Outcome Measures

(why, how and when)

The current health care environment has been placing an emphasis on provider performance with respect to cost, quality and a growing demand for provider accountability. To survive, in fact to flourish, in this era of accountability all of us chiropractors should be prepared to maintain and be able to provide appropriate documentation and patient records in a clinically efficient and economical manner.

I have attached for your review all the items that health plans, the agencies that accredited the health plans and our licensing board require in the patient file. If you have any questions about this list please feel free to contact me.

Chiropractors can easily meet the accountability and quality assurance measures by appropriately using/integrating outcome measures into an evidence-based, *patient-centered model* of practice. The following discusses why, when and how to use outmeasures.

Outcome measures are subjective measurements supplied by the patient in a self-administered questionnaire scored by either the doctor or staff members. I know that many chiropractors were not exposed to this type of outcome measures while they were in school. Most of us scheduled or developed a patient care plan based on symptoms. Now we recognize that care should be based upon functional improvement in addition to symptomatic response.

Some of the benefits of using outcome assessment measures in practice are:

- To document the patient's baseline.
- To document improvement to your patients, yourself and third party insurance payers.
- To consistently evaluate the effect of your care over time.
- To help you determine the point of MTB (maximum therapeutic benefit.
- And to justify the type, dose and duration of your care.

So what are the measures? They are pen and paper questionnaires that are completed by the patient. They are condition specific but are very valid and reliable and in many cases more reliable than many of the "objective" (physical, orthopedic, ROM) tests we have relied upon. For low back conditions we would use the Oswestry and for neck complaints we would use the Neck Disability Index that is patterned after the Oswestry and developed by a chiropractor.

Why use them? Patients are concerned about their own function (hurts to bend, can't lift my child, can't lift the groceries etc.) they don't care if they are subluxated. They don't present complaining that they are right rotated/right laterally flexed. They let us know about their activities of daily living –ability to perform work and recreational activities.

We need to gather functional information to effectively develop and monitor a treatment plan. The Oswestry and Neck Disability Index will do this for us. Care should be *patient-centered* which means we need to consider what matters most to patients that is changes in functional status versus changes in x-ray findings or degrees of Straight Leg Raising Test. We need to evaluate physical measures and continue to perform neuro and ortho tests in order develop the

patient's clinical picture and treatment program but they are really not the best measures for assessing treatment progress.

Many traditional chiropractic methods or interventions have focused on or placed an emphasis on structural pathology. This approach can be referred to as the **Pathoanatomical Model**. This model is effective for many self-limiting uncomplicated back problems but it does not work as well for chronic back pain or complicated problems. Most of us were trained in this model. This approach to care is *provider-centered* and not always designed with the patient's interest in mind and therefore does little to empower patients to take charge or control of their own condition. The utilization of this approach is becoming outdated.

Conversely, an improved *patient-centered* model is should be utilized for patients who present with the type of back pain that will respond to conservative care. This functional approach, called the **Biopsychosocial Model** has a focus of restoring function rather than pain and/or symptoms. This model empowers patients with self-reliance and is truly a *patient-centered* approach to health care. Using this approach, the treating doctor functions as both a healer and a teacher to empower patients with the ability to control and rehabilitate their own condition.

We all know that over time patients frequently forget how serve their pain was or how disabled they were when they first presented themselves to the office. By using an outcome measure we establish a written baseline that allows us to monitor and measure progress and recall bias. Recall bias is the patients' failure to accurately recall his/her changing symptoms over time.

In addition, the functional approach supports care. It can explain how two patients with the same diagnosis need different amounts of care. They have different alterations of function.

When to use an outcome measure. Healthcare researchers recommend that outcome measures should be administered at baseline and every two weeks for an acute problem and at patient discharge. We can monitor less frequently for the chronic patient.

How they help us establish treatment plans. Typically we have written our treatment plans for our records and narrative reports to read something like this.
Management includes: (1) restoration of spinal mobility by various techniques of chiropractic manipulative therapy (2) soft tissue mobilization and massage to relieve muscle hypertonicity (3) physiotherapy modalities to reduce inflammation, pain and spasm. (4) active care instructions to improve mobility. There is nothing wrong with this but it does leave room for a second party to make a determination that patient's progress stopped before the treating doctor determined progress stopped.

Before we describe a treatment plan using the information gathered from the questionnaire and how to score the questionnaire the reader should download/print one of the questionnaires that are attached.

Treatment goals can be listed as short-term and/or long term. An example of a short –term goal: within two weeks patient will be able to stand for half a day without increasing the pain.

A long-term goal may be patient's Revised Oswestry Score will decrease from 50% to less than 20% in four weeks.

These are treatment goals that focus on function and are very defendable when working in the third party payment system.

Scoring. It takes about a minute to score the questionnaires.
Each questionnaire has ten (10) Sections. The sections concern impairments like pain, lifting and standing. In each Section there are six (6) statements. The patient chooses one statement from each section that best describes their status.

Each Section is given a value between 0-5. The statement selected determines the value. The chosen statements receive a score. Letters A-F can donate the statements. Statement A=0; statement B=1;C=2;D=3;E=4;F=5. (Another way of expressing this is statement 1 graded as 0 points and statement 6 is graded 5 points). A total of 50 points is possible and would equate to 100% disability. The range then is 0 (highest level of function) to 50 (lowest level of function).

If a patient selects a statement in *each* of the 10 Sections and these scores add to 16. You can just multiply the score by 2 to get the disability. 16 x 2 = 32% disability.

If a patient selects a statement in only 9 of the 10 Sections and these add up to 16 we use a different calculation. Because the patient only chose a statement in 9 Sections the maximum possible value of the sections is 45 (9 Sections x 5) versus (10 sections x 5=50).

Therefore we get and index score of: $\frac{16 \text{ (total scored)}}{45 \text{ (total possible)}} \times 100 = 36\ \%$ disability.

If a patient selects two or more statements in one section use the statement with the highest value when calculating the score.

Interpretation of the percentage of disability scores in this manner:

Revised Oswestry

0% to 20% -Minimal disability. This group can cope with most living activities. Treatment is usually advice on lifting, self-care physical fitness and diet.

20% to 40% - Moderate disability. Problems can be managed by conservative care They may be off work.

40% to 60%- Severe disability. These patients required detailed investigation

60% to 80% Crippled . Back pain impinges on all aspects of their life.

80% to 100 % These patients are either bed-bound or exaggerating their symptoms.

Neck Disability Index (NDI):

Raw Score means the number scored out of 50 possible.

0-4 = no disablility

5-15= mild

15-24= moderate

25-34 = severe

above 34 = complete.

When treating and using the NDI at least a 5- point change is required to be clinically significant. Patients often do not score the items as zero once they are in treatment. In other words, it is common to find patients will continue to score between 5-15 despite having made excellent recovery. The practitioner should avoid the trap of treating to zero as this is not supportable based on current evidence.

NDI % Disability (out of 100)

0-8% = no disability

10%-28%= mild

30%-48% = moderate

50%-68%= severe

above 68% =complete disability