TERCAP®

Taxonomy of Error, Root Cause Analysis
and Practice-responsibility

Ten Years After the Institute of Medicine (IOM) Recommendation to NCSBN: Highlights of the Findings from the NCSBN National Nursing Adverse Event Reporting System – TERCAP®
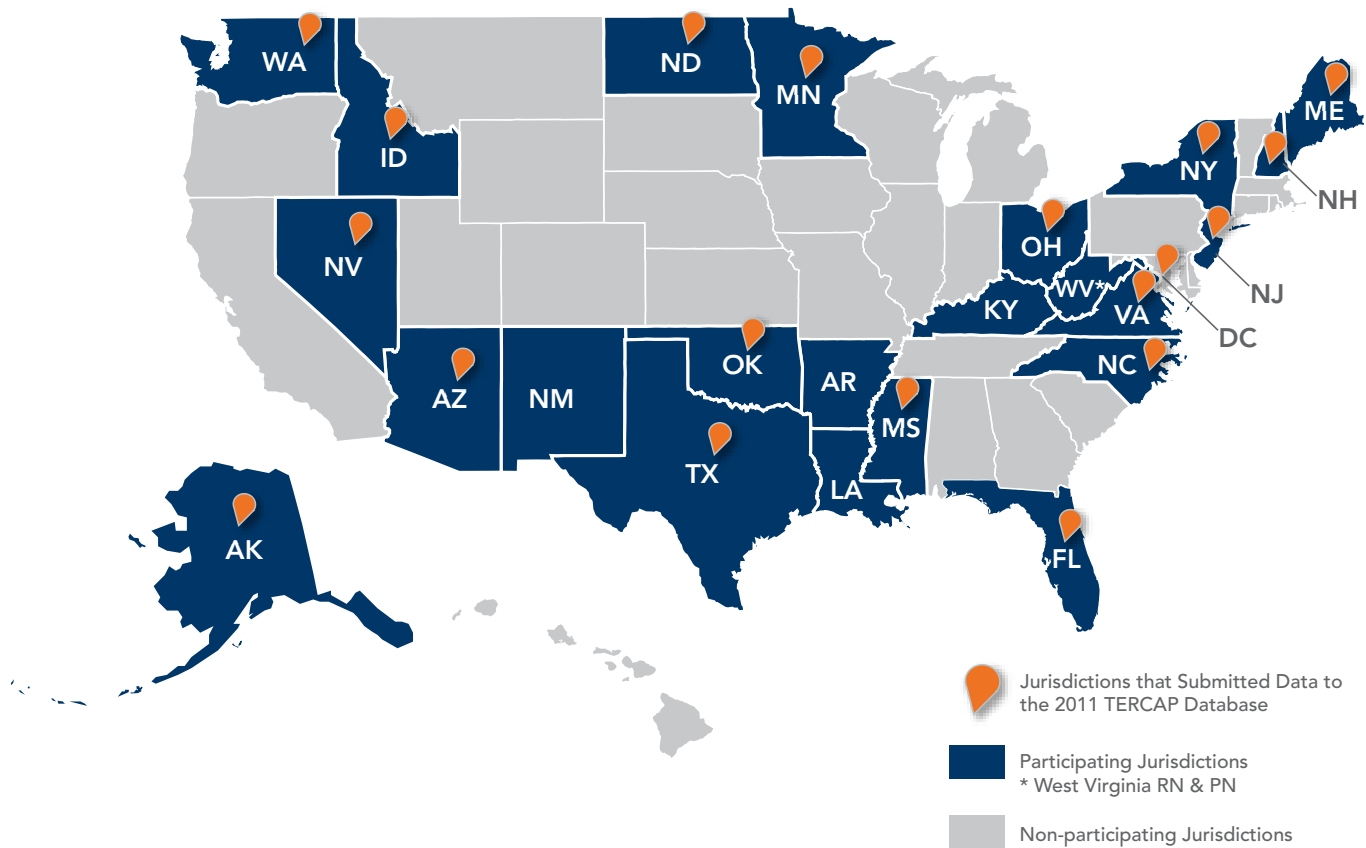
A decade has passed since the publication of the 2004 Institute of Medicine (IOM) report "Keeping Patients Safe: Transforming the Work Environment of Nurses," in which the IOM recommended that "The National Council of State Boards of Nursing [NCSBN], in consultation with patient safety experts and health 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 having authority over nursing" (Institute of Medicine, 2004).

To systematically track and evaluate the causes of adverse events from both individual and system perspectives, and enable the development of proactive interventions to protect patient health and safety, NCSBN initiated the Taxonomy of Error Root Cause Analysis of Practice-responsibility (TERCAP®) project. Practice breakdown is defined as the disruption or absence of any of the aspects of good nursing practice and the term "practice breakdown" is used in this context because it broadens the categorization of events reported to TERCAP.

The TERCAP database, developed in 2007 in consultation with nursing regulators, researchers, and educators nationwide, is a direct response to the IOM's concerns. It is designed for boards of nursing (BONs) to collect standardized, comprehensive and consistent information regarding nursing practice breakdown during investigations and report practice breakdown cases to NCSBN for analysis of error trends.

Based on 3,075 practice breakdown cases submitted by 25 BONs, NCSBN completed the 2014 TERCAP report, which examined all components involved in the TERCAP model by evaluating the contributing factors associated with practice breakdown from nurses, patients', and system perspectives. Figure 1 shows the BONs that have contributed data to TERCAP.

Figure 1. BONs Contributing to TERCAP®

Legend:
- Jurisdictions that Submitted Data to the 2011 TERCAP Database
- Participating Jurisdictions * West Virginia RN & PN
- Non-participating Jurisdictions

Highlights of the 2014 TERCAP Report

Nature of Practice Breakdown and Contributing System Factors
- 73 percent of the practice breakdown cases submitted to TERCAP involved unintentional errors.
- While 56 percent of the practice breakdown did not cause harm, 44 percent did cause harm to patients.
- The most frequently reported practice breakdown categories include a lack of professional responsibility and/or patient advocacy, defined as a nurse failing to act responsibly in protecting patient vulnerabilities (73 percent), lack of clinical reasoning (49 percent), and lack of intervention (48 percent).
- Miscommunication (38 percent) and health care team conflicts (39 percent) were the most frequently reported system factors contributing to practice breakdown.

Characteristics of Patients and Practice Breakdown
- 66 percent of the patients involved in a practice breakdown were 50 years or older.
- Patients 65 years or older are more likely to be affected by lack of intervention compared to patients 18 years of age or younger (56 percent versus 39 percent).
- At the time of the practice breakdown, 62 percent of patients up to 18 years of age were accompanied by their family or friends, while only 22 percent of patients aged 65 and above were accompanied by family or friends.

Characteristics of Nurses Contributed to Practice Breakdown
In line with previous NCSBN studies (E. H. Zhong, Kenward, Sheets, Doherty, & Gross, 2009; E.H. Zhong & Thomas, 2012), the 2014 TERCAP report showed that nurses with a previous negative job (discipline or termination for practice issues by employers) or discipline history were more likely to commit practice breakdown. In addition, male nurses and licensed practical nurse (LPNs) or vocational nurses (VNs) are over represented in the group of nurses who committed practice breakdown.

- 38 percent of the nurses had been previously disciplined by their employers for practice issues.
- 9 percent of the nurses had been disciplined by BONs before the current incident, while the average annual discipline rate by BONs in the general nursing workforce is less than 0.3 percent.
- 5 percent of the nurses had a criminal conviction history while less than 3 percent of the non-disciplined nurses had such a history.
- 15 percent of the nurses were male, compared to 9 percent of the national nursing workforce.
- 37 percent of the nurses held LPN/VN licenses, compared to 20 percent of the nursing workforce.

The Initial Trend Reviews (2008-2014)

The proportion of types of practice breakdown reported to TERCAP remained consistent over the past seven years. There was a slight decrease in the proportion of cases related to a lack of professional responsibility and/or patient advocacy from the 2008-2011 reporting period (78 percent) compared to the 2011–2014 reporting period (71 percent), and a slight increase in cases related to a lack of prevention, from 23 percent to 29 percent.

There was a slight decrease in the proportion of cases involving system factors reported to TERCAP since 2011 (Figure 2). This positive tendency could be a result of a group effort from BONs and other health care members in improving the health care system.

Figure 2. Proportion of Cases Involving System Factors Reported during 2008-2011 and 2011-2014
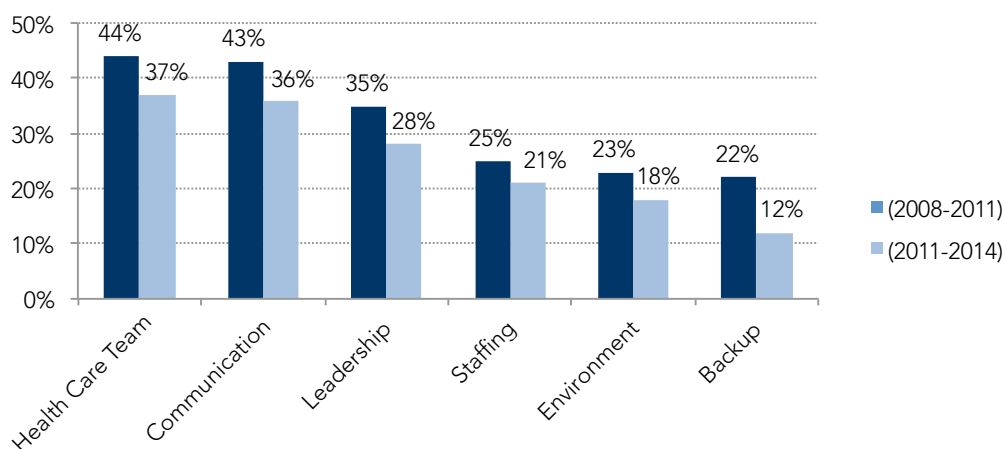
Facility Issues

The current report examined the distribution of registered nurses (RNs) and LPN/VNs by employment setting compared to the national composition. At the time of practice breakdown, 16 percent of RNs and 56 percent LPN/VNs worked in long-term care (LTC) facilities, while the HRSA U.S. Nursing Workforce report showed that nationally only 7 percent of RNs and 31 percent of LPN/VNs worked in nursing care facilities (HRSA, 2013). Conversely, 52 percent of RNs and 8 percent of LPN/VNs worked in hospital settings when the practice breakdown occurred; however, nationally, 63 percent of RNs and 29 percent of LPN/VNs worked in hospital settings (HRSA, 2013). The underlying causes for higher reporting of practice breakdown in LTC facilities compared to hospital settings are unclear. A further analysis on the cases reported from LTC facilities and hospitals showed the following:

- 85 percent of LTC nurses versus 3 percent of the hospital nurses were assigned more than 10 direct care patients.
- 80 percent of the LTC patients and 37 percent of the hospital patients were 65 years or older.
- 67 percent of the LTC facilities versus 20 percent of hospitals used paper documentation record systems.
- 28 percent of the LTC cases versus 17 percent hospital cases claimed that a staffing issue contributed to the practice breakdown.
- 32 percent of the LTC cases versus 25 percent of the hospital cases reported that leadership contributed to the practice breakdown.

- After BON investigations, 14 percent of the LTC cases versus 10 percent of the hospital cases were dismissed by BONs
- 49 percent of the LTC cases versus 57 percent of the cases from hospitals resulted in disciplinary action by BONs.

Summary

The proportions and types of practice breakdown reported to TERCAP remained consistent over the past seven years. Unintentional errors were the predominant cause (73 percent) of cases submitted to TERCAP, with less than half of the reported breakdowns involving harm to patients. Practice breakdowns occurred more frequently in LTC facilities, as compared with hospitals, and involved older patients at a higher frequency than younger patients. The TERCAP data supports existing evidence that nurses with a history of disciplinary action or reported violation experienced more practice breakdowns, particularly in male nurse and LPN/VN populations.

Future Plans

- NCSBN will continue the TERCAP data collection and further promote the TERCAP project at the state and national levels with the goal to increase participation of all BONs.
- NCSBN will monitor the possible trend changes after the implementation of the Affordable Care Act within a two-year time frame.

With the establishment and refinement of the TERCAP database, along with the release of the 2011, 2013 and 2014 TERCAP reports, NCSBN has fulfilled the IOM request of designing uniform processes for BONs to follow. With broader participation from BONs, additional analysis can be performed to further investigate the causes of practice breakdown and move the TERCAP project to the next level – development of rational strategies to prevent and reduce practice breakdown.

References

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