ISMP Medication Safety Alert!®

Nurse Advise-ERR™

Educating the healthcare community about safe medication practices

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Success with New Year's resolutions requires team support

Most people make at least one New Year's resolution. Unfortunately, about a quarter of these resolutions will be abandoned by the end of the first week, and a majority will fall by the wayside after just 6 weeks.

In spite of this, people are rather resilient when faced with a setback; 60% of those who fail this year will make the same resolution next year.[1] They believe that failures are not inevitable, and with a few adjustments, successes will eventually occur. Thus, the same pledge is made anywhere from 5 to 10 years before a positive outcome is achieved. So personal resolve over time, despite setbacks, is one factor related to success with personal and job-related changes.

Three additional elements are needed to convert personal resolve into constructive job-related improvements: a) perceiving ourselves as having an important role in identifying what needs to be improved, b) having a process in place that will guide and direct the change, and c) obtaining positive support and feedback from others in the workplace.

A study of pharmacists illustrates how these three elements can help drive change to improve medication safety.[2] Over a 4-week period, pharmacists were given time each week to self-monitor their work and document in a diary any medication errors they found and corrected. After 2 weeks, study investigators provided anonymous written feedback to each pharmacist about how others performed as a group. Using this feedback, pharmacists were asked to set a goal to either maintain their current performance or improve their ability to identify and prevent medication errors. Compared to a control group where no feedback or goal setting occurred, even those who just wanted to maintain their current performance increased their error detection by 22%. Even more impressive, pharmacists who set goals to enhance error detection were able to improve their ability to detect and prevent medication errors by 103%.

What brought about such improvement? In the study, the self-monitoring process allowed pharmacists to initiate and take control over areas of their work and identify where improvements were needed. Sharing what was learned collectively among pharmacists also encouraged them to support each other's attempts to change. It widened the scope of possible improvements by raising a range of issues for consideration. The pharmacists ranked this type of feedback, support, and goal setting among the most effective medication error-reduction strategies investigated by the researchers.

So take heart and make those New Year's resolutions! Select at least one potential change related to improving medication safety. Then, nurses working within a unit could meet to share their safety resolutions to foster team support, feedback, and guidance with the desired changes. Who knows? Maybe someone's personal resolve to change will spark the interest of others on the team to follow suit. While people resist change when they feel coerced or believe they are doing it for someone else, group support of specific patient safety improvements that have been chosen by individual team members will set the stage for more widespread changes among staff.

References: 1. Polivy J, Herman CP. If at first you don't succeed. *Amer Psychol* 2002;57:677-689. 2. Grasha AF. Tools for the reflective practitioner: Use of self-monitoring, personal feedback, and goal setting to reduce error. *Health Notes: Quality Assurance* 2002;1(6):19-24.

safetywire

Is U really worth it? After reading the order below, a pharmacist was concerned that the dose for **LANTUS** (insulin glargine), which he read as 90 units, was unusually high.

He was going to ask a nurse to check with the prescriber, but then he noticed that clarification had already occurred.

However, the pharmacist thought the nurse had clarified the dose of 90 units, not the unapproved abbreviation (u), so he misinterpreted the order clarification as "…dosage **15** units" instead of "…dosage **is** units" and dispensed 15 units, a more common dose than 90 units. Fortunately, the nurse noticed the error and called to obtain the correct dose (which was actually 90 units). In this case, the "u" for units led to a clarification as ambiguous as the original order. The only safe way to express units is to write it out completely. Additionally, nurses who clarify a medication order should rewrite the entire order; in this case: "To clarify: Lantus insulin 90 units every evening subcutaneously."

Wrong patient error. An oncology patient received another patient's chemotherapy despite verification by two nurses. Typically, each patient's chemotherapy was sent inside a labeled ziplock bag, which was then taken to the bedside for verification before administration. In this case, the pharmacy sent chemotherapy for two patients inside the same ziplock bag (same drug, different doses). The verification proceeded by taking the bag to the patient's room. When the contents were removed, the nurses discovered that there were chemotherapy bags for two

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New diabetic drug, Symlin, carries a heightened risk of errors

A new subcutaneous medication, **SYMLIN** (pramlintide acetate), was recently released as adjunctive therapy to insulin for type 1 and type 2 diabetes. The drug is a synthetic analog of human amylin, a pancreatic hormone that helps control postprandial glucose by slowing gastric emptying, modulating appetite, and decreasing postprandial glucagon concentrations. While this is great news for patients, concerns about errors exist when using this drug.

Symlin is dosed in micrograms (mcg) but the manufacturer recommends using a dosing chart supplied in a patient medication guide to "convert" the mcg dose to units, and administering the drug using a U-100 insulin syringe (preferably the 0.3 mL size). This poses two problems:

- The dosing chart must be readily available to prescribers, pharmacists, nurses, and patients to "convert" the mcg dose to units.
- Using an insulin syringe, a patient or nurse could become confused and withdraw 30 *units*, for example, for a prescribed 30 *mcg* dose.

Dosage Prescribed (mcg)	Increment Using a U-100 Syringe (units)	Volume (mL)
15	2.5	0.025
30	5	0.05
45	7.5	0.075
60	10	0.1
120	20	0.2

Sample of dosing chart for prescribers.

The package insert, under *prescribing* information, contains a chart (above) that also converts mcg doses to volumetric doses in mL. If a physician believes the patient will be using a small volumetric syringe (tuberculin) to administer the medication, he might prescribe the medication in mL. However, the patient's information sheet lists only a chart with the conversion of the mcg dose to units, not volume. Thus, patients may become confused about the actual Symlin dose. Also, nurses may not have ready access to either conversion chart. Prescribers have also expressed the dose in "units," potentially causing confusion as the following error illustrates.

A patient on Symlin was admitted to a hospital. An endocrinologist gave a telephone order for "Symlin 20 units" (equal to 120 mcg). The pharmacist was unfamiliar with Symlin. She looked it up in *Micromedex*, but became confused because the physician had prescribed the dose in units while *Micromedex* expressed the dose in mcg. The package insert was not available in the pharmacy as the patient's medication from home was being used. This led the pharmacist and the patient's nurse to believe that the physician must have meant to order 20 mcg, not 20 units (which is 120 mcg). For several days, the patient received a subtherapeutic dose and experienced loss of glycemic control requiring insulin dose adjustments. Later, a clinical coordinator discovered the error while reviewing the original order.

Additional conditions exist that could greatly contribute to errors. Current labeling states that Symlin and insulin should not be mixed in one syringe. The drug should be administered only in the abdomen or thigh, not the arm, at least 2 inches from an insulin injection. Patients who take Symlin must test their glucose before and after every meal and at bedtime (7 times daily), and initially adjust their rapid- or short-acting insulin at mealtime, as guided by their physician. Thus, Symlin should only be prescribed for patients who are likely to follow up with their physicians and comply with their instructions.

ISMP has contacted the manufacturer, Amylin Pharmaceuticals, to recommend packaging Symlin in a pen injector delivery device that is capable of delivering up to 120 mcg in 15 mcg increments. We will keep you posted on any changes.

safetywires continued

different patients. They correctly verified the patient (using two identifiers) and the medication, but the nurse who administered the chemotherapy accidentally picked up the wrong patient's bag and hung it. The other bag of chemotherapy was placed back in the ziplock bag. The error was discovered hours later while looking for the other patient's chemotherapy. Luckily, the patients' doses were close enough that no harm resulted. In this case, the wrong chemotherapy bag should have been removed from the room immediately. Just as important, the pharmacy should dispense only one patient's medications in each ziplock bag. Besides bar code scanning, involving the patient as the final double check might have also averted this error.

Special Announcements

ISMP teleconference. Please join us for **Preventing Errors with Insulin: An Interdisciplinary Approach**, to be held **February 9**, from 1:30 to 3:00 pm (ET), and repeated **February 15**. The speakers will explore barriers to optimal therapy and safety, common types of insulin errors, and key safety strategies. CE credit will be available. Visit www.ismp.org/educational/teleconferences.asp to register.

Free CE Credit (1 hour) for the 2005 July-December issues of **Nurse Advise-ERR™** is now available at: www.ismp.org/Newsletters/nursing/newsletterCE/default.asp.

ISMP Medication Safety Alert! Nurse Advise-ERR™ (ISSN 1550-6304) **Editors:** Judy Smetzer, RN, BSN; Nancy Tuohy, RN, MSN; Michael R. Cohen, RPh, MS, ScD; Russell Jenkins, MD. **ISMP, 1800 Byberry Road, Suite 810, Huntingdon Valley, PA 19006.** Tel. 215-947-7797; Fax 215-914-1492; E-MAIL: nursing@ismp.org.

Report medication errors to ISMP at 1-800-FAIL-SAF(E).

Now accepting applications for the *2006-2007* ISMP Safe Medication Management Fellowship

Location and Term: The 12-month fellowship commences summer 2006 in Huntingdon Valley, PA (near Philadelphia), at the office of the Institute for Safe Medication Practices. Relocation to the area is required.

Fellowship Description: Because of the Institute's years of experience and solid reputation within the medication safety field, the ISMP Safe Medication Management Fellowship offers an experienced healthcare provider an unparalleled opportunity to learn from and work with some of the nation's experts in medication safety. Now in its 14th year, the Fellowship allows the candidate to work collaboratively with practitioners in every kind of healthcare setting in developing and implementing interdisciplinary error-prevention strategies. The Fellow also works on broad-based communication about medication errors and their prevention, and education initiatives that reach healthcare professionals and the public with crucial information. Graduates of the program have been sought for employment in medication safety positions in healthcare systems, regulatory agencies, the pharmaceutical industry, and ISMP.

Fellowship Opportunities: As part of his/her year at ISMP, the Safe Medication Management Fellow:

- Gains valuable experience through site visits to various healthcare delivery settings and extensive networking within the nation's pharmaceutical, healthcare, and legislative and regulatory communities
- Assists in investigating medication errors reported to national and state error reporting programs
- Helps provide follow-up to product manufacturers and regulatory authorities after learning about safety hazards
- Gains exposure to medication-system problems and error prevention program development in countries around the globe
- Participates in original research and surveys on medication errors and prevention
- Learns and applies the techniques of Failure Mode and Effects Analysis while assisting staff in evaluating new medical products for safety
- Develops verbal and writing skills while collaborating with ISMP staff on educational events and publication of newsletters and journal columns.

Candidate Qualifications and Compensation: Pharmacists and physicians who have completed a residency program, and nurses with risk management, quality improvement, or patient safety experience may apply. A generous stipend, two weeks vacation, and full health benefits are provided.

How to Apply: Information and application can be found at www.ismp.org/profdevelopment/managementfellowship.asp. Applications can also be requested by calling 215-947-7797 or via ismpinfo@ismp.org.

All applications must be received by March 31, 2006.

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