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"Expert System" to Increase Income 30%

Nelson Hendler*

MD, MS, Former Assistant Professor of Neurosurgery, Johns Hopkins University School of Medicine, Past President of American Academy of Pain Management, United States

***Corresponding author:** Nelson Hendler, MD, MS, Former Assistant Professor of Neurosurgery, Johns Hopkins University School of Medicine, Past President of American Academy of Pain Management, United States, Tel: 443-277-0306, E-mail: Docnelse@aol.com

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1. 40%-80% of chronic pain patients are misdiagnosed [1-5] Most are told they have sprains and strains when they actually have surgically correctable lesions [1,2,5]. For CRPS(RSD) 71%-80% of patients really have nerve entrapment, which responded to peripheral nerve decompression [3,4].
2. Doctors order the wrong tests and don't spend enough time taking a careful history. A Wall Street Journal article quotes medical research which says the two leading causes of misdiagnosis are A) Ordering the wrong diagnostic test (57%) and B) poor history taking (56%) [6].
3. MRIs miss damaged discs 76%-78% of the time, and CTs miss bony lesions detected by 3D-CT 56% of the time [7,8]
4. An accurate diagnosis will lead to a 192% increase in interventional testing to replace inaccurate CT and MRI
5. Once a thorough history is taken, and the proper tests are ordered, 50%-63% of patients, previously told there is nothing to be done to help them, require surgery to improve [1,2,5].

Don Long, MD, PhD, former chairman of neurosurgery at Johns Hopkins Hospital reported about a group of 70 patients with neck pain and headache, who, after having normal MRI, CT and X-rays, had been told that nothing could be done to help their pain. These patients then received facet blocks, root blocks, 3D-CT, flexion-extension X-rays and provocative discograms. As the results of these tests, 63% of the patients were determined to be candidates for surgery. Post operatively, 93% of the patients improved [5].

A team of physicians from Johns Hopkins Hospital developed an Internet based questionnaire, which duplicates a physician taking a careful and thorough history. The is an "Expert System" based on using artificial intelligence and Bayesian analysis to interpret and score the answers to the questionnaire. When the patient finishes the questionnaire, in either English or Spanish, called the Pain Diagnostic Paradigm, within five minutes, diagnoses are generated, based on the answers to the questions, which have a 96% correlation with diagnoses of Johns Hopkins Hospital doctors [9]. Then, based on the correct diagnosis, the Treatment Algorithm recommends the correct test to use. The efficacy of this technique has been documented by the ability of the Diagnostic Paradigm and Treatment Algorithm to predict intra-operative finding with 100% accuracy [10].

What is meant by the correct test? Since the MRI is not particularly accurate for diagnosing disc disease, other testing is needed. Please refer to the article by Dr. Long again. At Johns Hopkins Hospital the neurosurgeons used facet blocks, root blocks, provocative discograms, and peripheral nerve blocks to improve the accuracy of diagnosis. These are interventional procedures, which require the use of a C-arm fluoroscope, and can be performed by an anesthesiologist, interventional radiologist, or a surgeon. In fact, Dr. Das, former president of the Indian Pain Society, reported that he increased interventional testing 192%, as well as improving patient care, when he began to use the Pain Diagnostic Paradigm in his practice [11].

The tests are available at www.DiagnoseThePains.com, and can increase income, and improve patient care.

These tests benefit the surgeon in various ways:

1) Produce a more accurate evaluation in less time, with less inter-rater reliability issues.
2) See more patients in a day, since using the tests will allow a physician to evaluate a patient in 5 minutes instead of the normal 20-40 minutes.
3) The Treatment Algorithm will recommend that a physician perform facet blocks, root blocks, peripheral nerve blocks, and provocative discograms at a 192% higher level than they do now [11].
4)The number of patients who will require surgery will increase 50%-63% [5].

Orthopedic and neurosurgeons using the tests report an increase in income of at least 30 % a year without increasing the time spent seeing patients, and produces better patient satisfaction.

Additional information is available from DocNelse@aol.com

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