

## RESULTS OF THE CONVERSION TO A TOBACCO-FREE ENVIRONMENT IN A STATE PSYCHIATRIC HOSPITAL

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Tobacco use is the leading cause of preventable death in the United States. It has been shown to lead to preventable injury in not only those who use tobacco products directly, but also in those who are exposed to tobacco indirectly such as by passive smoking (Barendregt, Bonneux, & Maas, 1997). Many who use tobacco products indicate that they cannot stop because they have become dependent or addicted. The burden of tobacco use in many cases falls upon those least able to make a rational decision about their use. Such is the situation encountered at inpatient mental health facilities (Glassman, 1993).

To provide patients at Wichita Falls State Hospital the opportunity to be free of tobacco use, the facility implemented a

tobacco-free policy, which applied not only to patients, but to staff and visitors as well. This policy mandated that tobacco products could not be used on any part of the hospital campus. To assist patients in overcoming their dependence on tobacco products they were provided with nicotine replacement aides—primarily nicotine patches and education about smoking and tobacco addiction recovery.

We took advantage of this opportunity to study patient aggression both verbally and physically and compare the number of incidents before and after the implementation of the policy. Previous studies (Haller, McNeil, & Binder, 1996; Resnick & Bosworth, 1989; Smith & Grant, 1989) found no significant change in the patients' behavior following a ban on smoking at their respective hospitals.

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### METHOD

The setting is a state hospital in which 98% of the patients are admitted on an involuntary basis. The census of the programs in this research project was consistent during the period of the study, with an average daily census of 190 patients in

November 1998, and 188 in January 1999. The number of admissions to the facility was also consistent during the study period, with 68 admissions during November 1998, and 73 during January 1999. Each director of the three primary adult treatment programs selected two psychiatric technicians to record patient acts of aggression on the Overt Aggression Scale (Yudofsky, Silver, Jackson, Endicott, & Williams, 1986). Patients in the programs studied were adults, age 18 to 65 years, representing both acute, newly admitted psychiatrically ill patients, and those who had been hospitalized for longer-term illnesses. Aggressive acts were identified according to the following categories: verbal and physical. Data was collected for the month of November when patients were allowed to smoke. No data was collected for December to enable staff and patients to adjust to the No Smoking Policy which became effective on December 1, 1998. Patients were informed that the hospital was going smoke-free due to health concerns. Patients were educated as to alternatives to smoking. Each patient who smoked was evaluated by the physician and was offered a nicotine patch. Nearly all accepted the offer. Data was again collected for 30 days during January 1999. The number was calculated for each type of aggression. The difference of aggressive acts between November 1998 and January 1999 was computed. The results were analyzed with *t*-tests (two-tailed) to determine significance.

## RESULTS

There were 1,184 verbal acts of aggression during the month of November 1998. There were 656 verbal acts of aggression during January 1999, which corresponded to a 45% decrease. This result was significant ( $t=3.752$ ,  $df=376$ ,  $p<.01$ ).

There were 266 physical acts of aggression during November 1998. There were 133 physical acts of aggression during Jan-

uary 1999, which corresponded to a 50% decrease. This result was significant ( $t=4.217$ ,  $df=376$ ,  $p<.01$ ).

## DISCUSSION

As a result of the decreased episodes of physical and verbal aggression, we found a corresponding decrease in the injuries suffered by our patients and staff. We reviewed injury reports during the period in which smoking by staff and patients was still occurring. It appeared that numerous injuries were a result of a patient without cigarettes becoming intimidating or assaultive with staff or other patients in an attempt to get cigarettes, or in confrontations triggered by staff imposing smoking restrictions on patients for smoking in inappropriate places and at inappropriate times. Frequently, patients would walk across the campus panhandling for cigarettes in the pre-ban period. This activity heightened the possibility of conflict or confrontation.

During the period of the study, conversations with the direct care staff revealed, much to their surprise, that aggression was in fact on the decrease after the smoking ban. Although many of the staff had expressed concerns that the opposite effect would occur, most were able to express satisfaction with the realization that aggression had dramatically decreased. Therefore, the unequal distribution of tobacco products in the patient population was seen as a primary contributor to aggression in our facility.

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