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Probation and Recidivism: Remediation Among Disciplined Nurses in Six States

A link between a history of criminal conviction and a risk of professional misconduct highlights the importance of criminal background checks.

Abstract

OBJECTIVE: The researchers sought to determine what factors might affect the outcomes of remediation, including the likelihood of recidivism, among nurses who had been the subject of disciplinary action and had been put on probation by a state board of nursing.

METHODS: Boards of nursing in six states, Arizona, Maryland, Massachusetts, Minnesota, Nebraska, and North Carolina, chose to participate in this exploratory study. A 29-item questionnaire was used to investigate the records of 207 RNs, LPNs, and advanced practice RNs (APRNs) who were disciplined and put on probation by a state nursing board in 2001, as well as to collect data on their employment settings, the boards' actions, and remediation outcomes (the presence or absence of recidivism); 491 nurses who had not been disciplined served as controls.

RESULTS: Among the disciplined nurses studied, 57% were RNs, 36% were LPNs, 3% held both RN and LPN licenses, and 3% were APRNs. Of the disciplined group, 39% recidivated between 2001 and 2005. Three factors were shown to influence the recidivism rate: having a history of criminal conviction, having committed more than one violation before the 2001 probation, and changing employers during the probationary period.

Data on history of criminal conviction prior to state board disciplinary action were available for 112 (54%) of the 207 nurses. Among those 112, 35% (n = 39) had a history of criminal conviction, whereas only 3% of the control group reported one. The recidivism rate among those with a history of criminal conviction (56%; 22 of 39 nurses) was nearly twice as high as the rate among those without such a history (33%; 24 of 73). Also, 33% of the disciplined nurses changed employers during their probation; the recidivism rate among them was more than twice the rate among the disciplined nurses who stayed with the same employer. The recidivism rate of the 45 disciplined nurses who committed more than one practice-related violation from 1996 through 2001 was twice as high as the rate of those who committed only a single violation.

The proportion of men who had been disciplined was more than twice the proportion of men in the national nursing workforce. Younger nurses (both men and women) were more likely to recidivate.

CONCLUSIONS: All health care regulators and nursing employers should be aware of the association between a history of criminal conviction and the likelihood of committing a violation that requires state nursing board disciplinary action.

KEY WORDS: probation, recidivism, remediation, disciplinary action, nursing licensure, criminal conviction

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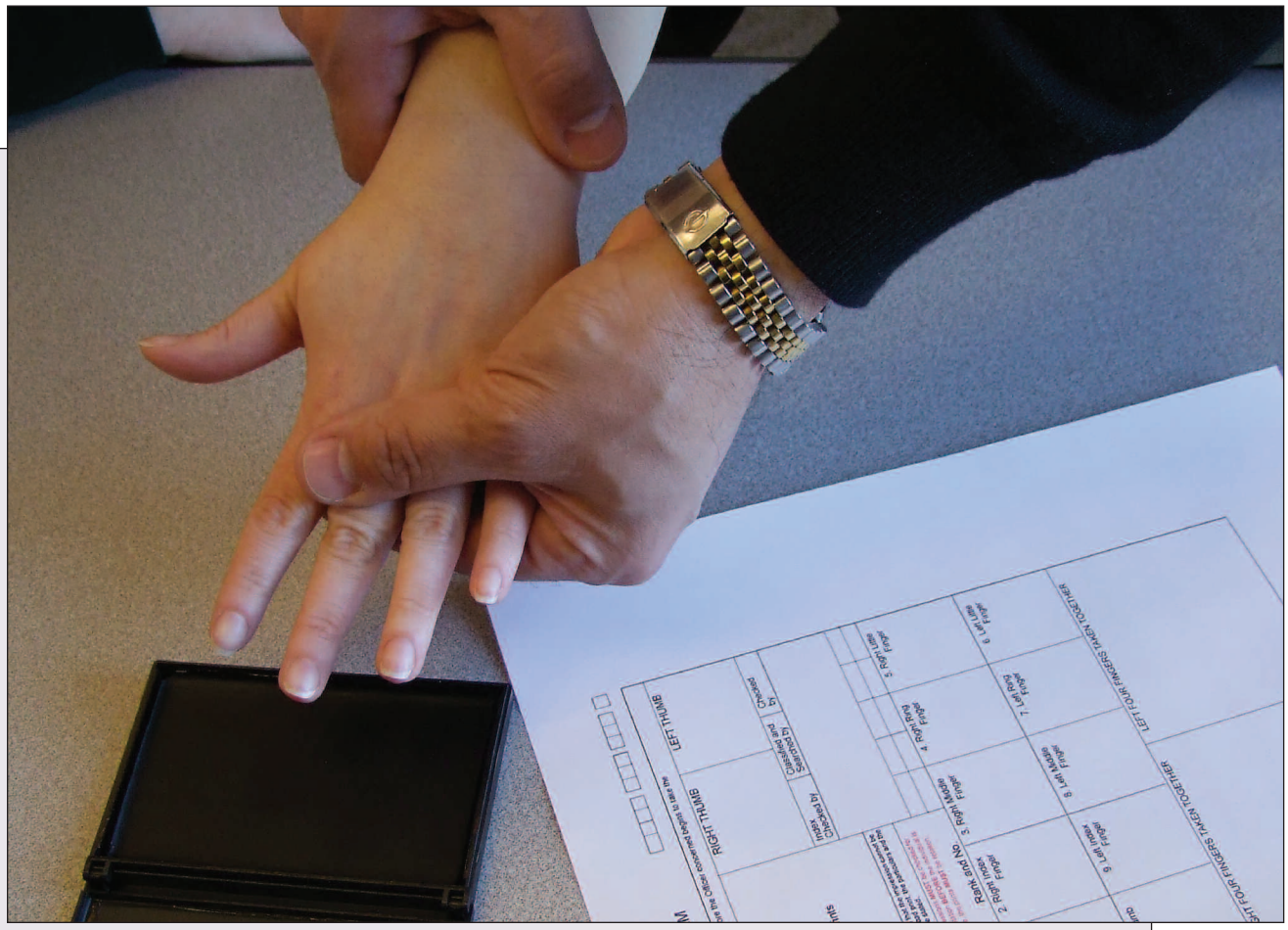
The nursing workforce is facing greater challenges than ever: the public's increasing need for health care, nurses' expanding professional roles, and the continuing shortages of nurses and nursing faculty are all straining the profession. An additional challenge is the fact that the number and percentage of nurses with sanctions imposed by state boards of nursing have risen in the last decade,[1] despite the efforts of legislators, educators, state boards of nursing, and health care facilities. However, there have been few if any nationwide studies on the characteristics of nurses who have been disciplined, outcomes of remediation, or the putative risk factors for violation and recidivism.

Protecting the public from incompetent or otherwise unsafe nursing practice is a responsibility of state boards of nursing. Boards of nursing can place nurses who have committed practice-related violations on probation, limiting their practice to particular settings or placing it under certain conditions for a specified time. The state boards also aim to help nurses who have been disciplined return to nursing practice through remediation. Therefore, in 2006 the National Council of State Boards of Nursing (NCSBN), working with six state nursing boards, initiated an exploratory study to evaluate the characteristics of nurses who had been disciplined and the factors that might affect the outcomes of remediation. (Note that remediation programs usually include an educational component; however, the programs' compositions vary, and there's no consensus on what they should include. We did not evaluate the efficacy of particular remediation programs or their components.) We designed the study with the hope that its findings could be used in shaping regulatory policies



Of the 207 nurses who had been put on probation in 2001, 39% recidivated within five years.

and in developing disciplinary programs targeted to specific goals and individual nurses.

METHODS

Case selection criteria. This study investigated nurses in six states who had been disciplined and were put on probation by state nursing boards in 2001 because of practice-related violations. Cases that involved substance abuse without direct violations in patient care were excluded because different remediation requirements are typically imposed on these nurses. The NCSBN is currently conducting a separate study on substance abuse.

Confidentiality. Preassigned identification numbers were used in data entry to protect the identity of the disciplined nurses. This report presents data in aggregated form only.

Participating state boards and data collection. In response to an invitation from the NCSBN, six of the organization's 59 member boards of nursing volunteered to participate in the study, those of Arizona, Maryland, Massachusetts, Minnesota, Nebraska, and North Carolina. The six participating state boards were asked to retrieve all records that met the study criteria from their existing disciplinary databases.

The six participating boards are spread geographically throughout the United States, with nursing populations ranging from 27,000 to 136,000 each.[2] They vary in board structures: the Arizona, Maryland, Minnesota, and North Carolina state boards are independent boards, and the boards of Massachusetts and Nebraska are units within state agencies.

Data collection instrument. The data collection instrument, a 29-item questionnaire designed to gather information on the characteristics of the disciplined nurses, their employment settings, board actions, and remediation outcomes (recidivism or nonrecidivism; defined in Results), was developed by the research department at the NCSBN along with its member boards (to view the instrument, go to http://links.lww.com/A793). The variables studied were determined in extensive discussions with experts in nursing practice and discipline nationwide, as well as in a review of the literature. We adopted the categories for practice errors defined by an instrument developed by the NCSBN called Taxonomy of Error, Root Cause Analysis and Practice-responsibility.[3,4] A pilot study was conducted to ensure that the instrument was clearly formulated and the data were available. After reviewing the comments and suggestions from the participating state boards, the data collection instrument was finalized.

Subjects. We investigated the records of 207 nurses, including RNs, LPNs, and advanced practice RNs (APRNs), who were subjected to probationary action by one of the state nursing boards in 2001. We examined the available data on each nurse's history of criminal conviction prior to the 2001 probation and their records of professional disciplinary action from 1996 through 2001. Data on criminal convictions prior to 2001 were missing for 95 cases, and these were excluded from our analysis of the association between having a history of criminal conviction and the likelihood of committing practice-related violations and recidivism. Additional disciplinary records from 2001 through 2005 were collected to evaluate remediation outcomes. To collect control data on the legal history of nurses who hadn't been disciplined, we asked the state boards to retrieve the history of criminal conviction of randomly selected nurses who had held an active license in 2001 and had never been subject to any board action through 2005; the records of 491 nurses were obtained. State licensure statistics[2] and national nursing workforce statistics published by the Health Resources and Services Administration (HRSA) were also used for data comparison.[5,6]

Statistical analysis. χ^2 analyses and *t* tests were performed for data analysis. We used binary logistic regression analysis to assess factors associated with remediation outcomes. Analysis was conducted using SPSS 12.0 software; results with $P < 0.05$ were considered statistically significant.

RESULTS

Analysis of the results is divided into two major sections, the first a description of the characteristics of the sample and the second the relationship of those characteristics to remediation outcomes. (Note: all percentages have been rounded to whole numbers, except in tables and figures.)

Characteristics of the sample. *Age and sex.* At the time of the 2001 probation, the mean age of the

Implications of Criminal Background Checks

IF YOU HAVEN'T HAD ONE YET, YOUR NEXT JOB APPLICATION COULD CHANGE THAT.

More than ever before, nurses are now subject to criminal background checks. State and federal statutes and Joint Commission standards permit or may even require nursing schools, employers, and state licensing boards to conduct criminal background checks on applicants. Although prospective employers may require nurses to pay a fee to cover the cost of a background check and will often, to protect themselves against liability, have nurses sign a release that permits the check, some employers do not notify applicants that a check is being conducted.

Criminal background checks are usually initiated by human resources departments that often employ outside investigators to uncover records of arrests, indictments, convictions, plea bargains, and any other facts of a person's legal history that haven't been sealed by a court. Some of the possible findings of a criminal background check, such as a history of violent behavior, sexual offenses, or controlled substance abuse, have obvious implications with regard to patient safety. However, even findings that seem unrelated to nursing practice can have consequences that are damaging to a nurse's career, and in some jurisdictions, the discovery of an arrest or an indictment is sufficient to trigger a nursing board investigation. For example, an arrest for shoplifting, driving while intoxicated, or domestic violence may result in a nursing board denying licensure, placing a licensee on probation, or issuing charges against a renewal applicant. Being charged with prostitution, public lewdness, or indecent exposure may be considered evidence of moral turpitude or professional misconduct and result in a nursing board's refusal to issue a license to an otherwise qualified applicant. Criminal activity may also result in licensed professionals being placed on the U.S. Department of Health and Human Services' Office of Inspector General's List of Excluded Individuals/Entities, which excludes them from participating in any federal health programs, including Medicare and Medicaid (for more on the list, see http://oig.hhs.gov/fraud/exclusions/faq.asp). A misdemeanor—or even an anonymous complaint—can trigger a nursing board investigation that may lead to disciplinary action. And any criminal history may be sufficient to affect nursing school admission or completion.

Financial misdeeds may or may not rise to the level of criminal activity but will still be revealed in a background check and may pose licensure problems. For example, failing to repay a student loan or to file tax returns, making late child-support payments, or writing bad checks may appear in a criminal background check and have undesirable professional consequences. Dishonorable military discharges may also be discovered in a background investigation.

Depending on the jurisdiction and type of criminal activity, a conviction may or may not automatically result in disqualification. Some felony charges may permanently bar practice, while others result in a time-limited barring; it varies by state. However, if you are a nurse or a prospective nursing student with a criminal history, you may be able to improve your chances of being hired or accepted by submitting a written explanation of your case with your employment or school application. For example, if you have successfully completed probation and can show evidence of rehabilitation, the school, employer, or nursing board may consider your application. Or you may be considered eligible by employers or nursing schools if you have been given a deferred adjudication agreement (a plea bargain agreement in which the nurse pleads guilty or no contest and the court withholds or defers formal judgment pending the outcome of probation). If probation is successfully completed, the charges are dismissed. However, a nursing board may still consider a deferred adjudication agreement the equivalent of a criminal conviction, and it provides less protection than a simple no-contest plea against any subsequent civil litigation related to the initial charges.

Nurses are also advised to familiarize themselves with school, employer, and licensing board requirements for self-reporting criminal convictions; in this context, "convictions" can include not only jury verdicts after a trial, but also plea agreements. Some applications may also ask for indictment or arrest history. Applicants must respond honestly to these questions, even if the event seems remote and unrelated to nursing practice or the position or if the charges were withdrawn. Under no circumstances should an applicant withhold information or respond to an application question dishonestly because that may be considered document falsification and professional misconduct, leaving the applicant vulnerable to subsequent disciplinary or legal action. Failure to submit to a criminal background investigation can disqualify an applicant from school enrollment, employment, or licensure. The information obtained during a criminal background investigation is subject to the confidentiality policies of the requesting organization as well as federal and state privacy laws. The boards of nursing generally restrict access to criminal background checks to specific people within an organization; usually, they make public only the final board decisions.

It should also be noted that, for various reasons, databases may contain inaccurate information. It's even possible, for example, that those who have been the victims of identity theft have criminal records and are not yet aware of it. Therefore, nurses are wise to ask for a copy of any reports that have adversely affected them.—*Edie Ann Brous, JD, RN, nurse and attorney in New York City and coordinator of* Legal Clinic.

Podcasts at ajnonline.com

Edie Ann Brous, *AJN*'s *Legal Clinic* coordinator, speaks with editor-in-chief Diana J. Mason about the intricacies of answering questions about one's criminal background on licensure applications and about going before the nursing board.

Table 1. Licenses Held by and Work Settings of the Nurses on Probation*

		% (n)
Type of license (N = 206)	RN	57.3 (118)
	LPN	36.4 (75)
	Both RN and LPN	2.9 (6)
	APRN	3.4 (7)
Employment setting (N = 186)	Long-term care facility	44.1 (82)
	Hospital	34.9 (65)
	Home health care	5.9 (11)
	Public or community care	2.2 (4)
	Other	12.9 (24)

* In each case N = the number of nurses for whom data were available.

207 disciplined nurses was 43.3 years (SD = 9.36 years) and ages ranged from 20 to 65 years. Among the nurses, 14% (n = 30) were male and 86% (n = 177) were female. The HRSA studies reported that in 2000 in the United States, 5% of RNs and 6% of LPNs were male.[5,6] Therefore, the proportion of men disciplined was more than twice the proportion of men in the national nursing workforce. This is in line with the trend reported by two previous studies that used broader discipline categories.[7,8]

Types of license. This study found that 57% of nurses who had been disciplined (118 of 206; one nurse didn't specify the type of license she held at the time of probation) held RN licenses at the time of the 2001 probation, 36% (n = 75) held LPN licenses, 3% (n = 6) held both RN and LPN licenses, and 3% (n = 7) were APRNs (see Table 1). Further analysis indicated that the proportion of disciplined LPNs was more than twice the proportion of LPNs licensed in the six states: 38% of nurses who were disciplined (75 of 200, excluding those with both RN and LPN licenses and the one who didn't specify the type of license she held) held LPN licenses, while 18% (90,625 of 495,106) of nurses practicing in the six states held LPN licenses.[2]

Work setting. Forty-four percent of the disciplined nurses (82 of 186; employment information was not available for 21 nurses) were employed in long-term care facilities when the incident resulting in the 2001 probation occurred, while 35% (65 of 186) reported employment in hospitals at that time (see Table 1).

According to the National Sample Survey of Registered Nurses, in 2000 an estimated 7% of all U.S. RNs worked in long-term care or home health care settings.[5] Our study found that 34% of RNs disciplined in 2001 worked in long-term care or home health care settings, a proportion nearly five times greater than would be expected if those who were disciplined were evenly distributed across all employment settings.

Interestingly, the proportion of public and community health RNs in the study group who were disciplined was much lower than the proportion of all RNs in the National Sample Survey who worked in those settings (3% and 18%, respectively).[5] A similar trend was also demonstrated in the LPN workforce distribution: 77% of LPNs who were disciplined worked in long-term care facilities and 12% in hospitals. The national statistics showed that in 2000, about 32% of LPNs worked in long-term care and 37% worked in hospitals,[6] indicating a proportionally higher discipline rate among LPNs working in long-term care facilities.

History of criminal conviction. Data on history of criminal conviction prior to state board disciplinary action in 2001 was available for 112 (54%) of the 207 nurses. Among them, 35% (n = 39) had a history of criminal conviction, whereas only 3% (n = 15) of the 491 nurses in the control group reported one (see Figure 1).

Disciplinary grounds and probationary requirements. The 11 "disciplinary grounds" (the reasons disciplinary action was taken) reported are listed in Table 2. "Intentional misconduct or criminal behavior" was the most frequently cited (21%). A total of 778 probationary requirements were imposed on the 207 disciplined nurses by the state boards during the 2001 probationary period. Multiple probationary requirements were imposed on 96% (n = 199) of the nurses. The four most frequently imposed requirements were that

- the nurse's employer had to provide reports, either quarterly or monthly, written by the nurse's supervisor (n = 173 nurses, 22% of the total number of requirements imposed).
- the nurse was allowed to practice only under supervision (n = 141; 18%).
- the nurse's work setting was restricted (for example, the nurse was barred from access to certain drugs or patients) (n = 99; 13%).
- the nurse had to complete specific educational requirements (n = 75; 10%).

Remediation outcomes were defined as follows: nonrecidivism was the completion of the probationary term without any new disciplinary charges being filed by a board of nursing between 2001 and 2005; recidivism was the commission of any additional violations from 2001 to 2005 during or after the probationary period. Sixty-one percent (126 of 207) of nurses who'd been disciplined did not recidivate, and 39% (81 of 207) did.

This result is noticeably similar to a previous

report that found that in Kentucky between 1989 and 1995, 40% of nurses who were put on probation "without license restriction" recidivated.[8]

Using data taken from the NCSBN's Nur*sys* database, an online system containing nurse license and discipline information from state nursing boards, we estimated that the maximum proportion of nurses in the six states who were subject to any form of disciplinary action (not just probation) from 2001 to 2005 (without considering multiple violations) was slightly greater than 1%. In contrast, we found that 39% of the 207 nurses who had been put on probation in 2001 recidivated within five years. In other words, compared with the general nursing workforce, the nurses who were put on probation in 2001 were much more likely to commit additional violations, although not necessarily of the same type.

Factors that may affect remediation outcomes. We examined the demographic and employment data to find factors that may be associated with the remediation outcomes. The main findings are presented in Table 3.

Having a history of criminal conviction. χ^2 analysis showed that among the 207 nurses who had been disciplined, there was a statistically significant association between a history of criminal conviction for any crime prior to the 2001 probation and the recidivism rate (P = 0.014). As noted above, the state boards reported that the history of criminal conviction of 95 of the disciplined nurses (46%) was unknown. Among the nurses for whom data on legal history were available (n = 112), 56% of those who did have a prior conviction recidivated, as did 33% of those who had never been convicted.

Changing employers during probation. Our data showed that 33% of the disciplined nurses changed employers during their probation. The recidivism rate among those nurses was more than twice the rate among those who remained with the same employer (47% versus 23%; P = 0.002).

Committing multiple violations. We reviewed the state boards' disciplinary records from 1996 through the date of the 2001 probation for each nurse who was disciplined and found that 45 nurses who had been disciplined had committed more than one violation (33 had committed different types of violations and 12 had committed the same type of violation more than once). χ^2 analysis revealed that the recidivism rate among those who committed multiple violations before their 2001 probation was more than twice as high as the rate among those who committed only a single violation from 1996 through 2001 (71% versus 30%; $P < 0.001$).

Age. An independent t test showed a statistically significant difference in remediation outcomes according to the ages of the nurses who had been disciplined (t_{205} = -2.46, P = 0.015). On average, the disciplined nurses who recidivated were about three years younger than the nonrecidivists. Further analysis showed that 49% of the 73 nurses who were under the age of 40 recidivated, whereas 34% of the 134 nurses who were 40 years old or older did so (P = 0.02).

We also noticed that among nonrecidivists, 11 of the 89 nurses 40 years old and older and one of 37 nurses under 40 years old had successfully completed their full probation term but no longer held an active license in 2005.

Sex. A significant association between sex and the recidivism rate was identified (P = 0.028). A higher percentage of men than of women (57% versus 36%) recidivated.

License type. We also found an association between the recidivism rate and the types of nursing licenses held by those who had been disciplined. A significantly higher percentage of LPNs (51%) than of RNs (32%) recidivated (P = 0.007).

Finally, no statistically significant association could be found between the recidivism rate and the number of licenses held by nurses who had been disciplined (χ^2 = 0.55, P = 0.31). The sample size was too small for other demographic characteristics such as ethnic background, marital status, and foreign versus domestic education to reach the minimum data points required for statistical analysis.

Table 2. Disciplinary Grounds for the 2001 Probation (N = 207)

Reason disciplinary action was taken	% (n)
Intentional misconduct or criminal behavior	21.3 (44)
Drug or alcohol impairment or substance abuse that caused practice violation	19.3 (40)
Inappropriate clinical reasoning (for example, failure to recognize patient's signs and symptoms, failure to assess or intervene)	15.5 (32)
Multiple offenses (different types of violation addressed under a single disciplinary action)	12.6 (26)
Breakdown in professional responsibility or patient advocacy (for example, practice beyond scope)	10.6 (22)
Medication error	6.8 (14)
Documentation error	5.8 (12)
Missed or inadequate nursing intervention	3.9 (8)
Inadequate attentiveness or surveillance	1.9 (4)
Violation of board orders (unspecified)	1.4 (3)
Lack of standard preventive measures	1.0 (2)

Table 3. Factors Associated with Remediation Outcomes*

Factor	Group	Remediation Outcomes		χ^2 (P)
		Recidivism % (n)	Nonrecidivism % (n)	
History of criminal conviction (n = 112)	Yes	56.4 (22)	43.6 (17)	5.82 (0.014)
	No	32.9 (24)	67.1 (49)	
Change of employers (n = 160)	Changed	47.2 (25)	52.8 (28)	9.35 (0.002)
	No change	23.4 (25)	76.6 (82)	
Multiple violations (n = 207)	Yes	71.1 (32)	28.9 (13)	24.7 (< 0.001)
	No	30.2 (49)	69.8 (113)	
Age (n = 207)	< 40 years	49.3 (36)	50.7 (37)	4.91 (0.02)
	≥ 40 years	33.6 (45)	66.4 (89)	
Sex (n = 207)	Male	56.7 (17)	43.3 (13)	4.53 (0.028)
	Female	36.2 (64)	63.8 (113)	
Type of license (n = 200)	LPN	50.7 (38)	49.3 (37)	6.87 (0.007)
	RN	32.0 (40)	68.0 (85)	

* In each case n = the number of nurses for whom data were available.

We further assessed the factors associated with recidivism using a binary logistic regression. The 88 cases with complete records were used for analysis. The three most influential factors at a statistical significance level of < 0.05 are shown in Table 4, with regression coefficients, odds ratios, and 95% confidence intervals: having a history of criminal conviction, changing employers during the probation period, and committing multiple violations.

Limitations. This study was based on data available from six state boards of nursing that volunteered to participate. Although the structures of the six participating boards are not distinct from the nonparticipating boards, generalizations from the current findings should be made with caution.

By design, this study addressed only probation cases. Given the amount of effort required to retrieve 10 years' worth of data, we could not exclude the possibility that not every probation case that met the criteria was retrieved. In addition, because each state board has its own procedures for collecting and recording data on variables such as history of criminal conviction, we were unable to conduct further analysis and make direct comparisons of the efficiency of each state's remediation program.

DISCUSSION

Based on 207 probation cases from six states, we evaluated the background characteristics of nurses who had been disciplined and the outcomes of their remediation. Collecting data directly from the databases of the state boards avoids the possible response bias of self-reported surveys.

One of the main findings of this study is the striking association between a history of criminal conviction and the risk of behavior requiring disciplinary action. The data showed that 35% of the nurses who had been disciplined had a history of criminal conviction, while only 3% of the nondisciplined nurses reported such a history. This alarming finding has not been formally documented in any previous study. Moreover, this study revealed a statistically significant association between having a history of criminal conviction and the rate of recidivism: the recidivism rate among those with such a history (56%) was nearly double that of those who had no such history (33%).

Despite the link between the history of conviction and the violations established in this study, in 46% of the disciplinary cases we investigated, the offender's legal history was unknown, even after the nurses had been disciplined. It seems likely that, until

Younger nurses were more likely to recidivate.

now, having a history of criminal conviction hasn't been considered as a factor associated with violations in nursing practice; therefore, this information was not strictly required by the state nursing boards.

In 1990 the California Board of Registered Nursing became the first state nursing board to conduct criminal background checks on applicants for nursing licensure. In 1998 a policy recommendation to member boards of nursing to conduct checks was adopted by the NCSBN Delegate Assembly.[9] In 2005 the NCSBN officially urged the member boards to integrate criminal background checks into the licensure protocol.[10] Currently, 32 state boards of nursing require federal criminal background checks as part of the licensing process.[11] Data gathered in this study strongly support the policy.

Although current law prohibits state nursing boards from sharing the results of criminal background checks with employers of nurses, we would like to make all health care regulators and nursing employers aware of the possible risk posed by nurses who have a history of criminal conviction. In fact, knowledge of employees' history of criminal conviction would allow employers to pay closer attention to this high-risk group and provide necessary support to and supervision of those who need it. Conversely, the absence of such information stands to increase the risk to public health.

This study also showed that changing employers during the probation period increased the likelihood of recidivism. It's possible that nurses who change employers during probation face additional challenges. For example, it has been reported that a lack of awareness of policies or procedures in a new work setting is a risk factor for violation.[7, 12] In addition, changing employers may result in the discontinuation of support and supervision from familiar sources. It's likely that nurses who have been disciplined hope that making a "new start" could prevent scrutiny or biased treatment. However, our findings suggest that a "new start" may not be the most beneficial option. Therefore, nurses who are facing disciplinary sanctions should be warned about the possible negative impact of changing employers, and whenever possible, employers should provide the necessary support to enable nurses who have been disciplined to continue practicing in the same workplace. We would also recommend that nurses who have been disciplined and who plan to switch jobs deliberately take advantage of orientation and other support programs provided by the new employer.

We also found that nurses who committed multiple violations were more likely to commit additional violations during or after probation. Therefore, closer attention to and supervision of this risk group is recommended.

This study also showed that younger nurses were more likely to recidivate: among those who were younger than 40, 49% recidivated, while 34% of those who were 40 years old or older recidivated. It has been reported that experienced nurses tend to develop better ways to manage errors.[13] Nonetheless, in our study, a few nurses (11 of 89) from the older age group no longer held an active license in 2005 after successfully completing their probation, which may contribute to the lower recidivism rate.

One of the interesting findings of this study is that the men who had been disciplined had a higher recidivism rate than the women. It has been well documented that men are overrepresented among nurses who have been disciplined,[7, 8] yet the under-

Table 4. Binary Logistic Regression Analysis of Recidivism

Predictor	OR (95% CI)	P value
History of criminal conviction	4.36 (1.29–14.7)	0.018
Change of employers during probation period	3.87 (1.29–11.6)	0.016
Multiple violations from 1996 through 2001	8.73 (2.7–28.2)	< 0.001

How to read the table: (using the first row) an adjusted odds ratio (OR) of 4.36 for having a history of criminal conviction indicates that, after controlling for other variables in the model, the odds of recidivism among nurses in this group is 4.36 times greater than among those who have no such history. The 95% confidence interval (CI) for this adjusted odds ratio is 1.29 to 14.7, indicating a 95% certainty that the risk of recidivism in this group is between 1.29 and 14.7 times greater than that among those who have no history of criminal conviction. Each predictor (variable) is dichotomous, meaning that there are two possible categories; for instance, a nurse could either have or not have a history of criminal conviction.

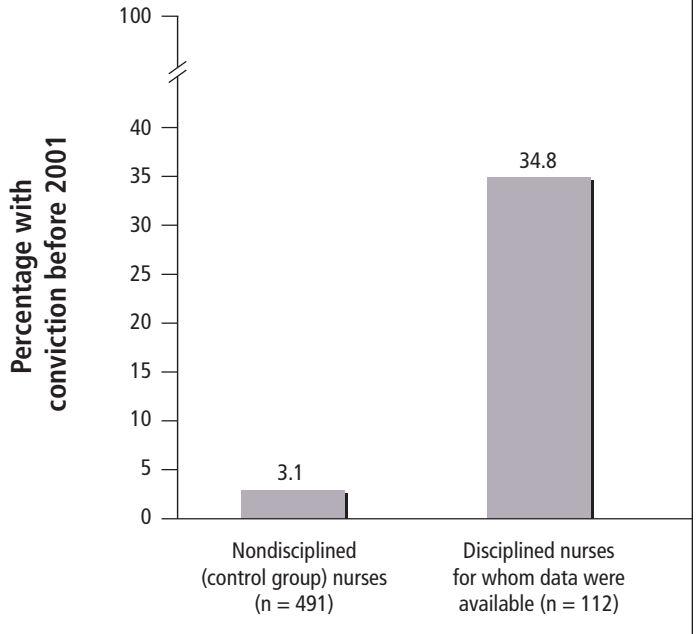
Thirty-five percent of nurses who had been disciplined had a history of criminal conviction, while only 3% of the nondisciplined nurses reported such a history.

lying cause remains under debate. A previous report by Carruth and Booth suggested that this disturbing trend could be attributed to the fact that men are more often placed in critical and acute care settings, which demand quick response and great efficiency; perhaps the intense nature of this work puts them at higher risk for committing violations.[14] The current study did not collect sufficient data to address this question.

We also found that there was a higher percentage of LPNs (51%) than RNs (32%) who recidivated. This may be attributable to the fact that the majority of disciplined LPNs (77%) were employed in long-term care facilities, where reporting violations of state or federal regulations (or both) is strictly required,[15] and only 25% of disciplined RNs work in these settings. Although each state has its own regulations, hospitals are, in general, less strictly regulated than other health care facilities with regard to the reporting of nursing violations. Most hospitals have their own remediation programs and report only serious violations to the state board. Therefore, to keep track of the disciplinary history of each nurse, it would be desirable to apply the same reporting guideline to all nursing facilities.

Finally, the findings of this study could be used as a platform for more detailed analysis of violations and professional discipline. Future research might look at various forms of remediation to evaluate their impact on recidivism. It is our hope that further quantitative elaboration of professional disciplinary action will lead to the development of rational and more-effective remediation programs to protect public health and safety. ▼

Figure 1. Rate of Prior Criminal Conviction Among Disciplined Nurses and Control Group



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