

Chapter One: How to Set up Your CRMA Referral

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The very first point that I must make about providers who are ligament testing is that you are unique so use it! Leverage it! Tell your patients about it!

Now if you are wondering what I mean by unique, it is a flunk on your part, or maybe it has just not set in to you how very few providers understand spinal ligament conditions! If you want to start testing this premise then I suggest that you should indeed test it for yourself, just so you can really appreciate the truth of it!. The next five chiropractors you talk to, the next five physical therapists that you talk to, the next five occupational therapists, the next five sports medicine guys you talk to, the next five orthopedists, the next five neurologists, the next five surgeons, the next five physiatrists, the next five pain management specialists, the next five interventional radiologists, the next five general practitioners, the next five internal medicine specialists, the next five naturopaths that next five acupuncturists, the next five massage therapists that you talk to, simply ask them how do you determine the severity and the location of a spinal ligament sprain (ligament injury) and watch what happens.

When someone knows something with certainty and confidence and they are then asked about that something, there is usually a very smooth and direct communication that occurs and you know that they know what they are talking about immediately, emphasis on immediately!. Doctors spend their whole professional career's being paid to know, so when they do not know, especially something that they feel they should, but do not, they will often cover their communication with a very general answer the does not answer the question! So watch for this as this is what you are most often going to find.

I really want you to do this for real. Do it at the next seminar that you are at and you will see firsthand for yourself.

Doctor's are supposed to diagnose what the patient has and then prescribe a form of treatment to correct it. Once you start down the trail of becoming a spinal ligament expert, you are going to find this out for yourself and I want you to do it, as it should heighten your own significance an importance. It should heighten your drive, but remember humility will get you farther along than arrogance will.

Please remember that 85% of the patients with chronic spinal pain do not have an actual anatomical cause identified in their diagnosis. This is actually taught to many providers, that there is no anatomical cause, no mechanical cause, no physical cause, no identifiable lesion to explain the condition. (1)

This is the sad state of our healthcare system today. We have billions of dollars worth of technology and THEY have no answer to the common problem of; "doctor why do I have chronic back pain."

That does not have to be you, but that IS the environment that you exist in, that you practice in, that you communicate in.

Do not believe me, test it for yourself. The next fifty patients that come in with some sort of chronic spinal pain who have been to other doctors, simply ask them what physical problem did this providers identify as the physical cause for their condition, "non specific low back pain" is not a real diagnosis, neither is headaches etc or cervicgia either as they are symptoms, no causes. The patient walks in with the complaint of headaches and walks out with the ICD-9 code for headaches, big deal what does it tell you? The patient wants someone who can tell them the cause, the physical condition that is causing the headaches!

With chronic spinal pain patients and acute spinal pain patients you may be the first provider to be able to accurately give them an actual diagnosis!

WHY DO I USE THE COMPANY THAT I USE FOR A RADIOGRAPHIC INTERSEGMENTAL MOTION ANALYSIS (RISMA)---PERFORMED BY BOARD CERTIFIED RADIOLOGIST'S USING (CRMA) COMPUTERIZED RADIOGRAPHIC MENSURATION ANALYSIS

For a chiropractor first and foremost this is a spinal subluxation assessment! This is also the most accurate and reliable subluxation assessment that crosses all professions and makes the spinal subluxation verifiable in a most accurate and reliable way. The most common mechanism of a spinal subluxation is a "micro", "macro" trauma to the spinal ligaments, called most commonly a spinal sprain. This will be explained in greater detail in the subluxation chapter, but for now it will suffice to know that subluxations are caused with spinal sprains (ligament traumas).

An inter-segmental motion study can assist you in identifying the location and severity of ligamentous instability (laxity, sub-failure), which gives you a good indication as to the severity of the spinal sprain. This same test helps you to rule in or rule out "Alteration of Motion Segment Integrity" (AOMSI) which is measured ligamentous laxity that has crossed over the

allowed radiographic measurement, as introduced by the American Medical Association Permanent Impairment Guides. This is a HUGE help as now there is an Authoritative Guideline (AMA Guides to the Evaluation of Permanent Impairment) that tells us how to locate and measure a very common lesion associated with spinal traumas (alteration of motion segment integrity). These same authoritative guidelines say what the affect this objective finding has on the patient's health and well being in the form of an impairment. What is neat about that you may ask? Simple since the AMA decided this, YOU do not have to and now it is the AMA and not you, that is saying it. You as a single provider are small and insignificant in what you think, however the AMA is large and powerful, so we need only understand how what they say, seriously validates and helps us with what we do!

Ligament instability is associated with every subluxation, and it is simply a stretching or a sub failure of any ligament in its simplest form. Ligament instability can be a entity that does not cause a clinical expression, in which case it is merely a mechanical instability that weakens the structure and increases its ability to go clinical in its expression. A ligament instability that causes the vertebral alignment to cause a sensory, motor or cause the expression of pain is called a "clinical instability" or a "spinal instability", again all spinal subluxations!

This CRMA test then assists you in correlating true clinical spinal instability, which occurs when ligamentous laxity is identified as abnormal and there is a identified, motor, sensory or pain problem now clinically expressive at that spinal level. All four things are determined or significantly assisted by this one test; ligamentous instability, severity and location of the sprain, spinal instability and alteration of motion segment integrity.

When you fully duplicate this test it is perhaps the most important test that you can do! You--- YES YOU are going to be identifying things that the patient may be impaired with for the rest of their life IF they do not have a doctor that understands the condition! You are going to be identifying things that are going to drive many if not all of your treatment decisions, modality choices and many if not all of your active care decisions! The results can objectively determine the need for all of the care that you may need to deliver in order to get a successful result with the patient. The results of your diagnostic work up may be the basis upon which money is paid out in terms of a medical-legal settlement. The results can be what you are basing your whole testimony on when testifying in a court of law, or being deposed on in an adversarial deposition. These results may be used to prequalify a patient for a spinal fusion surgery if your conservative care is not successful! These results drive all of this and they matter!

Now let's talk about objectivity, as everyone says they want to be more objective, they want more objectivity and objectivity now is said to drive the modern day evolution to evidenced based medicine. Objectivity means that something can be verified. The amount of money in your pocket right now can be accurately verified. The amount of gas in your gas tank can be

measured and verified. The inter-segmental motion anomalies caused by the ligament damage you patient suffered can be accurately and reliably measured---thus verified! But who measured it? Did you? Doctor you have a vested interest; just look at all of the money you are going to make in treatment! This is what a adversarial insurance defense attorney thinks and promotes! If you do the test, it would be like the heart surgeon being the only one to do the echocardiogram that allows him to do these open heart surgical procedures that he does a lot of and makes a lot of money doing.

Right or wrong chiropractic has been wrongly targeted as a second class profession with a whole bunch of slickster's trying to get away with a whole lot of slickness! Why else would the doctor do a test himself that can be so critical to so many aspects of the patient's current and future reality!

So why is it that you send out for this test and why do you choose the company that you choose to do it with is the question? This is a question that only you can answer? I am not going to leave you hanging though as I am going to answer this question, and I am going to answer it the way that I did while I was in private practice regardless of who asked; patient, insurer, plaintiff attorney, defense attorney, insurance adjuster, IME provider, my thirteen year old son!

I send out to have a radiographic inter-segmental motion analysis (RISMA) performed to help me determine the severity and location of the ligamentous instability lesion pattern (deformity, i.e., spinal subluxation) that is associated with the mechanism of injury that the patient has undergone. The amount and location of the ligamentous instability helps me to clinically determine the location and the severity of the possible spinal sprain, rule in or rule out severe sprain findings called alteration of motion segment integrity, as well as clinically correlate for spinal instabilities. In essence it helps me to determine the severity of the injury that the patient has suffered and it allows me to do it in a most objective way. All of which assists me with defining or modifying my patient treatment plan; including but not limited to what modalities and why, the frequency and duration of the care, which adjustments and why as well as the frequency and duration, what active care and why, what activity of daily living modifications and why and what potential work modifications and why.

The results of this study can do all of the above as well as indentify that the patient has alteration of motion segment integrity findings, which is a qualifying finding for impairment placement. I feel it for this reason I need the read to be accurate, reliable and independent (performed by another professional), so there is a reduction in all bias!

The company that I choose is Spinal Kinetics because they are the best that I have found to do this type of testing. If I find a more accurate or reliable company to perform this service I would switch to that provider. These findings help me with every aspect of my patient care and they

are important. I definitely do not have the equipment in my office to do these accurately and even if I did, due to the objective nature of the results I would still have an independent third party such as Spinal Kinetics perform this test!

If you know of or have found a better way to do this type of testing I am all ears!

Doctor one of the things that will seriously change your career is when you understand how to continuously be on offense, to put forth more truth than what can be denied, to put forth more objective consensus than what can be denied! When someone says that you do not need this type of testing, it is fair to ask them, and you should put them back on defense by asking them how else this type of testing can be more accurately performed? How else can you get this performed in a more accurate way? Let them explain that to you? Let them defend that there is better way to do this? Let them defend that there is a more accurate way to qualify these impairment findings? Let them defend that there is more unbiased way to do this, by having and independent third party do it? Watch what happens when you do this!

Now let me try to give you a little background about inter-segmental spinal motion testing. It has been called x-ray digitization for the longest time. However to day this has become confusing, because right or wrong the term digitization has today come to mean taking analog images and turning them into digital images. This process has now been called x-ray digitization. It probably more accurately should have been termed x-ray digitalization but it was not. The old term of x-ray digitization, meant to measure things in x-rays and it still means that today, but it does often today get confused because of this new terminology that came after it. Remember x-ray digitization was around long before digital x-ray.

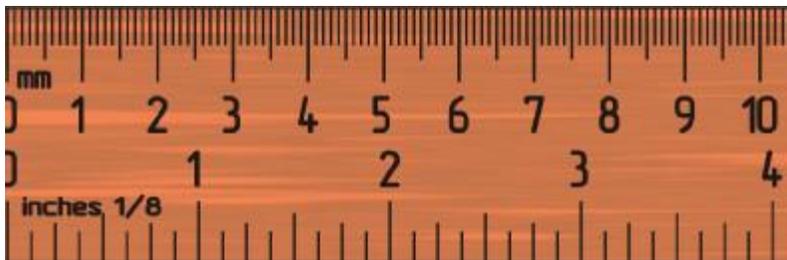
Digital x-ray is really no different from analog x-ray in some respects and very different in many other respects. I am talking digital now as that is the direction that radiography is going. With digital x-ray systems traditional film is replaced by a charged coupled device (CCD), which contains tiny grids containing millions of photosensitive elements.

The x-ray images they capture are now transferred to on rewritable storage cards that can be immediately uploaded to the computer and reviewed immediately without further processing. This images that are now in what is called a DICOM (Digital Imaging and Communications in Medicine) format, which is specific file format that allows all of the other devices, computers, printers, scanners, software's etc to able to integrate with this new standard file format. This file format is then also used by all digital imaging systems in the world. You can now review your images immediately with no further processing. It eliminates the whole process of chemical development associated with analog x-rays.

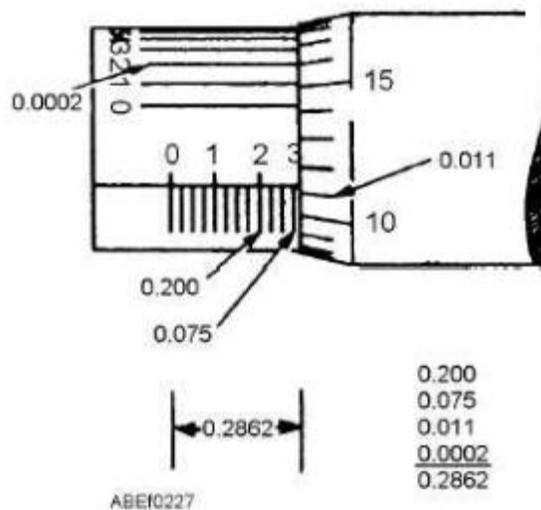
More importantly you can now take these digital x-ray images and have any provider anywhere in the world receive them for review in a matter of minutes, via a secure internet connection and a standard PACS (Picture Archiving and Communication System) by which to receive them.

Now this may sound long and a bit wordy but I believe that it important to have some idea of basic understanding of x-ray digitization and its background and it will give you more security and more understanding of just how really important it is, and how really important it is to know the company that you are having your service performed by.

Now at first, especially for chiropractors, the complexity of measuring something on x-rays would not appear to be all that complex, as this profession has been measuring things on x-rays for some 100 plus years on plain films. Many of the things that we have measured however would be in the macro measurement world, whereas inter-segmental motion would begin to be in the micro-measurement world, or a much smaller world. Most of the early measurement systems for chiropractic alignment measurements were very capable of being performed with a simple set of films, a view box and a x-ray pencil and a ruler to both lay down straight lines of mensuration, which were straight due the solid edge of the ruler, and you then flip the same ruler over to measure the distance in say inches, centimeters or millimeters, which was the lowest unit of measure on the ruler. These devices were fine for macro measurements and were very reliable. If you were measuring say a Cobb's angle for lateral scoliosis or a Ruth Jackson's Cervical Curve Angle these tools were fine, as it really did not matter if you were off by say 3 or 4 degrees. If you are measuring for a some sort of postural measurement such as the height of the right femur versus the left on a standing lumbo-pelvic x-ray and you we off by a couple of millimeters it really did not matter as those types of measurements are more macro measurement in nature or said another way in centimeters or inches. I do not think anyone would argue with this.



To press this point further so I am sure I have given you every opportunity to get the point, please look at this ruler above. What is the smallest unit of measure that this thing could accurately measure? Certainly an Inch as it is the largest increment of measurement here and so would be the most accurate. We could do a good job with Centimeters probably, but what about millimeters which is the smallest unit on this device. If you needed to be accurate with millimeters (micro) do you really think you could be, or might there be a better device?



If we were going to desire to accurately measure millimeters of space, wouldn't it be desirable to use a device where say a millimeter was a larger increment on the device---or at least use a device that could accurately measure spaces that were a lot smaller than a millimeter!

So if you are going to go into micro measurements or into measuring things that are much smaller, the instruments used for the macro measurements no longer work, so you really have to have the appropriate tool for the job at hand. I can use a tape measure to measure where to cut a board for a table that I am building, however if I am trying to grind a key to a tenth of a millimeter the tape measure no longer works as it is a macro measuring device trying to measure a more micro space.

Computers today have the ability to measure in terms of pixels, which is the point or dot in an image! This pixel is very small, making of course a single millimeter like the inch on the above ruler, a very large increment to measure in comparison.

So in order to set up a facility that can measure accurately smaller delineations such as those required for inter-segmental motion studies, you have to consider of number of factors that a company like ours has to think about, or that you would have to think about if you wanted to set up a company like ours:

1. We have to have a Computer Validated System to measure these micro-measurements accurately!
2. We have to have a system that is built specifically for this task.
3. We have to have a system that is built and that can be calibrated to different focal film distances as some providers will take say a lateral cervical at 40" FFD instead of the standard 72" FFD. The system then needs to be programmed to account for the magnification factor that occurs with the lower FFD film. This is especially true if you are going to accurately measure things on a DMX (Digital Motion X-ray) which is shot at a 36" FFD.

4. The system should be able to handle the DICOM file format (Digital Imaging and Communications in Medicine) associated with all of today's digital systems.
5. The system should automatically be able to read the DPI of the images and set the system accordingly, again for the accuracy of the digital images. This is especially true for the digital imaging accuracy of mensuration. Those of you that have a digital unit that have personally sent images to say a radiologist to have them read, know that if you transmit at say 300 dpi the images take forever to send, so you may reduce the file size by reducing the image and it will transmit much quicker. Well if I reduce the image I have to be able to have a system that can accurately calibrate to this reduction. This would be a large source of error for the digital images.
6. There are many places in the work flow of transmitting and uploading images where errors can enter in, work flow errors that may make the measurements on the images inaccurate. We have seen major research use techniques to try to reduce mensuration error only to clearly see the technique itself contain a major flaw or error, of course causing the mensuration output with the technique to produce errors.
7. You have to be an expert in the imaging techniques that are utilized and should be an expert at the workflows that today modern imaging techniques provide. At Spinal Kinetics we had to become all of that and more.
8. You should have trained providers performing the test!
9. You would have to develop a quality control system internally to catch any operator or systemic errors so that the quality of the reporting is maintained.
10. You should have an external educational system that helps the providers to understand what the results mean, and how to better utilize those test results to get better more optimal outcomes with their patients! They should be working very hard to provide educational assistance to their providers, such as the materials that you are now reading---big smile J !
11. You should have people within the company able to work with and testify if necessary in the medical legal process itself! You have to be able to help the plaintiff attorneys or anyone else in this arena.
12. You should have expertise with other forms of weight bearing imaging, x-ray, digital motion x-ray, weight bearing MRI etc. This provides better understanding as to how they all fit, and what each optimally provides and why. This also improves your expertise on understanding, designing, critiquing any algorithm that is out there or created for their proper utilization!
13. You should be able to have a system that can be modified to meet the needs to all markets. By that I mean if Blue Cross Blue Shield has mensuration criteria in some provider guidelines and the providers need it incorporated in the reads, then you had

ought to be able to modify your system to incorporate it, which means that you have to be the owner or completely in control of your own system so that you can make these modifications.

14. You should have the ability to modify and innovate within your system the does the actual biomechanical analysis, so that you can incorporate new findings and new technology as it becomes available to the field!

These are the main things that you would have to think about if you are going to start a x-ray reading service or a weight-bearing image reading service that puts out biomechanical mensuration reports using validated computer assisted methods as Spinal Kinetics does.

At Spinal Kinetics we have worked through all of these issues above. I point them out for a number of reasons, but the main reason is just so you have a bit of a feel for the fact that this can be quite complicated.

As an aspiring expert in this field there are other differences that may bring more clarity for you.

As Spinal Kinetics, when we receive images to do reports on we do not know what the doctor on the other end is using it for? It could be for a Spinal Fusion pre-authorization read, where the surgeon has had it sent out to see if the level of instability meets that insurance carrier's criteria for a pre-authorization. This means that our test can either hold the process up or allow it to resume.

Our test may be ordered by a pain management specialist in order to assist with determining the area of potential spinal instability in order to help determine the need for a spinal injections or fact rhizotomies.

It may be being used by the Doctor of Chiropractic to assist with determining every aspect of their conservative patient care!

It may be being used by a physiatrist, or the physical therapists to direct every aspect of their physical rehabilitation care plan.

It may be being used for proper impairment placement in the AMA impairment guides, or for disability determination purposes.

It may be being used to help identify the pathoanatomic cause for a chronic spinal pain patient! Remember this is huge because studies today have indicated that 80-90% of the patients out there with say chronic low back pain, have no physical diagnosis! (1)

I may be being used for some patient to obtain some sort of benefits!

References:

1. William S. Marras. *The Working Back: A Systems View* (p. 255). Kindle Edition.