Nurse Interceptions Reduce Medication Errors

A recent study funded by the Robert Wood Johnson Foundation Interdisciplinary Nursing Quality Research Initiative, published in the Journal of Nursing Scholarship, has taken a closer look at acute care hospitals to determine the relationships among characteristics of the nursing practice environment, nurse staffing levels, nurses’ error interception practices, and rates of nonintercepted medication errors.

The study was conducted in a sample of 82 medical-surgical units recruited from 14 acute care hospitals in New Jersey. RNs on all of the units were surveyed, producing a sample of 686 staff nurses. Data collected for the 8-month study period included the number of medication errors per 1,000 patient days and the number of RN hours per patient day. Nurse survey data included the Practice Environment Scale of the Nursing Work Index as a measure of environmental characteristics, and a metric of nurses’ interception practices was developed for the study.

The study found that nurses’ error interception practices—including independent comparisons between the medication administration record and patient record at the beginning of a nurse’s shift; determining the rationale for each ordered medication; requesting that physicians rewrite orders when improper abbreviations are used; and ensuring that patients and families are knowledgeable regarding the medication regimen so that they can question unexplained variances—are associated with lower rates of non-intercepted medication errors, further quantifying the important role of nurses in enhancing patient safety.


Off-Label Antipsychotic Use Increases among Children

A national study conducted at The Children’s Hospital of Philadelphia shows an increased use of powerful antipsychotic drugs to treat publicly insured children over the past decade. The study, published in Health Services Research, found a 62% increase in the number of Medicaid-enrolled children ages 3 to 18 taking antipsychotic medication, reaching a total of 354,000 children by 2007.

Increased use of antipsychotic agents was observed across a wide range of mental health diagnoses, and was particularly high for children with attention-deficit/hyperactivity disorder (ADHD) or conduct disorder, although the U.S. Food and Drug Administration has not approved the drugs to treat these conditions in children. In total, 65% of children prescribed antipsychotic agents in 2007 were using the drugs off label.
While schizophrenia, bipolar disorder, and autism were the most likely diagnoses to result in an antipsychotic prescription, children with these disorders did not make up the majority of those who took such drugs. Children with ADHD and those who were diagnosed with three or more concurrent mental health disorders made up the largest group of children taking antipsychotic agents. In 2007, 50% of children taking antipsychotic drugs had a diagnosis of ADHD, and 14% had ADHD as their only diagnosis.

The researchers noted that the increase in antipsychotic agent use is due in part to an overall increase in the number of mental health diagnoses assigned to children. Researchers found a 28% increase in the number of children with a mental health diagnosis, but this alone did not account for the spike in prescriptions.


### Antidepressant Treatment Beef Up with Creatine

In a proof-of-concept study, researchers from three South Korean universities and the University of Utah reported that women with major depressive disorder who augmented their daily antidepressant medication with 5 grams of creatine responded twice as fast and experienced remission of the illness at twice the rate of women who took the antidepressant drug alone. The study, published in the American Journal of Psychiatry online, means that taking creatine under a physician’s supervision could provide a relatively inexpensive way for women who have not responded well to selective serotonin reuptake inhibitors to improve their treatment outcomes.

How creatine works against depression is not precisely known, but the researchers suggest that the pro-energetic effect of creatine supplementation, including the making of more phosphocreatine, may contribute to an earlier and greater response to antidepressant agents.

The 8-week double-blind study included 52 South Korean women, ages 19 to 65, with major depressive disorder. All of the women took the antidepressant agent Lexapro® (escitalopram) during the trial. Twenty-five of the women received creatine with the Lexapro, and 27 were given placebo. Eight women in the creatine group and 5 in the placebo group did not finish the trial, leaving a total of 39 participants.

Participants were interviewed at the start of the trial to establish baselines for their depression, and were checked at 2, 4, and 8 weeks to see how they responded to Lexapro plus creatine or Lexapro and placebo. The researchers used three measures to check the severity of depression, with the primary outcomes being measured by the Hamilton Depression Rating Scale (HDRS).

The group that received creatine showed significantly higher improvement rates on the HDRS at 2 (32%) and 4 (68%) weeks compared with the placebo group (3.7% and 29%, respectively). At the end of 8 weeks, half of those in the creatine group showed no signs of depression compared with one quarter in the placebo group. No significant adverse side effects were associated with creatine.


### Strengthening Brain Connection May Help GAD

A University of Wisconsin-Madison imaging study shows the brains of people with generalized anxiety disorder (GAD) have weaker connections between a brain structure that controls emotional response and the amygdala. The findings support the theory that reduced communications between parts of the brain explain the intense anxiety felt by people with GAD.

The researchers did two types of imaging—diffusion tensor imaging and functional magnetic resonance—on the brains of 49 GAD patients and 39 healthy volunteers. Compared with the healthy volunteers, the imaging showed the brains of people with GAD

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had reduced connections between the prefrontal and anterior cingulate cortex and the amygdala via the uncinate fasciculus. This reduced connectivity was not found in other white matter tracts elsewhere in their brains.

The researchers questioned whether this weak connection results in the intense anticipatory anxiety and worry that is the hallmark of GAD. It also suggests that behavioral therapy that teaches patients to consciously exercise this emotional regulation works to reduce anxiety by strengthening the connection.


Couples Overcome PTSD Together

Participation in disorder-specific couples therapy resulted in decreased posttraumatic stress disorder (PTSD) symptom severity and increased patient relationship satisfaction in couples in which one partner was diagnosed as having PTSD, compared with couples who were placed on a wait list for the therapy, according to a study in the Journal of the American Medical Association.

The researchers conducted a study to examine the effect of a cognitive-behavioral conjoint therapy (CBCT) for PTSD, designed to treat PTSD and its symptoms and enhance intimate relationships in couples. The randomized controlled trial, conducted from 2008 to 2012, included heterosexual and same-sex couples \((n = 80\) individuals) in which one partner met criteria for PTSD according to the Clinician-Administered PTSD Scale. Symptoms of PTSD, coexisting conditions, and relationship satisfaction were collected by assessors at the beginning of the study, at mid-treatment \((8\) weeks after baseline), and at posttreatment \((16\) weeks after baseline). An uncontrolled 3-month follow up was also completed. Couples were randomly assigned to take part in the 15-session CBCT for PTSD protocol immediately \((n = 20\) or were placed on a wait list for the therapy \((n = 20\). Clinician-rated PTSD symptom severity was the primary outcome; intimate relationship satisfaction, patient- and partner-rated PTSD symptoms, and coexisting symptoms were secondary outcomes.

The researchers found that PTSD symptom severity and patients’ intimate relationship satisfaction were significantly more improved in couples therapy than in the wait-list condition. Also, change ratios (calculated by dividing the change in the CBCT condition from pretreatment to posttreatment by the change in the wait-list condition over this period) indicated that PTSD symptom severity decreased almost three times more in CBCT compared with the wait list; and patient-reported relationship satisfaction increased four times more in CBCT compared with the wait list.

The secondary outcomes of depression, general anxiety, and anger expression symptoms also improved more in CBCT relative to the wait list.

See the article by Davis et al. on pages 20-29 of this issue for more information on couples therapy, specifically for veterans of Operations Enduring and Iraqi Freedom.


Will Plastic Surgery Prevent Bullying?

Bullying among teens has always been a problem, and now some students, parents, and other organizations are taking significant, appearance-altering action in an effort to prevent a teen from being bullied. On the heels of a recent story about a 14-year-old Georgia girl who was granted complimentary plastic surgery from a foundation to help ward off school bullies, the issue has sparked notable controversy and debate, and RealSelf.com conducted an online poll to gauge how the public felt about this topic. RealSelf.com is the largest online community for sharing and learning about cosmetic surgeries and treatments.

The survey findings revealed that while many are completely against adolescent surgery, others would be comfortable allowing their teen to undergo surgical procedures to alleviate harassment by peers. The poll surveyed more than 650 people and asked if they would allow their child to undergo a procedure to help decrease bullying. According to the results, 68% were in favor of plastic surgery for teens when it comes to bullying, while 32% were not. When asked about potential procedures, 24% stated they felt both nose jobs and ear pinning for a teen would be appropriate, if it could help prevent them from being bullied.