

Self-Injection Anxiety Counseling (SIAC) is a six-session program designed to teach people who are unable to self-inject due to anxiety or phobia how to successfully perform their own self-injections. SIAC was developed and validated by David C. Mohr, Ph.D. and Darcy Cox, Psy.D. at the University of California, San Francisco's (UCSF) Behavioral Medicine Research Center (BMRC). SIAC includes a patient workbook and a manual for the counselor. SIAC has been successfully administered by psychologists and nurses trained in the protocol. More information about SIAC, as well as other MS research, is available the UCSF BMRC website (www.ucsf.edu/bmrc). For more information about SIAC, contact the authors at bmrc@itsa.ucsf.edu.

Background

Preliminary work found that approximately 50% of MS patients who had been prescribed medications that required *intramuscular* injection were unable to self-inject (Mohr, Boudewyn, Likosky, Levine, & Goodkin, 2001). While problems with *subcutaneous* injections are probably less frequent, they do occur (Cox & Mohr, 2003). In an initial study following patients prescribed interferon beta-1a (IFN η -1a), inability to self-inject was associated with increased risk of discontinuing the medication within six months (Mohr et al., 2001). The inability to self-inject was largely a result of anxiety, and beliefs that interfere with self-injection such as "I will never be able to do that," "It will hurt," or "What if I hit the bone?" A treatment was developed that focuses on 1) teaching people to control their anxious arousal through relaxation, 2) changing their anxious thinking through cognitive restructuring techniques, and 3) using "graded exposure" (a method of making small, manageable changes in injection-related behaviors that ultimately lead to self-injection).

Validation

The initial pilot trial tested SIAC, administered by psychologists, with 8 patients who were unable to self inject their IFN η -1a. At the end of 6 sessions, 7 of the patients had successfully self-injected. The 8th patient was able to self-inject with one additional session (Mohr, Cox, Epstein, & Boudewyn, 2002).

A subsequent randomized controlled trial of SIAC, administered by nurses from the UCSF MS Center, was recently completed. Thirty patients with MS who were unable to self-inject IFN η -1a were randomly assigned to receive either SIAC or education/assistance from a nurse, similar to that available from the manufacturer of the drug. Of the 11 (72.7%) patients who completed SIAC, 9 were able to self-inject. Of the 12 patients completing the control condition, only 3 patients (25.0%) were able to self-inject at the end of treatment. This study has recently been submitted for publication.

References

- Cox, D., & Mohr, D. C. (2003). Managing difficulties with adherence to injectable medications due to blood, injection, and injury phobia and self-injection anxiety. *American Journal of Drug Delivery*, 1(3), 215-221.
- Mohr, D. C., Boudewyn, A. C., Likosky, W., Levine, E., & Goodkin, D. E. (2001). Injectable medication for the treatment of multiple sclerosis: the influence of self-

efficacy expectations and injection anxiety on adherence and ability to self-inject. *Annals of Behavioral Medicine*, 23(2), 125-132.

Mohr, D. C., Cox, D., Epstein, L., & Boudewyn, A. (2002). Teaching patients to self-inject: pilot study of a treatment for injection anxiety and phobia in multiple sclerosis patients prescribed injectable medications. *Journal of Behaviour Therapy and Experimental Psychiatry*, 33(1), 39-47.