

Psychiatric Use of Unscheduled Medication in the Pennsylvania State Hospital System, Effects of Discontinuing the Use of P.R.N. Orders

Authors/Presenters:

Gregory Smith, M.S.
Chief Executive Officer
Allentown State Hospital
1600 Hanover Avenue
Allentown, Pennsylvania
GRSmith@state.pa.us

Robert Davis, M.D.
Associate Medical Director
Pennsylvania Office of Mental Health & Substance
Abuse Services
Harrisburg State Hospital
Beechmont Building
Harrisburg, Pennsylvania
RobeDavis@state.pa.us

Background

In 2004, following the published study on the use of P.R.N. Orders and Exposure of Psychiatric Inpatients to Unnecessary Psychotropic Medications at the Arkansas State Hospital, the Pennsylvania state hospital system began a study of its 9 hospitals to assess patient exposure to unscheduled medications between the one hospital that did not permit the use of P.R.N. orders and the other 8 hospitals that allowed their use.

Objective

The initial objective of this prospective study was to assess patient exposure to the psychiatric use of unscheduled medications at Allentown, Clarks-Summit, Danville, Harrisburg, Mayview, Norristown, Torrance, Warren and Wernersville state hospitals and to unify practice guidelines in this regard. This objective was expanded in August 2004 to evaluate the effects of discontinuing the psychiatric use of P.R.N. orders on patient and staff safety measures.

Method

The 15-month period covered by this study began March 1, 2004 and ended May 31, 2005. The 6-month period preceding the March 1, 2004 start date, September 1, 2003 through February 29, 2004, was established to baseline the hospital safety measures used to assess the effects of discontinuing the psychiatric use of P.R.N. orders that was announced in August 2004.

All unscheduled medications given for psychiatric reasons were entered into a uniform database by each hospital's performance improvement staff. Each hospital's 24-hour nursing report served as the source document for all database entries. Licensed nurses, responsible for the administration of the unscheduled medication, completed this report.

The specific medication administered, its dose, route, date, time, effectiveness, person requesting the medication with the reason for its use were the data elements collected on each medication administered in all 9 hospitals. Multiple medications given at the same time were treated as separate record entries. This data was appended into a central database each month for analysis. Data on the administration of unscheduled medications were shared monthly with the hospital system. Additionally, throughout this span, including the baseline period, a monthly risk management summary report was issued to all hospitals that provided incident detail on all people served by the hospital system. The data contained in this report was used to assess the effects of this change on key patient and staff safety measures.



Results

People served in the 8 hospitals that permitted the use of PRN orders were exposed to more than twice the amount of unscheduled medication as the hospital that did not permit their use ($p < .003$).

During the 15 month study period 46,913 unscheduled medications were administered to people served in the hospital system. Of this number, 35,353 (75 percent) were administered by P.R.N. order and 11,560 (25 percent) were administered by STAT physicians order. During the first month of the study period, March 2004, 87.7 unscheduled medications per 1,000 days-of-care were administered in the hospital system. By May 2005, the last month of the study, the system rate had declined to 17.2 medications per 1,000 days-of-care. The primary reasons reported for the use of unscheduled medications were agitation (60%), followed by anxiety (16%), and insomnia (7%). Unscheduled medications given for psychosis were given 120 times (0.3 percent) during the study period.

Patient-to-patient assaults with patient injury averaged 1.78 per 1,000 days of care in the hospital system during baseline. During the 9 month period after the decision was announced to discontinue the psychiatric use of PRN orders the system rate decreased to 1.49 per 1,000 days-of-care ($p < .036$). Patient-to-staff assaults were unaffected by this change. Falls, Aggression, Adverse Drug Reactions, Seclusion and Mechanical Restraint all declined following the decision to discontinue the psychiatric use of PRN orders.

Conclusion

Decreasing the psychiatric use of unscheduled medications has resulted in a safer hospital system for patients and staff. Sedation, the desired effect of most medications given on an unscheduled basis, can account for increased falls and adverse drug reactions. The paradoxical effects of lorazepam could account for increased aggression, assaults and anxiety. Increasing the quality of the decision-making on the need to administer additional psychiatric medication by requiring a physician's approval of each request reduced patients over exposure to psychotropic medication. All uses of unscheduled medications, including medications administered early, need to be closely monitored by the clinician as well as the healthcare facility to assure their proper and judicious use.