



# Clinical Update



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## Nurses Removing Chest Tubes

Over the past 20 years, the bedside RN's role in chest tube removal has been revisited since Kinney's initial research in 1995.<sup>1</sup> This review covers issues relating to scope of practice, nurse practice acts, and the literature on chest tube removal.

### Scope of Practice

A scope of practice is the legal definition of a licensed profession set out by a state's practice act. A dynamic of professional practice silos has persisted today, despite the significant changes in healthcare delivery and the emergence of collaborative practice in virtually all settings. This has led to "turf wars" when one profession goes to the legislature to modify its practice act as others claim unique ownership of certain practices.<sup>2</sup>

The National Council of State Boards of Nursing (NCSBN) with regulatory boards from occupational therapy, pharmacy, physical therapy, and medicine have called for a different view of scope of practice to meet the goals of health reform: improved access to care and reduced costs while maintaining safety. Consumer advocacy groups support this effort.<sup>2,3</sup> Most nurses are familiar with the scope of practice debates in their own states over whether APRNs can practice independently and prescribe controlled substances.

Practice regulation is essential to protect the public and offer a way to discipline those who do not comply with standards. Practice acts should, first and foremost, focus on safe practice and public protection; they should not be used for professional self-interest or create unnecessary barriers to patient care.<sup>2,3</sup>

State legislatures ultimately have the responsibility to set professional scope of practice. The stakeholders recommend considering these critical factors<sup>2</sup>:

- Historical basis for the profession and its evolution
- Relationship of education and training to scope of practice
- Evidence of how a change in practice benefits the public
- Ability of the regulatory agency to manage any modifications

### Nursing Practice

Each state has a Nurse Practice Act. While there are compacts that allow nurses to practice across state lines, such as in transport and telehealth, the nurse is still responsible for following the practice act of the state in which he or she practices.

The American Nurses Association describes the factors affecting scope and standards of nursing practice for both RNs and APRNs.<sup>4</sup> When determining what a nurse is permitted to do, first is *state law and regulation*. None of the other elements can override the law. Next is the *policies and procedures* (P&P) where the nurse is practicing. While nurses are required to follow institutional P&P, those cannot disregard the Nurse Practice Act. *Self-determination* follows – nurses must honestly assess their personal knowledge, experience, and skills and not carry out a task or procedure for which they are not prepared. Finally, a nurse should consider *liability and risk management* concerns. Nurses

who do not follow regulations or P&P and do things without proper education will not be covered by their malpractice insurance and make themselves a target for litigation.

### Chest Tube Removal

The first data on chest tube removal by nurses came in an [AACN survey](#) in 1993. With regard to the facility policy, 80% of RNs did not remove chest tubes. Of those that did, 14% were only mediastinal, 28% only pleural and 57% removed both. RNs removed tubes from patients with cardiac surgery (12%), thoracic surgery (7%), thoracic trauma (5%) and other conditions (5%). Only 44% of nurses had a written standard P&P.

Four years later, a more robust survey was done. This time fewer nurses said RNs could remove chest tubes – 17% (n=90) versus 20% (n=127). About 52% of the removal group reported removing both mediastinal and pleural tubes, 24% only mediastinal, and 24% only pleural tubes. The number of facilities with written P&P increased to 77%. The RNs permitted to remove chest tubes included staff nurses (25%), a core group of specially trained nurses (53%), CNSes (10%), and APRN (19%). (Respondents could choose more than one). Six percent had no special training to remove tubes, while 31% had classroom lecture; 52% had competency testing, and 87% had precepted experience. (Again, could choose more than one).

In a 1995 survey of pain management during chest tube removal, 11% of RNs removed their patients' chest tubes; 12.5% reported APRNs removed the tubes. Classroom and clinical instruction together were required in 40% of organizations and clinical teaching alone in 34%. Just 7% required competency testing and 34% had written P&P.<sup>1</sup> Patients were significantly more likely to receive pain medication before tube removal when nurses removed the tube compared with physician removal.

Three other studies<sup>5-7</sup> described experience with RNs removing chest tubes; two instituted the practice specifically to manage patient pain more effectively.<sup>6,7</sup> All projects were successful, reducing patient pain with no post-removal complications.

### Are RNs Permitted to Remove Tubes?

The evidence shows that bedside RNs with additional training can safely and efficiently remove chest tubes. However, despite the goals of coordinating scope of practice, state "nursing practice" differs from "medical practice." Nursing practice is a right granted by a state, described by the Nurse Practice Act. These acts are not laundry lists of tasks and procedures. They are broad statements such as "*The delivery of health care services which require assessment, diagnosis, planning, intervention and evaluation...where such acts require substantial specialized judgment and skill base on knowledge and application of the principles of biological, physical and social sciences.*"<sup>8</sup> The practice acts empower the board of nursing to write rules and regulations and issue opinions that relate the scope of practice to specific actions. Some states have addressed chest tube removal, based on a

## In the Literature

### Who's at Risk for *C. difficile*?

The current issue of *AACN Advanced Critical Care* features a study describing how nurses developed a *C. difficile* risk assessment tool. The authors provide a comprehensive review of the literature, including analysis of other scoring tools and a detailed description of how they chose the items on their assessment. They believe that by using the tool to identify at-risk patients, clinicians can provide prophylactic treatment, promptly isolate patients, restrict antibiotic use, and limit testing of low-risk patients.

Source: Smith, LA et al.: Development and validation of a *Clostridium difficile* risk assessment tool. *AACN Advanced Critical Care* 2014;25(4):334-346. [PubMed Citation](#)

### Are Authors Really Writing?

In recent years, there has been a careful examination of whether named authors of studies in the medical literature actually did the research and wrote the paper. The first examination of inappropriate authorship in nursing journals is in the current issue of the *Journal of Nursing Scholarship*. Researchers looked at articles published in 10 nursing journals and the final dataset contained 422 articles. Authors did not meet published criteria for authorship in 42% of articles. There were unnamed contributors – known as ghostwriters – in 28%. The researchers contacted corresponding authors to identify reasons for this practice. Their answers are fascinating.

Source: Kennedy, MS et al.: Honorary and ghost authorship in nursing publications. *Journal of Nursing Scholarship* 2014;46(6):416-422. [PubMed Citation](#)

### Can You Get Good Lab Samples When Starting an IV?


It's a debate revisited often: is the quality of blood samples collected through an IV catheter acceptable for laboratory tests, or do patients require dedicated venipuncture? A study in the *Journal of Emergency Nursing* examined 9000 blood draws to try to answer the question. Each sample was examined by spectrophotometry. Blood collected at an IV start had a 1.1% hemolysis rate, 0.8% when collected from existing vascular access and 0.1% with venipuncture and a steel needle. These values compare favorably with a laboratory benchmark of 2%.

Source: Dietrich H: One poke or two: can intravenous catheter provide an acceptable blood sample? A data set presentation, review of previous data sets and discussion. *Journal of Emergency Nursing* 2014;40(6):575-578. [PubMed Citation](#)

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request for clarification from a nurse licensed in that state. The table lists sample statements about RNs removing chest tubes.

State	Can RN Remove Chest Tube?	Notes
Alabama	Yes - mediastinal	APRN can remove pleural tubes and aspirate
Alaska	Yes	With proper training and physician order
Arkansas	Yes	Must follow Delegated Medical Acts Statement
Arizona	Yes	Documented training, competence, resources available in case of problem
Maine	No	
Mississippi	Yes - pleural	Documented training, competence, physician order, resources available in case of problem
Nebraska	Yes	Documented training, competence
South Dakota	Yes	Documented training, return demonstration, policies, procedures and physician order



## On the World Wide Web

**National Council for State Boards of Nursing**  
 The NCSBN is the key resource for information about Nurse Practice Acts, laws, and regulations relating to nurse licensure. In addition to articles and important summaries, they also have links to each state's Board of Nursing, the current status of multistate licensure, and the NCLEX exam. From this link to the Nurse Practice Act page, you can explore other resources: <https://www.ncsbn.org/1455.htm>

**ANA Resources**  
 The American Nurses Association provides a number of resources available to non-members as well as members of state affiliates. This [link](#) is to a page that lists each state's language protecting the use of the title "nurse;" [this links to a compendium](#) of ANA education positions, position statements and documents and while this [scope of practice page](#) refers to APRNs, the principles apply to all licensed nurses.

### Steps to Take

To institute a plan for RNs to remove chest tubes, first collect data on the number of chest tubes and why RN removal would be preferable to the current practice. Is there a problem with pain management because physicians want to remove tubes during rounds, with little notice – preventing proper analgesia? Are transfers being delayed until someone can remove the tube? If APRNs are available and there are no issues, RNs may not need to add this task to their responsibilities.

If you decide to move forward, check to see if your state board of nursing has issued an opinion on the practice. If not, write a letter requesting one, citing the literature and explaining how patients will benefit. Describe how RNs will be trained and how competence will be confirmed.

By providing the board with this information, the members will see how this practice will enhance patient care while protecting patient safety.

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