



DIAGNOSIS & DIAGNOSTIC EQUIP

Visual Analog and Numeric Rating Scales

Brad McKechnie, DC, DACAN

The visual analog and numeric rating scales are simple reporting instruments that can accurately quantify a patient's subjective pain for the clinician. These scales are preferable to longer testing instruments as they place minimal demands upon the sick patient.^{1,4,5} The numeric rating scale (Figure 1) is highly accurate for quantifying a patient's subjective pain. The numeric rating scale has the highest diagnostic yield for the chronic pain population, and its accuracy is followed closely by the accuracy of the visual analog scale.^{7,8} Combining the numeric rating scale with the visual analog scale in clinical situations results in a higher diagnostic yield in pain reporting.^{3,5} With respect to the numeric rating scale, the greater the self-reported pain levels from the patient, the greater the probability of continued symptoms and disability.⁹ Pain that does not change with each successive office visit and does not go below a grade of "3" with rest, is suspected to be related to psychological problems, cancer, or non-degenerative spinal disease.⁶

Using the scale of 0-100 with 0 = no pain and 100 = worst possible pain, please write the number indicating your present pain level in the box at the right:	<input type="text"/>
--	----------------------

The visual analog scale (Figure 2) also has a high yield accuracy for measuring pain intensity with chronic low back pain patients. The chronic back pain population represents approximately 10% (some sources indicate the number may be as high as 20%) of patients with low back pain but accounts for as much as 90% of total expenditures for back pain in the United States. The validity of the 10 centimeter visual analog scale has been established and there is evidence that the 10 centimeter scale graded into one centimeter intervals with small markings on the horizontal line is more reliable.^{1,2} The horizontal visual analog scale is preferred to the vertical visual analog scale in a chiropractic practice as some patients may mistake the vertical version of the scale for a representation of the spine.³ Any frequent pain greater than "5" indicates magnification or expansion of the patient's painful syndrome.

Please place one mark on the line below to indicate your present pain level:

No pain |-----| Worst pain ever

As with any testing instrument utilized in clinical practice for the assessment of the patient's pain perception, the accuracy of one instrument is enhanced by the addition of other instruments. We utilize a combination of the pain drawing, the numeric rating scale, and the visual analog scale for daily charting purposes. The combination of these three instruments allow for the rapid and accurate assessment of the intensity, location, and type of pain the patient is experiencing, as well as providing a means to quantify the patient's progress in an objective manner, something that will be of definite value as the health care industry moves toward outcome based reporting.

Outcome assessments will be key issues under proposed national legislation for health care reform, as outcome data will be compiled and provider performance compared. It is vital that the chiropractic profession move toward an accurate and standardized reporting format in the near future.

References

1. Chapman CR, et al: Pain measurement: An overview. *Pain*, Vol. 22, 1985.
2. Bradley LA, et al: Psychological testing, in Tollison CD: *Handbook of Chronic Pain Management*, Williams and Wilkins, Baltimore, 1989.
3. Strong J, Ashton R, and Chant D: Pain intensity measurement in chronic low back pain. *Clinical J. Pain*, 7(3):1991.
4. Waddell G: Clinical assessment of lumbar impairment. *Clin Orth Rel Res*, No. 221, August 1987.
5. Bradley LA: Psychological evaluation of the low back pain patient, in Tollison CD and Kriegal ML: *Interdisciplinary Rehabilitation of Low Back Pain*, Williams and Wilkins, Baltimore, 1989.
6. White AH: *Back School and Other Conservative Approaches to Low Back Pain*. CV Mosby, St. Louis, 1983.
7. Downie WW, et al: Studies with pain rating scales, *Annals of Rheumatic Disease*, 37:378-381, 1978.
8. Jensen, MP, Karoly P, and Braver S: The management of clinical pain intensity: A comparison of six methods. *Pain*, 27:117-126, 1986.

9. Biering-Sorenson F: A prospective study of low back pain in a general population. II. Location, character, aggravating, and relieving factors. Scand. J. Med., 15:81, 1983.

Brad McKechnie, DC, DACAN
Pasadena, Texas

APRIL 1993