PATIENT SAFETY INITIATIVE
CREATING A CULTURE OF SAFETY AND ACCOUNTABILITY

A JOINT COLLABORATION
OHIO BOARD OF NURSING AND NURSING EMPLOYERS

CONTENTS

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THE OHIO BOARD OF NURSING AND NURSING EMPLOYERS

By implementing a more comprehensive approach to practice complaints, the Board believes it will directly address and impact patient safety by increasing employer involvement; creating a state and national patient safety database using TERCAP data; and handling cases incorporating the principles of Just Culture. Considering these objectives, the Board agreed upon a Patient Safety Initiative to be conducted with several acute care facilities as a new approach for practice complaints. If successful, the Patient Safety Initiative will be expanded.

Just Culture and statewide patient safety initiatives are being developed in many health care systems throughout the country, including Ohio. The Ohio Patient Safety Institute, the Ohio Hospital Association, the Ohio Organization of Nurse Executives, and the Ohio Nurses Association are undertaking Just Culture education initiatives. The time is right for nursing organizations, employers and regulators to more closely collaborate for patient safety.

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OVERVIEW

PATIENT SAFETY INITIATIVE
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Background and Statutory Obligations

The Ohio Board of Nursing is a governmental agency created by Ohio law to regulate the practice of nursing in the state of Ohio for the safety of the public. The Nurse Practice Act (NPA) is set forth in Chapter 4723. of the Ohio Revised Code, and Chapters 4723-1 through 4723-27 of the Ohio Administrative Code contain administrative rules adopted by the Board. The NPA and rules establish requirements for nurses and certificate holders regulated by the Board. A major function of the Board is to safeguard the health of the public by investigating complaints and adjudicating violations. The Board received over 6,200 complaints in calendar year 2009, of which approximately 19% were practice complaints.

Objectives

The Board is collaborating with nursing employers to initiate a Patient Safety Initiative focusing on a new approach to nursing practice issues.

- The goal is to increase patient safety through effective reporting, remediation, modification of systems, and accountability.

- The objectives are to:
  - Increase employer reporting of information related to practice breakdowns
  - Increase employer-sponsored practice remediation
  - Incorporate Just Culture for the review of practice complaints
  - Create a statewide patient safety database
  - Assist with the development of a national patient safety database
  - Increase the use of the Practice Intervention and Improvement Program (PIIP) alternative to discipline program

Components

1. The Practice Intervention and Improvement Program (PIIP) is a confidential alternative to discipline program for eligible licensees. The program establishes a structured remedial education and monitoring program to document that the participant's practice deficiency has been corrected.

2. TERCAP (Taxonomy of Error, Root Cause Analysis and Practice-Responsibility) is a tool used to gather data and track cases involving practice breakdown. TERCAP is an initiative of the National Council of State Boards of Nursing to develop a national database on practice breakdown, and to identify patterns of error, risk factors, and system issues that contribute to practice breakdown. This will assist in the development of new approaches for patient safety.

3. Just Culture, a risk management model pioneered by Outcomes Engineering, Inc., is a systematic method that can be used by nursing employers and the Board to increase patient safety by recognizing and modifying system flaws, and by holding individuals accountable for reckless behavior or repeated behavior that poses increased risk to patients. Just Culture finds middle ground between a punitive culture that generally does not consider the systems issues that contribute to errors, and a blame-free culture, that does not hold individuals appropriately accountable. Just Culture holds individuals accountable for their performance based on their job responsibilities, but does not expect individuals to assume accountability for system flaws over which they had no control.

Model Design and Responsibilities

Health care facilities will be responsible for choosing to establish Just Culture within their own organizations, i.e., providing training, establishing systems and methods to report practice complaints, providing remediation for a nursing practice deficiency, and resolving systemic issues contributing to practice breakdown. While it is beyond the role of the Board to mandate the use of Just Culture for employers and their businesses, the Board will encourage its use and work collaboratively with employers to promote the principles.

The essential connection between the Board and employers is the initial reporting and communication regarding complaints. Facilities are responsible to report practice complaints and the Board is responsible to investigate, incorporating the Just Culture analysis as part of the investigatory and review process prior to or at the time of recommending disposition of the complaints.

Many complaints do not result in public disciplinary action, but remain confidential and closed unless subsequent violations are reported. However, it is important that complaints are reported. If they are not reported, the risk to public safety is high. For example, the Board may have confidential information from Employer A about a nurse and if Employer B reports a complaint on the same nurse, a pattern could emerge. If Employer B does not report the complaint, it is unlikely the Board could identify a pattern of at-risk behavior.

The public will remain confident that the Board meets its statutory responsibility to protect the public when they know that the Board expects that all complaints will be reported to the Board.

This model illustrates the Board and employers working more closely in conjunction with individual licensees and the health care setting to promote patient safety. The model will enable the Board and the employer to meet their respective legal obligations and assure the public that their expectations for public protection and patient safety are being met. By incorporating the Just Culture principles, we anticipate an increase in employer remediation and in the use of PIIP, the confidential alternative to discipline remediation program, both of which are designed to return the licensee to safe practice.

Board – Obligations

- Public protection
- Investigation of complaints and imposition of sanctions, as warranted
- Assure the public that the Board is fulfilling its mandate of public protection

Employer – Obligations

- Safe patient care
- Safe systems
- Mandatory reporting

Implementation of Patient Safety Initiative
Reporting Complaints

Board – Results

- Just Culture analysis guiding investigative process, review, and discipline
- Increased consistency in review of all factors looking at human error, risk-taking behavior, and reckless behavior
- Development of patient safety databases
- Remediation of licensees

Employer – Results

- Safer environment
- Systems modification for improved patient safety
- Return licensees to practice upon successful remediation
- Contribution to patient safety databases

Processes and Procedures

1. The employer identifies a nursing practice breakdown and notifies the Ohio Board of Nursing by completing the complaint forms. The employer follows their policies and procedures for reviewing/investigating a practice breakdown. If applicable, the employer submits an employer remediation plan to the Board.

    a. If the employer is not sure about reporting a possible violation to the Board, the employer should report the situation, so the Board can conduct an investigation, review the facts and circumstances, and make a determination regarding whether a violation occurred.

    b. While the Board understands that not every practice or medication error needs to be reported, employers need to consider, among other things, the intent related to the error and the potential or actual harm. If a one-time error was intentional or had the potential to result in patient harm, the incident should be reported. Further, if the employer is aware of a pattern of errors or concerns, the employer should report the concern. Even if the employer is not sure there is enough evidence to prove a violation, the employer should file a complaint so Board compliance agents can conduct a detailed investigation. The Board may have other investigatory information from the past or from previous employers and the newly reported information may now indicate a more serious problem or a pattern.

2. Board staff reviews the complaint and if additional information is needed to complete the complaint data, consults with the employer. An investigation is opened if the matter involves an alleged violation. The Just Culture analysis is used as part of the investigative process. Board staff enter complaint data in the NCSBN database for TERCAP patient safety data.

3. Board staff present the case to the Board Supervising Member for Disciplinary Matters for review and disposition. The Just Culture analysis is incorporated to assist in distinguishing between human error, risk-taking behavior, and reckless behavior. The Board may close the case, issue a non-disciplinary advisory letter, refer the nurse to the PIIP Program with employer remediation, or impose disciplinary sanctions.

Just Culture Overview and Analysis

Just Culture is a term coined by David Marx, Chief Executive Officer of Outcome Engineering, LLC, an engineer and attorney who is known for his work in patient safety and safe system design. He describes Just Culture as,

> On one side of the coin, it is about creating a reporting environment where staff can raise their hand when they have seen a risk or made a mistake. On the other side of the coin, it is about having a well-established system of accountability. A 'Just Culture' must recognize that while we as humans are fallible, we do generally have control of our behavioral choices.

Scott Griffith, Chief Operating Officer of Outcome Engineering, LLC, wrote a column, "The Growth of a Just Culture" in the *Joint Commission Perspectives on Patient Safety*, (December 2009, Volume 9, Issue 12). The following are highlights from that article.

- Just Culture strikes a balance, being neither "highly punitive" nor "blame free."

- It is a culture that holds organizations accountable for the systems they design and for how they respond to staff behaviors fairly and justly. In turn, staff are accountable for the quality of their choices and for reporting both their errors and system vulnerabilities. In an organization with a Just Culture, we focus on our systems yet do not lose sight of physicians, managers, pharmacists, clerks, or nurses as components within our system.

- Rather than assume that a bad outcome has a bad person associated with it, the focus is on the differences between human error, at-risk behavior, and reckless behavior; justice is administered based on the quality of the person's choice.

- Just Culture recognizes that human error is inadvertent, while at-risk behavior and reckless acts are conscious choices, regardless of whether harm was intended. When all three behaviors are managed consistently, a Just Culture shifts to focus on the quality of choices, not on undesired outcomes that may or may not result.

Just Culture focuses on system-wide issues that contribute to practice breakdown, and also examines the behavior and responsibilities of the nurse and holds the nurse accountable for unsafe or reckless choices that endanger patients. Practice breakdown analysis focuses on three origins of errors: (1) human error; (2) at-risk behavior; (3) reckless behavior.

When practice breakdowns are reported to the Board, the Just Culture analysis is used by the Board to distinguish between human error, risk-taking behavior, and reckless behavior. Using the analysis of Just Culture, the Board may close the case, issue a non-disciplinary advisory letter, or consider the options of remediation or disciplinary sanctions. The Board recognizes that each case presents a unique set of factors that warrant individual consideration by the Board.

Outcome Measures

1. Patient Safety Initiative Program employers will provide supplemental practice breakdown information to the Board for 95% of all practice complaints.

2. The Board will investigate and/or review 95% of the practice complaints using the Just Culture analysis as evidenced by the investigative summary or case review report.

3. The Board will submit to the national database for TERCAP the supplemental practice breakdown data for 95% of the practice cases for which the Board imposed disciplinary action.

4. Through consultation and collaboration, the Board and employers will establish an increased number of employer remediation plans for practice cases.

5. The number of practice cases considered for and/or referred to PIIP will increase within six months after the implementation of the Patient Safety Initiative.

6. Ohio data will be available for the state and incorporated in the national patient safety database maintained by the National Council of State Boards of Nursing.

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COMPLAINT FORM

All complaints are kept confidential pursuant to Section 4723.28(I), ORC and are not a public record.

Instructions: You may download this form, complete it on your computer, save it as a Word document, and e-mail it as an attachment, to complaints@nursing.ohio.gov. Or you may fax the completed form to 614-995-3686 or 614-995-3685, or send via regular mail it to the Board's Office, Att'n Compliance Unit, at the address listed above in the letterhead. If you have questions, please call 614-466-9564.

Under HIPAA, the Board is a health oversight agency to whom release of PHI is a permitted disclosure without patient authorization. 45 CFR 164.512(d).

Complainant Information

Date _____

Name of person filing complaint and Title/Position (if applicable) _____

Home Address _____
Include City, State & Zip

Home Telephone _____ E-Mail Address _____

Filing on behalf of an agency or facility? ☐ Yes ☐ No (If yes, please provide information requested below)

agency/facility name _____

agency/facility address _____
Include City, State & Zip

agency/facility telephone _____ Your E-Mail Address (at facility) _____

Complaint/Incident Information

Please provide as much information as possible. The Board understands that you may not know all of the information.

Name (of the person you are reporting to the Board) _____

Home Address _____
Include City, State & Zip

Home Telephone # _____ E-Mail Address _____

Please check
☐ Advanced Practice Nurse (CNP, CNS, CRNA, Certified Nurse Mid-Wife)
☐ Registered Nurse ☐ Licensed Practical Nurse
☐ Dialysis Technician ☐ Community Health Worker
☐ Certified Medication Aide ☐ No License or Certificate

License or Certificate No. _____ Last 4 SSN _____ D.O.B. _____

Employer _____ Date of Hire _____

Employer's Address _____
Include City, State, & Zip

Employer Telephone # _____ Employer E-Mail Address _____

Complaint/Incident Information Cont'd

Has the information reported in this complaint been reported to another agency or law enforcement authority?
☐Yes ☐ No

If yes, please specify and list the contact person _____
Was the nurse/dialysis techician/community health worker/certified medication aide terminated from employment due to this incident?☐Yes ☐ No

If yes, please list effective date _____

Please provide below a brief description of complaint or violation, including names of witnesses and/or victims: (please type or print neatly) **Please send all related documentation and witness statements confirming the violation.**

_____

Please Note: if you are an employer and are reporting a nurse who has been involved in a practice breakdown (including but not limited to documentation issues, failure to follow physician's orders, failure to assess a patient, failure to perform treatments, and medication errors) please complete the Supplemental Information Form (available on the Board's website at www.nursing.ohio.gov.

Please provide names, addresses and telephone numbers of witnesses below:

Witness #1 _____
Name

_____
Address line 1

_____
Address line 2

_____
Telephone # and/or e-mail address

Witness #2 _____
Name

_____
Address line 1

_____
Address line 2

_____
Telephone # and/or e-mail address

Witness #3 _____
Name

_____
Address line 1

_____
Address line 2

_____
Telephone # and/or e-mail address

Witness #4 _____
Name

_____
Address line 1

_____
Address line 2

_____
Telephone # and/or e-mail address

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REPORTING COMPLAINTS

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The public expects that safe nursing care will be delivered and that unsafe or incompetent practice will be addressed. One way to promote safe nursing care is for employers to report practice issues and for the Ohio Board of Nursing to review the practice breakdown and potential violation.

In calendar year 2009, the Board received over 6,200 complaints and allegations of violations of the Nurse Practice Act (NPA) and administrative rules. Based on the evidence obtained during the investigation, the Board may pursue disciplinary action, refer nurses to confidential alternative programs for discipline, issue non-disciplinary advisory letters, or close the complaint with no action taken.

Q: What are the violations I should report?

A: Conduct by a licensed nurse that would be grounds for disciplinary action in Section 4723.28, Ohio Revised Code (ORC), includes, but is not limited to, failure to practice in accordance with safe nursing care standards, violations of maintaining professional boundaries, positive drug screens, diversion of drugs, or impairment of the ability to practice nursing. The employer is required to report even if the nurse has been referred to an employee assistance program or is participating in a remediation program.

If the employer is not sure about reporting a possible violation to the Board, the employer should report the situation, so the Board can conduct an investigation, review the facts and circumstances, and make a determination regarding whether a violation occurred. The law does not require that the employer conduct a full investigation and determine if the nurse has violated the law or rules prior to filing a complaint with the Board.

Q: Should employer-employee issues be reported to the Board?

A: In general, employer-employee issues are not reported to the Board. This includes failure to follow an employer policy. For example, not providing adequate notice of termination of employment, “no call, no show,” rudeness with

co-workers, refusal to accept an assignment, staffing or work hour issues, etc., are usually employer-employee issues handled by the employer.

Q: How do I determine if I should refer a medication error to the Board?

A: If in doubt, it is better to report the error to the Board for evaluation. The majority of the Board investigators are nurses who will collect additional information and evaluate if further review for a violation is warranted. Below are guidelines or examples of what to report to the Board:

- Administration of the medication was beyond the nurse's scope of practice
- Administration of the medication was beyond the nurse's knowledge, skills, and abilities
- Errors are repetitive, or a pattern of errors has been identified
- Violation of known medication administration policies and/or procedures resulted in a significant risk to patient
- Recklessly or knowingly caused harm

Q: Under HIPAA, am I permitted to release health care information to the Board?

A: Under HIPAA, the Board is a health oversight and law enforcement agency to whom release of Personal Health Information is a permitted disclosure without patient authorization. 45 CFR 164.512(d); 45 CFR 164.512(f).

Q: How do I make a complaint to the Board?

A: Locate the complaint form on the Board web site at www.nursing.ohio.gov and click on "Discipline and Compliance." You can download the form, complete it as a Word document and e-mail it as an attachment to complaints@nursing.ohio.gov; fax it to 614-995-3686 or 614-995-3685; or send via regular mail, Attention: Compliance Unit, Ohio Board of Nursing, 17 S. High Street, Suite 400, Columbus, Ohio, 43215.

Q: If I make a complaint, what will happen?

A: Complaints are investigated by Board investigators, most are nurses, and all are experienced and have had investigative training. Generally, the investigator contacts the complainant, nurse, and others who can provide information about the allegation. Based on the evidence obtained during the investigation, the Board may pursue disciplinary action or close the complaint.

Q: Is my complaint confidential?

A: Yes. The fact that the Board has received information and is investigating a licensee is confidential and would not be disclosed to the public. The Board keeps complaints and information obtained about those who are under investigation confidential, as required by Section 4723.28(I)(1), ORC. In the interest of protecting patients, always report nurses if you believe there are grounds for disciplinary action.

Q: Does the law provide immunity if I make a complaint?

A: Under Section 4723.33, ORC, a registered nurse, licensed practical nurse, dialysis technician, community health worker, or medication aide who in good faith makes a report to the Board regarding a violation of the NPA or rules, or participates in any investigation, administrative proceeding, or judicial proceeding resulting from the report, has the full protection against retaliatory action provided by Sections 4113.51 to 4113.53 of the Revised Code.

Q: Why do I need to complete the "Supplemental Information Form for Employers" when I make a practice complaint?

A: The supplemental information is being used to develop state and national patient safety databases. The data will be used to better understand the nature of practice breakdown, identify risk factors, and develop systems to prevent practice breakdown. All facility or patient-specific information will be redacted.

Q: Is Ohio a "mandatory" reporting state?

A: Yes. Ohio law requires mandatory reporting which means that employers must report to the Board those licensees and certificate holders whom they have reason to believe may have violated the NPA or the rules adopted by the Board.

Q: Since the nurse was terminated from employment here, is there really a need to submit a complaint?

A: The Board has many cases where employers did not report nurses to the Board and the nurses went to other employers and repeated their practice errors. It is your responsibility to report potential violations.

Q: Who is to report violations by nurses from a staffing agency?

A: Employers who use nurses from staffing agencies or travel companies need to ensure that complaints are filed with the Board either by the staffing agency, travel company, or by the practice setting where the nurse is working on assignment. The Board is aware of situations where nurses working for staffing agencies or travel companies were not reported and subsequently the nurses continued to practice in other settings repeating the same violations and endangering the public.

Q: Who do I contact with questions?

A: Email the Board Compliance Unit at compliance@nursing.ohio.gov.

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The Board requests that employers answer the following questions when reporting a nurse who has committed a practice breakdown, including but not limited to documentation errors, failure to follow physician's orders, failure to assess a patient, failure to perform treatments, and medication errors.

Supplemental Information Form For Employers

This form is kept confidential pursuant to Section 4723.28(I), ORC and is not a public record.

Instructions: You may download this form, complete it on your computer, save it as a Word document, and e-mail it as an attachment, to complaints@nursing.ohio.gov. Or you may fax the completed form to 614-995-3686 or 614-995-3685, or send via regular mail it to the Board's Office, Att'n Compliance Unit, at the address listed above in the letterhead. If you have questions, please call 614-466-9564.

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Name of Nurse: _____

Date of Incident: _____

Name of Facility: _____

1. Type of Community: *select ONLY one*
☐ Rural (lowly populated, farm or ranch land, communities of 10, 000 or less)
☐ Suburban (towns, communities of 10,000 to 50,000)
☐ Urban (any city over 50,000)

2. Type of Facility or practice environment: *select ONLY one*
☐ Ambulatory Care
☐ Behavioral Health
☐ Home Care
☐ Long Term Care
☐ Physician/Provider Office or Clinic
☐ Assisted Living
☐ Critical Access Hospital
☐ Hospitals
☐ Office-based Surgery
☐ Other, please specify_____

3. Facility Size: *select ONLY one*
☐ 5 or fewer beds ☐ 6 – 24 beds ☐ 25 – 49 beds ☐ 50 – 99 beds ☐ 100 -199 beds ☐ 200 – 299 beds
☐ 300 – 399 beds ☐ 400 – 499 beds ☐ 500 or more beds ☐ Not Applicable

4. Medical Record System: *select ONLY one*
☐ Electronic physician orders ☐ Electronic medication administration system
☐ Paper documentation ☐ Combination paper/electronic record

5. Length of time the nurse had worked for the organization/agency where the practice error or breakdown occurred: *select ONLY one*
☐ Less than 1 month ☐ 1 month ☐ 1 -12 months ☐ 1 -2 years ☐ 2 – 3 years ☐ 3 – 5 years
☐ More than 5 years

6. Work start and end times when the practice breakdown occurred (please denote am or pm):
Start time _____ am/pm End time _____ am/pm Time of incident _____ am/pm

7. Length of time the nurse had worked in patient care location / department where the practice breakdown occurred
☐ Less than 1 month ☐ 1 month - 12 months ☐ 1 - 2 years ☐ 2 - 3 years ☐ 3 - 5 years
☐ More than 5 years

8. Length of time the nurse had been in the specific nursing role at the time of the practice breakdown:
☐ Less than one month ☐ 1 month - 12 months ☐ 1 - 2 years ☐ 2 - 3 years ☐ 3 - 5 years
☐ More than 5 years

9. Type of shift:
☐ 8 hour ☐ 10 hour ☐ 12 hour ☐ On call ☐ Other - please specify _____

10. Days worked in a row at the time of the practice breakdown (include ALL positions / employment):
☐ First day back after time off ☐ 2 - 3 days ☐ 4 - 5 days ☐ 6 or more days

11. Was the nurse working in a Temporary capacity (e.g., traveler, float pool, covering a patient for another nurse)?
☐ Yes ☐ No

12. Assignment of the nurse at time of the practice breakdown:
☐ Direct patient care ☐ Team leader ☐ Charge nurse ☐ Nurse manager / supervisor
☐ Combination patient care / leadership role

13. How many direct care patients were assigned to the nurse at the time of the practice breakdown? Number of Patients _____

14. How many staff members was the nurse responsible for supervising at the time of the practice breakdown? Number of Staff _____

15. How many patients was the nurse responsible for overall (counting direct-care patients and the patients of the other staff the nurse was supervising at the time of the practice breakdown)?
Number of Patients _____

16. Previous discipline history by employer(s), including current employer, for practice issues?
☐ Yes (Please include copies with this complaint form) ☐ No

17. Employment Outcome: *Select ONLY one*
☐ Employer retained nurse ☐ Nurse resigned ☐ Nurse resigned in lieu of termination
☐ Employer terminated / dismissed nurse ☐ Other – please specify_____

18. Patient age _____ or (If more than one patient was involved, report data for the patient with the most serious harm, or risk of harm).

19. Patient gender (If more than one patient was involved, report data for the patient with the most serious harm, or risk of harm). ☐ Male ☐ Female

20. Were the patient's family and/or friends present at the time of the practice breakdown?
☐ Yes ☐ No

21. Indicate whether the patient exhibited any of the following at the time of the practice breakdown: *Check ALL that apply*
☐ Agitation /Combativeness ☐ Altered level of consciousness ☐ Cognitive impairment ☐ Communication /Language difficulty ☐ Depression / Anxiety ☐ Inadequate coping /stress management ☐ Incontinence ☐ Insomnia ☐ Pain Management Issues ☐ Sensory deficits (hearing, vision, touch) ☐ None

22. Indicate the patient's diagnosis: *Check no more than TWO diagnoses, those that contributed to the reported situation.*
☐ Alzheimer's disease and other dementias (confusion) ☐ Arthritis ☐ Asthma ☐ Back problems ☐ Cancer ☐ Congestive heart failure ☐ Depression and anxiety disorders ☐ Diabetes ☐ Emphysema ☐ Fractures ☐ Gall bladder disease ☐ Gastrointestinal disorders ☐ HIV / AIDS ☐ Hypertension ☐ Infections ☐ Ischemic heart disease (CAD, MI)
☐ Nervous system disorders ☐ Pneumonia ☐ Pregnancy ☐ Renal / urinary system disorders
☐ Skin disorders ☐ Stomach ulcers ☐ Stroke (CVA)
☐ Other - please specify _____

23. What happened to the patient? *Check ALL that apply*
☐ Patient fell ☐ Patient departed without authorization ☐ Patient received wrong medication
☐ Patient received wrong treatment ☐ Patient received wrong therapy
☐ Patient acquired nosocomial (hospital acquired) infection ☐ Patient suffered hemolytic transfusion reaction ☐ Patient suffered severe allergic reaction / anaphylaxis ☐ Patient was abducted ☐ Patient was assaulted ☐ Patient suicide ☐ Patient homicide
☐ Other - please specify_____

24. Patient Harm: *Select ONLY one*
☐ No harm - An error occurred but with no harm to the patient
☐ Harm - An error occurred which caused a minor negative change in the patient's condition.
☐ Significant harm - Significant harm involves serious physical or psychological injury. Serious injury specifically includes loss of function or limb.
☐ Patient death - An error occurred that may have contributed to or resulted in patient death.

25. Did the practice breakdown involve a medication error?
☐ Yes ☐ No *If No, skip to Question 29*

26. Name of drug involved in the practice breakdown (Include complete medication order):
Drug ordered _____ Drug actually given _____

27. Indicate the type of medication error. (The type of medication error identifies the form or mode of the error, or how the error was manifested.): *Check ALL that apply*
☐ Drug prepared incorrectly ☐ Extra dose ☐ Improper dose / quantity ☐ Mislabeling
☐ Omission ☐ Prescribing ☐ Unauthorized drug ☐ Wrong administration technique
☐ Wrong dosage form ☐ Wrong drug ☐ Wrong patient ☐ Wrong route ☐ Wrong time
☐ Wrong reason ☐ Abbreviations
☐ Other - please specify _____

28. Did the practice breakdown involve a documentation error? ☐ Yes ☐ No
If Yes, the practice breakdown documentation error involved: ☐ Pre-charting / untimely charting ☐ Incomplete or lack of charting ☐ Charting incorrect information ☐ Charting on wrong patient record ☐ Other - please specify _____

29. If Attentiveness / Surveillance was a factor in the Practice Breakdown, *Check ALL that apply:*
☐ Patient not observed for an unsafe period of time ☐ Staff performance not observed for an unsafe period of time ☐ Other - please specify _____

30. If Clinical Reasoning was a factor in the Practice Breakdown, *Check ALL that apply:*
☐ Clinical implications of patient signs, symptoms and/or responses to interventions not recognized
☐ Clinical implications of patient signs, symptoms and/or interventions misinterpreted
☐ Following orders, routine (rote system) without considering specific patient condition
☐ Poor judgment in delegation and the supervision of other staff members
☐ Inappropriate acceptance of assignment or accepting a delegated action beyond the nurse's knowledge and skills
☐ Lack of knowledge ☐ Other - please specify_____

31. If Prevention was a factor in the Practice Breakdown, *Check ALL that apply*
☐ Preventive measure for patient well-being not taken ☐ Breach of infection precautions
☐ Did not conduct safety checks prior to use of equipment
☐ Other – please specify_____

32. If Intervention was a factor in the Practice Breakdown *Check ALL that apply*
☐ Did not intervene for patient ☐ Did not provide timely intervention
☐ Did not provide skillful intervention ☐ Intervened on wrong patient
☐ Other - please specify _____

33. If Interpretation of Authorized Provider's Orders was a factor in the Practice Breakdown, *Check ALL that apply*
☐ Did not follow standard protocol / order ☐ Missed authorized provider's order
☐ Unauthorized intervention (not ordered by an authorized provider) ☐ Misinterpreted telephone or verbal order ☐ Misinterpreted authorized provider handwriting ☐Undetected authorized provider error resulting in execution of an inappropriate order ☐ Other - please specify _____

34. If Professional Responsibility / Patient Advocacy was a factor in the Practice Breakdown, *Check ALL that apply*
☐ Nurse failed to advocate for patient safety and clinical stability ☐ Nurse did not recognize limits of own knowledge and experience ☐ Nurse did not refer patient to additional services as needed
☐ Specific patient requests or concerns unattended ☐ Lack of respect for patient / family concerns and dignity ☐ Patient abandonment ☐ Boundary crossings / violations ☐ Breach of confidentiality
☐Nurse attributes responsibility to others ☐ Other - please specify _____

35. Did the questionnaire allow you to capture the essential elements of the practice breakdown? If not, please explain what was missing that would have helped describe the case (please send all related documentation and witness statements confirming the practice violation)_____

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CREATING A CULTURE OF SAFETY AND ACCOUNTABILITY

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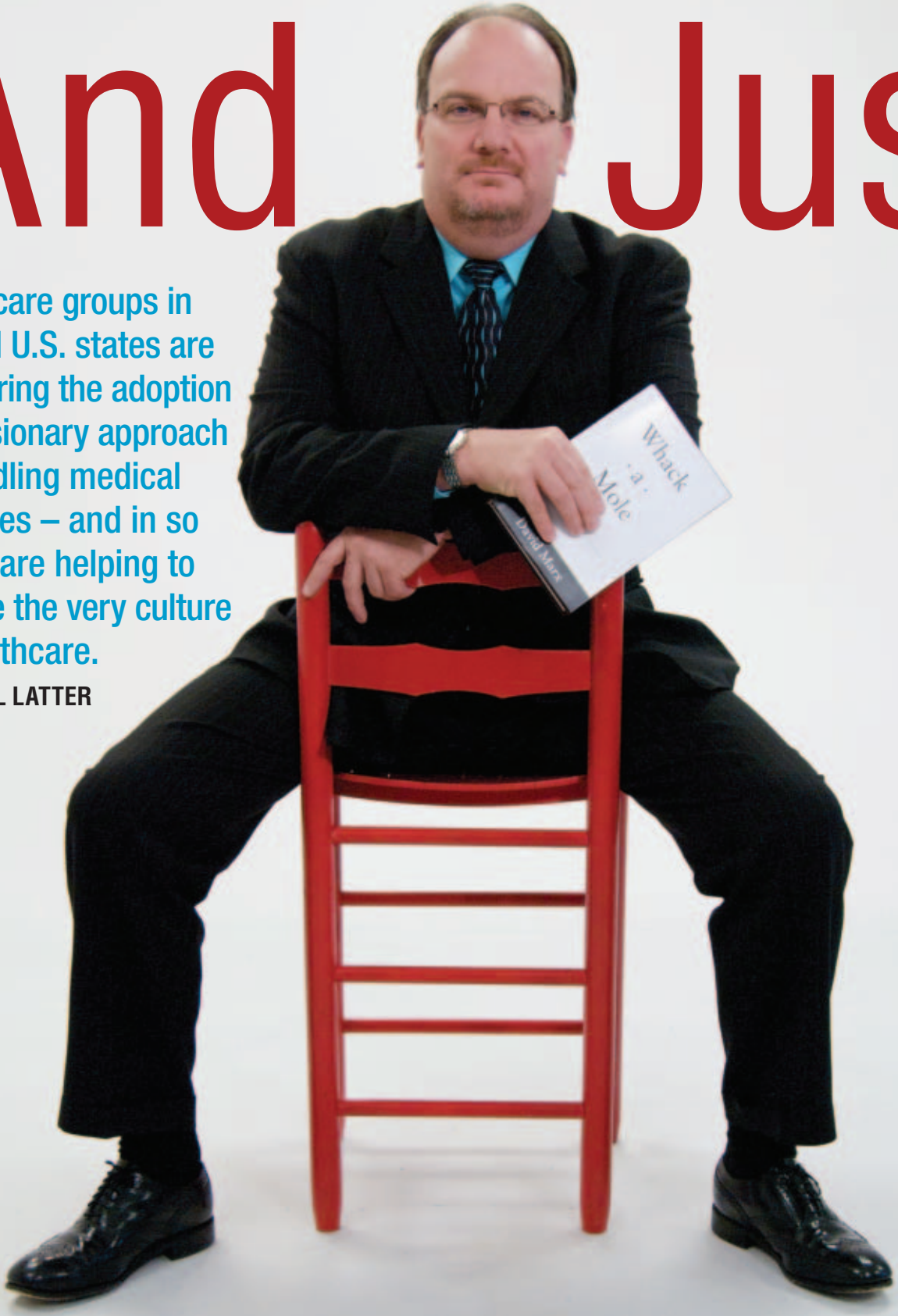
RESOURCE ARTICLES
2010

And Just



Healthcare groups in several U.S. states are pioneering the adoption of a visionary approach to handling medical mistakes – and in so doing, are helping to change the very culture of healthcare.

BY CAROL LATTER

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ice For All

Across the country and around the globe, David Marx has spent the last decade or more spreading a message that has been slowly altering the way the world looks at mistakes – from pilot error in the aviation industry to medical errors in the healthcare field.

In our increasingly litigious society, Americans in particular have become known for suing first and asking questions later – and regulators and corporate leaders alike have found it all too easy to cave in to public pressure to "make people pay" for their mistakes.

The idea: to strike fear into people's hearts so they'll be driven by fear to avoid slip-ups.

The reality: punitive approaches have been proven ineffective in reducing preventable errors.

The reason: business or operating systems are rarely perfect, and humans – despite their best intentions – are fallible.

Despite decades of strict regulations and harsh penalties for errors, Marx says, "200,000 people die from medical error or hospital infection" in the U.S. each year. And in a climate of fear, medical errors are vastly underreported, reducing the chance for the healthcare system to learn from those mistakes.

Clearly, another approach is needed.

Marx advocates an approach he believes is both more humane and more effective – a middle ground between harsh punishment and a blame-free society. "Just Culture" calls for treating people fairly and encouraging open communication so that "near misses" can serve as learning tools to prevent future problems, and actual mistakes can be used to identify and correct root causes.

Under this model, healthcare organizations still investigate why an adverse incident took place, but they console employees who make honest mistakes and coach those involved in risky behavior. Sanctions are reserved for reckless acts.

A State of Justice

Healthcare organizations in a number of states – North Carolina, Missouri and California chief among them – have heeded Marx's "better way." They've spent the last several years pioneering the statewide adoption of his visionary approach, with impressive results.

North Carolina is one of a handful of states that have been launching statewide initiatives to engage

Theresa Manley, right, discusses Just Culture initiatives with fellow staff members. Manley is chair of the California Patient Safety Action Coalition, which has been promoting Marx's approach as a means of improving healthcare safety.

everyone – from regulators and healthcare leadership to individual physicians and nurses – in this alternate approach to improving patient safety and the overall tone of the workplace environment.

Dr. Carol Koeble, MD, MS, CPE, is director of the North Carolina Center for Hospital Quality and Patient Safety, an initiative of the North Carolina Hospital Association. The center was established in 2005 through grant funding to put North Carolina on the path to "having the safest, highest quality hospitals in the U.S."

When she arrived from Alaska four years ago to take the helm of the center, Dr. Koeble learned that the state board of nursing had invited Marx to speak about Just Culture, and that he was subsequently brought back to address a hospital association member meeting.

In talking to hospitals, she discovered that many were extremely interested in what Marx had to say. A subsequent statewide, day-and-a-half educational session attracted 130 people from 30 hospitals. This led, in short order, to the establishment of a statewide collaborative to provide participating healthcare organizations with a foundational platform and strategic goals. "We've been building statewide consensus for fair and just culture since that time," says Dr. Koeble.

The NC Quality Center has developed two collaboratives – an 18-month program that began in 2006 and attracted nine hospitals, and a second two-year program, begun in 2008, involving eight facilities. In addition to the collaborative programs, the center provides educational programs on a statewide, regional and local basis.

Three in-person educational sessions, regular teleconferences and coaching calls are offered to participating organizations, Dr. Koeble says. In addition, hospitals are provided with how-to materials created by Marx's company, including an assessment algorithm tool, to determine how to handle and respond to medical errors at the organizational level.

The North Carolina Board of Nursing is very much involved, and has adopted the Just Culture model to investigate "deviations from [standard] nursing practices. They've been piloting a tool in the state to assist hospitals," she says. Hospitals can use the tool to determine whether they can handle specific adverse events on their own, or whether a case should be referred to the board of nursing. "It's been a very successful pilot."

One of the lessons learned along the way involves leadership engagement. Some of the hospitals in the first collaborative "moved rapidly," while others "barely got out of the starting gate in 18 months. The successful ones were those that had senior leadership engaged from the beginning."

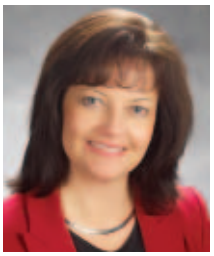
The second lesson was learned after participants in the first collaborative program were asked to go back to their organizations and train their managers. "They had a difficult time providing the training," she says. In the second collaborative, representatives from the center provided the follow-up training, traveling to each hospital and spending up to five hours with key managers, using a training guide by Marx.

Other keys to success were setting achievement milestones and "having the right staff involved," Dr. Koeble says.

The second collaborative has been extremely successful, she notes. "All eight are really moving and are where they should be. We learned from our first program and identified opportunities to make the second collaborative better."

Finding Champions

Becky Miller, MHA, CPHQ, FACHE and executive director of the Missouri Center for Patient Safety in Jefferson City, says her state's journey began after Marx addressed a conference there, attended by about 120 people. Marx received a very enthusiastic response, which resulted in 85% of participants indicating interest in a statewide initiative.



"If you don't have people who are aware of Just Culture and are prepared to act on it, you aren't going to be able to prevent mistakes before they happen. That's something that needs to be drilled down through the whole organization," says Becky Miller, executive director of the Missouri Center for Patient Safety in Jefferson City.

On the advice of the state board of nursing, the center applied for, and got, a patient safety grant of $264,000 that allowed it to organize a collaborative. Initially, a briefing was held for leaders of statewide organizations to educate them about Just Culture and gain support for the collaborative. Soon after, 67 organizations asked to participate, and were accepted into the collaborative. That number included five statewide regulatory agencies, a nursing association, two physicians' offices, a nursing home, a professional school and hospitals.

"We asked each of the organizations to identify a 'champion' within their organization, and then established a leadership team that would work on the project with them," Miller says. "We provided training to the champions and then to their full team. We were also able to provide additional training for organizations wanting to take the next step; 21 received more intensive onsite training for their full executive or management team, or full staff." Approximately 4,000 people in Missouri were trained in Just Culture concepts as a result of the project.

A researcher helped the center modify a survey tool to determine if those participating in the collaborative came away with increased understanding, "and if they implemented that in their organizations."

Miller says the initiative proved successful. "We did see a difference, particularly in organizations that got the additional training. Their leaders seemed to be more aware of what their staff perceptions were regarding Just Culture. We think that opened up leaders' eyes. Those leaders thought their staff members were more mindful of errors and mistakes. They were doing more investigations, even if there wasn't serious harm."

She adds, "Regulators also told us they had a better understanding of the issues providers were dealing with, and they were interested

in integrating these concepts into their own regulatory processes."

Miller, who has a background in health policy, regulations, and risk management in acute care, says Just Culture "really takes the way I tried to work intuitively, and puts a model and some science behind it. If you don't have people who are aware of Just Culture and are prepared to act on it, you aren't going to be able to prevent mistakes before they happen. That's something that needs to be drilled down through the whole organization."

And while that's easier said than done, the CEO and a physician at a few hospitals "sat through an entire day of training. That's the kind of organization that you're really seeing taking the lead in doing this kind of work," she says.

Making Healthcare Safer

Theresa Manley, chair of the California Patient Safety Action Coalition (CAPSAC), says that state's action on Just Culture arose out of two mandatory reporting laws that became effective in July 2007. One was an adverse event reporting mandate; a second piece of legislation introduced an administrative fine for hospitals that failed to report these events in a timely way.

"We decided we wanted to get a group of people together across the continuum of healthcare in California to see how we could make healthcare safer," Manley says. "At the state level, we all agreed that in light of this punitive legislation that was passed, as a healthcare provider community, we saw a real value in looking at the culture in our organizations."

CAPSAC obtained a grant to hold a convening meeting in July 2008, and decided to partner with Marx's company, Outcome Engineering, "in trying to spread the idea of fair and just culture."

Before long, the number of CAPSAC's membership organizations grew from 20 to 60. "There was a feeling of urgency among healthcare organizations on how to become safer. We can do a better job of investigating adverse events and finding out why people make the behavioral choices they do. We thought the Just Culture approach could help."

The coalition began conducting regional trainings across the state for a nominal fee, training more than 900 people, including risk managers and senior leaders, in the Just Culture model. In 2009, the focus turned to investigating adverse events.

CAPSAC is also developing a physician strategy. "We cannot have a successful Just Culture without physician involvement," says Manley. "We're going to work with the California Medical Association and senior physician leaders across the state to help lead this effort."

In addition, CAPSAC is reaching out to the broader community by working with Americans For Quality Healthcare, a national partnership organization, to help identify and engage consumer advocacy groups in its efforts.

"We want to get the patients to sit at the table with us and help us understand how we can influence public perception and, in turn, educate our legislators on principles of

a fair and just culture. We want to do more outreach and influence the provider groups in having one voice about eliminating reckless behavior," Manley says.

As for healthcare professionals, she believes that safe behavior "must become so embedded that it becomes the habit and pattern of every person."

"History will tell you that having a punitive approach will not get you very far with human behavior. It goes to the fundamentals of social psychology. Instead of saying, 'We're going to fine you every time you don't wash your hands,' we need to influence your behavior through the social behavior in organizations by highlighting the inherent risk," Manley says.

"The Just Culture model gets it right because you can't put red rules in places for everything. A social system must be provided so the individual can recognize the inherent risk and make the right behavioral choices, so at the end of the day we can all feel good about the work we're doing."

Dr. Koeble of North Carolina says, "The big thing to realize is that in healthcare in general, nobody wants to do a bad job. In the past, if an error or mistake happened, we generally punished people. That shuts off the information pipeline around the event, and we can't learn from that. Just Culture allows the person to speak up and talk about a mistake. If something happened to them, they're going to be treated fairly. They are responsible for their own actions, they have choices, and they know what's expected of them."

"We can do a better job of .investigating adverse events and finding out why people make the behavioral choices they do. We thought the Just Culture approach could help," says Theresa Manley, chair of the California Patient Safety Action Coalition.

At the same time, if they choose to deviate from acceptable behavior, "there are repercussions that can happen. If someone coaches me to be in a good place, that's a positive thing, and I shouldn't take it personally."

Manley adds, "This is almost like good parenting. As a supervisor, manager or leader, you're trying to influence the choices that people will make when you're not there. Let's make sure that healthcare workers are not reckless or at risk, and that they choose the right things to do. I think that's why Just Culture really has such broad appeal. It speaks to the intelligence and integrity of healthcare providers." PS

Column: The Growth of a Just Culture

by K. Scott Griffith, chief operating officer, Outcome Engineering L.L.C.

Management dilemmas:

- Two nurses select the wrong medication from the dispensing system. One dose reaches a patient, causing him to go into shock, and the other is caught at the bedside before causing harm. Do we treat these nurses in the same way?
- An otherwise great pharmacist can't break an addiction to his afternoon smoke break. Do we give this person an exception to the no-smoking rule?
- A Phlebotomist loses custody of a yet-unlabeled specimen but chooses not to report the incident, out of fear of discipline. Do we forgive the breach, given the legitimate reasons for the phlebotomist's fear?
- A nurse complains that a physician knowingly violated a safety rule, although it was broken in order to save a life. Do we condone the rule violation?
- An entire surgical team defends skipping the presurgical time-out on the basis that no adverse event occurred. Do we condone this violation?

These are but a few examples of management dilemmas that might be addressed with the philosophy of a Just Culture. The Just Culture approach takes into account several important questions, including the following:

- How are we to account for the systems we create around caregivers?
- How are caregivers to account for their errors and their choices within those systems?
- Which ideas of workplace justice best support patient safety?
- What ideas of justice are fair given the predictable, inescapable fallibility of our managers and staff?

Health care professionals around the world are trying to find answers to these common questions—but that's easier said than done. Finding just, equitable, and efficient answers can seem illusive or even impossible. Though many organizations have tried adopting portions of the Just Culture, the fundamental concepts are often misapplied. Some have adopted a "blame-free" model of accountability, hoping that a "softer, kinder" approach will reduce adverse events or raise their patient safety survey scores.

In many organizations, managers have used academic models that over-simplify human behavior, focusing on procedural compliance over values or labeling behaviors as unsafe acts only after an adverse outcome occurs. At other times, these organizations turn a blind eye to risky choices, reinforcing the wrong lesson when no one is harmed. Each of these approaches, however well intended, falls short of hitting the mark. Just Culture is more than an adverse event–reporting system; it's more than a behavioral response to procedural noncompliance; it's more than an "unsafe acts" flowchart. But beyond these descriptions of what it's not, exactly what is a Just Culture?

For health care managers, Just Culture refers to a values-supportive model of shared accountability. It's a culture that holds organizations accountable for the systems they design and for how they respond to staff behaviors fairly and justly. In turn, staff

K. Scott Griffith, chief operating officer, Outcome Engineering L.L.C.

are accountable for the quality of their choices and for reporting both their errors and system vulnerabilities. In an organization with a Just Culture, we focus on our systems yet do not lose sight of physicians, managers, pharmacists, clerks, or nurses as components within our system. Through this balanced accountability, Just Culture provides better tools to manage the complicated risks within health care.

Rather than only react to the actual harm involved in discovered events, an organization with a Just Culture assesses the daily risks inherent in its operations and works toward maximum reliability to prevent future adverse events, relentlessly improving both system design and the quality of collective behavioral choices.

One of the defining qualities of a Just Culture is its commitment to values, including learning cultures, open and fair cultures, safe system design, and effective management of behavioral choices. A Just Culture fosters an environment where employees hunger for knowledge and eagerly seek to understand risk at both individual and

"A Just Culture fosters an environment where employees hunger for knowledge and eagerly seek to understand risk."

organizational levels. Recognizing the impact of system design on patient safety, those within a Just Culture design safe systems that work proactively—not just reactively to harmful outcomes. Though systems cannot be designed to perfection, they can be created to anticipate and capture human errors before they become critical, while also permitting recovery in the event that an error does reach a patient.

In a Just Culture, openness and fairness must be present to facilitate effective and honest reporting within safe systems. While there are ample reasons why someone who makes an error might not come forward or report his or her participation in an event, a Just Culture strikes a balance, being neither "highly punitive" nor "blame free." A Just Culture accepts that people make mistakes, but it also facilitates the differentiation and management of behavioral choices so that we improve our chances of achieving the outcomes we desire. Rather than just assume that a bad outcome has a bad person associated with it, we focus on the differences between human error, *at-risk behavior*, and *reckless behavior*—and administer justice based on the quality of the person's choice.

To effectively manage human behavior, a Just Culture understands the "severity bias" that emerges when the level of actual harm determines whether someone is disciplined. This can often lead organizations toward a dangerous "no harm, no foul" view of accountability. However, a Just Culture recognizes that human error is inadvertent, while at-risk behavior and reckless acts are conscious choices, regardless of whether harm was intended. When all three behaviors are managed consistently, a Just Culture shifts to focus on the quality of choices, not on undesired outcomes that may or may not result. An organization with a Just Culture is more concerned with the potential for risk—and catching it before harm occurs—than with punishing based on an outcome, which oftentimes is the result of human error alone.

A Just Culture recognizes that in order to achieve the best possible outcome, it must support each of its core values. Specifically in health care, the needs of privacy and access to care must be balanced with compassion, fiscal responsibility, and patient safety. An organization cannot guarantee perfect outcomes, but it can commit to maximizing its reliability around each of its core values and being the best steward of the limited resources it has.

Editor's Note: *The views expressed in this article are those of the author and not of The Joint Commission or Joint Commission Resources.* PS

Goals for a Just Culture

The Just Culture model sets goals for an organization, including the following:

- Creating an environment of internal transparency around risk
- Striving to understand why human errors occur within the organization
- Striving to understand why at-risk behaviors occur within the organization
- Learning to see common threads—to prioritize risk and interventions
- Working with staff to design systems that reduce the rate of human error and at-risk behavior or mitigate their effects
- Learning when to console and when to coach our employees
- Limiting the use of warnings and punitive actions to the narrow circumstances where such use benefits organizational safety
- Avoiding traditional organizational biases by focusing on the risks inherent in systems and behavioral choices, not the actual outcomes of events
- Using data to build both unit and organizational models of risk
- Learning to measure risk, at both the unit and organizational levels

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TERCAP: Creating a National Database on Nursing Errors

Patricia Benner, RN, PhD, FAAN, Kathy Malloch, PhD, MBA, RN, FAAN, Vicki Sheets, JD, RN, CAE, Karla Bitz, PhD, RN, Lisa Emrich, MSN, RN, Mary Beth Thomas, RN, MSN, Karen Bowen, MS, RN, Kathy Scott, PhD, RN, Linda Patterson, Kathy Schwed, JD, Marie Farrell, EdD, MPH, MS, RN, FAAN

This article presents an overview of contemporary patient safety initiatives, continuing challenges specific to the creation of valid and reliable evidence for healthcare policy, and the National Council of State Boards of Nursing (NCSBN) initiative to illuminate the role of nursing practice in patient safety, error reduction and prevention. A brief review of national efforts on patient safety and specifically nurses' role in patient safety provides the context for changes in NCSBN strategies from individual nurse based efforts to system and practice based efforts. The role of classification and computerized data systems for policy are reviewed along with the challenges to classifying nursing practice breakdown based on an standards of excellent nursing practice. A taxonomy of nursing practice breakdown is presented along with the implications for policy and change.

Patient Safety Initiatives

Since the Institute of Medicine (IOM) report *To Err is Human*[1] was released in 1999, reporting that between 44,000-98,000 Americans die from medical errors annually, considerable national professional and societal attention has been given to the epidemic of errors

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in medicine.[2] Subsequently, additional major reports entitled *Crossing the Quality Chasm*[3] and most recently *Keeping the Patient Safe: Transforming the Work Environment of Nurses*[4] have been published. The IOM, in *Crossing the Quality Chasm*,[3] reports:

- Only 55% of patients in a recent random sample of adults received recommended care, with little difference found between care recommended for prevention, to address acute episodes or to treat chronic conditions.[5]
- Medication-related errors for hospitalized patients cost roughly $2 billion annually.[1,6]
- 18,000 Americans die each year from heart attacks because they did not receive preventive medications, although they were eligible for them.[7,8] Misdiagnoses/million occur in 20,000 – 80,000 of heart attacks in the ED.[9]
- Medical errors kill more people per year than breast cancer, AIDS, or motor vehicle accidents.[10]
- Health-care errors are the seventh leading cause of death in the US, costing $376 billion annually.[1]

Many agree that concrete strategies are needed that allow for the prevention of errors. Errors are costly to patients minimally, in terms of efficacy and time, and maximally, in term of discomfort and even harm or death. Errors are also costly to health care professionals who often bear the guilt of causing harm or death to another and violating the notions of good practice that guide their practice. Recommendation 7.2 of the third IOM report (2004) states:

> NCSBN, in consultation with patient safety experts and health care leaders, should undertake an initiative to design uniform processes across states for better distinguishing human errors from willful negligence and intentional misconduct, along with guidelines for their applicability by state boards of nursing and other state regulatory bodies.[4]

This report recognized that nurses are on the "sharp end" of patient care delivery, and that their practice deliberately includes error prevention and the promotion of patient safety. Nurses have the most direct contact time with patients who are hospitalized. They deliver, monitor and manage most patient therapies, often adjusting the dosages of medication within safe ranges according to needs and responses.

Evidence and Policymaking

Developing better institutional environments for patient safety requires understanding the multiple sources and nature of breakdowns in promoting safe patient care. An evidence-based policy process is informed by the collection of valid and reliable data and by ongoing evaluation. This process includes identifying the problem, developing a plan to address the problem, judging the feasibility of the plan, guiding the implementation of the plan, and then providing evidence from evaluation as a basis for any needed future revisions.[11] Creating the link and closing the gap between best guess and valid and reliable evidence are challenging for several reasons.[12] The most significant is the lack of understanding of the nature, scope and causes of safety breaches and credible evidence for prevention and remediation. All four of the specific gaps in reliable evidence suggested by Gray and Muir[13] exist in patient

safety related to nursing care: the relevance gap, in which there is an absence of high quality data to make policy decisions; the publication gap, in which a limited amount of information about evidence is published in scientific journals; the hunting gap, which describes the difficulty of finding published research; and finally the quality gap, in which critical appraisal of evidence that avoids misleading or biased conclusions is missing. NCSBN has designed a new instrument to collect a national database on nursing errors related to practice breakdowns reported to State Boards of Nursing (SBONs) as a means of providing better evidence for SBONs, but also for nurses, nurse educators and health care delivery institutions.

Background of the Initiatives

Historically, SBONs in the United States have focused on a nurse's personal and professional responsibility in relation to an alleged error. While a SBON considers patient factors, nurse's working conditions, and system issues, the boards have not had a standardized method for considering or classifying the types of nursing breakdown. Nor has a systematic review been available at the state or national level that considers caregivers, patient factors, nurse characteristics, working conditions (e.g. length of shift, staffing, etc.) and other system characteristics that may have contributed to the nurse's error. Records of SBON procedures for evaluating nursing errors have focused on the individual nurse's responsibility and the board's evaluation and subsequent recommendation on the nurse's culpability.[14] However, these investigations ignore a wide array of information available in the document based investigatory file such as system characteristics, nurse education, and patient and nurse characteristics.

In contrast, the IOM calls for a systems approach similar to that taken by airlines. Studies found that the majority of airline accidents are caused not by technical failures, but by breakdowns in communication. Benner and colleagues[14] identified an urgent need for decreasing health care errors that are typically framed in an oppositional "either/or" approach. One either upholds a model of individual agency and responsibility or focuses on a "system" approach that identifies aspects of the environment, such as clear labeling and redundant checking, or decision support systems that identify contraindications, correct drug dosages and drug incompatibilities.[15] But these two approaches do not stand in opposition to one another. Both are needed, and each can reinforce and support the other. System approaches can redesign and improve practices and individual performance. And it takes collective action of practitioners to institute system-wide reform.

NCSBN Initiative

In 1999, the NCSBN convened an expert panel to examine breakdown in nursing practice. The Practice Breakdown Advisory Panel (PBAP) argues that the debate becomes oversimplified by focusing on exclusively these two opposite poles: the agency of the individual or the power of designing systems as impersonal protections in an ongoing system of rules, policies and information that support the individual's practice. While the systems approach is designed to be inclusive, it does not account for knowledge work and problem solving required in under-determined complex practices such as nursing and medicine. The PBAP proposed practice-based guidance and problem solving by professional practitioners as

sources of and as approachs to error reduction in health care. Another approach is to inform patients to be guardians of their safety where possible; however, when patients are acutely ill their ability and knowledge for self-protection are diminished. Individual responsibility, practice based professional responsibility, and patient self-protection have distinct moral sources and discourses; however, phronesis, judgment and wisdom lodged in the character and skill of the practionitioner engaged in actual practice situations and lodged in a professional practice tradition undergird and sustain a systems approach, which synthesizes individual practitioner agency and patient self-protection approaches. A systems approach is based upon a post-hoc analysis and redesign of a system based upon unsafe performance. In complex under-determined practices, a systems approach is most effective when designed with a view of supporting and sustaining clinical judgment or phronesis—ongoing problem solving and practice improvement based upon notions of good practice, collective attentiveness, experiential learning and practice development in local communities of practitioners.

Phronesis encompasses the perception, relational work, and judgment of practitioners engaged with other human beings.[16] Phronesis was defined by Aristotle as ethical and clinical judgment carried out with skilled know-how and wisdom. Nursing offers a good example of phronesis when viewed as a basic human encounter lodged in a practice that requires skillful ethical comportment and ethical clinical reasoning. Aristotle was the first to point out distinctions between phronesis and techne. Techne, in contrast to phronesis, has to do with the making of things and can be standardized as a technique, algorithm or order. But phronesis involves relationship, mutual influence, and ethical comportment (behavior) in complex and under-determined situations. This distinction between phronesis and techne in both nursing and medicine has major implications for classifying nursing and medical errors.

In the practice of medicine and nursing, science and technology increase certainty about measurement of signs and symptoms. The practice of objectively measuring signs and symptoms and evaluating basic scientific research and clinical trials can greatly assist in the reduction of errors and improve clinical judgment. A caveat is that regardless of the level of objectivity or the validity of scientific evidence, if the measure and the phenomenon of interest are not appropriately linked, reduction of errors and improved clinical judgment will not occur as anticipated. Further, the selection of inappropriate measures can result in inappropriate conclusions and potential errors. No one would recommend going back to guessing body temperatures by human touch alone. However, even the most formal measurements cannot replace the perceptual skill of the clinician to recognize when a measurement is relevant or to recognize the meaning of a particular measurement in a particular patient situation. Also, following the course of the patient's development of signs and symptoms (the trajectory or evolution of signs and symptoms, i.e. temporal sequencing), informs the clinician's understanding of the meaning of the signs and symptoms. This may seem patently obvious to any practicing clinician, yet current strategies for applying algorithms or making particular clinical judgments based upon aggregate outcome data alone ignore the clinical know-how, relational skills, and need for clinical judgment as reasoning about the particular across time. Technique is defined here as pre-specified outcomes that can be reduced to routine, predictable, standardized care.

A more robust understanding of the prac-

tice of nursing and doctoring needs to be developed. This is especially true in an era when science and technology have become the dominant publicly legitimized discourses for modern professional practices. However, a broader base of skilled know-how and clinical and ethical judgment over the course of events for a particular patient is needed and provides better outcomes than science and technology can alone supply.

The systems approach is vital to preventing predictable errors and correcting systems designs that contribute to errors once they have been identified. However, a systems approach cannot replace situated problem solving based upon professional judgment or phronesis lodged in a community of practitioners whose collective agency and efforts exceed what any one individual can accomplish. Phronesis offers a missing link between individual responsibility and a systems component. A community of practitioners shares notions of good internal to a practice,[18] holds socially-embedded knowledge, participates in a scientific community and in a shared history of experiential learning, often told in narratives of past learning.[19] Notions of the good refer to the goals and ends of a practice, valued activities and their significance in particular situation. Even in a pluralistic society, notions of the good (the in-order-to's or the for-sake-of-which) are restricted to the situated goals and concerns of the persons involved and the restrictedness or boundedness of the situation. The shared moral agency of a community of practitioners is not adequately captured in the discourse of individual responsibility or in the impersonal language of systems engineering focused on correcting past mistakes. A community of practitioners creates multiple perspectives and relationships of responsibility in complex, fast-paced, under-determined health care situations. Consequently, a systems engineering approach depends on the practice tradition and the moral agency of individuals and on a moral community of practitioners to generate and sustain a systems approach.

Patient Safety and Nursing Practice

The PBAP work calls attention to "practice" as a significant middle term between a focus on the system or the individual in designing measures to improve patient safety. The ethos and standards of good practice are lodged in professional practice itself through educational institutions, work settings, and regulatory bodies. Nursing errors are sometimes subsumed under "medical errors," "physician errors" or "medication errors" with little public or professional awareness of the nature and seriousness of errors that nurses could prevent or cause. Nurses provide the closest and most consistent surveillance of patients. In some situations, institutional and resource conditions for good practice are missing. There may be staffing shortages, poor inter-professional communication practices, or errors that occur as a result of breakdowns in the institutional support essential to fulfill the minimal professional standards for good nursing practice. The practice is about relationships for nurses, physicians, social workers and other helping professionals dedicated to health promotion and care of the ill. This practice requires ongoing attentiveness, perceptiveness, responsive problem solving and effective communication. Multiple vantage points from different disciplines, specialties and experiential backgrounds offer insights and correctives to ongoing situations that would go undetected by individual practitioners. Health care workers functioning within a systems approach can detect and correct predictable er-

rors. In this context, problem solving occurs as individual and collective responsibility that operates within a community of practitioners. Practice-based approaches are particularly effective in under-determined situations and for improvement in the practice over time by maintaining a narrative understanding of past errors and ongoing system improvements and by offering different perspectives in situations where blind spots or experiential learning from past concrete cases have particular relevance to the current situation.

A systems approach integrated with and complementary to a practice based approach can assist in limiting practice areas where constant surveillance and attentiveness are required. However, in complex fast-paced systems, attentiveness can never be eliminated. The goal is to engineer what areas can be placed in the background and to create environments that facilitate attentiveness required by nurses and other health care professionals. Based upon this vision of the roles of systems engineering, an ongoing community of practice and practice development, the PBAP inductively generated major aspects of safe nursing practice. Disruption or absence of any of these aspects of good practice was called practice breakdown.

Members of the PBAP recognized that SBON provide a unique source of data specific to errors, practice breakdown and patient safety. For these reasons the PBAP embarked on the challenging process of identifying and extracting key information from board of nursing investigative cases, categorizing these data into a taxonomy that would integrate issues specific to the individual, the practice of nursing, and the system in which nursing is practiced.

Developing a Classification System Based upon a Vision of Good Nursing Practice

The lack of descriptive classifications of excellent nursing practice and concomitant sources of nursing practice breakdown is a result of the institutional and public invisibility of the surveillance and quality control provided by nurses. This invisibility is dangerous because in it prevents accountability and adequate feedback to large inter-locking systems ,making it difficult to maximize nurses' contribution to improving patient safety. The invisibility of nurses' contribution is due, in part, to the hidden work of nursing practice that is often classified as "other," leaving little trace in classification schemes where the predominant focus is on medical practice.[20]

NCSBN's effort to develop an instrument to describe and distinguish types and sources of nursing error was well underway when the first IOM report was written. Work continued on developing the Taxonomy of Error, Root Cause Analysis and Practice Responsibility (TERCAP), an instrument to be used for case analysis at the SBON level in order to develop a national database on patient care.[14] The TERCAP is an investigation intake instrument to classify nursing practice breakdown reported to SBONs. It includes the root causes of practice breakdown in nursing practice, examines the nurse characteristics (including the work demands of the nurse), the patient characteristics, the types of nursing practice breakdown, and finally, the system characteristics associated with the particular error. See Table 1 for the eight categories of safe nursing practice that were identified within the TERCAP.

The TERCAP is deliberately designed to influence investigations at the SBON level to develop a national database that would protect

the public by increasing patient safety not only by re-educating and disciplining nurses but also by developing an evidence-based approach to regulation through recommendations for educational and system change to reduce nursing error within and across states. The use of the term, Root Cause Analysis (RCA) in the TERCAP title is designed to encourage SBONs to think about the root causes of the error, and not just focus on the nurse's responsibility for the error under ideal, context-free circumstances such as adequate staffing or supervision. In 1998, the Joint Commission for Accreditation of Health-Care Organizations (JCAHO) implemented standards and recommendations related to the identification, reporting, analyzing, and presenting of sentinel events for hospitals so that weaknesses in procedures, systems, and employee habits could be determined and rectified. The hospital RCA process, however, often does not analyze beyond the more obvious and objective behaviors, systems, and processes to include the examination of human interactions and underlying norms, values and beliefs. As a result, fundamental contributors to practice breakdown and resulting patient care error continue to be misunderstood, mismanaged, and/or minimized.[22]

The TERCAP cannot accomplish full RCA retrospectively because of the delay in and specific focus of the analysis, but it can direct the investigation toward more comprehensive and systemic causes of nursing errors. Findings related to system and education sources of error are not currently incorporated into the regulatory efforts of many SBONs but will form an educational and informational arm of the work of the SBONs to promote patient safety. The analysis and reporting of this information is important for both health care professionals and health care consumers. As Emrich notes:

> What is learned from these errors in cases of nursing practice breakdown would be used to influence health care and nursing policy at all levels: local, state, national, and possibly international. However, changes in health care policy requires the input and action of legislators and officials, who do not have an in-depth understanding of the mindful activities that nurses take on behalf of their patients (83).[23]

This is an important reason for the nursing profession to categorize and name its seemingly invisible activities, especially those related to patient safety. In addition, the PBAP believed that TERCAP findings would provide data to strategically focus on error prevention and distinguish human errors from willful negligence and intentional misconduct as recommended by the 2004 IOM report.

Based on an inductive content analysis of the intake files of cases reported to SBONs and with the goal to add items related to system and practice responsibility, the PBAB reviewed three to four paper based intake files of nurses who had been reported to 14 SBONs and generated the following major categories of information to be included in the State Board's Investigatory Report. The TERCAP instrument is comprised of the following main sections:

I. Patient profile
II. Patient outcome
III. Setting of error
IV. System issues
V. Health care team
VI. Nurse profile
VII. Intentional misconduct or criminal behavior
VIII. Practice breakdown category: Safe Administration of Medica-

tion
IX. Practice breakdown category: Documentation
X. Practice breakdown categories
a. Attentiveness/Surveillance
b. Clinical Reasoning
c. Prevention
d. Intervention
e. Interpretation of Authorized Providers' Orders
f. Professional Responsibility

TERCAP Design Challenges

While classification systems typically strive to develop non-overlapping categories, in an under-determined and complex practice such as nursing or medicine, developing completely non-overlapping categories would create almost an endless list of possible practice breakdowns. A tradeoff must be made between an endless list and a list that will "make sense" to practitioners and users of the instrument. Each of the intents of the eight practice breakdown categories is linked to proximal causes for error.

Defining practice breakdown presented numerous challenges. From a nursing practice perspective, nursing practice breakdown is related to more than poorly administered health care treatments and medications. In addition to the specific nursing tasks of administering prescribed health care treatments and medications, nurses provide front-line surveillance of the patient, monitoring the patient for responses to therapies and titrating therapies in response to changes in patients' physiological and psychological states. Thus any classification of types of nursing practice error must include at least two major aspects of nursing practice:

1. Nurses' work uses and is intertwined with medical diagnoses, so in terms of a "diagnostic system" (i.e. identifying injury or patho-physiology and directly seeking to intervene in the deficit or problem), the medical/physiological taxonomy is most appropriate.
2. Nursing's uniqueness lies in the vast "other" left out necessarily by any diagnostic approach of naming deficits and correcting them. Nursing work attends to the omitted "other category" of the patient's vulnerability as a result of illness (the human experience of disease), such as suffering, and diminished lifeworld and sense of possibility, typically left out when the focus is primarily on "medical diagnostics and cures." It also includes the management of treatments and patient-family education for managing multiple chronic illnesses.

Challenges from the system were also present. The problem is further complicated by institutional constraints to good or even good enough nursing practice. Meeting and responding to the other may clash with the bureaucratic goals of care for the many in the most cost-efficient manner. For all these reasons, nursing practice requires that the nurse develop moral agency and interpersonal skills of patient/family involvement to advocate for the patient and provide a front line defense against nursing error. Good and self-improving nursing practice demands experiential learning and character development on the part of the professional nurse, just as it demands ongoing system design and re-design to create the best institutional processes and structures for patient safety that include optimizing the delivery of nursing care.

Theoretical Premises for Developing a Classification of Nursing Error

As Bowker and Starr[20] point out, "…Distinctions among things is the prime negotiated entity" in the development of a classification scheme. Since this was an instrument developed for SBONs for the purpose of prospectively classifying types of errors, or individual and system contributions to the error along with patient and nurse outcomes, meaningful classes of nursing errors needed to cover the broad range of good nursing practice.

For example, disrespect for a patient and failure to advocate for the patient's concerns demonstrate a lack of professional fiduciary responsibility for the patient. Disrespect can cause psychological harm when it leads to diminished attentiveness and response to the concerns or requests of the patient or family. When a patient's or family's plea for assistance is not heard or a change in clinical condition or symptoms is not attended to, the patient may be severely harmed or even die due to this lack of attentiveness.

The nurse-patient relationship sets up the conditions of possibility for the patient to disclose concern, fears and discomforts. If the nurse is too hurried or too task-oriented to notice the patient's and family's experience, then the level of disclosure on the part of the patient/family will be constrained. Likewise, attunement to and engagement with the patient allows the nurse to notice subtle changes. In situations of patient neglect, the nurse's attention is attuned to his/her perceived needs before or even instead of those of the patient.

Clinical reasoning requires engaged reasoning across time about the particular through changes in the patient's condition and changes in the clinician's understanding of the patient's situation.[24] Disruption in this engaged reasoning has great potential to lead to nursing error.

TERCAP Overview

The TERCAP instrument seeks to provide a meaningful account of the educational, nurse, system, and practice environment contributions to the error. Practice breakdown categories were inductively generated from actual cases of nursing errors reported to SBONs. Naming the categories of breakdown remained in the context of commonly accepted nursing practice standards and goals of good practice. Practice errors do not fall into isolable sets of errors since one error will cause a cascade of other practice errors or breakdown. Even so, the PBAP sought to develop categories that were meaningful to aspects of good nursing practice and to the nurse's moral agency, knowledge, and skill. The PBAP questioned whether nursing errors are predictably situated in particular circumstances and practice demands. Bowker and Starr, in their groundbreaking work *Sorting Things Out: Classification and Its Consequences,*[20] note that: "Classifications are powerful technologies. Embedded in working infrastructures they become relatively invisible without losing any of that power" (50).[20] Bowker and Starr suggest that a classification system have the following characteristics: comparability, visibility and control. Each of these characteristics is reviewed in relation to the development of the TERCAP Instrument:

Comparability. Within SBONs, the goal was to develop an instrument that would be able to compare error types and system influences across time. The instrument was designed to create the possibility of prospective studies of the effectiveness of board remediation actions. To the extent possible, the goal is also to

compare the medication classification of error and patient harm.

Visibility. The tool was constructed with the assumption that many aspects of nursing work that both prevent and cause errors in patient care are currently invisible (or at least not noticed or articulated) and therefore not easily tracked by the current classification systems.

Historically, regulatory boards have disproportionately focused their attention on the individual nurse's culpability and responsibility for patient care errors. The goal of developing a nursing error database using the TERCAP was to broaden this focus in order to track educational and practice system contributions to nursing errors. Invisibility can come from an aspect of work being taken for granted, so that no one thinks of naming it. The nursing roles of error prevention, attentiveness and surveillance, and aspects of nursing interventions, for example, if left invisible, create a dangerous gap in the ability to track and reduce these errors. The artfulness in creating a classification scheme lies in what is made visibles and therefore can be measured and problematized, as well as what should be left out of the classification system because it seldom leads to errors in patient care. This artfulness can only be achieved with ongoing development and refinement of a data collection instrument.

No classification system can or should render all activities and work visible. Sorting out what aspects of practice breakdown are most relevant to patient harm requires selecting the most salient contributions to patient care breakdown. Another way to state this is that classifications systems as formal systems run into the limits of formalism. They cannot make explicit all the knowledge within the universe to be formalized or classified. Those constructing classification systems have to determine what it is safe to leave invisible and have to identify the appropriate sources and kinds of visibility and invisibility. Wise psychiatrists or psychologists do not think that a full understanding of one of their patients is captured by formally classifying the patient using the DSM IV. The major functions of official classifications systems, as Bowker and Starr[20] point out, are: a) retrieving records; b) documenting work; c) providing legitimacy and recognition for work; d) providing strategies for accounting, costing and getting reimbursed for services rendered; e) communicating and coordinating work across boundaries of specific workers; f) guiding knowledge development or reification of work (making obvious the abstract).

Bowker and Starr[20] point out that classification systems can also trivialize a practice. Classification systems will be trivializing or even sub-intelligent when they consistently overlook a major domain of relevant work (e.g. the non-diagnostic non-elemental aspects of nursing work) or when they overlook the intent and content of the work (i.e. the ends and meanings inherent in nursing work and practice goals). The reification of documentation systems and formal categories of work captured in information systems will be a problem to the extent that organizations consistently overlook the shadow world of the unclassified.

Control. Control, like comparability and visibility, is an inevitable outcome of a classification system. All classification systems lead to some form of control, and control, like visibility, may be useful or detrimental.[20] The goal of the TERCAP is to identify the system correlates and consequences to different patients of the different types of nursing error. More systematic and comprehensive information about the types of patient care errors associated with nursing practice will make it possible to target repeated nursing errors for error reduction and prevention through improved education, nurs-

ing care management, and regulatory efforts.

TERCAP: Eight Categories

Eight categories were determined to reflect nursing practice based on a vision of good nursing practice and Bowker and Starr's[20] beliefs and tenets about classifications. In this section, an overview and description of the categories is presented. Table 1 (next page) includes a brief description for each category.

1. *Safe Medication Administration*. The professional nursing standard of the six rights of medication administration is used by nurses as a safety check before the administration of any medication. The consistent use of this safety procedure diminishes the chances for medication errors. It does not effectively prevent mistaken identity of medication through similar names, or packaging. Also problematic are medications with difficult to determine dosages or with high alerts (e.g. potassium chloride). All of these are system problems and contributors to error that need to be addressed in order to increase patient safety.

Since nurses are the ones who most often administer medications, they are at the "sharp end" of medication errors[4] (IOM, 2004) that may start in the pharmacy, with the physician, or with the nurse.

Medication errors accounted for 20% of the primary errors reported in the PBAP pilot study. One death was attributable to medication error. Male patients experienced more medication errors than female patients, indicating that there could be predictable gender patterns in nursing errors if this trend continues in larger randomized samples. The most frequent type of medication error in the pilot study was giving the wrong dose.

2. *Documentation*. Accurate record keeping and careful documentation are essential parts of nursing practice that serve to protect the welfare of patients. Since documentation is an aspect of all nursing care, it is often an element in practice breakdown as well. Documentation errors include both inaccurate charting and omission of documentation. When therapies or medications are not immediately documented on a patient record, patients are at risk for receiving the therapy twice. This is especially a problem for pain and sedation medications. Likewise when medications are charted before they are actually given, the patient is at risk for omission of the medication if interruptions occur and the medication is not given. False documentation or the attempt to cover up a patient care error is a most egregious act because it endangers the patient and prevents interventions to assist the patient and future efforts to prevent the error from occurring again.

3. *Attentiveness / Surveillance*. The goals of nursing surveillance or vigilance are the early detection of a downturn in a patient's health status or the advent of an adverse event and the initiation of activities to "rescue" the patient and restore health. Fairman[26] discussed intensive care nurses' use of "watchful vigilance" (56) as a protective measure. When this does not happen, "failure to rescue" is said to occur. The concept of failure to rescue has been tested and validated as an indicator of the quality of acute hospital care for surgical patients.[27] When there are higher levels of nurse staffing, the incidence of failure to rescue decreases.[28,29]

In a recent study,[23] the concept of nursing vigilance was examined, using the initial version of the TERCAP Instrument. Emrich notes that SBON reviews of investigative information about practice breakdowns focus on minimally acceptable nursing practices for the specific circumstance. When nursing practice falls below this minimally acceptable thresh-

Table 1. TERCAP: Standards of Safe Nursing Practice

1. *Safe Medication Administration*: The nurse administers the right dose of the right medication via the right route to the right patient at the right time for the right reason.

2. *Documentation*: Nursing documentation provides relevant information about the patient and what was done in response to his or her needs.

3. *Attentiveness / Surveillance*: The nurse monitors what is happening with the patient and staff. The nurse observes the patient's clinical condition; if the nurse has not observed a patient, then he/she cannot identify changes if they occurred and/or make knowledgeable discernments and decisions about the patient.

4. *Clinical Reasoning*: Nurses interpret patient's signs, symptoms and responses to therapies. Nurses evaluate the relevance of changes in patient signs and symptoms and ensure that patient care providers are notified and that patient care is adjusted appropriately.

5. *Prevention*: The nurse follows usual and customary measures to prevent risks, hazards or complication due to illness or hospitalization. These include fall precautions, preventing hazards of immobility, contractures or stasis pneumonia.

6. *Intervention*: The nurse properly executes nursing interventions.

7. *Interpretation of Authorized Provider's Orders*: The nurse interprets authorized provider orders.

8. *Professional Responsibility / Patient Advocacy*: The nurse demonstrates professional responsibility and understands the nature of the nurse-patient relationship. Advocacy refers to the expectations that a nurse acts responsibly in protecting patient/family vulnerabilities and in advocating to see that patient needs/concerns are addressed.

old, SBONs consider what remedial measures or licensure sanctions are appropriate for the nurse that will be in the best interest of public safety. In doing so, SBONs consider many factors including the severity of nurses' behaviors and the circumstances surrounding the practice breakdown. In this study of nursing vigilance, the TERCAP differentiated behaviors in which the nurse disregards his/her professional responsibilities from behaviors that occur within the course of nursing practice, and where the nurse has no intent to fall below nursing standards but encounters circumstances that interfere with appropriate vigilance. The Nursing Vigilance study indicated that nurses who did not adhere to their professional responsibility to provide care or demonstrated nursing vigilance were more likely to incur a publicly disclosed board action than nurses whose behaviors reflected diminished nursing vigilance as captured by other TERCAP categories such as clinical reasoning. This research finding demonstrates that the TERCAP instrument does distinguish between willful, neglectful or illegal behavior and that it is responsive to IOM (2004) Recommendation 7.2.[4]

Emrich's findings[23] resemble a case-control study[30] which found that students' "unprofes-

sional behavior" in medical school, serious enough to receive written evaluative notes, predicted later disciplinary actions by State Boards of Medicine. The American Board of Internal Medicine defines professionalism as requiring "the physician to serve the interests of the patient above his or her self-interest." Professionalism aspires to altruism, accountability, excellence, duty, service honor, integrity and respect.[31]

4. *Clinical Reasoning*. Nurses interpret patients' signs, symptoms and responses to therapies and evaluate the relevance of those changes to ensure that patient care providers are notified and patient care is adjusted appropriately. Clinical judgment is usually intertwined with other causes of practice breakdown; however, the focus of this category is on the interpretation and understanding of patient signs and symptoms, responses to therapies, and clinical implications of patient changes over time. The type of error under this category most frequently chosen in the pilot study was: clinical implications of signs, symptoms and/or interventions not recognized or misinterpreted. Inappropriate judgment may be highly influenced by unfamiliarity with the setting or treatment, and/or knowledge or skill deficit on the part of the nurse. It is useful to sort out what contributes to a breakdown in good clinical judgment, since problems of inattentiveness and knowledge deficit leading to poor clinical judgment require different corrective measures at the system and nurse levels.

For example, nurses titrate drugs and other therapies according to their assessment of patient responses (e.g. change patient positioning in response to patient shock; titrate IV medications to maintain the patient's vital signs within acceptable parameters; assess patient pain and adjust pain medication; administer sliding scale insulin in response to patient blood sugars).

5. *Prevention*. Health care institutions are hazardous places over and above the physiological threats created by being bedridden due to injury or disease. The nurse follows usual and customary measures to prevent risks, hazards or complications due to hospitalization or illness. These include safety hazards of highly technical equipment and procedures, nosocomial infections, fall precautions, preventing hazards of immobility, contractures, stasis pneumonia et cetera. The practice breakdown category is related to the prevention of hazards to patients that occur when nurses do not follow the usual measures to prevent hazards or complications due to illness or hospitalization. Patients who did not receive the usual preventative measures are at risk for harm or death.

Preventive nursing care related to the hazards of hospitalization and patient immobility is a major area of potential practice breakdown, but, like all "omitted actions," is the hardest to track. Immobility hazards such as, decubiti, stasis pneumonia, pneumonia due to poor mouth care or problems with suctioning, deep vein thrombosis, technological safety hazards, nosocomial infections, patient falls, dehydration, and high or low blood sugars can all be indications of a lack of standard preventive measures by nurses.

Nurses are the patient's front line of defense. In a study of critical care nurses, Benner, Hooper-Kyriakidis and Stannard[24] found that a central practice function of nurses is the monitoring, managing and preventing of practice breakdown or direct patient care errors. This finding is in keeping with the recent IOM report (2004) statement about nurses' role in patient safety:

> While performing these assessments (and also when delivering therapeutic treatment and patient education), nurses

are functioning at the "sharp end" of the health care system because of their immediate link to the patient. This ongoing vigilance function often thrusts nurses into a role that has been described as the "front line" of patient defense.[32] Studies of organizations with a high track record of high reliability and safety have shown that such vigilance by front-line workers is essential for detecting threats to safety before they actually become errors and adverse events.[33,34] Because licensed nurses and nursing assistants work at the "sharp end" of health care delivery, they are key instruments for carrying out such vigilance in health care.

6. *Intervention*. Nurses administer most ongoing therapeutic interventions for institutionalized patients. The practice breakdown involving timely and appropriate nursing interventions can be a serious breach to patient safety and can be associated with many system problems, such as reliance on memory, poor communication, work overload, etc. Nursing errors related to faulty and/or lack of intervention place patients at high risk for harm or death. In our pilot work, nurses making these errors had been in their current positions two or fewer years. The two major types of practice breakdown in this category were error in performance of intervention and lack of timely intervention. Aiken[28] and her colleagues have used failure to rescue as a measure to assess the effectiveness of nursing and medical care. Failure to rescue a patient can occur for many reasons, but when the initial interventions of establishing an airway, breathing and circulation are delayed or initiated improperly, there is no chance of patient rescue.

7. *Interpretation of Authorized Provider's Orders*. Many opportunities for error come from interpreting the many aspects of the provider's order. The transition to computerized provider orders, so that hand written and oral orders are removed from practice to the extent possible reduces misinterpretation of health care provider orders. Also the elimination of confusing abbreviations and decimal placements in dosages of medication will eliminate many errors that occur as a result of misinterpreting health care provider orders.

In the pilot work, breakdown in communication was most likely to occur if nurses had two or fewer years in their current positions. Misinterpretation of health care provider orders was often due to missing a provider's order and was more likely to occur during twelve-hour shifts. Missed or mistaken prescriptions or provider orders are problems that could be almost completely resolved with improvements in automated orders and with automated Order Alert systems for nurses.

Missed or mistaken orders are dangerous to patients since essential medications or therapies may be omitted or wrong therapies or medications may be administered. This is often caused by system problems such as "verbal or telephone" orders or the notoriously poor handwriting of providers. However, the nurse is responsible for understanding and verifying the safety of any provider order that he or she carries out.

8. *Professional Responsibility / Patient Advocacy*. Nurses, like other professionals, have an ethical and fiduciary responsibility to advocate for their patients' best interests and well-being. Lack of responsibility and/or patient advocacy occurs when a nurse does not act responsibly for the patient's well-being. Neglect, disrespect, or failure to respond to patient requests for help can cause harmful errors. When nurses ignore either patients' or families' information or fail to advocate on their behalf, patient harm

is likely to occur.

The choice of nurses not to notify the physician of condition changes in the patient is the most frequent form of practice breakdown in this category. While nurses bear professional, legal and ethical responsibility in both instances, it was found that system and physician factors strongly influenced delay or deliberate avoidance of calling the doctor. Deliberately covering up an error is both professional and system problems. If a system does not have a strong culture of patient safety and if those who report errors are blamed and negatively sanctioned instead of being assisted in improving performance and system problems to prevent future such errors, under-reporting and covering up of errors will continue to be a problem.[4]

Recommendations for the Use of the TERCAP Instrument and Policy Implications

The use of the TERCAP as an electronic intake instrument used in all states and kept by the NCSBN opens new avenues for the protection of the public from practice breakdown in all types of settings. The variability of patterns of errors can be compared between states and between types of systems, nurse characteristics, patient characteristics, working conditions, and system characteristics. For example, in our pilot work we found that patients with limited consciousness or cognitive abilities were more susceptible to extreme harm or death due to patient care errors. This calls for higher nurse-patient ratios for cognitively impaired patients and increased systems of protection for these patients. The use of TERCAP will help to identify behaviors of individuals and health care teams, as well as system components that contribute to practice breakdown. Learning from the experiences of nurses who have been involved in practice breakdown can become a powerful tool to promote patient safety.

Though the TERCAP was designed for use by SBON and NCSBN to create a comprehensive database on nursing errors reported to SBONs, it could also be used in all practice settings. Recent research in the hospital setting by nurse executive and researcher Scott[21] utilized the TERCAP to categorize and analyze the individual errors of nurses and other healthcare professionals and workers in the community hospital setting. Findings revealed that multiple people in multiple professions and positions committed a variety of errors during the course of routine and emergent work that resulted in patient harm. Specific patterns of risk were identified for organizational leaders to examine and address strategically with the goal of improving the reliability of practitioners, teams, and patient care delivery systems.

Nurse executives could also partner with their SBONs and begin the analysis of reportable practice breakdown events using the TERCAP in the practice setting. Information surrounding an error is generally more accurate immediately following an event, and, as time goes on, the information has a tendency to decay. Therefore, a richer database is potentially available for SBONs and practice settings when they work in partnership.

SBONs using this instrument will have the opportunity to compare their patterns of error with those of other states. They will also have the possibility of conducting prospective studies to determine whether specific state board educational interventions reduce certain classes of errors for nurses who have been reported. The instrument will be useful for providing feedback to specific service provision institutions in order to assist them in reducing nurs-

ing errors. TERCAP instrument survey reports should be useful to schools of nursing in designing educational programs and curricula to better prepare nursing students for safer patient care environments, as well as identifying best practices related to evidence based regulation. A TERCAP database will be useful in tracking repeated problems with a particular nurse's misconduct or errors across multiple states. Finally, a collaborative partnership with nurses, regulators, educators, facility leadership, stakeholders, and other policy leaders will enhance the efforts of this evidence-based regulatory performance measurement to provide evidence for effective health care policy and public protection. 

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