



# Exploring How Nursing Schools Handle Student Errors and Near Misses

This study, part 1 of a two-part series, reports survey findings that indicate areas for improvement.

In 2000, the Institute of Medicine reported that up to 98,000 people die each year as a result of preventable medical errors.<sup>1</sup> Subsequent estimates by James and by Makary and Daniel indicate that, in actuality, between 210,000 and 440,000 such deaths occur annually.<sup>2,3</sup> During the past 15 years, health care organizations have devoted significant effort toward identifying the causes of medical errors and instituting the necessary changes to improve health care quality and patient safety. But less attention has been paid to understanding how students learn about quality and safety, examining school policies and tools that can help students learn about errors and near misses, and exploring ways to alter curricula and create environments that optimize such learning. This study, part 1 of a two-part series, presents the findings of an investigation of nursing school policies and practices for reporting and tracking student errors and near misses, and for identifying trends. Part 2 will describe strategies that schools can use to create cultures that encourage individual accountability and system effectiveness and support.

## BACKGROUND

Historically, it's been believed that vigilance and individual accountability are paramount to preventing medical errors. A culture of shame and blame has prevailed, one aimed at punishing those who make mistakes. But research has shown that such a culture results only in hiding errors, not in preventing them.<sup>4</sup> In a review of adverse events experienced by Medicare beneficiaries, the U.S. Department of Health and Human Services found that hospital incident reporting systems captured only about 14%.<sup>5</sup> Several reasons have been given for failure to report. One survey of nearly 300,000 health care employees found that 46% felt they couldn't report an error they had caused without fear of retaliation.<sup>6</sup> In the most recent Hospital Survey on Patient Safety Culture by the Agency for Healthcare Research and Quality (AHRQ), several findings suggest that employees don't feel comfortable disclosing errors or near misses.<sup>7</sup> For example:

- 37% worried that their mistakes were recorded in their personnel file.

## ABSTRACT

**Background:** Little attention has been paid to how nursing students learn about quality and safety, and to the tools and policies that guide nursing schools in helping students respond to errors and near misses.

**Purpose:** This study sought to determine whether prelicensure nursing programs have a policy for reporting and following up on student clinical errors and near misses, a tool for such reporting, a tool or process (or both) for identifying trends, strategies for follow-up with students after errors and near misses, and strategies for follow-up with clinical agencies and individual faculty members.

**Methods:** A national electronic survey of 1,667 schools of nursing with a prelicensure registered nursing program was conducted. Data from 494 responding schools (30%) were analyzed.

**Results:** Of the responding schools, 245 (50%) reported having no policy for managing students following a clinical error or near miss, and 272 (55%) reported having no tool for reporting student errors or near misses.

**Conclusions:** Significant work is needed if the principles of a fair and just culture are to shape the response to nursing student errors and near misses. For nursing schools, some essential first steps are to understand the tools and policies a school has in place; the school's philosophy regarding errors and near misses; the resources needed to establish a fair and just culture; and how faculty can work together to create learning environments that eliminate or minimize the negative consequences of errors and near misses for patients, students, and faculty.

**Keywords:** errors, near misses, nursing student, prelicensure nursing program

- 48% agreed with the statement that “when an event is reported, it feels like the person is being written up, not the problem.”
- 51% did not agree with the statement that “staff feel free to question the decisions or actions of those with more authority.”
- 51% felt that their mistakes were held against them.

These findings are consistent with those of a survey of almost 1,300 nurses by Cohen and Shastay.<sup>8</sup> In that survey, 37% of respondents said they'd failed to report a medication error because they thought doing so might be personally or professionally damaging, and 47% believed that reports of their errors were placed in their personnel files.

**Definitions.** James Reason, an eminent leader in safety science, defined *error* as “a generic term [used] to encompass all those occasions in which a planned sequence of mental or physical activities fails to achieve its intended outcome, and when these failures cannot be attributed to the intervention of some chance agency.”<sup>9</sup> The AHRQ defines *error* as “an act of commission (doing something wrong) or omission (failing to do the right thing) that leads to an undesirable outcome or significant potential for such an outcome.”<sup>10</sup> To our ears, the AHRQ definition retains a tinge of blame; we prefer Reason's definition.

The Institute for Safe Medication Practices defines a *near miss* as “an event, situation, or error that took place but was captured before reaching the patient.”<sup>11</sup> This varies somewhat from the AHRQ's definition: “an event or situation that did not produce patient injury, but only because of chance.”<sup>10</sup>

How an organization responds to errors and near misses has a significant influence on whether they

increase or decrease and are reported or not. A *fair and just culture* is one in which people learn and improve by openly identifying and examining their weaknesses, and feel supported and safe in doing so.<sup>12,13</sup> In terms of patient safety, the Rand Corporation has called the movement toward such a culture “the most profound change over the past 20 years.”<sup>14</sup> An atmosphere of fairness and trust is especially important. When people are encouraged and rewarded for reporting safety-related information, then learning can occur and needed changes can be implemented.<sup>15</sup>

A fair and just culture is not one in which individuals have no responsibility for what occurs. Reckless behavior that takes place with impunity is clearly unacceptable. But a fair and just culture recognizes that people sometimes make mistakes, system issues often contribute to errors, and a balance must be sought between individual accountability and system effectiveness.<sup>16</sup> After an error or a near miss, the focus should be on *what* went wrong rather than *who* is to blame. (See *Examining an Error or a Near Miss: Five Essential Questions*.)

**Nursing student errors and near misses.** In nursing, the usual response to student error has been some form of discipline, which can range from a verbal warning to immediate dismissal. Manthey has offered some historic examples.<sup>17</sup> (See *Shame and Blame in an Earlier Era*.)<sup>17</sup> This atmosphere of shame and blame remains prevalent. In our experience, some faculty members continue to believe that individual self-vigilance is what matters most, and that if an error or a near miss occurs, the student is at fault. Others have commented that talking about errors or

## Examining an Error or a Near Miss: Five Essential Questions

- What happened?
- Has it happened before?
- Could it happen again?
- What caused it to happen?
- Who should be told?

acknowledging the need for a cultural change toward errors might inadvertently condone their occurrence. There is also concern that if the fact of student errors becomes public knowledge, clinical organizations may be reluctant to have students in their facilities.

There have been relatively few studies investigating nursing student errors and near misses; of these, most have focused on medication errors.<sup>18-20</sup> In one Australian study, Reid-Searl and colleagues interviewed 28 students and found that nine reported making medication errors or near misses.<sup>19</sup> Reasons for errors included a lack of immediate nursing supervision and numerous distractions. Many students said they were told that reporting errors was unnecessary and time consuming. In a study that looked beyond medication errors, Currie and colleagues reported results from a three-year review of web-based student reporting of hazards and near misses.<sup>21</sup> Hazards included infections, equipment and device failures, medication issues, environmental concerns, and issues with documentation and patient identification. Asked whether they had ever been involved in a hazard or near miss, 453 students reported more than 10,000 *yes* responses; of these, 59% were hazards and 41% were near misses.

In recent years, the need for a fair and just culture in nursing schools has begun to receive wider attention.<sup>16, 22-24</sup> Leaders in this area have been working to apply the principles of safety science, known and used in clinical settings, to nursing school settings. But it's not clear to what extent nursing schools currently have policies that support a contemporary, evidence-based approach to student errors and near misses and to what extent they provide relevant resources to faculty and students.

**The purpose of this study** was to determine whether prelicensure nursing programs have the following:

- a policy for reporting and follow-up of student errors and near misses
- a tool for reporting student errors and near misses
- a process or tools (or both) for identifying trends
- strategies for follow-up with students after an error or a near miss
- strategies for follow-up with clinical agencies or individual faculty members (or both) after student errors or near misses

This study was part of a larger project, funded by the National Council of State Boards of Nursing (NCSBN), in which an occurrence reporting tool was developed and the framework for a national data reporting system and repository was established.<sup>25</sup>

## METHODS

**Sample.** The survey population consisted of nursing schools in the United States that have one or more prelicensure registered nursing programs that prepare students to sit for the National Council Licensure Examination (NCLEX). At the time of the study, there was no single, complete electronic database of all schools of nursing. We obtained a list of schools provided by the NCSBN and manually reviewed each entry. This resulted in a list of 1,667 schools with prelicensure nursing programs. We verified contact information for the dean or director of each school by either using the school's website or calling the school.

Expedited review and approval from the University of Minnesota's institutional review board were obtained before data collection began.

**Tool.** An invitation to respond in an online survey questionnaire was e-mailed in March 2012 to the deans or directors of the 1,667 nursing schools. A public URL was used so that the person receiving the invitation could forward it to the most appropriate person to complete the survey. Two follow-up reminders were sent, one each month, following the initial invitation. The data collection period was from March 2012 through April 2013.

The survey questionnaire, developed by a panel of content experts from the Quality and Safety Education for Nurses (QSEN) project, contained 20 items. Seven items collected information on school demographics.

## Shame and Blame in an Earlier Era<sup>17</sup>

### Responses to student error.

"Decapping was when your cap was removed from your head by the Sister in charge of the school; the cap remained on her shelf for a period of time commensurate with the seriousness of the infraction. For a slight error, the sentence might be a week; for a bad error, as long as a month. . . .

"The theory behind decapping for medication errors was that if a person felt enough pain, shame and guilt, he or she would be more careful, thus preventing further mistakes. . . . [Decapping was] a gentler response than that used 50 years earlier.

"I found nursing school records from the early 1900s documenting dismissal of students who 'neglected to complete the patient's clothing list on admission' or 'did not lock the medication cabinet door.' Any deviation from accepted behavior was met with punishment that was swift and severe: expulsion from the school."

Twelve items included questions on whether the school differentiated between errors and near misses; whether it had written policies or tools for handling such events; whether it had a process for identifying trends; and whether it had processes and strategies for follow-up with students, faculty, and clinical agencies. The final question provided space for additional comments. Expert and content validity were achieved through feedback from faculty at 22 nursing schools in the San Francisco Bay Area and subsequent tool revision. A copy of the survey questions can be obtained from the authors.

Research Electronic Data Capture (REDCap) was used for building, housing, and managing the survey online.<sup>26</sup> Data collected via REDCap were kept securely on the University of Minnesota servers. The directions called for only one survey to be completed per school, regardless of the number of prelicensure nursing programs it offered. If a school had a tool or policy (or both) in place, we requested that copies of these documents be uploaded to the database. Several documents were e-mailed directly to the research team; these were manually entered into the database by a project member.

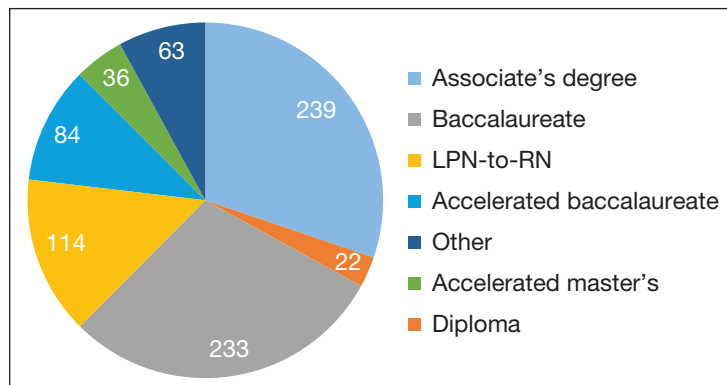
**Data analysis.** Demographic data and responses to yes–no questions relating to the existence of tools, practices, and policies (for example, “Does your school differentiate between errors and near-misses?”) were tabulated using descriptive statistics. For the questions involving descriptive responses (for example, “Please describe your school’s process and/or tools for trending of errors and near-misses”), common themes were identified. To achieve interrater reliability, one of us (SC) identified commonly occurring themes, which were then reviewed and validated through the agreement of two of us (JD and JB).

## RESULTS

**Demographics of responding organizations.** A total of 557 survey responses were received (a 33% response rate). Although the instructions called for each school to submit only one survey, 50 schools submitted two. In those situations, the responses were compared. If the information was consistent, one of the two entries was deleted. If one respondent answered yes to a question asking whether a school had a specific component (such as a tool, policy, or follow-up process) and the other respondent answered no, the school was credited with a *yes* response and the second entry was deleted. After elimination of duplicates and incomplete entries, 494 schools were represented in the survey (30%).

The responding organizations included public, private, and proprietary schools. Of these, 325 were public schools, 97 were private religious schools, 52 were private secular schools, and 14 were proprietary schools; six schools did not specify. Geographically, respondents were located in 48 states (excepting Alaska and Vermont) and the District of Columbia, with the

**Figure 1.** Number and Types of Prelicensure Nursing Programs (N = 791) at the Responding Schools



largest numbers in California (40 schools) and in Texas, Illinois, and Pennsylvania (28 schools each).

The responding schools offered 791 prelicensure programs, with some schools offering more than one type (such as LPN-to-RN, associate’s degree, and baccalaureate). Figure 1 depicts the number and types of programs offered at the 494 schools.

**Presence of tools and policies.** Asked whether their school had a tool for reporting clinical errors and near misses, 205 respondents (41%) replied yes, 272 (55%) replied no, and five (1%) said they didn’t know. Asked whether their school had a written policy for follow-up with students after an error or a near miss, 155 (31%) replied yes, 245 (50%) replied no, 82 (17%) said there was no consistent standard, and four (1%) didn’t know. (Totals here and in the following paragraphs may not sum to 494 because not all respondents answered every question.)

When asked whether their school differentiated between errors and near misses, 100 respondents (20%) said yes, 239 (48%) said no, 144 (29%) said there was no consistent standard, and five (1%) didn’t know. When asked whether their school considered student errors or near misses in simulation assignments to be the same as those in clinical settings, 62 respondents (13%) said yes, 299 (61%) said no, 101 (20%) said there was no consistent standard, and 13 (3%) said they didn’t know. There was no attempt to ascertain if simulation hours counted as clinical hours. Figure 2 summarizes the responses regarding the presence of tools and policies and the consideration of errors and near misses.

The survey also requested that schools with tools, policies, or both submit copies of these documents. One hundred schools (20%) sent at least one such document. Of these, 66 schools sent both tools and policies (constituting 13% of all 494 schools, and 55% of the 120 schools that had indicated having both), 28 sent only reporting tools, and six sent only policies. In addition, some schools submitted

other related documents that were neither tools nor policies. For example, one school sent an excerpt from a 272-page student handbook.

**Nature of tools and policies.** The title of a tool or policy for recording student errors or near misses can reflect the school's thinking about the existence of these events. Among the tools and policies sent in, there was wide variation in their titles. See *Titles of Error-Reporting Tools and Policies* for some examples.

The focus and purpose of tools and policies also varied. In most cases, the purpose of a tool was documentation of events, although some addressed a combination of purposes (such as documentation of disciplinary actions, tracking events and trends, and counseling). The majority of tools targeted medication errors, either alone or as one of several types of events (such as procedural errors, bloodborne pathogen exposures, and Health Insurance Portability and Accountability Act [HIPAA] violations). One tool focused on the inappropriate use of bed rails and restraints and the presence of wet floors. At one school, although the policy addressed medication errors, the tool submitted was a student status report used for commenting on grades, discipline, attendance, and motivation.

Schools had different approaches to reflecting on student errors and near misses. One reporting tool asked the student to reflect on what could have prevented the error; another tool asked for information on contributing system factors; and a third tool asked, "What suggestions would you make for the school to change its curriculum to prevent another student from making an error similar to yours?" There was also variance in who was expected to fill out a given tool. Most forms were designed to be

completed by students, but some were designed to be completed by faculty, and some had room for comments by both.

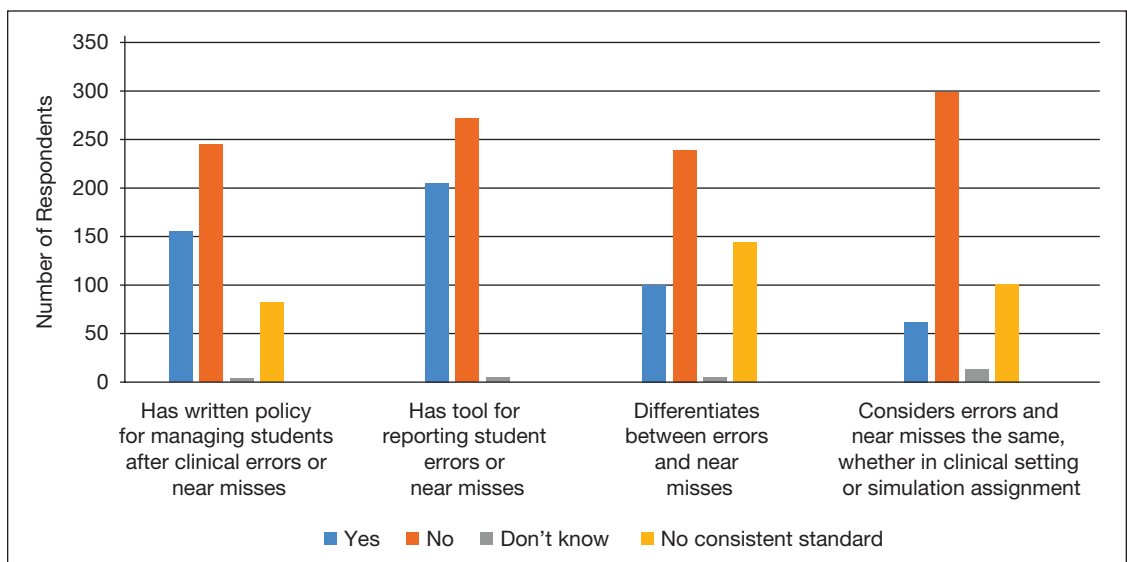
**Trends in errors and near misses.** Participants were asked whether their school had a process or tools for tracking and noting trends in errors and near misses. Seventy-five respondents (15%) answered yes and 398 (81%) answered no. Nine respondents (2%) indicated that they didn't know and 12 (2%) did not respond to this question.

The schools that reported having such a process or tool described a variety of approaches. For example, some schools designated an individual, such as an undergraduate program coordinator or a quality and safety officer, who was responsible for tracking or noting trends or both. Other schools charged a group with such responsibilities; examples included a selection and progression committee, an academic student affairs committee, and a review committee that met weekly "to discuss any clinical errors, near misses, and unsafe student behavior in the clinical setting." Some schools shared tracking and trend information at nursing faculty meetings. Rather than addressing trends, some schools described the processes they used when counseling individual students.

**Postevent follow-up with students.** How school leaders handle student errors and near misses differed greatly, ranging from counseling to dismissal. Specific responses included the following:

- "Student completes report on how they will change behavior so X doesn't happen again, and attends remediation lab."
- "Student counseled by instructor and receives Unsatisfactory for the week."

**Figure 2.** Responses Regarding a School's Tools and Policies and Whether It Differentiated Between Errors and Near Misses



- “If safety issue . . . resulted in patient demise, student may be dismissed.”
- “The student may be required to conduct a review of the literature on a topic of the professor’s choice.”
- “We have a ‘three strikes and you’re out’ policy.”

#### **Postevent follow-up with clinical agencies.**

One survey item asked respondents to “discuss your school’s and/or faculty’s current process for follow-up with clinical agency reporting” as well as “support and/or discipline for students following a clinical error or near miss.” A total of 324 respondents (66%) indicated that there was some follow-up with the clinical agency, such as following institutional policy, filling out a facility incident report, reporting the incident to a nurse manager, or a combination of these. Another 95 respondents (19%) did not comment on follow-up with clinical agencies, but did describe some school process for working with students after the event. Thirty-three (7%) reported variability in how follow-up was handled, indicating either that work was under way to develop a formal process or that the school handled situations on a case-by-case basis. Lastly, 14 respondents (3%) replied that the school had no policy in place (and gave no indication that any was forthcoming), and 28 (6%) left the question blank. One respondent commented, “We don’t have any process in place, but I will be looking into this issue with the policy and governance committee.”

**Postevent follow-up with individual faculty.** Respondents were then asked to “describe any strategies your school has in place for follow-up with individual faculty if their students have committed errors.” A total of 333 respondents (67%) described their school’s processes for such follow-up. Respondents indicated a range of actions, including a follow-up call or e-mail from a dean, director, program chair, or department head; individual counseling regarding what happened and what might be helpful in the future; and discussion at the monthly all-faculty meeting. Of the last, one respondent said, “We look on these moments as times to improve on an identified need rather than any sort of blaming process.” Yet another said, “We expect the instructors to prevent the medication errors. We have only had one occurrence in the past 15 years of a faculty member not preventing an error. Faculty member was counseled and incident was documented on evaluation.” Although the majority of schools reported some follow-up, 113 (23%) indicated there was no specific process in place and 48 (10%) did not answer.

## **DISCUSSION**

Several noteworthy findings emerged. First, half of the responding schools indicated that they had no policy for managing students following a clinical error or near miss, and 55% indicated that they had no tool for reporting student errors or near misses. There may be several reasons for these findings: faculty members

### **Titles of Error-Reporting Tools and Policies**

- Breach of practice form
- Clinical advisement notice
- Critical incident report
- Documentation of concern
- Documentation of unsafe performance
- Event discovery report
- Incident report
- Learner prescription for remediation
- Medication error teaching tool
- Safety reporting tool—error report
- Student occurrence report
- Variance report form
- Violation of policy form

may not see student errors and near misses as a priority, or as much of a problem at all; they might be unaware of such events occurring at their school; or they may believe that current school policies and processes adequately address such situations.

It’s worth noting that among the additional comments made by respondents, several indicated that faculty members just haven’t thought about this issue. One respondent said, “I have never thought about tracking our clinical errors in this manner, but it really has me thinking.” Another noted, “As a new department chair . . . I appreciate your study as it makes me mindful of [the] need to track these events and their follow-up.” Conversely, some respondents seemed to believe that their students don’t make mistakes. As one respondent put it, “Our faculty have the expertise to prevent most errors.”

Second, a substantial number of schools reported a lack of consistent standards with regard to student errors and near misses. For example, 29% reported having no consistent standard for differentiating between errors and near misses, 20% reported having no consistent standard in addressing errors or near misses in simulation assignments versus those in clinical settings, and 17% reported having no consistent policy for managing students following a clinical error or near miss. Moreover, five respondents said they didn’t know what their school’s approach was in these matters. This suggests that conversations among faculty could be helpful in exploring how they regard errors and near misses, how this study’s findings might be relevant to their school, and how they might approach errors and near misses more effectively.

Third, with regard to schools that submitted copies of their tools and policies, it would seem that they haven’t fully incorporated the principles of a fair and just culture into those documents. Several of the documents described the nurse’s (or nursing student’s) professional responsibility for “insuring patient safety”

or for “delivering appropriate and responsible nursing care.” But the underlying philosophies and approach could be radically different. See *Differences in the Culture of the Learning Environment* for sample statements from two schools.

The titles of the submitted tools and policies conveyed a great deal about potential biases, whether intentional or not, in a school’s approach to student errors and near misses, student accountability, and discipline or punishment. Consider the spectrum of messages given—from the punitive-sounding “violation of policy form” to the more neutral “event discovery report” to the growth-oriented “learner prescription for remediation” and “medication error teaching tool.”

We examined the tools for themes and wording suggestive of a fair and just culture, and found none that fully incorporated those principles. Since some schools submitted only excerpts of documents, it’s possible that such content might have been included in sections on vision or philosophy. That said, the vast majority of the tools we saw focused solely on what the student did or did not do correctly. As with the titles, the wording and tone of the documents themselves often sounded punitive and reflected a shame-and-blame approach to student errors and near misses.

Two schools did reference the QSEN framework. One school incorporated a fishbone diagram (a tool used in systematically analyzing an event) into its “Student Report of Incident/Medication Error.” In that report, a QSEN root-cause analysis of incident was used as the framework, and the student was asked to reflect on questions such as, “What were you thinking or saying or doing that contributed to the error and why were you thinking that way?” “What agency policies would apply to this situation?” and “Was there any equipment involved with which you were unfamiliar or [that] didn’t function properly?”

Fourth, it’s heartening that some schools are doing noteworthy work to address student errors and near misses. For example, one college has created a quality

and safety committee that performs data analysis on all such events, generates reports each semester, and suggests quality improvement initiatives. A university has created the position of quality and safety officer at its school of nursing,<sup>22</sup> and another school has identified two coordinators to work together in this regard. These professionals monitor safety issues, collect data to identify trends in student errors and near misses, and serve as resources for faculty. And the occurrence reporting tool described earlier, which two of us (JD and JB) developed and piloted for the larger NCSBN project, has been used in many nursing schools.<sup>25</sup> The NCSBN is developing a national, web-based data reporting system and repository to which schools can subscribe, anonymously report student errors and near misses, and receive trend data.

Lastly, we were repeatedly reminded of the commitment that nursing faculty make to their students and to safe nursing practice. As one faculty member noted,

Errors in the delivery of health care can be devastating for all parties involved, and no one is immune. A repository and a tracking tool could help faculty and students anticipate vulnerabilities in the system and in their human response to it.

**Limitations.** This study sought to provide an illustrative overview of the current landscape in prelicensure nursing programs with regard to the reporting and tracking of student errors and near misses and the identification of trends. It was intended neither to quantify the existence of relevant policies and tools nor to reveal the extent to which students are involved in errors and near misses. The findings should be interpreted with caution for several reasons.

First, the survey depended on self-reporting by designated representatives of nursing schools. While it’s possible that a large proportion of the schools that didn’t respond to the survey have relevant tools or policies in place, it seems more likely that schools having such tools or policies would claim credit by responding to the survey. Second, the survey used an online format that, depending on the recipient, may or may not have been perceived as user friendly. Third, the survey also might not have been sent or forwarded to the most appropriate potential responder—someone responsible for tracking and reporting student errors and near misses and identifying trends. Moreover, if some responders weren’t sufficiently aware of their school’s policies and practices, the study findings might not represent the actual state of affairs at nursing schools.

## CONCLUSIONS

To the best of our knowledge, this national survey is the first to systematically gather information from U.S. schools of nursing about the existence and use of tools and policies that address student errors and near

### Differences in the Culture of the Learning Environment

#### Statements from two schools.

**School A:** “[The] purpose is to prepare professionals for current and future practice domains [and] effectively link classroom and clinical experiences with expectations for competence, compassion, and justice in health care.”

**School B:** “[We have] an academic, legal, and ethical responsibility to protect the public and health care community from unsafe nursing practice. It is within this context that students can be disciplined or dismissed . . . nursing students are responsible for maintaining a safe environment at all times.”

misses. The findings indicate that the majority of the responding schools lack explicit tools, processes, or policies for consistently addressing student errors or near misses. Furthermore, both respondents' survey answers and the copies of tools and policies provided indicate that significant work is needed to ensure that the principles of a fair and just culture shape how schools respond to these events.

There is abundant evidence that creating a fair and just culture in a given environment promotes open communication, transparency, a commitment to safe practice, and improved outcomes. For nursing schools, some essential first steps are to understand the tools and policies a school has in place; the school's philosophy regarding errors and near misses; the resources needed to establish a fair and just culture; and how faculty can work together to create learning environments that eliminate or minimize the negative consequences of errors and near misses for patients, students, and faculty.

At some schools, the main challenge may be to improve internal communication, rather than to generate new tools and policies or alter the culture. Regardless, our hope is that this study's findings will prompt conversations among faculty: What do we believe about errors and near misses? What underlying philosophy do we want to adopt? How can we educate and support ourselves with regard to student errors and near misses? How will we hold ourselves accountable when such events occur? How can we model for our students a better way to think about errors and near misses? These conversations are essential to ensuring that a nursing school has a fair and just culture in place. In part 2 of this series, we'll describe strategies that faculty can use to do just that. ▼

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