



Practitioners anticipate punitive action from licensing bodies

Despite widespread recognition that blame, shame, and punishment for mistakes are tremendously counterproductive to patient safety, responses to our March 2005 survey from 1,572 licensed healthcare providers (1,032 registered nurses [RNs], 64 licensed practical nurses [LPNs]) suggest that participants still fear punitive action from their licensing boards in the wake of a medication error.

General results. As expected, participants anticipated an increasing severity of punishment by the licensing boards as the patient outcome worsened. For example, 93% of all respondents believed their licenses would be restricted in some fashion if involved in a fatal medication error. Among nurses, 21% of RNs and 33% of LPNs felt their licenses would be revoked if the error resulted in a fatality (see Table 1 on page 2 for more results). One in six (16%) of all respondents felt there would be a monetary fine included for fatal errors, and 7% thought this would also occur with an otherwise harmful event. If the patient was harmed but did not die, 22% of RNs believed license probation would result, 6% felt license suspension would occur, and 1% felt license revocation would occur. Half of all participants believed that remedial education would be required in the wake of either a harmful or fatal medication error.

Many respondents clearly feared licensing action if three errors or more were reported to their licensing board, regardless of severity or patient outcome. Thirty-four percent of RNs and 33% of LPNs felt that their licenses would be placed on probation (see Table 1) for three or

more errors reported within 1 year. Of all respondents, almost one in five thought that notification to other states in which they were licensed would be required under these circumstances.

Surprisingly, 30% of all respondents (31% of RNs, 46% of LPNs) felt that they would receive a verbal or written reprimand, or be required to obtain remedial education, even if the reported medication error *never reached the patient!* While a reprimand may not seem as punitive as license restrictions, still, these actions often become part of the professional's licensing records, at least temporarily.

Differences between the professions. Overall, physician respondents (n=36) expected less punitive action from their licensing boards than pharmacists (n=326) and nurses, particularly for intercepted or minor errors. LPNs expected the most punitive action from their boards, regardless of the type or severity of the error. Pharmacists and physicians anticipated less remedial education than nurses for potentially harmful errors and policy violations.

Differences if the error was reported. Punitive actions were anticipated more often among the respondents (n=50) who had experienced a medication error that had actually been reported to their licensing body within the last 5 years. This subset of individuals (more than half being nurses) reported more anticipated verbal and written reprimands in all categories except minor or intercepted errors. However, for minor and intercepted errors, there was an increase in the anticipated remedial

continued on next page

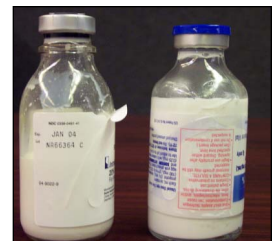
nicecatch



Little bottle of lipids?

A medication error was narrowly avoided when a nurse intervened before a new graduate nurse could hang what she described as "a little bottle of lipids." A closer look at the bottle of white, opaque fluid revealed that it was propofol (**DIPRI-VAN**), not lipids (which had not been prescribed for this patient). The patient had been receiving propofol in the critical care unit, and this bottle was accidentally transferred with the patient to the medical unit.

Depending on how these products are stored, this mistake could happen in almost any acute care setting. Lipids come in various sizes. This hospital used 100 mL bottles of **INTRALIPID** 20% fat emulsion. The size of this bottle is not that much different than the 50 mL propofol 1% emulsion from Baxter (see photo). Thus it was relatively easy, particularly for someone new to healthcare, to mistake one for another. Though the propofol vial has some red warning text and a highlighted medication name, placing a pharmacy label on top of the text can obliterate these important signals.



Left: 100 mL bottle of Intralipids
Right: 50 mL vial of propofol

Unless absolutely necessary, it is safest to avoid using the 100 mL size bottles of lipids for IV infusion. We suggest a double check and/or bar-code scanning for lipids or propofol (or both) before hanging. For drugs like propofol, neuromuscular blockers, and others that should only be given in critical care settings, be sure these medications are never transferred with patients to locations outside the unit. As a result of this kind of mix up, Baxter now supplies lipids in plastic containers. But until all stock of the glass bottles is depleted, this potential for error remains.

Licensing bodies survey continued education. This subset also felt there would be greater penalties against their licenses, especially for fatal errors, policy violations, and three or more errors reported per year. They also reported a greater expectation of monetary fines for all categories except inter-cepted errors.

Interestingly, respondents who are, or have ever been, an employee or panel member of a licensing board (n=34) consistently expected a higher degree of punitive action in the wake of a medication error. Demographic differences between individual states could not be determined due to insufficient data among all 50 US states.

Usefulness of publications. Overall, respondents were split regarding the value of newsletters published by their licensing boards; 16% found the publications very helpful to patient safety and quality; 33% found them somewhat helpful; and 52% were not sure or did not find the publications helpful at all. LPNs found the publications most helpful, and physicians found them least helpful.


Respondents who had experienced a medication error that was reported to their licensing board found the newsletter less valuable than the group who had never had an error reported to the board. Conversely, 82% of respondents who are, or had ever been, an employee or panel member of a licensing board found the publication useful.

Conclusion. Our survey indicates that many nurses, pharmacists, and physicians believe that their licensing boards might take serious action against them if they are involved in a medication error, be it a near miss or a tragically fatal error with a multitude of system-based causes.

These results describe a disconnect between healthcare providers' anticipated response to an error by their licensing boards and the 1999 Institute of Medicine report, *To Err is Human*, as well as advice from national safety experts, which clearly refute the value of punishment for unintentional acts such as errors. Furthermore, fear of punishment from licensing boards may greatly contribute to underreporting of medication errors, even within healthcare systems that embrace a more just culture. Most importantly, we will never fully understand the system-based causes of errors if practitioners fear punishment from reporting.

Hopefully there are impending positive changes within the professional licensing boards—changes brought about by healthcare's evolving culture of safety. ISMP will bring any new promising initiatives by licensing boards to the attention of our readers and others. We thank all who participated in this survey. We will use the findings to continue our efforts to influence national policy, promote publication of error-reduction strategies in licensing body publications, and support a more just culture within state licensing boards. Visit www.ismp.org/s/survey200502R.asp for full survey data.

safetywires

 **Monitoring for DEPODUR.**

DepoDur (morphine sulfate extended-release liposome injection) is a new, one-time epidural injection that's advertised as, "Two Days of Post-Surgical Pain Relief Now Possible With Just One Shot." The analgesic effects continue for about 48 hours after administration, during which time no other medications should be injected into the epidural space. The manufacturer's package insert notes that concurrent use of other central nervous system (CNS) depressants increases the risk of respiratory depression, hypotension, profound sedation, or coma. But it's difficult to identify a patient who's received DepoDur as there are no continuing orders. Thus, surgeons might order pain medications by other routes within this 48-hour timeframe, which could cause excessive sedation. Additionally, nurses may not be alerted to the need for patient monitoring, similar to patients with indwelling epidural catheters or IV opioids. During clinical trials, the onset of respiratory depression generally occurred within the first 16 hours after administration. We suggest using a pre-printed order form that states "Patient received DepoDur at ___ (time) on ___ (date)," and includes bold warnings that the patient should not receive other pain medications, CNS depressants, or epidural drugs without anesthesia consent. The form should also include parameters for monitoring. Labels have also been suggested for the chart, MAR, and patient's door or bed (e.g., similar to "Patient has received TPA, do not give anticoagulants").

continued on page 3 ▶

| Table 1. | More than 3 errors reported in 1 year | | | | | Policy/procedure violation | | | | | Fatal error | | | | |
|--------------------|---------------------------------------|-----|-----|-----------------------|-----------------|----------------------------|-----|-----|-----------------------|-----------------|-------------|-----|-----|-----------------------|-----------------|
| | All | RN | LPN | Error Report to Board | No Error Report | All | RN | LPN | Error Report to Board | No Error Report | All | RN | LPN | Error Report to Board | No Error Report |
| Written Reprimand | 30% | 29% | 25% | 44% | 29% | 39% | 38% | 53% | 42% | 39% | 26% | 24% | 14% | 34% | 26% |
| Remedial Education | 47% | 48% | 52% | 58% | 47% | 40% | 44% | 39% | 42% | 40% | 50% | 50% | 36% | 42% | 50% |
| Probation | 34% | 34% | 33% | 56% | 33% | 24% | 26% | 17% | 36% | 24% | 41% | 43% | 34% | 48% | 40% |
| Suspension | 24% | 24% | 19% | 34% | 24% | 17% | 18% | 14% | 24% | 17% | 33% | 36% | 23% | 36% | 34% |
| Revocation | 14% | 14% | 8% | 22% | 13% | 6% | 6% | 6% | 12% | 5% | 19% | 21% | 33% | 24% | 19% |
| Monetary Fine | 11% | 8% | 8% | 18% | 10% | 9% | 7% | 6% | 14% | 8% | 16% | 13% | 22% | 26% | 15% |

Improvised dosing charts can cause errors

A patient received nitroglycerin at 60 mL/hour rather than 60 mcg/minute, as ordered. He became hypotensive but recovered after the error was detected. At first, a pharmacist investigating the event thought that someone had programmed the infusion pump with the concentration of the premixed nitroglycerin (50 mg/250 mL, or 200 mcg/mL) instead of the rate (60 mcg/minute, or 18 mL/hour). However, he soon discovered that a poorly designed dosing table for nitroglycerin caused the problem.

| Flow Rate | mcg |
|-----------|-----|
| 3 | 10 |
| 6 | 20 |
| 9 | 30 |
| 54 | 180 |
| 57 | 190 |
| 60 | 200 |

The handwritten table (see photo) listed flow rates from 3 mL to 60 mL per hour, alongside a column that corresponded to doses between 10 mcg and 200 mcg per minute. However, no dosage unit expression was listed alongside the numbers in either column. This led to confusion and subsequent misprogramming of the pump. Later, the pharmacist was surprised to find additional handwritten dosing tables for other drug infusions, many of which did not correspond to the concentrations of premixed solutions in the hospital.

Dosing charts are an important safety strategy because they eliminate the need for error-prone calcu-

lations. However, a formal approval process, which involves nurses and pharmacists, and ongoing oversight, is needed to ensure standardization and proper design. Clear expressions of drug concentration and units of measure are a must. Also, dosing tables from other hospitals should not be brought into a new facility for use unless the same formal approval is obtained.

When standard concentrations are used, pharmacists can also apply commercial or computer-generated labels that include dosing tables. At a minimum, pharmacists should affix labels that clearly list the parameters (total drug in the container, volume of diluent, concentration) that must be entered into the pump to calculate an infusion rate.

Also require an independent double check of pump settings for high-alert drugs like nitroglycerin. Smart pumps with dose-limit features also could help prevent large overdoses like this one. These pumps can screen for safe infusion rates using a library of preprogrammed standard concentrations for commonly used drugs. Overriding these alerts, however, negates any safety feature.

pearls for patients



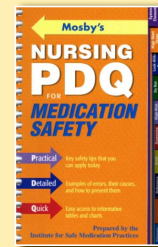
Penny for your thoughts.

Dime for your breath?

After using his albuterol inhaler, an asthmatic patient began to cough and felt as though something had gone into his lungs. A chest x-ray at a local clinic confirmed the presence of a coin in his trachea. A fiberoptic bronchoscopy was performed in a hospital to remove a dime. The patient later revealed that he kept the inhaler in his pocket without the dust cap on. This allowed the dime to become lodged in the opening of the inhaler and be inhaled along with the dose of albuterol. Nurses should be clear when educating patients on proper inhaler use and storage. This includes reminding patients to keep the dust cap in place when the inhaler is not in use, as dust or lint (or a dime, in this case) can enter the inhaler and cause problems when forcibly expelled into the airway or lung during drug administration.

Mosby's Nursing PDQ for Medication Safety prepared by ISMP.

This pocket-sized reference has quick facts and error-reduction strategies for high-alert medications, look-alike drugs, high-risk procedures, assessing risk, error reduction, error reporting, medication administration, and more. For more information and to order, visit: www.ismp.org/NursingArticles/Nbook.htm.



safetywires continued

You know what I mean. Some orders are communicated ambiguously through the use of unfamiliar abbreviations or "coined" names for medications (e.g., "epi" for epinephrine, "vanc" for vancomycin). But, at times, it's what is **not** said or included in written orders that can be just as problematic. In one example, during a resuscitation, an emergency department physician ordered "10 of insulin." Distracted by the chaos, a new nurse drew up 10 mL of regular insulin instead of 10 units. Thankfully, the dose was not given because another nurse caught the error while double checking the syringe—a step that understandably may be bypassed during emergencies. Believing they know what is intended, nurses may accept incomplete orders without thinking. They may be used to hearing "give an amp of bicarb" or seeing "Tylenol 2 tabs prn pain." But which size ampul? What strength of acetaminophen (**TYLENOL**) or sodium bicarbonate? What route of administration? Clarification of an incomplete order is vital to patient safety, even during stressful situations.

ISMP Medication Safety Alert! Nurse Advise-ERR (ISSN 1550-6304) ©2005 Institute for Safe Medication Practices (ISMP).

Permission is granted to subscribers to reproduce material for internal newsletters or communications. Other reproduction is prohibited without written permission. Unless noted, published errors were received through the USP-ISMP Medication Errors Reporting Program.

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 SAFE.