

# Monitoring Aggression and Problem Behaviors in Inpatient Neuropsychiatric Units

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**The Problem Behavior Recording System (PBRs) is a computer-based monitoring system for tracking aggression and other problem behaviors among inpatients on neuropsychiatric units. The authors describe the system and compare it with other tracking systems. In 1997 a total of 405 aggressive incidents on an aggressive-ambulatory neuropsychiatry unit were recorded on the PBRs, whereas only 112 incidents, or 28 percent, were documented in hospital incident reports. In a further analysis, nursing notes in the charts of three patients were examined for a three-month period; 34 aggressive incidents were documented, compared with 41 PBRs entries for the same patients. The chart review took nearly three hours to complete, compared with less than five minutes for the PBRs analysis. (*Psychiatric Services* 51: 1040–1042, 2000)**

Problems with aggression and impulse control are common among persons with neuropsychiatric conditions. Accurate monitoring of aggression is essential to document natural

recovery or treatment outcome. Aggression in psychiatric facilities is typically documented in patients' medical records and in various unit communication books. Serious aggressive incidents usually are recorded in official incident reports.

However, these recording methods have limitations. Silver and Yudofsky (1), monitoring aggression among chronically hospitalized patients, counted more than 4,000 aggressive episodes during the recording period, yet only 25 to 50 percent of them were recorded in hospital records. They suggested that aggression could be more accurately monitored by using specific procedures such as their Overt Aggression Scale (2). We describe the clinical applications of a new aggression recording system designed for inpatient neuropsychiatry units.

The Problem Behavior Recording System (PBRs) is a computer-based monitoring system designed to track aggression and other problem behaviors associated with serious neuropsychiatric conditions (3). The system was designed to supplement standard recording procedures for aggressive behavior on the neuropsychiatric aggressive-ambulatory unit in our 800-bed provincial hospital. The patients on this unit have diagnoses of mental disorders due to a general medical condition and demonstrate a level of aggressive or disruptive behavior that prevents them from being cared for in the community.

On our unit the PBRs recording sheet is placed in a binder in the nursing station. In the upper half of the

sheet are numeric codes for describing an aggressive incident. Seven categories of codes are used, with some categories having as many as 14 codes. The categories are type of aggressive behavior, such as grabbing, pushing, or hitting; other problem behavior or incident, such as yelling or screaming, stealing, or refusing to eat; antecedents of the incident, such as an argument, staff limit setting, or a delusional state; type of participants, such as patients only or patients and staff; whether and by whom injuries were sustained; consequences, such as time-out or use of mechanical restraints; and location of the incident, such as the dayroom or hallway.

The lower half of the PBRs recording sheet uses a tabular format. Each incident is documented on a single line. The date, the time, and the patient's name are entered, followed by the appropriate codes in each of the seven categories. A copy of the PBRs recording sheet is available from the authors. It can be adapted for use in different facilities by changing the categories or the coded descriptors.

The PBRs requires a modest amount of staff training, is time economical, and is easily implemented. It has been well received by staff as part of the daily ward duties. Ideally, when a problem behavior occurs, it is recorded immediately, although sometimes a delay occurs. Several times a week the information is entered into the PBRs database, which is maintained in a spreadsheet program. Unit-based monthly summaries and individual patient reports are generated.

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Before we implemented the PBRS, information about aggression and other problem behaviors was recorded in three separate systems, and no single system captured all of the data. The most serious incidents—for example, those involving fights or injuries—were recorded in official hospital incident reports as well as in nurses' progress notes. Agitation, aggression, and disruptive behavior were also recorded in nurses' notes and on a special behavior chart. The PBRS replaced the behavior chart, which was a nonstandardized and inconsistently used system. In the past, attending physicians or consulting psychiatrists who wished to study trends in aggressive behavior had to review incident reports, nurses' progress notes, and the behavior chart. Now the PBRS database contains records of all incidents of aggressive or other problem behavior on the unit.

### **Comparison with the previous system**

In 1997 a total of 112 official hospital incident reports were filed for aggression on our aggressive-ambulatory unit. According to the PBRS, there were 405 incidents of pushing, hitting or kicking, or attacking with a weapon during this period. Thus only 28 percent of the aggressive episodes were recorded in incident reports.

To compare use of the PBRS with use of the previous system, we examined all the nursing notes in the charts of three patients over a three-month period and recorded the number of aggressive incidents documented. Thirty-four such incidents were found in the notes, whereas 41 incidents were recorded in the PBRS database. The chart analysis entailed a close reading of 137 pages of nurses' notes, taking almost three hours. The PBRS analysis took less than five minutes. Moreover, the nursing notes often omitted such information as antecedents and location of incidents.

The information derived from the different recording procedures—incident reports, nursing notes, and the PBRS—can serve different purposes. Incident reports are closely tied to workers' compensation and are considered legal documents for insur-

ance purposes. Nursing notes are in narrative format and sometimes provide valuable impressions of how behaviors build over several hours to result in aggression. The PBRS is a rapid-access database for answering clinical questions about such variables as the frequency, antecedents, and locations of the behaviors as well as medication efficacy.

### **Comparison with other instruments**

Aggression in psychiatric facilities has long been known to be underreported in standard hospital charting procedures (4,5). Supplemental recording procedures used to measure specific behavioral incidents, such as the Overt Aggression Scale (2), the Scale for the Assessment of Aggressive and Agitated Behaviors (6), and the Staff Observation Aggression Scale (7), have been shown to document systematically a much greater proportion of aggressive behavior on a unit than does standard chart monitoring.

We developed our own system rather than use existing measures because we needed a more time- and cost-efficient method of tracking high-frequency aggression and problem behaviors. The most common problem behaviors on our unit are screaming-disruption and resistiveness-uncooperativeness. If individual sheets such as those used in the previously mentioned scales had been used for recording incidents on our unit in 1997, there would have been 405 pages on aggressive incidents and 1,090 pages on problem behaviors—assuming that all of the incidents entered in the PBRS were recorded on individual sheets. We believe that requiring a separate page for each incident would result in substantially fewer documented incidents.

In contrast, a PBRS form can be designed to document more than 20 incidents. The PBRS contains essentially the same information as the existing scales, or more, and the information is entered rapidly by nursing staff. The single line of numerically coded data is then entered directly into a spreadsheet, allowing statistical analyses of individual and unit-based trends to be conducted quickly and easily.

### **Routine uses of the PBRS**

PBRS monitoring begins as soon as a patient is admitted to the unit. Each new patient's case is presented at the multidisciplinary team meeting within two weeks of admission. A summary of the PBRS data to date is valuable for understanding the patient's behavioral problems, and it provides a pretreatment baseline for later interventions. Subsequent reports can be generated daily, weekly, or monthly and can be presented at patient review conferences. If new behaviors emerge, they are identified quickly by the treatment team and are recorded in the database.

The PBRS also can be used to identify and disentangle unit-based problems. For example, in early 1996 we documented a 136 percent increase in aggressive incidents on the unit. Further investigation revealed that four patients were instigating the majority of these incidents, and three patients were the targets of most of this aggression. Most of these incidents occurred in the dayroom, and the targeted patients were engaged in loud, disruptive behavior when the incidents occurred.

A treatment team brainstorming session produced several suggestions for modifying the patients' physical environment and increasing rehabilitation activities and programming. In the month after these changes were implemented, aggressive behavior declined by 46 percent and patient injuries due to aggression by 25 percent. Thus the PBRS not only helped us identify a unit-level problem but also was useful in tracking the effectiveness of our solutions.

### **Conclusions**

The PBRS provides a rich source of information about aggressive and problem behaviors at both the individual level and the unit level. The system is user friendly because of its simplicity and effectiveness as well as its minimal requirements for staff training. In clinical practice the system can provide useful information for evaluating the effectiveness of behavioral interventions or medication changes and for environmental restructuring based on analyses of the antecedents of aggressive or problem behaviors on a unit. ♦

## References

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