Safe Patient Handling and Mobility: Identifying and Resolving Barriers to Use. What still needs to happen?

By Terry Snyder, MBA, BSBME

In 2005, an excellent NECOEM Reporter article by Christine Pontus, RN - “Safe Patient Handling (SPH): It Has All Been Said. Now, What Needs to Happen.” described how SPH programs could significantly reduce the high rate of injuries experienced by health care workers. She cited compelling data on the human and financial costs of manual patient handling, and the effectiveness of SPH programs in reducing these injuries.

But fast forward-eight years later, “What needs to happen” still appears to be elusive. In 2013, Massachusetts Dept. of Public Health (MDPH) Hospital Ergonomics Task Force completed a survey of 88 Massachusetts hospitals and found that “...while most hospitals have taken steps to improve patient handling to protect workers and patient safety, there is clearly need for improvement.” Many hospitals, small and large, still have inadequate Safe Patient Handling and Mobility (SPHM) programs and equipment, lack formal policy or oversight, and offer little training for staff. SPHM equipment that has been purchased is often not being used. The result is not surprising: the musculoskeletal injury rate for health care workers in MA has continued to be high over the past decade.

Based on the experience of ergonomics specialists like myself, this article describes how participatory ergonomics methods can engage unit staff and managers, to identify and resolve obstacles to sustained effective SPHM programs. Although there are many patient care areas facing these challenges (Continued on page 2)

Demystifying Minimally Invasive Surgery: First in a Series

By Karen Huyck, MD, Tony Tannoury, MD, and Abe Timmons, DO

Minimally invasive surgical (MIS) spine procedures are becoming increasingly prevalent. Many of us anecdotally are seeing excellent outcomes with faster healing times and quicker return to work with these procedures. We also are seeing the general term “minimally invasive” being applied to diverse spine procedures with very little information available to the PCP or primary occupational medicine provider to assess these proposed techniques and their risks and benefits; this makes it difficult for us to guide our patients effectively through their treatment decisions. Moreover, there is no evidence in the medical literature to suggest a long-term benefit of most spine surgeries, there is no strong evidence to suggest any benefit of MIS approaches over traditional surgical approaches, and spine surgeries involving more than two-levels have been shown in the literature to have limited success.

Overall, there is significant marketing and promotion of MIS surgery, some of it reliable but much of it unfounded or sham. In this series of articles, we take a closer look at MIS spine procedures. These articles (Continued on page 4)
The process should begin with a commitment from nursing leadership: Although participatory ergonomic methods involve the engagement of a unit’s entire staff, manager support and involvement are key to the success of every phase of the process. It is understandable that it is often difficult to get a nursing manager’s time and commitment for SPHM programs in states like Massachusetts that do not mandate SPHM programs, when there are so many other legal regulations and accreditation requirements that need their attention. Looking at unit specific injury rates and the benefits to patient care and safety is helpful in gaining this support.

The initial confidential survey: To achieve successful SPHM behavior change at an individual, front-line staff level, we need to understand what staff perceives as barriers to compliance with a SPHM program. Survey findings also serve as a baseline for future comparison, to monitor the effectiveness of any program changes. From the survey we learn about:

1. Perceptions and obstacles to SPHM use. Although these vary depending on individual SPHM experience and the medical needs of patients in a specific nursing unit, some common obstacles do emerge.

2. Pain and discomfort that direct patient care workers attribute to manual patient handling. This is common, but often under-reported except in confidential surveys; staff frequently self-treat or see their primary care provider. Even when an injury is reported, hospital administrators often do not review the injury circumstances with the unit. Confidential survey data related to pain and discomfort can be a powerful tool to get the attention of unit staff and leadership, who are often unaware of how much discomfort direct care workers on their unit are experiencing related to manual patient handling. (Although we are focusing on nursing staff in this article, there are other direct care workers that participate in moving patients including hospital transporters, diagnostic testing personnel, and even hospital security workers.)

3. Commitment to a four month trial: The survey asks, “If the obstacles to use SPHM methods are addressed, would you be willing to commit to use SPHM tools whenever possible, for a four month trial, and give us feedback?” Gaining this commitment is an important part of the change process, and the response is usually very positive. Approaching this as a trial, rather than a permanent change, respectfully engages the staff in removing obstacles and providing feedback - especially those staff members who may be opposed to a comprehensive SPHM program.

4. Knowledge of SPHM strategies and benefits. A “Did you know?” section can also be included in the survey as an educational tool, and to determine topics to include in future training.

After the survey is completed, the unit leadership can develop plans to resolve identified barriers. This information is shared with the unit staff to gain their support and expertise in crafting solutions. Sometimes a task force is formed with staff participation, to resolve specific problems, before a pilot can begin. Here are 7 common obstacles and ways to address them.

1. NOT ENOUGH TIME. On acute care nursing units, time is a precious commodity, and SPHM programming competes with other essential tasks. Yes, SPHM does take extra time, like other safety practices - such as wearing gowns, gloves and masks for patient care that require these precautions. These other safety measures have been adopted, monitored and sustained, primarily because the benefits outweigh the costs, and staff clearly understand their importance and management’s commitment to these infection control measures. In contrast, SPHM programs are often not reinforced after the initial equipment training and staff often revert to manual patient handling practices, reserving the SPHM equipment only for extremely obese patients. We find that continued program emphasis, which focuses on the benefits for the patient in addition to staff safety,
can ‘tip the scales’ towards justifying the extra time investment.

2. EQUIPMENT AND SUPPLIES ARE NOT AVAILABLE WHEN NEEDED. Even if staff are willing to take extra time for the patient’s benefit, there is a limit to the time available. For example: for facilities that have ceiling lifts, finding and placing a repositioning sling every time the patient needs to be boosted is usually not realistic. Pressure mapping studies have demonstrated that leaving a particular type of mesh repositioning sling beneath patients at all times is safe for patients and, with proper program components in place, helps to encourage repositioning of patients on a regular basis to decrease the occurrence of pressure ulcers. The repositioning sling has many uses depending on how the sling is attached to the ceiling lift hanger bar; it can help boost, turn or place a patient in a sitting position, and can be used to transfer between bed and stretcher or chair. If the nursing area uses other types of slings such as chair, turning, and limb slings, these need to be stored where they can be quickly accessed.

**Sling and equipment management:** One major barrier to SPHM success is inadequate infrastructure; slings, equipment and other required accessories must be available, in the right place, at the right time, and in working order. When the infrastructure fails, individuals revert to old habits. This needs to be resolved in coordination with other departments that are part of the sling supply and laundering chain. Here are a few infrastructure issues to consider: A facility must stock the number of slings, types and sizes on each unit. In many cases, slings require a different laundry process than what is used for sheets and towels, in terms of cleaning solutions, temperatures, quality inspection, and tracking. Reusable slings should be tracked, preferably by bar codes and facility identification, as they tend to disappear, and slings also have a finite life based on the number of times they are laundered. In some applications, such as out-patient departments that infrequently need a sling, a disposable sling might be a good option.

3. NOT IN THE HABIT and lack of co-worker support are also common problems. Students and nursing assistants often do not feel empowered to insist on using SPHM equipment. If SPHM equipment is only rarely used, or regular training is not offered, the staff may avoid using the equipment because they are not confident or proficient. It is important that unit management communicates a strong SPHM policy that empowers everyone to use these procedures, unless there is a compelling reason not to do so.

4. FEAR THAT THE PATIENT WILL DISLIKE USING SPHM can also prevent nursing staff from using equipment with confidence, and reassuring the patient and family. The nursing feedback after one 4 month in-patient unit SPHM intervention showed that patients actually felt safer being moved in a sling than by manual methods, and were more willing to go from bed to chair supported by a sling before they could weight bear viii. Patient and family concerns were addressed by an educational brochure. Patients that continued to reject the use of SPHM equipment were managed using the same protocol used for any other refusal of medical care.

5. USE OF SPHM EQUIPMENT IS MEDICALLY CONTRAINDICATED In one neurological ICU, the staff gave a number of medical reasons for not using ceiling lifts. Although some of these reasons were valid, the clinical nursing specialist found that most were not scientifically based, or could be solved with alternative SPHM techniques. These concerns were effectively addressed in staff meetings and bedside training, as long as the treating physician was not opposed to this practice. Physicians also need to understand how SPHM benefits patients, and how lifting practices can be modified to adapt to different medical conditions.

6. I DO NOT HAVE THE RIGHT TOOL FOR A PATIENT HANDLING TASK. Nursing staff are often unaware of additional accessories stocked in their facility, such as turning and limb slings. Many SPHM programs have not included or budgeted for mobilization tools, although there are many effective ones on the market that can lift or lower a patient to stand or sit, and enable earlier ambulation, with less risk of falling. Although many studies show that cost savings justify these purchases, needed SPHM equipment is often lacking.

When hospitals do have a full range of SPHM equipment, they are able to train nurses to evaluate functional mobility, using simple assessment tests, and then match the most appropriate device or intervention to the patient’s functional mobility level vii. This allows the patient to be moved safely and earlier in the recovery process.

7. TRAINING AND SUPER USER RECRUITMENT: New staff should receive training, and annual refresher courses should be provided along with introduction of new equipment or procedures. Staff training should include SPHM benefits to patients and staff, how to assess a patient’s level of mobility and needed SPHM equipment, as well as proper operation of equipment. Typically, there are nursing staff on each shift who are very comfortable with SPHM. They provide effective and credible hands-on peer coaching and support. The nursing director of a large inpatient transplant unit found that ‘super users’ were a key element in their successful SPHM initiative viii. If super users cannot be identified, key staff members on each shift can be trained for this role.

After the major obstacles are addressed, and the unit is ready to begin the trial, here are some suggestions that increase the chances of success: Publicize the start date of the trial and identify a SPHM trial coordinator. Set up ways to find out about problems and questions by providing a suggestion box or an on-line confidential site. Address any question or concern in a timely fashion. Keep the project visible through posters and staff meetings. Reward the desired behaviors by “catching” individuals doing things right.

At the end of the trial: A follow-up survey can be administered as early as the third month after the start of the trial, to monitor progress and identify additional opportunities for improvement. Typically, by this time, the most important SPHM barriers have been identified and in many cases resolved, SPHM compliance is high, and the unit understands that a continual improvement process will be needed to sustain a successful program.

In conclusion: A participatory ergonom-
ics approach is effective in identifying and resolving barriers to SPHM use. Confidential surveys are powerful tools to engage staff in addressing obstacles and making a commitment to a SPHM trial. Providing education about the significant benefits to patients can help justify the additional time needed to use SPHM. The time required to use SPHM methods can be reduced through training, practice, and efficient access to slings and other equipment. We are hopeful that the recent findings from the MDPH Hospital Ergonomics Task Force will lead to more hospitals undertaking participatory ergonomics approaches, to create successful and sustained SPHM programs. It’s possible to make 2014 the year that comprehensive SPHM programs become the standard of care across Massachusetts – and we will look back and wonder, “What took us so long?”

A: Case discussion: Multi-level MIS lumbar fusion

A 45-year-old otherwise healthy, non-smoking female physical therapist with a normal BMI (22 kg/m²) was assisting an approximately 400 pound patient from sitting to standing with help from three other people when she developed left-sided lumbosacral and buttock pain radiating into the left posterior leg and into the foot. She had no history of prior back issues. On exam, the patient had gastrocnemius weakness with single leg heel raise, decreased sensation in the lateral border of the left foot, and positive Straight Leg Raise (SLR). Her primary functional deficits were significantly decreased positional tolerance, with inability to sit more than 10 minutes at a time, and decreased ability to bend, lift, twist, push, and pull. Her diagnosis was a left S1 lumbar radiculopathy.

The patient’s condition failed to improve with conservative therapy over the next two months, including PT and medications. Lumbar MRI showed a central disc bulge at L5-S1 effacing the ventral thecal sac without clear evidence of foraminal narrowing in the setting of multilevel degenerative changes of the mid-to-lower lumbar spine most pronounced at L3-4 and L4-5.

References

3. CDC Safe Workplace Topics, Safe Patient Handling, Last revised 2014 http://www.cdc.gov/niosh/topics/safepatient/
8. Same as Ref V1

Some additional reference material:

1. Overview of successful sustained SPHM introduction process in the VA hospital system: Patient Handling in the Veterans Health Administration; Facilitating Change in the Health Care Industry: Hodgson, Michael J et al. JOEM. Volume 55, Number 10, October 2013
2. For a nice summary on the reasons to support SPHM programs, see https://www.osha.gov/dsg/hospitals/documents/3.5_SPH_effectiveness_508.pdf
3. For a good summary of steps to implementing a SPH program from the ground-up, see Road Map to a Comprehensive Safe Patient Handling Program, Minnesota Hospital Association 2012 http://www.mnhospitals.org/Portals/0/Documents/pt_lifting/safe-lift-roadmap.pdf

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Lateral MRI

After an unsuccessful lumbar epidural steroid injection at L5-S1, the patient was referred to an orthopedic spine surgeon who assessed an inflammatory left S1 radiculopathy without significant compression of the left S1 nerve root on MRI (of note: x-rays had not been obtained at that time). She was thought not to be a surgical candidate. Continuing to suffer from her back and buttock pain and disability, the patient sought a second surgical opinion at Boston University (BU) with an orthopedic spine surgeon specializing in minimally invasive surgery.

During this work up, lumbosacral x-ray showed asymmetric disc space narrowing at L3-4 and L4-L5 resulting in acquired rotatory deformity, lateral listhesis (translation) of L3-4 and early degenerative dextroscoliosis. In addition, dynamic flexion-extension views showed...
abnormal flexion on L2-3 and a mild degree of retrolisthesis at L4-L5. In addition, a vacuum disc (a sign when an intervertebral disc loses its pressure and bone abuts against bone with air trapped within the disc) at L3-4 was diagnosed.

As a result of the above mentioned MRI, but most importantly the x-rays findings, fusion surgery was considered a preferred option. Because of the degenerative changes, asymmetrical disc collapse, and rotatory instability of the lumbar spine from L2-S1, the risk of developing adjacent disc disease requiring a revision surgery was determined to be too elevated and unacceptable with single-level (L5-S1) surgery. Thus, addressing the full pathology (i.e., L2 to S1) was recommended. In addition, it was felt that performing isolated L5-S1 discectomy without addressing the other pain generators, not only would not give the desired pain relief but also would predispose the patient to faster and more dramatic deterioration and, therefore, was not recommended.

Given widely different surgical opinions, a third surgical (Continued on page 7)
In response to anticipated health care reform in the 1990s, the Vermont legislature established the Physician Policy Council (PPC), a bargaining group of physicians from wide range of specialties, to represent physicians’ interests in “provider regulation, provider reimbursement, [and] quality of health care” with the Vermont state government. The PPC was assembled through the Vermont Medical Society (VMS) and was inactive when health care reform waned. With the Patient Protection and Affordable Care Act (ACA) and Vermont Act 48, An Act Relating to a Universal and Unified Health System, health care reform and the PPC have returned.

The original PPC did not include an occupational physician, but as workplace health and workers’ compensation may be at issue during implementation of the ACA and Act 48, the VMS added occupational medicine to a roster of representatives of 26 medical subspecialties. In the coming years, many issues are likely to arise in Vermont of interest to occupational physicians, including incorporation of payment for workers’ compensation medical services into a single-payer system and development of public health programs that have workplace components.

Dr. Neil Haas, MD, MPH, FACOEM, has been a member of the VMS Council since 2006 and has served on VMS multidisciplinary ad hoc committees handling workers’ compensation matters. It has allowed Dr. Haas to interact with administrators from governmental and non-governmental entities, lawyers, and health care professionals. In the fall, Dr. Haas was tasked with finding an occupational physician to participate in the PPC and was joined by occupational physicians Verne Backus, Philip Davignon, and Susan Olsen.

This is what Dr. Haas has to say: “I am sure that there are physicians from whom I have not heard in Vermont and Vermont’s neighboring states who have interest in workers’ compensation and workplace health developments in Vermont. Those of us who will represent physician interests concerning workers’ compensation and workplace health want to hear from you about occupational medicine, workers’ compensation, and workplace health in Vermont. The ACA and Act 48 may result in hazards and opportunities for us. VMS advocates for physician, patient, and public health measures; and offers educational opportunities. Some medical societies focus on education and their leadership prefer to avoid legislative and administrative advocacy. The preference is understandable, but when the vessels that hold us encounter turbulence, it is better to place a hand on the rudder than to leave it hoping that the currents don’t dash us into rocks. Some of the wellness initiatives that may come along with the ACA and Act 48 present opportunities for occupational physicians and primary care physicians to collaborate; deliver convenient, coordinated, cost-effective care in the workplace and primary care settings; and enhance the health or our patients. For example, we could have programs that allow occupational physicians, with appropriate safeguards, to access and summarize data for workplace illness prevalence, then to construct workplace education and prevention programs focused on those illnesses, and communicate and coordinate care efforts with primary care practices. I am hopeful that changes in health care will benefit patients and make the lives of health care professionals easier, and that physician organizations like the state medical and medical specialty societies will steer implementation of the ACA and Act 48. I am hopeful that my physician colleagues who involve themselves will find their experiences as valuable as I have found mine. I thank you who put your hand on the rudder.”

On behalf of NECOEM, we thank you Dr. Haas, for taking the lead in the involvement of occupational physicians in this important initiative. As you have rightly stated, occupational physicians should certainly be one of those who should “place their hand on the rudder”, lest we be swept away by the churning of the ocean created as the various States and the nation as a whole take further steps towards making healthcare an affordable reality for all.

For those of us, Vermonters or not, who would like to hear from or correspond with Dr. Haas further on Vermont workers’ compensation and workplace health issues, please correspond with Dr. Haas at NSOMC.MD@myFairPoint.net.

Editorial Notes:
1. As outlined on the Vermont Medical Society’s website, Act 48, created the Green Mountain Care Board and gave it broad authority to reform the delivery of health care in the state, outlined a number of principles that are to guide the state’s reform efforts, including: ensuring universal access; containing costs; ensuring provider choice; reaffirming the primacy of the physician/patient relationship; and, ensuring that the delivery of health care can be done on a solvent, sustainable basis.

2. Dr. Haas has been a member of NECOEM since 2001 and is also a member of the NECOEM Board of Directors.
Letitia (Tish) Davis, ScD, EdM, was awarded the American Public Health Association 2013 Alice Hamilton Award. She has been an Occupational Health and Safety leader, particularly in the areas of young workers, construction workers and linking surveillance to action. As the director for more than 30 years of the Massachusetts Department of Public Health’s Occupational Health Surveillance Program, she has created models that have been replicated throughout the country. Tish is a mentor to scores of students, medical residents and new public health researchers. She embraces the principles of community-based participatory research by engaging workers and community members in determining surveillance priorities, interpreting results and assisting them to develop impactful interventions. Some of the highlights include creating model young worker programs, promoting greater recognition by community health center personnel of how work-related factors influence health, prevention programs for immigrant workers such as floor finishers, and documenting the patterns and extent of underreporting of occupational injuries and illnesses. Tish is a leader in national initiatives such as the Council for State and Territorial Epidemiologists’ occupational health indicators program and the National Academy of Sciences/Institute of Medicine reports: Protecting Youth at Work, Evaluating Occupational Health and Safety Research Programs, and Incorporating Occupational Information in Electronic Health Records. She advocates for workers in the construction sector as a member of the Technical Advisory Board for CPWR—The Center for Construction Research and Training, the NORA Construction Sector Council, and OSHA’s Advisory Committee on Construction Safety and Health. Congratulations Tish Davis!

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Opinion was obtained and resulted in a diagnosis of piriformis syndrome. The patient continued with further non-operative treatment modalities; multiple medications, self-directed pool therapy, multiple courses of medical acupuncture, chiropractic treatment, cognitive behavioral therapy, and work conditioning, all with short-lived benefit and without improvement in positional tolerance. Of note, the patient worked in a modified capacity throughout the injury period.

To help further identify the pain generator, an EMG was performed that was normal, but the testing neurologist assessed that the symptoms were consistent with an S1 radiculopathy. This was followed by a left S1 selective nerve root block with five days of near total pain relief suggesting that left S1 nerve root impingement was her primary pain generator.

After extensive discussion about evidence, risks and benefits with her local providers, BU spine surgeon, BU spine PT, and other patients who underwent similar, multi-level Minimally Invasive Fusion procedures, the patient decided to undergo minimally invasive L2-S1 fusion 14 months after her injury. Pre-operative clinical psychology consultation was obtained, and the patient underwent uneventful L2-S1 minimally invasive spinal fusion with blood loss of 250 cc.

The patient was able to ambulate with the physical therapist on the first post-operative day and was discharged home two days later. She experienced near complete resolution of L5-S1 radiculopathy and buttock (piriformis) pain in the immediate post-operative period and returned to sedentary duty at approximately six weeks post-operatively with gradual progression to full duty work.

At her one year post-operative exam, the patient was found to have normal posture, gait, balance, strength, sensation, and deep tendon reflexes with some mild but improving decrease in sensation in the anterior right thigh consistent with anterior surgical approach. The patient had minimal subjective stiffness but was able to bend down and touch the ground and maintain unrestricted full time work. No significant tenderness to palpation over the thoracolumbar spine and lateral areas was noted other than some mild tenderness in the left gluteus muscles. Left straight leg raise caused some mild gastrocnemius pain.

One-year post-operative x-ray showed expected postoperative appearance with significant interval improvement in alignment (shown in the accompanying x-ray plates).

One-year post-surgery, she reports that she is 95% better and feels that she has gotten her life back. She is able to sit up to one and a half hours, is using only 10 mg of amitriptyline at night, reports vastly improved mood, and overall notes fewer functional limitations.

**B. Definition of MIS:** Minimally invasive spine surgery (MIS) is a technique or a sum of different techniques that aim to address the patient’s problem with the least amount of collateral damage. An equivalent name that is utilized is Less Invasive Surgery (LIS). The definition, however, is still confusing since there is no clear threshold for when a classic or standard surgical procedure becomes minimally invasive. The concept of the

(Continued on page 9)
NECOEM is a strong and sound organization, due to our dedicated leadership and our loyal membership. I am pleased to report on NECOEM’s progress towards achieving the objectives that I had outlined in a previous issue of the NECOEM Reporter.

An important goal has been to increase the inclusion and development of our colleagues who are new to the field or NECOEM. NECOEM recently embarked on a significant outreach to all medical schools, Occupational Medicine residency programs and MPH programs in New England. We now offer medical students free registration and residents a 67% discount to attend our conference. Thanks to David Diamond for ensuring that we have the budget for this. In addition, we introduced colored badge ribbons for our first time conference attendees, to encourage other members to introduce themselves and help make our new attendees feel welcome and included.

**Clarifying NECOEM’s role in the rapidly changing health care environment was another objective that I had outlined.**

Every year we are fortunate to have several insightful presentations at our conferences. For example, this year our distinguished Harriet Hardy Awardee, Dr. Jay Himmelstein shared his experiences as Senior Advisor to the Disability Health and Employment Group and Founding Director of Work Without Limits. In addition, we heard about thought provoking research from Dr. Michael Osterholm, the Director of the Center for Infectious Disease Research and Policy at the University of Minnesota. We heard about emerging Environmental Medicine issues including hydrofracking and nanotechnology. Finally, thanks to Stephanos Kales and Al Reilly, we had an impressive Clinical Research track yet again.

**Another important objective is to ensure that we fully meet the needs and interests of our members.** I am happy to report that this has been an exciting year for NECOEM, including our new Commercial Driver Medical Examiner course to help our members comply with the Federal Motor Carrier Safety Administration requirements. Thanks to Ron Blum, Jay Poliner and Robert Swotinsky for developing and leading this very well received program. We have had another outstanding conference thanks to Matt Lundquist as conference chair, as well as his dedicated committee. NECOEM has always co-hosted the conference with the Massachusetts Association of Occupational Health Nurses. This longstanding collaboration is clearly a win-win for the membership of each of our organizations. We had two excellent and well attended dinner meetings, thanks to George Moore and Jim Mazo. Finally, thanks to Tom Luna, we published three issues of our NECOEM Reporter, including the new “You’re the Occ Doc” feature, in which you are guided through a case, with questions to test your clinical acumen. As always, I welcome suggestions regarding how NECOEM can enhance the value that we provide to you.

My sincere thanks go to Dianne Plan-tamura, our amazing Executive Director, as well as our impressive Board of Directors for their unrelenting dedication and leadership.

*Phil Lerner, MD, MPH, FACOEM  President – NECOEM  December 2012 to present*
MIS or LIS is to perform the required surgical procedure with the least amount of tissue and muscle damage and blood loss, and without further destabilizing the spinal column by sacrificing the least possible amount of stabilizing bony and ligamentous structures.

As a result, the patient will experience:
- Less postoperative pain
- Less blood loss and need for blood transfusion
- Less dependence on post-operative narcotic medication
- Faster recovery and return to work
- Improved function
- Less scarring and smaller incisions
- Less damage to adjacent discs and subsequently less adjacent disc disease

These hypothetical benefits are contingent on great understanding of the mechanics of the spine, strict adherence to proper surgical technique, and the ability to perform all that is necessary to achieve maximum relief. At times, MIS-labeled surgeons will cut corners simply to be able to perform the procedure via minimally invasive techniques. Such practices will give the patient inferior results and compromise the reputation of MIS techniques.

C. Conclusion: The minimally invasive surgical option proved to be an ideal solution for this injured worker. The key elements of the success of this case are the following:
- A highly motivated and compliant patient
- Competent and well trained health care providers
- Open and efficient communication between all stakeholders including the patient, rehabilitation providers, occupational medicine provider, spine specialist
- Careful and thorough review and analysis of all diagnostic studies particularly the x-rays, which were very informative and decisive in the treatment recommendation
- Timely, appropriate, and thorough conservative care
- Muscle-sparing surgical approach that allowed fast and sustained recovery

Availability of an experienced care manager to help navigate the patient through the workers’ compensation process

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During our next two issues, we will discuss in more detail the different minimally invasive procedures and techniques that have been proven clinically successful, the risks and possible complications, as well as financial analysis of such novel technologies and techniques. Some of these techniques are:
- Injection therapies: such as steroid injections, ablation therapy
- Endoscopic procedures
- Percutaneous, tubular decompressive procedures: such as laminectomy, discectomy, foraminotomy
- Minimally invasive posterior fusions: Transforaminal Lumbar Interbody Fusion (TLIF), Posterior Lumbar Interbody Fusions (PLIF)
- Lateral interbody fusions
- Anterolateral Interbody fusions
The New England College of Occupational and Environmental Medicine is a not-for-profit regional component society of the American College of Occupational and Environmental Medicine. The mission of the New England College of Occupational and Environmental Medicine is to support the optimal health and safety of workers and workplace environments through educating our members and other health care professionals, encouraging research, workplace safety, and high quality practice, guiding public policy, and promoting the specialty of Occupational and Environmental Medicine.

WHAT IS IT?

From this issue, we will be starting a section on trivia, facts, figures, etc. related to the field of occupational medicine. If you have any such interesting or fun-filled material, please e-mail it to the associate editor 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.

This settlement located in the Near West Side of Chicago had among its many notable residents a prominent lady associated with the field of occupational medicine. Can you identify the structure? Please send responses to Abhijay Karandikar at dr_abhik@yahoo.com