheung, MD, FRCPC

An Inventive Approach to Serving Wine at the Navy Pier Reception

Drs. M. Moholkar and Phil Adamo
at the AOHC Opening Session

Drs. J. Schwartzberg, K. Huyck, and D. Diamond

D. Plantamura and Resident Dr. D. Barbeau

Tom Luna, MD, MPH, FACOEM
**Dr. Adamo Honored**

P. Adamo, MD, MPH receives the Centennial Award of Leadership Recognition; Dr. N. Haas assumes leadership of HOD.

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Remembering Dr. Alice Hamilton and Hull House

Hamilton combined lab research and field work to effect social change. She lived at Hull House on and off for four decades.

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Downtown Chicago’s Architectural Wonders

175 N State St: The Chicago Theater with a “Midwestern Corncob” in the background

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Drs. U. Savanoor, K. Saito, M. Isakari and M. Doria at the Navy Pier Reception

A skyscraper of another sort at the Navy Pier Reception

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Drs. C. Hix, R. Blum; L. McLellan and Dr. B. McLellan

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D. Plantamura, Drs. B. Ramazzini and C. Hix

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HSPH Alumni Dinner: Drs. Winters, Huyck, and Hatfield

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“Life at Hull-House satisfied every longing, for companionship, for the excitement of new experiences, for constant intellectual stimulation and for being caught up in a big movement for social change which enlisted my enthusiastic loyalty.”

Alice Hamilton
IDP (Continued from page 3)

*St. Mary’s WorkMed is now in their 3rd year of fully integrating this disability prevention program and they are approaching the completion of 100 IDP Evaluations.

Disability* which is graphically represented below. It shows a small percentage of patients who progress beyond Phase 3. From this, one can see the benefit of using disability prevention strategies to reduce the progression to Phase 3.

**Franks Model of Work-Related Disability**

Horizontal Axis: Time Off Work (wks)
Vertical Axis: % Still Off Work

(Adapted from Frank et al. Disability resulting from occupational low back pain. Spine. 1996.)

The Integrated Disability Prevention Evaluation (IDP Evaluation+)

The IDP Evaluation is a separate and comprehensive medical evaluation “primarily directed towards disability prevention”. This is an entirely new way of integrating disability prevention into clinical practice and is proving to be an effective evolution of the OM provider’s role in patient care. It enhances the quality and depth of patient-provider dialogue and understanding, and most importantly, it appears to be having a positive impact on recovery. The IDP Evaluation is used for patients in the sub-acute (4-12 wks post injury) or “critical phase” in an effort to better assess patients in delayed recovery and identify potential causes or contributors for delayed recovery.

We believe that if a patient is not improving as expected, it is clinically indicated to identify and address potential contributing factors or conditions that are affecting their recovery from a work-related injury. There is a reason why a patient is not getting better, and these factors should be explored in a timely manner, preferably within 4-12 weeks post-injury.

The IDP Evaluation uses a checklist of possible factors affecting recovery including co-morbid medical and psychological conditions, work and personal stressors, sleep, coping, cumulative activities (work and home), motivation, etc. It also uses established screening tools for conditions including depression, anxiety, and fear of re-injury, pain catastrophizing, perceived injustice, and obstructive sleep apnea. The Disability Prevention Inventory (DPI) checklist allows for an enhanced understanding of the patient and depending on the patient’s responses to “Yes/No” questions helps to efficiently direct the medical provider to have more in-depth discussions regarding certain factors.

This additional time and re-directed focus during the IDP Evaluation allows for a mutually transformative discussion between the medical provider and the patient and is expected to yield a holistic and fuller understanding of the patient. This allows for a “fresh look” or “self – second opinion” of the patient and may result in targeted interventions or treatment, either within or outside of the Workers’ Compensation system.

Of importance is the re-affirmation of the correct diagnosis and optimal treatment. A primary medical reason for delayed recovery, such as an unknown underlying diagnosis or missed diagnosis can be, of course, a very important cause for delayed recovery and should be at the top of the list when considering factors for delayed recovery at the IDP Evaluation. As such, additional diagnostic work-up or specialty consultation would be indicated.

The IDP Evaluation dictation is one that is very different from usual. It outlines identified factors likely affecting recovery and an action plan for each one. The dictation clearly states which factors are work-related, not work-related and pre-existing.

Examples of interventions for identified factors likely affecting recovery are outlined in the box below.

In summary the IDP evaluation represents a fundamental change in how we clinically evaluate and manage patients with musculoskeletal injuries – a separate clinical evaluation primarily directed towards disability prevention. It provides a comprehensive bio-psychosocial approach to assessing patients in delayed recovery, optimally conducted during the sub-acute injury phase (4-12 weeks), also described as the “critical” phase. These patients are often very complex with combined physical, psychological and social factors that may be affecting their recovery. By conducting a comprehensive evaluation of the patient in delayed recovery by means of extended time with the patient, in-depth and collaborative patient-provider discussion, and clinical judgment assisted by screening tools, important contributing factors are less likely to be overlooked or missed and timely targeted treatment can be rendered.

**Examples of Pain Related Factors and First Line Strategies for Treatment**

► Pre-existing depression, anxiety, sleep apnea: Refer to PCP for eval/work-up/treatment
► Fear-avoidance or kinesiophobia: Refer to PT, work simulation, education, rarely Brief CBT*.
► Work conflict / difficulty with work restrictions: Interface with employer, team meeting, etc.
► Pain related factors, poor coping, sleep hygiene, pain strategies: Brief CBT*.
► Medical diagnosis related – reach diagnostic closure: Consider imaging/dx work-up, specialty consultation, etc.


Patient Vignettes

► When asking a patient (who was in delayed recovery, had an IDP Eval, and had Brief CBT, and was improving - functioning better but still with pain) what do you think had the biggest impact on your recovery, she replied that it was the psychologist who provided the CBT interventions, “she taught me how pain doesn’t have to run my life”. This is an example of the beneficial effects of helping patients become empowered rather than over-medicalized.

► A patient in delayed recovery has an IDP Evaluation for delayed post-surgical recovery for knee surgery and has been unable to attain her pre-injury work capacity. She scored high on screening for kinesiophobia. We had a frank discussion about fear of re-injury and she communicates that she is worried that a serious injury will occur if she becomes increasingly physically active. She replied that she does have this fear and that she had asked her surgeon about how to safely progress her activity. She stated that her surgeon replied, “let fear be your guide” (!!!)

► A 50-year-old female educator with a concussion was in delayed recovery despite appropriate medical care and time. She was seen for an IDP Evaluation. She was coordinating care with her PCP during this time and the discussion included possible other medical conditions that might be affecting her recovery. She was screened for sleep apnea, confirmed by a sleep study, initiated treatment with CPAP and ultimate-

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ly experienced a dramatic improvement in her symptoms and tolerance for normal activities. She and the nurse case manager subsequently commented on what likely would have occurred if a comprehensive approach to the patient’s delayed recovery were not done.

Case Study: Early Behavioral Intervention

The following case is based on an actual patient treated for work injuries and who had an IDP evaluation. Case identifiers have been removed for confidentiality purposes. The general approach to disability prevention is exemplified here and is as important as the details of the case.

Presentation: A 25-year-old female presents after having an altercation with a student causing sudden neck extension associated with attempts to bite her. Her initial complaints included neck and mid-back pain and she subsequently complained of low back pain. Initially, she did not report low back pain associated with this injury but did comment that she has pre-existing intermittent low back pain. Screening included the Keele StAR1 Back Screening Tool where she scored a Total Score of 4.5 (she checked off two responses for one question and that item score was averaged to 4.5 for that question), and Sub Score was 3 or less (2.5) placing her in a Medium Risk category. Our IDP program approach at this level of risk was to consider back injury education, work restrictions, prescription medications and referral to PT or manual therapy, such as osteopathic or chiropractic interventions. On examination, there was muscle tenderness and tightness in the bilateral scalene and trapezius muscles and range of motion of the neck was full but movement was very slow. Neurological exam of the UEs was normal and Spurling’s maneuver was negative. The remainder of her neck and back exam was unremarkable.

Treatment: Initial care included PT, osteopathic consultation and treatment, OTC pain medications, and work restrictions. As time progressed, she noticed more back pain over her pre-existing levels and continued neck pain. LS spine x-rays were performed and were normal with minimal leftward curvature of the spine. After some gradual improvement, her recovery plateaued and she reported pain that would come and go in different areas. She remained on restrictions but continued to work modified duty, full time hours. Given her delayed recovery an IDP evaluation was recommended.

Diagnoses: Initial diagnoses included cervical and thoracic spine strains and later, aggravation of pre-existing low back pain.

IDP Evaluation: She had an IDP evaluation at about 12 weeks. She reported continued moderate pain, 5/10, right upper and low back, and reported that her pain “isn’t getting better”. Screening tools were indicative of fear or re-injury, depressive and anxiety symptoms, and sleep disorder. She reported difficulty sleeping due to pain and likely anxiety; she stated she could not breathe while sleeping. She reported worrying about her injury and having trouble coping. She also reported a physically demanding job and low control over her job, believing it was a matter of time before she had a re-injury. She reported dreams of having anxiety and awake with anxiety and pain. The injury occurred near the one-year anniversary of a significant personal loss. She admitted to never addressing the emotional difficulties that surfaced from this loss. On exam, she had a depressed affect and was tearful for the first time since the initial visit.

Identified potential factors for delayed recovery included the following:

► Non-work-related factors: Extreme personal stressors, anniversary of the loss of a loved one, possibly affecting sleep, anxiety levels, difficulty coping and severity of symptoms.

► Combined non-work related and work related factor: Non-restorative sleep appeared to be predominantly due to personal stressors and partially due to work factors.

► Work factors: Fear of re-injury and difficulty coping with her injury, and increased muscle tightness and tension possibly slowing recovery due to the above factors.

IDP Eval Recommendations: This included a referral to her PCP for evaluation for possible anxiety, depression, and possible sleep disorder. Recommendations relevant to her work injury and covered under Workers’ Compensation also included referral to a psychologist for Brief CBT (6 visits) to address fear of re-injury, coping skills and sleep hygiene related to her work injury. Treatment also included massage therapy, muscle relaxants, and physical therapy with biofeedback.

Outcome: Approximately 1 month post IDP evaluation, the patient stated her pain level was 1/10 and that she was “a lot better”. Her pain depended on the day and was random. She reported that she was nearly resolved but had continued muscle tightness. She reported benefit from the CBT and had less pain and stress when she talked to the psychologist. Physical therapy was also very beneficial. She was discharged from the practice at regular duty with minimal symptoms. She completed brief CBT covered under Workers’ Compensation and she continued outpatient counseling, under her private insurance and outside of Workers’ Compensation.

Take Home Points: In retrospect, this IDP evaluation was the pivotal encounter that ultimately surfaced important contributing factors for delayed recovery. Without this, it appears unlikely that the medical provider would have realized the extent of psychosocial factors that pre-existed the work injury, and combined with the work injury, resulted in high complaint severity and a significant impact on patient’s recovery. This case also highlights the complex inter-relationship between physical complaints and personal stressors as well as the contributing effects on sleep and coping abilities. This case also points out how the combined treatment interventions between Workers’ Compensation and private healthcare can enhance patient care and outcomes. The 6 visits of Brief CBT covered by Workers’ compensation appear to have been beneficial. The IDP evaluation likely uncovered a severe underlying pre-existing psychological condition or stressor that might not have been addressed and treated otherwise. In addition, it appears that if the patient was treated with a standard approach to injury management, this important underlying severe condition may not have been realized, and if left untreated, would likely have had long-term detrimental effects on her recovery from her work injury.

Challenges and Obstacles

Movement in the direction of fully integrating disability prevention approaches within the clinical setting is a pivotal change, and with any significant change there are inherent challenges. These include “System” challenges, ones related to the presence of WR vs NWR conditions, pre-existing conditions, as well as practical ones associated with the implementation of this approach within a clinical practice, and making this a financially viable approach within the current payer systems. These all appear to be surmountable.

The most common barrier we face with the implementation of the IDP approach within our clinical practice is described below and followed by a helpful response.

Obstacle: We are concerned that if you explore psychosocial factors and recommend treatment for these, we will “own all the psychological conditions” under Workers’ Compensation.

Response: By understanding and addressing these psychosocial factors early, the chances are greater that patients will recover faster.

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The research in the field supports this. If we ignore them, the chances are greater that the patient will continue on to chronic conditions and down the road it will be very difficult to separate out the combined effects of the injury and any psychosocial factors. We have a Brief CBT program. This is set for 6 visits and the focus will be on improving sleep, stress reduction techniques and coping with pain and improving function. If there are pre-existing psychological conditions identified, or if psychosocial factors are identified that are not related to the work injury, we will refer the patients to their primary care physician outside of Workers’ Compensation for optimal treatment. We will clearly document work-related and non-work-related conditions in the medical note and will recommend treatment for psychosocial factors if they are relevant to their work injury.

Encouragement, Collaboration and the Future

There has been so much great work completed already in the area of disability prevention and much of this has advanced the field in a much-needed way. This work can be found in major and significant research publications and only a small number are referenced here. The practical and clinical application of these findings along with other clinical initiatives and observations is the next natural step within a much larger context, one that is occurring because of not only developments in the field but also the continued educational support from ACOEM and NECOEM.

I admit that there have been times where I have lost energy and spirit when challenges and obstacles have been stronger than me and my team, and have, on occasion, thought that this direction may not gain traction and may not be worth the emotional investment and work required for success. The important forces that have maintained my commitment and promise have included encouragement from mentors in our field, strong-felt and heart-felt encouragement from ACOEM and NECOEM, and other colleagues when speaking on this topic, patient communications and clinical observations, and collaborating with like-minded occupational medicine practices in Maine. This shared energy and encouragement for continued work in this direction, combined with the expertise and commitment of our specialty are great ingredients for the future. Some of the comments I have enjoyed and appreciated hearing from colleagues include, “Keep up the good work!”, “This is so important”, “I’m energized by this”, “This makes sense”, “Let me know what I can do to help”, “Would you be willing to speak to a group in my area”. “Can you reach out to other medical providers?” What is also seen and heard are comments of pleasant surprise that some WC insurance carriers are covering Brief CBT to address psychosocial factors early in a work-related injury. These are great to hear, especially in the context of the barriers and challenges that are present with movement in this direction.

We have found that the benefits to the patient and the effectiveness of this biopsychosocial approach far outweigh the challenges we face, and that these challenges are all surmountable. In addition, we have realized a significant amount of support from employers, Workers’ Compensation insurers and TPAs and even at the level of the Maine Workers’ Compensation Board. I believe that a “critical mass” will need to occur and that this will hopefully, someday, result in not only the full realization of the importance of these disability prevention approaches, but that this becomes a standard of care in occupational medicine practices.

For those interested in beginning some level of disability prevention, a great place to start could be to 1) incorporate the Spice Model and 2) assess disability risk through dialogue at the first visit. Just ask the patient their expectations for full recovery and how much they like their job. If the responses are negative, follow up with the additional question of “why”. This will often lead to some level of disability risk assessment and a better understanding of potential barriers to return to work and possible “yellow flags”. This process may affect treatment decisions as well as the direction and content of discussion at the visits. This step could be a first step and later followed by the use of screening tools and the separate IDP evaluations for patients trending toward delayed recovery. Information including examples of patient-provider dialogue, screening tools, and more case studies relevant to this topic will soon be available this summer in the New England Journal of Medicine.

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Samuel D. Turner, MD, MPH is finishing his 2nd year of residency at the Harvard Program and plans to begin his career working at the US Naval Hospital in Yokosuka, Japan, starting this summer. His project, “Self-reported Stress Related Illnesses Among US Law Enforcement Officers: A National Survey,” found that greater than a third of the police officers who responded to their survey reported some form of stress related illness or injury and these officers perceive their typical work as being significantly more stressful than police who deny stress related illness.

D. Barbeau, MD, PhD, MSPH
Deborah Barbeau, MD, PhD, MSPH is also at the Harvard Program and studied the “Health Effects Associated with Urinary Triclosan Concentration in a Nationally Representative Sample of US Adults.” Why study this substance which is found in many commonly used products, e.g. antimicrobial soaps? “It has a similar chemical structure to BPA (Bisphenol A) which is considered an endocrine disruptor” and the question arose as to whether there could be adverse human health effects from this substance as well. The results: No negative outcomes were found and in fact, there seemed to be a protective effect from various conditions. Per Dr. Barbeau, “there was a positive correlation with overall good health.”

Kevin Loh, DO, MPH (Harvard Program), “Entry Fitness Levels and Subsequent Academy Performance Outcomes in Massachusetts Police Recruits.” Dr. Loh, a USAF physician, wondered whether this type of assessment would be applicable in the USAF, which uses physical fitness examinations as a screening tool for continuing military services. This study has not yet been completed and they are still collecting data. Thus far “we found that the successful graduates have lower BMI and better performance in: 1.5 mile run-time, sit-ups, push-ups.” Successful graduates are leaner and have better overall fitness performance.

On a personal note, Dr. Loh is completing his second year of residency. The USAF has assigned him to a Battlefield Airmen Training SQ located in San Antonio TX, beginning in July.

Two other New England residents presented their research:

- Gretchen C. Guzek, MD, MPH (Yale Program), “Graduate Drama School – Injury Prevalence and Severity”
- K. Abdulrahman Altassan, MD, MPH (C) (Yale Program), “The Effect of Union Status on Injury Risk and Injury Severity in a Manufacturing Cohort.”

On a personal note, Dr. Barbeau has accepted a position with the Occupational and Environmental Health Network (OEHN).
Haiti Continued from page 1)

patients. This past year, over 1200. The experience always stretches my medical muscles and I come back home with a completely changed perspective. The following is a piece I wrote after my first trip to Haiti in 2012. You can see our recent blogs on http://www.mobilemissionhaiti.org.

I am a careful man. The risks I take are quite well calculated. I realize there are the occasional exceptions (adopting three kids from Russia leaps to mind). But, in general, when there is a call to join a humanitarian mission to some dangerous or uncomfortable or even just an inconvenient part of the world, you can count on me to be first in line....to write a check. I enjoy my comfort zone, where I know the boundaries, the rules, the hierarchy, and the expectations. So, please tell me why on earth I agreed to join a team of fellow parishioners on a medical mission to Haiti. A place where at it’s best over the past century has been the poorest, most desperate, and heart-breaking country in the Western Hemisphere. Now throw in horrific hurricanes a few years ago and then the devastating earthquake in January, 2010, and what could possibly be left but a lifeless shell of a country with little hope for any meaningful future for it’s people. And, yet, there I am, volunteering to go to this place to provide medical care, hardly thinking twice about my “comfort zone.”

Part of my decision was a mutual dare with my wife. If she would go to Honduras to work at a school and orphanage in Tegucigalpa, I would go to Haiti.

I am not a primary care physician, although back in the day, I did do my share of urgent care medicine. However, over the past 20 years, I have been comfortably situated at a Harvard teaching hospital, overseeing the occupational medicine service. My day to day consists of providing regulatory medicine, workplace injury management, and consulting services for company nurses and environmental, health and safety personnel. I don’t see malnutrition or parasitic infestations. I felt insecure with the thought of seeing unspeakably poor people needing just basic medical care. However, on arriving in Port au Prince and witnessing the horror of real human devastation convinced me that whatever I could do would be welcome. I know how to treat intestinal worms, scabies and fungal infections, and we were prepared to dole out as many vitamins as we could. Besides, I was with a group of terrific people who very early on proved that we were much more than the sum of our parts.

The politicians call it the “Haiti Problem.” Decades of corrupt government, bad foreign policy decisions by, not only the U.S., but much of Europe, and a series of unfortunate “acts of God”. There is no infrastructure, not only for the local necessities of re-building, but even the macro problem of distributing international aid. Half the government was destroyed in the earthquake, not to mention many essential U.N. officials staying at the Montana hotel, perched on a scenic hill, now just an empty space after the hotel pancaked down on itself killing all who did not make it out. My impression is that much of Haiti functions more like the wild west of late 19th century America. Think ineffective government and law enforcement, no public works, everyone scrambling to survive any way they can. My translator, Peterson, escaped with his pregnant wife, from his home seconds before it collapsed. He lives in a tent city and makes a living using the language that his father insisted that he learn. English and French skills are money in Haiti. He supplements his translation gigs by selling souvenirs. I was more than happy to pay full price for some bracelets and a cross he made of old man’s shoes.

When he asked for some Ibuprofen for his “stress headaches,” the pills were destined to be sold to the highest bidder. For the record, I was able to find some extra Advil and Aleve to help relieve his “stress headaches”.

Our trip from Port au Prince to Leogane was a bumpy ride down torn up streets, past mile after mile of incomprehensible poverty. Even two years after the earthquake, signs of destruction surrounded us. Piles of rubble, crumbling foundations with rusted rebar protruding meaninglessly skyward, acres and acres of tent cities of tarp and corrugated tin. The presidential palace lay in ruins surrounded by a carefully mown lawn. Relentless poverty, relentless overcrowding, relentless filth. The smells changed with each passing mile: the acrid smell of burning garbage, the nauseating odor of diesel fumes, the stench of canals filled with human waste, and the vaguely appetizing smell of roadside chicken roasting on a grill. Over and over, there were filthy latrines draining to the bay, filled with Styrofoam, plastic and other environmental atrocities. I saw the occasional group of people washing clothes and drinking water in a roadside pool of yellow/gray water. Once in a while, there were signs of rebuilding from the quake, even some completed concrete buildings, brightly painted. But for the most part, I had the feeling that rebuilding Haiti was proceeding at an absolute snail’s pace.

The topography of much of Haiti.

Paul Farmer calls it "mountains beyond mountains."

Part of the team riding out to a rural clinic on the now famous Daihatsu flatbed truck (for the record, way fun!)

Our team spent five days in various remote, sometimes difficult locations, seeing 800 patients and giving out thousands of prescriptions for everything from high blood pressure medicine to antibiotics. I was challenged by the array of health care needs, especially a young girl with an untreated seizure disorder which her mother thought was “paralysis.” I felt helpless, knowing that if she were in Boston, she would be seeing a top-notch pediatric neurologist, have a full work-up, including EEG and MRI and with vigilant medication monitoring. All I could do was give her what little seizure medication we packed and plead with her mother to take her to a clinic such as Hopital St. Croix or Medicins sans Frontieres. Even there, she would not get the kind of care she really needed.
Our medical clinic in an earthquake-ravaged church on a river bed in Fayette.

There were so many others, from the young child who our podiatrist was convinced suffered from rickets to the 104 year old woman who really just needed an arm around her shoulder and maybe some Ibuprofen for the aches and pains that are inevitable when one’s age hits three digits. We even treated an acute machete injury. A young girl had sliced off part of the tip of her finger while harvesting sugar cane. We had gauze and antibiotic ointment, but NO TAPE. Midwesterner Nick and Southern Boy myself looked at the roll of duct tape brought along for tarp management and discovered the 102nd use for duct tape. We gave out hundreds of toothbrushes and tubes of toothpaste thanks to our dental philanthropists, as well as crayons, pens, and little notepads with obsolete corporate logos from a previous marketing idea for my department. Hand-stitched bags made from brightly colored cloth made by our friends at Parish of the Epiphany were received with broad grins. We also had team members talking to whoever was willing about their needs beyond medical, hoping to learn ways to help heal these people and this country with more than pills.

Dr. Boswell; 103 year old woman; translator Peterson

It’s hard to know what impact our week in Haiti made. But, in the end, I believe we made a difference, even if it was just to show up.

Bondyebeniou.

NECOEM Members Inducted as New Fellows at the AOHC 2016 Opening Session

L>R: Drs. Susan Upham (ME), Dana Sparhawk (RI), Amir Mohammad (CT), Craig Curtis (ME), and Kris Arnold (MA)
Not Pictured: Drs. Verne Backus (VT), Robert Fitzpatrick (CT), Michael Shusko (Japan), and Michael Sracic (CT)
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New England College of
Occupational and Environmental Medicine

NECOEM
22 Mill Street,
Groveland, MA 01834
Voice/Fax: 978-373-5597
Email: necoem@comcast.net

NECOEM Reporter Editor:
Susan Upham, MD, MPH, FACOEM
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Answer to last issue’s WHAT IS IT?
The images show a part of the Minamata Memorial, completed in October 1996, the 40th anniversary of the official discovery of Minamata disease. Shown are the Prayer Fountain and stainless steel spheres scattered over the terraces. Minamata disease refers to methylmercury (MeHg) poisoning that occurred in humans who ingested fish and shellfish contaminated by MeHg discharged in waste water from a chemical plant. It was in the month of May that Minamata disease was “officially” recognized.

Congratulations to Leslie Walleigh, MD, MPH, for correctly identifying the images!

If you have any such interesting or fun-filled material, please email it to the associate editor, Abhijay Karandikar, at dr_abhik@yahoo.com. All material should be related to the specialty of occupational and environmental medicine and have an educational, inspirational, historic or other relevant value.

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