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SYMPTOM VALIDITY ASSESSMENT IN THE REHABILITATION SETTING

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It should come as no surprise to health care providers that patients are occasionally dishonest, or perhaps simply inaccurate, when describing their emotional, cognitive, and somatic ailments. Indeed, readers may recall a time in their own past when they "played sick" or exaggerated their ills to avoid unpleasant or undesirable responsibilities, or to garner sympathy from an employer or family member. Health professionals are by necessity overly reliant on patient self-report, which unfortunately can lead to deleterious consequences such as misdiagnosis, misapplied treatment, and diminished outcome. We tend to make clinical judgments about the validity of patient self-report and behaviors, which to the casual observer probably seem to be a rather crude litmus test of patient honesty. Even when there has been a strong suspicion of invalidity, untoward effects are possible when the clinician has relied solely on patient self-report to the exclusion of corroborative information or objective tests.

Inaccuracies may range from minor distortions of occupational or academic performance³⁹ to gross misrepresentation of somatic ills.¹⁴ Inaccurate self-report has been consistently shown to be more frequent among patients with certain psychiatric disorders compared with community-dwelling controls. For example, schizophrenia has been strongly associated with fabrication of information.^{61,76} Patients with post-traumatic stress disorders³⁷ and alcohol abuse^{60,74} have been shown to be less accurate in describing the history of their symptoms. Different forms of neurological illness, which admittedly overlap with many psychiatric conditions, may predispose patients to inaccurately report pertinent information.^{38,64} Even

psychosocial factors may be associated with distorted self-report or alterations in behavior.¹⁰ For example, secondary gain in the form of financial rewards associated with litigation has been consistently linked to exaggeration of emotional, cognitive, and somatic ills following minor head injury.^{7,15,22,23} To the extent that diagnoses presuppose a complete, honest, and accurate patient self-report,⁵² inaccurate information may significantly hinder the process of diagnosis and treatment.

Patients may not only provide inaccurate self-report, they may also exhibit somatic or cognitive dysfunction that has little or no physiological component. In other words, patients may present medical or cognitive ailments that are not always what they appear to be or are purported to be. In rehabilitation settings, these distortions can take a variety of forms such as motor weakness or paralysis, sensory impairment, and an inability to recall personally meaningful events. Several rather pejorative terms have been used to describe such conditions, including malingering, somatic exaggeration, somatic magnification, hysterical somatization, and pseudosomatic illness, to name a few. The realization that patients may display behaviors that are not physiologically based has led to heightened awareness among clinicians about the need to assess the veracity of patients' symptoms and has spurred the development of improved methods and techniques for detection of symptom invalidity. A generic term that has been used to refer to any difference between actual and observed or reported symptoms that is deliberate is called *dissimulation*, whereas unconscious production is usually viewed as symptom *distortion*. To the extent that it is difficult to discern whether patients have conscious or unconscious motives, this chapter will focus on the process by which patient self-report and symptoms are evaluated as opposed to identification of the specific diagnostic entity responsible for the patient's clinical presentation.

REVIEW OF SYMPTOM DISSIMULATION AND DISTORTION

Symptom magnification, minimization, distortion, or production may occur for a variety of reasons. In its most blatant form, the conscious and deliberate production of symptoms constitutes malingering if there is obvious secondary gain associated with the behavior,² such as a patient who feigns cognitive impairments following a motor vehicle accident to secure greater financial compensation. Despite its increasing popularity in the literature,^{3,4,5} proliferation of assessment instruments, and increased awareness among clinicians, malingering is probably quite rare. Further, it is problematic to use this term to describe patient behavior unless the clinician knows beyond a shadow of doubt that the symptoms were being consciously produced. Since mental telepathy is not a customary tool in the armamentarium of most clinicians, this level of certainty usually entails the patient's acknowledgement of their transgression. In fact, several civil suites have been won by patients who were given a diagnosis of malingering but where the standard of practice did not rise to the level of patient acknowledgement of their symptom fabrication. Clinicians would be well advised to avoid use of malingering as a diagnosis in all but the most blatant cases of invalidity, and only after a patient has acknowledged his or her transgression.

Several psychiatric conditions are probably more common than malingering, including the patient who dissimulates for secondary gain associated with the assumption of the patient role, as in factitious disorder, or the patient with conversion disorder who has unconscious production of somatic ills in the absence of explanatory organic pathology. Other dissociative conditions have also been linked to symptom invalidity. Apart from psychiatric entities, discrepancies between displayed and

actual symptoms in some instances may represent nothing more than an inability on the part of the patient to reliably report emotional, cognitive, and somatic ills. Differences have been noted in patients' ability to reliably and accurately report concerns, perhaps reflecting their level of formal education, attitudes and beliefs toward medical and mental health professionals, and inclination to view symptoms as problems that need professional attention.

One area that has received some attention in the literature is patients' inaccurate self-report of cognitive impairments, which are among the most commonly reported complaints of patients in rehabilitation settings. However, a large body of research now suggests that there is little relationship between patient complaints of cognitive dysfunction, such as memory disturbance, and actual performance on neuropsychological tests of memory functioning.^{9,13,18,40,43,53,57} Similar inaccuracies regarding actual and perceived memory performance have been found for patients with diverse medical conditions.^{16,41,56,57} These studies suggest that emotional factors, such as depression, probably account for the largest amount of variance in patient reports of memory impairment, though the role of other factors like patient defensiveness cannot be discounted. Lastly, certain brain injuries are more commonly associated with diminished awareness of impairments, a clinical condition known as *anosognosia*.⁵¹ These results underscore the fact that among patients with cognitive complaints, patient self-report is a highly unreliable source of information about actual impairments. The rehabilitation patient with stroke, traumatic brain injury, or neurological illness who is asked to describe his current emotional, cognitive, and somatic concerns is more likely than not to be inaccurate.

Part of the reason why patients may seem more credible to us is that there is a subtle yet significant tendency for many clinicians to identify with their patients and to assume that they have similar values and characteristics. This scenario is particularly true among clinicians who are at earlier stages of their training, have been exposed to less diverse clinical phenomenon, and who may not have received formal training and supervision concerning patient invalidity. Clinicians have also been known to ignore well-founded gut instincts and to succumb to assorted pressures when formulating their observations and conclusions, such as the wish to avoid any interactions with patients that could be construed as confrontational. Whether due to over-identification or naiveté, health providers may incorrectly assume that patients are being honest and accurate about their concerns.

ORIGINS AND DEVELOPMENT OF THE SYMPTOM VALIDITY APPROACH

The symptom validity approach can be traced to several early studies investigating questionable perceptual disturbances.^{12,30} In the first of these studies, Brady and Lind described an individualized assessment technique to evaluate a patient with a 2-year history of suspected hysterical blindness.¹² In another case of presumed hysterical blindness, Theodore and Mandelcorn utilized a two-alternative forced-choice paradigm to demonstrate the invalidity of patients' assertions that they were blind.⁶⁶ Pankratz and his colleagues showed that the technique could be adapted to assess other sensory impairments, such as deafness.⁶⁶ Pankratz is also credited with naming the procedure he helped to pioneer "symptom validity assessment,"⁴⁷ reflecting its focus on testing the validity of symptoms presented by patients.

Pankratz subsequently applied his technique to evaluate feigned memory impairment. A patient who complained of severe memory loss was placed in view of two lights, one red and one white. The patient was asked to identify which light had

flushed following completion of a 15-second distraction task (Symbol Digit Modalities Test). Following multiple trials, the patient's performance was compared with chance performance, which represented responding by a person with genuine memory impairment. In this instance, the patient scored significantly below chance levels of performance, indicating there was awareness of the correct response, but the patient ultimately chose the wrong response.⁴⁸ Using the symptom validity approach, feigned memory impairment has clearly been demonstrated in other patients whose performance is significantly worse than chance.⁴

Partly reflecting the influence of early studies examining feigned memory impairment, variations of the symptom validity approach have garnered considerable support from the neuropsychological community, where the legitimacy of impairment in higher cortical function is commonly assessed with tests of motivation and effort,¹⁹ most of which have capitalized on the model and techniques of symptom validity assessment. For example, Hiscock and Hiscock refined the symptom validity approach in a standardized test for assessing responding consistent with malingering, referred to as the Digit Memory Test.³⁶ Following the presentation of a five-digit number, patients are asked to identify which of two numbers had been presented previously. The increased time interval, in association with a five-digit number, was employed by the authors to promote the perception of "apparent difficulty."³⁶ To augment the effectiveness of the instrument with dissimulating patients, the authors would tell patients between each trial that because they performed so well, the interval between the presentation and recognition components would increase. A patient performance that is statistically worse than chance is indicative of dissimulation, or at the very least, diminished motivation to remember. The Digit Memory Test has subsequently been refined by other researchers,^{5,6,28,32} including computer-administered versions.^{11,54,57} In addition to being the predecessor to numerous psychometric instruments, the Hiscock and Hiscock Digit Memory Test is probably most notable for promoting the use of forced-choice responding within the context of a standardized test of memory.

Standardized approaches have shown clear advantages over clinical judgment, which rarely produce better than chance discrimination.^{22,23,25} In response to the rather disappointing findings related to clinical judgment and detection of dissimulation, it has been argued that clinicians must avoid reliance on clinical judgment for detecting dissimulation and instead focus on psychometric tests designed for this purpose.⁷⁰ Unfortunately, analysis of response patterns on individual neuropsychological tests has not yielded reliable results for detecting patient dissimulation.⁷⁰ The lackluster findings associated with detection of dissimulation based on neuropsychological test performance,^{69,76} and the mentality that a test could be devised whose sole purpose was to reliably and validly detect dissimulation, have resulted in a proliferation of psychometric instruments that purport to measure symptom validity and are largely based on the symptom validity approach. Some of the most recent tests include the Test of Memory Malingering,^{67,68} the Validity Indicator Profile,^{26,27} the Victoria Symptom Validity Test,^{58,59} and the Computerized Assessment of Response Bias,¹ to name a few. Performance on these tests is taken as an indication of the validity of an entire evaluation, though most clinicians would concede that it would be possible for patients to perform well on the symptom validity tests and to dissimulate their performance on other tests in the cognitive battery. The author is personally familiar with patients who have been instructed by attorneys to not perform worse than chance on tests providing a choice between only two alternatives. Such instruction is of course considered to be unethical in the legal community and is

essentially viewed as the intentional promotion of a fraud upon the court. These unfortunate situations also underscore the growing concern over test security, which in careless hands can effectively diminish the usefulness of a test. Unfortunately, a survey on this topic found that the practice is not viewed unanimously as questionable behavior among practicing attorneys and law students.³¹

Despite examples like the one above, symptom validity testing has become a mainstay of the medical-legal community. Determining the veracity of patients involved in litigation can have monumental impact on litigation outcome, particularly for persons who sustained head injuries and who are involved in litigation. Some have argued that symptom validity should be considered in any medical-legal case or whenever the potential for secondary gain is associated with impairment or disability.² Such arguments have strong support from studies that have shown response bias in compensation-seeking and noncompensation-seeking patients.^{8,20,75} Regrettably, tests using symptom validity approaches have drawbacks. In an exhaustive review of the symptom validity testing literature, Bianchini and his colleagues argue that these shortcomings must be addressed if they are to meet the standard of scientific admissibility in legal proceedings.³ Others have taken a similar, but admittedly more extreme view of neuropsychology and its value in medical-legal cases.²⁴ Some of these drawbacks will be reviewed later in the paper. The reader is referred to a recent publication to determine appropriate and professional use of symptom validity tests in medical-legal applications.²¹

SYMPTOM VALIDITY ASSESSMENT IN THE REHABILITATION SETTING

The prevalence of symptom dissimulation and distortion in rehabilitation patients is difficult to calculate and varies according to the context in which the evaluation occurs. As the previous section would imply, symptom invalidity is nearly always a concern in cases involving litigation. Cases involved in litigation are largely comprised of patients with traumatic brain injury, chronic pain, and work-related injuries, populations that typically receive services from rehabilitation professionals. Estimates from research examining persons with Social Security disability claims suggest that as many as one fifth may display symptom dissimulation.²⁹ Obviously, Social Security disability claimants represent one of many groups of people who have a financial incentive for displaying exaggerated or feigned emotional, cognitive, and somatic symptoms.

Considerably less is known about non-compensation seeking patient groups that are common in rehabilitation settings. In fact, a recent state of the art handbook on rehabilitation psychology mentions symptom dissimulation only in the context of forensic evaluations.²⁵ One exception noted in the literature supports the use of the rehabilitation setting for treatment of conversion disorder and describes the treatment of a young adolescent male with a functional gait disturbance.¹⁷ The reader is also directed to several other recent articles pertaining to treatment of conversion reactions.^{62,65} It should be noted that none of these papers describe a traditional symptom validity approach in evaluating patient symptoms. Indeed, the general approach has been to examine patients' symptoms and to compare them to objective medical signs to look for obvious inconsistencies.

Our earlier discussion regarding the dismal performance of clinicians in judging dissimulation would suggest that accuracy would be limited in all but the most blatant cases of dissimulation. One recent example from the author's practice involved a gentleman who was admitted to inpatient rehabilitation with complaints of

bilateral lower extremity paralysis who was alleged to have had a stroke. Shortly after admission, the patient made repeated requests that we order a motorized wheelchair, a device that is occasionally resold to medical suppliers by patients. Shortly after it became clear that we would not order the device for the patient, his paralysis spontaneously disappeared, and he walked out of the hospital.

SPECIFIC ASSESSMENT TECHNIQUES

The Pankratz symptom validity approach is most useful for evaluating functional impairments involving sensory, perceptual, and memory complaints.⁴⁹ The author is not aware of any published studies using this approach for intrapersonal stimuli, such as pain conditions, or non-memory cognitive complaints, though theoretically the technique could be applied to any symptom in which the patient could choose between two stimuli.

When applying the approach to a given patient, the clinician should start by precisely identifying the patient complaint so that a design can be individually tailored to address the thing that the patient claims that she cannot do. The astute reader will take note that this is a major departure from current neuropsychological tests of complaints. Once the symptom is defined, the clinician can select two stimuli if the patient is to choose between the alternatives, or another variation involves the random presentation of a single stimulus that the patient can indicate was present or not. Whatever stimuli is chosen, it should be a stimulus that is repeatable. Ordinarily the stimulus will be directly related to the patient's impairment.

The patient then completes multiple forced-choice trials in which she will be asked to choose one of two stimulus alternatives associated with her symptom complaint or where a stimulus is randomly applied. Though the number of trials is up to the clinician, it has been suggested that a minimum of 100 be completed.⁴⁹ This number of trials will ensure that the patient has ample opportunity to demonstrate a below-chance performance. The symptom validity approach, and its two-alternative-choice paradigm, makes use of the binomial curve.⁶⁵ As such, a patient with genuine impairment should not be able to perform statistically worse than chance. Therefore, when using the symptom validity assessment approach, the probability of genuine impairment is known. In a patient receiving symptom validity assessment for memory impairment, a patient might be asked to choose between two multi-digit numbers, one of which had been presented. If genuine memory impairment is present, a patient would be expected to perform no better than chance on the two-item forced-choice task. On average, genuine memory impairment should produce responses that are correct 50% of the time. Deviations from the expected chance performance become increasingly improbable, indicating the likelihood that the symptom is not genuine. In a symptom validity assessment using 100 trials, the .05 level of probability is reached when only 41 correct responses are obtained, and the .01 level of probability is reached with 38 or fewer responses. In most instances, the patient with symptom invalidity guesses wrong too often. However, as will be discussed later in this paper, below-chance performance is not a foolproof criterion.

The clinician should also take note of the patient's behavior during the testing situation. Patients with genuine impairment would not ordinarily be anxious or non-compliant with the testing, but patients who dissimulate may attempt to sabotage the test, refuse to complete the task, violate the rules of the test, or passively participate in the task by selecting the same stimulus each time.

LIMITATIONS OF THE SYMPTOM VALIDITY APPROACH

There are several limitations of the symptom validity approach that are worth noting. Thus far, the technique has not been adaptable to internal stimuli, such as pain complaints. Its usefulness with sensory, perceptual, and memory phenomena offers less utility than desirable for evaluating other patient symptoms. In addition, the individualized approach hinders empirical research with groups of subjects and prohibits the development of a standardized approach,³ though research using a single case design is still possible.

Several other limitations pertain to the statistical properties of the test. The symptom validity approach capitalizes on a known likelihood of chance performance.⁴⁸ Though unlikely, a patient could have a performance that is worse than chance, but is nonetheless valid. If using a .05 level of significance, a commonly accepted level of significance for many psychometric tests, 5 in 200 patients would be expected to obtain a similar score by chance. This would constitute an unacceptable rate of false-positive cases, considering the potential consequences of finding a symptom invalid that is not. Obviously, choosing a level of significance that is more stringent, as well as corroborative data from other sources, would decrease the likelihood of a false-positive finding. To complicate matters, repeated studies have shown that not all patients who dissimulate perform worse than chance on forced-choice tests.^{8,33,49,73}

Lastly, it should be noted that some clinicians have found themselves in the rather awkward position of identifying a patient's illness as having no organic basis only to find later that there was a bona fide cognitive or physiological process that was explanatory. Though the forced-choice recognition paradigm is relatively easy, some patients have impaired attention or working memory that would be expected to interfere with their performance on the test. Similarly, the effect of anxiety, depression, fatigue, sleep disturbance, pain, and combinations thereof, have been largely unexplored with tests of dissimulation, but are undoubtedly problematic for some patients.

With advances in technology and the discovery of previously unknown physiological processes, it is also likely that some conditions once thought to represent purely psychological phenomena will be attributed in part to a biological process. A recent study examining unilateral hysterical sensorimotor loss in seven patients using single photon emission tomography found hypoactivation of the contralateral basal ganglia and thalamus, which resolved after recovery.⁷³ It is unclear if this finding followed or preceded the hemisensory loss, though it does provide some of the first evidence of a psychobiological theory of hysteria.

ILLUSTRATIVE CASE EXAMPLE

Case History. The patient was a 35-year-old male. He was admitted for inpatient rehabilitation for a presumed brain stem cerebrovascular accident. He presented with left-side hemiparesis and hemisensory loss, but he denied having any other impairments, including problems with cognition. A CT scan revealed unidentified white matter changes in the vicinity of the brain stem, which were equivocal for brain stem stroke. The patient was unable to identify any family members or friends who lived in the area or who were available for contact. He claimed to be divorced and to have no contact with his ex-spouse or children. He reported that he was a self-employed skilled tradesman. He reported receiving a bachelor's degree, which seemed out of place with his chosen occupation and manner of speech. The college he claimed to attend was contacted, and they were unable to locate any record of

attendance or degrees conferred. When the patient was presented with this information, he reported that he had only earned an associate of arts degree, but he could not recall the name of the school he attended. The patient denied any previous hospital admissions, psychiatric care, or history of substance abuse. However, careful examination of medical records revealed that the patient might have been hospitalized previously. Records were obtained from two local hospitals, which revealed that the patient had three admissions for hemiparesis and presumed stroke over the preceding 2 years.

Suspicion was first raised after a staff member thought that she saw the patient move his paretic left hand. Observation of the patient during periods of sleep also revealed occasional movement of his left arm. Nonetheless, voluntary requests to move the left arm were met with apparent effort, but no movement of any kind. The patient was also observed to take a pile of hospital gowns, which he concealed in a gym bag in his room closet. The staff member's report of possible left hand movement, discrepancies involving factual information about the patient's education and medical history, and his presumed theft of hospital gowns prompted the decision to assess the validity of the patient's symptoms. In an initial diagnostic interview with the patient, he denied having any emotional concerns. He seemed unconcerned about his condition, and he would volunteer few details unless directly asked. His Mini-Mental State score was 30. He also completed a Neurobehavioral Status Examination, and all scores were found to be within the average range.

A decision was made to conduct symptom validity assessment with the patient. Among the patient's two presenting complaints, hemiparesis and hemisensory loss, we focused on the patient's hemisensory loss because this was a behavior that could be more readily tested with the symptom validity approach. Several bedside tests were already available in the neuropsychology literature that involved assessment of upper extremity sensory evaluation. Fingertip number writing and finger localization, respectively, assess tactile stimulation and finger agnosia. Using these tests as a model, we decided to randomly apply a pressure stimulus to the forefinger of each hand using a pencil eraser. The task was introduced as a means by which the clinician could determine the extent of the patient's sensory loss, a statement that was meant to help the patient save face. The patient was blindfolded, his hand was placed flat on a testing table, and the pressure stimulus was randomly applied 50 times over 100 trials for each hand. His unaffected right hand correctly identified the stimulus 97 times. In contrast, the patient's affected left hand resulted in correct identification of the stimulus only 34 times, a performance that was statistically worse than chance.

The patient's behavior during symptom validity testing was not remarkable. However, he did express some reluctance in completing the tasks initially. He made several statements in which he voiced concern that the task would not be helpful since he "could not feel anything." The introduction of the task seemed to be helpful in managing this mild patient resistance.

Prior to his departure from our facility, unobtrusive observation revealed that the patient had frequent use of his affected left hand. However, when immediately confronted with reinforcing statements like "it looks like your hand work is paying off, you are moving your arm much better," the patient was again unable to move his left arm. On the basis of the objective symptom validity data and subjective clinical data described above, the patient was given feedback regarding our findings. He had absolutely no response to our conclusion that the presenting complaints appeared to be non-physiologically based and that a stroke was unlikely. Since the exact diagnostic

entity was unclear, he was transferred to a nursing home for several weeks, where he continued to receive rehabilitation services until he spontaneously began to use his hemiparetic limbs, and reportedly walked out of the nursing home. At last count, the patient had presented himself at least two more times to local hospitals with the same presenting complaints. A diagnosis of malingering could not be made because the patient never admitted to conscious production of his symptoms and there was no obvious secondary gain. The differential diagnosis was factitious disorder versus conversion disorder, though the former was favored because of the perception of the patient's persistent presentation to local hospitals.

SUMMARY AND FUTURE DIRECTIONS

Symptom validity assessment has been the basis for most psychometric tests of dissimulation. These tests are a mainstay of medical-legal cases, which primarily involve litigants who have sustained head injuries. Literature examining the use of symptom validity procedures and tests for patients in rehabilitation settings has been all but absent. The lack of literature in this area may reflect an erroneous belief that symptom invalidity does not occur in rehabilitation settings. Symptom exaggeration is probably much more common than dissimulation in rehabilitation settings, though literature examining prevalence rates of patients with assorted ailments suggests that a significant number have symptom invalidity. These findings are admittedly complicated by the presence of co-occurring physical ailments in many of these patients. Despite these complexities, research focusing on the techniques embodied in symptom validity assessment and their application in rehabilitation patients is needed.

It is not necessary to conduct symptom validity testing for all patients in rehabilitation. The threshold model proposed by Rogers appears reasonable in this regard.⁵³ Patients who have symptoms that are inconsistent with objective medical conditions or whose symptoms are more severe than would be expected are possible candidates for further evaluation utilizing symptom validity assessment. The presence of factual inaccuracies, substance abuse, history of victimization or abuse, or sociopathy should always raise suspicion about the veracity of patient's self-report and symptoms.

In addition to research applying these techniques to patients in rehabilitation settings, further investigations are needed to develop the technique for patients with pain and non-memory cognitive concerns. Though standardization of the technique is contrary to its individualistic approach to assessment, it would also be reasonable to develop relatively standardized techniques for symptoms commonly encountered in rehabilitation settings. In conclusion, symptom validity assessment provides a reasonable method for evaluating diverse patient complaints in the rehabilitation setting.

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THE USE OF SODIUM AMYTAL IN THE ASSESSMENT AND TREATMENT OF FUNCTIONAL OR OTHER DISORDERS

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Sodium amytal (SA; sodium amobarbital), a medium action barbiturate, was first synthesized by the Lilly Company around 1927.⁷⁴ This agent quickly came to be used in many contexts, with many different patient populations, and for several different purposes. SA was approved by the Food and Drug Administration (FDA) in 1938 and is currently DEA schedule II. Perry and Jacobs⁷⁷ recommended injecting a 5% solution of SA (500 mg of the drug dissolved in 10 ml of sterile water) at a rate of IV infusion no faster than 50 mg/min or 1 ml/min. The infusion is to be continued until the "sedation threshold" is reached, i.e., sudden relaxation with slower and more regular breathing, slight slurring of speech, etc. At this point, the patient may be prompted to talk (if mute), move or feel a limb (in case of a motor or sensory deficit), remember (if amnesic), etc. While some contraindications or risks have been suggested (e.g., chronic obstructive pulmonary disease/respiratory depression), there are very few reports of any untoward or adverse effects,^{20,30,37} although the potential for abuse, especially when used as a street drug, clearly exists.⁶⁷

The first section of this article reviews the early history and use of SA, largely involving psychiatric cases, and its continued use in this domain. Several issues that developed out of this experience are highlighted. The next section examines the use of SA in assessment and treatment of chronic pain. It should be noted that the personal experience of the authors using this drug is