



Support Oregon House Bill 2876 Minimum education and certification standards for surgical technologists Sponsored by the Committee on Health Care

Legislative Intent: Requiring Newly-Practicing Surgical Technologists to be Educated and Certified

The proposed legislation requires graduation from an accredited surgical technology education program and certification by a national accreditation organization approved by the Oregon Health Authority as a condition of employment for newly-practicing surgical technologists. **This protects patients by putting a stop to on-the-job training and ensures all newly-practicing surgical technologists have education.**

The legislation grandfathers persons working as surgical technologists at least two of the three years immediately preceding January 1, 2017, and grants exemptions to graduates of US Army, Navy and Air Force surgical technology programs and federal employees.

The Role of the Surgical Technologist

Prior to surgery, the surgical technologist:

- Prepares the sterile field using sterile technique, setting up surgical instruments, sterile drapes and sterile solutions;
- Assembles surgical equipment and checks it to ensure it is working properly;
- Prepares patients for surgery by washing, shaving and disinfecting incision sites;
- Participates in positioning and draping patients; and
- Observes patients' vital signs, checks charts and helps the surgical team put on sterile gowns and gloves.



Skillful pre-surgery technique protects patients from life-threatening surgical site infections, malfunctioning equipment and unneeded delays during the procedure.

Oregon State Assembly of the Association of Surgical Technologists

During surgery, the surgical technologist stands next to the surgeon at the operating table, who relies on the surgical technologist every moment of the surgery. The surgical technologist:

- Swiftly passes instruments, fluids and supplies to the surgeon; and
- Operates lasers, robots, sterilizers, lights, suction apparatus, and diagnostic equipment.

The surgical technologist must be able to anticipate the needs of the surgeon because every moment a patient is in surgery the risks related to anesthesia and bleeding increase. The surgical technologist is trained to handle and minimize exposure to hazardous materials, communicable diseases and bloodborne pathogens. The integrity of the sterile field is the surgical technologist's highest priority.



After surgery, the surgical technologist performs a count of sponges and supplies with another member of the surgical team to assure no sponges or instruments remain inside the patient, which can cause serious infections, disability, and, in rare cases, death. The surgical technologist is the only staff member in the sterile field, near the patient, responsible for counting objects to prevent a foreign object from being retained after surgery.

Education, Certification and Continuing Education

Surgical Technology Curriculum

Nationwide, there are more than 500 accredited surgical technology programs. **Programs are generally twelve to twenty-four months in length resulting in a certificate or an Associate's Degree.** Curriculum includes anatomy, physiology, microbiology, medical terminology, surgical asepsis, sterilization techniques, assembling and operating surgical equipment including lasers and robotics, medical ethics, basic and advanced surgical techniques and basic and advanced surgical operative procedures.

Continuing Education

Continuing education is exceptionally important in an increasingly complex field. Through continuing education, practitioners learn about new techniques, equipment, technologies and new findings regarding patient safety. The proposed legislation requires uncertified surgical technologists to earn 15 hours of continuing education per year. Alternatively, individuals may hold surgical technologist certification, which requires continuing education as a condition of renewal.

Oregon State Assembly of the Association of Surgical Technologists

Requiring Certification of Surgical Technologists- Effective Public Policy with Broad Support

Surgical Technologists- The Only Member of Surgical Team Not Required To Meet Minimal Requirements

Surgical technologists currently are not required to meet minimal threshold educational and certification requirements. No law or regulation exists in Oregon to assure objective evidence of even minimal competence. This legislation ensures all personnel caring for surgical patients are appropriately educated and meet minimum continuing education standards. **This legislative model is the least intrusive and invasive level of regulation and oversight. No lesser degree of regulation is available.** Surgical patient care is enhanced when all members of the surgical team are appropriately educated.

Certified Surgical Technologists in Oregon

Based on data from the Bureau of Labor Statistics, OR-AST estimates that Oregon health facilities employ approximately 850 surgical technologists. There are currently two accredited surgical technology programs in Oregon. Accredited distance and online programs are also available for those who qualify. The proposed bill has a grandfathering provision for people currently working as surgical technologists and exempts military graduates and federal facilities.



Proposed Legislation Does NOT Require Licensure or Registration

The legislation does not require licensure or registration, thereby eliminating the costs and resources of creating new regulatory oversight. In this period of budget challenges, this bill takes advantage of recognized educational institutions and other systems that are in place to assess competency of personnel in the operating room. Hospitals already follow similar procedures for many other allied health care professionals.

Negligible Regulatory Costs to the State

Out of the eight states that have formally reviewed the legislation's potential impact on the state budget, **all eight states have determined the legislation has no fiscal impact.** No state's legislature, or legislative research council, has ever anticipated or determined that this legislation would result in fiscal impact to the state.

Oregon State Assembly of the Association of Surgical Technologists

Proposed Legislation- Not About Scope of Practice

The proposed legislation is about competency, not scope of practice. The legislation specifically exempts licensed health care professionals acting within the scope of their license.

Other States and Countries Require Surgical Technologist Education

Eight states have passed legislation that requires certification as a condition of employment: Idaho, Indiana, Massachusetts, New York, New Jersey, South Carolina, Tennessee and Texas. In addition, Washington, Colorado and Illinois provide for registration of surgical technologists. Many other developed countries require a nursing degree or an associate's degree or bachelor's degree for individuals performing surgical technology tasks and functions.



Hospitals and Health Departments Support Minimum Standards for Surgical Technologists



Hospitals and other health care facilities in Idaho, Indiana, Massachusetts, New York, New Jersey, South Carolina, Tennessee and Texas have been either supportive or neutral about this legislation. According to the Bureau of Labor Statistics data, surgical technologists in states in which this legislation has passed have a lower than average wage for surgical technologists. Average annual income of surgical technologists correlates strongly with the cost of living in each state. State health departments in Idaho, Indiana, South Carolina, Tennessee and Texas have been neutral or supportive of the legislation. **In addition, the Virginia Board of Health Professions has formally recommended that surgical technologists be certified.**

The American College of Surgeons Supports Surgical Technologist Education and Certification

The American College of Surgeons (ACS) has issued a formal statement supporting accredited education and certification of surgical technologists.

Oregon State Assembly of the Association of Surgical Technologists

Requiring Certification of Surgical Technologists Increases Quality and Reduces Costs

Surgical Site Infection Rates Continue to Increase

According to the National Healthcare Quality Report by the Agency for Healthcare Research and Quality, the hospital-acquired infection rates are increasing. **The quality measure that is deteriorating fastest is the measure for post-operative sepsis. *Post-operative sepsis rates increased by 8% in only one year.*** The training, education and experience of a Certified Surgical Technologist can only logically serve to arrest and abate this alarming statistic, protect patients and save lives.

Health Care-acquired Infections Drive Health Care Costs

- Health care-acquired infections incur an estimated \$28 to \$33 billion in excess healthcare costs each year.
- The hospital cost is an estimated \$25,546 per surgical site infection, and surgical site infections result in an estimated 13,088 deaths nationally per year.
- Reduction in surgical site infections would save lives and, indirectly, result in savings to consumers.



Surgical Technologists- Responsible for Preventing Surgical Site Infections

The surgical technologist is the professional in the operating room charged with the responsibility of maintaining the integrity of the sterile field. The sterile field refers to surfaces that sterile objects, such as surgical instruments, may contact. The sterile field includes the area immediately around a patient that has been prepared for a surgical procedure. Protecting the sterile field involves carrying out specific procedures using sterile technique.

Facilities Using Certified Surgical Technologists have Lower Infection Costs

Empirical data and studies analyzing surgical technologists' contributions to patient outcomes are rare, due largely to the fact that the profession is unregulated at present. Most studies involving adverse medical and surgical events are not publicly available, making analysis difficult. Nonetheless, some data are available.

Data from Virginia reveal that facilities utilizing only credentialed surgical technologists reduced the costs associated with extended stays due to surgical site infection by 11%.

Oregon State Assembly of the Association of Surgical Technologists

Requiring Certification of Surgical Technologists Protects Patients

Unqualified Surgical Technologists = Potential Harm to Patients

A more educated professional is a more competent professional. Examples of potential patient harm resulting from uncertified surgical technologists include:

- An increase in retained foreign objects and an increase in failures to pass sharp instruments properly – resulting in serious complications or exposing patients to bloodborne pathogens. An *Annals of Surgery* report found that the majority of discrepancies in instrument count happened when surgical technologists or nurses misplaced items in the operating room;
- Slow surgical procedures, resulting in unnecessary risk since the patient is under anesthesia and can experience excessive blood loss;
- Passing the wrong fluid or the wrong equipment; or
- Poorly assembling sophisticated surgical equipment, such as laser, endoscopic and neurosurgery equipment.

Most importantly, uncertified surgical technologists increase the risk of a patient contracting a surgical site infection. The surgical technologist is the person in the operating room responsible for maintaining the integrity of the sterile field.

- **The Centers for Disease Control and Prevention estimates that 5%-10% of hospitalized patients develop health care-acquired infections.**
- **Approximately 1.7 million patients develop health care-acquired infections each year and there are approximately 98,000 deaths per year, making it the 6th leading cause of death in the country according to a 2007 study. Of these infections, 290,000 were surgical site infections.**

Fewer Adverse Events in Health Care Facilities Requiring Certification

The Minnesota Adverse Health Events Reporting Act requires public dissemination by healthcare facilities of 28 adverse medical events. **Analysis of these data, by facility, reveals that adverse surgical events were 44% less frequent in hospitals that require certification for all employed surgical technologists.** Because of the confidentiality of root cause analyses of these events, it is difficult to determine exact fault. Even so, the data decisively show that health care facilities that value competency and, hence, certification, in their surgical staffs experienced better outcomes.

Oregon State Assembly of the Association of Surgical Technologists

Bottom Line: Requiring Certification of Surgical Technologists is Effective Public Policy that Protects Patients



Patient safety requires that all surgical personnel meet minimal educational and competency requirements. The surgical patient does not pick their surgical support team ahead of time. **During the procedure, the patient is under anesthesia and unable to make decisions or act on his or her behalf.** Surgical patient care is enhanced when all members of the surgical team are appropriately educated. This legislation will ensure that all personnel caring for surgical patients are qualified and meet minimum continuing education standards.

Oregon patients deserve no less.

**Support OR HB 2876, Surgical Technologist
Education and Certification
Sponsored by Committee on Health Care**



Potential for Patient Harm- Surgical Technologists

Prior to surgery, surgical technologists are responsible for setting up the operating room. Surgeries are delayed when a surgical technologist lacks the knowledge to prepare for an emergency surgery for a new patient, or when a new procedure is needed due to a patient emergency, *e.g.*, an emergency hysterectomy during a routine cesarean section. Surgical technologists are responsible for setting-up and checking equipment. Poorly-assembled or poorly-checked equipment can result in patient harm. Surgical technologists also monitor equipment, such as equipment that can cause surgical fires, a high-risk in operating rooms due to the presence of oxygen and flammable material. The FDA recently launched a surgical fire prevention initiative since too many *preventable* fires are occurring in operating rooms, especially trachea fires.

Poor performance by surgical technologists can cause external and internal third-degree burns and many malpractice cases naming surgical technologists involve burns to the legs, thighs, and internal burns from too-hot equipment (hot due to recent sterilization) that the patient cannot feel because he or she is under anesthesia.

Surgical technologists manage specimens such as cancer specimens, skin grafts and organs for organ replacement surgeries. If cancer specimens are compromised, the patient may not be as readily diagnosed or treated or might require a second surgery. When surgical technologists mishandle skin grafts, patients must have grafts done in a second location, leading to pain and scarring in a second location.

Surgical technologists are often the only other person in the sterile field besides the surgeon. Surgical technologists must also know how to perform many tasks simultaneously using sterile technique. At break-neck speed, they simultaneously remove items from the sterile field, load sutures, prepare multiple instruments for the next series of steps in the surgery and monitor equipment all while using sterile technique for each step. Surgical technologists impact the pace of the surgery, which is important because every minute a patient is under anesthesia the risk for excess bleeding and adverse events increases.

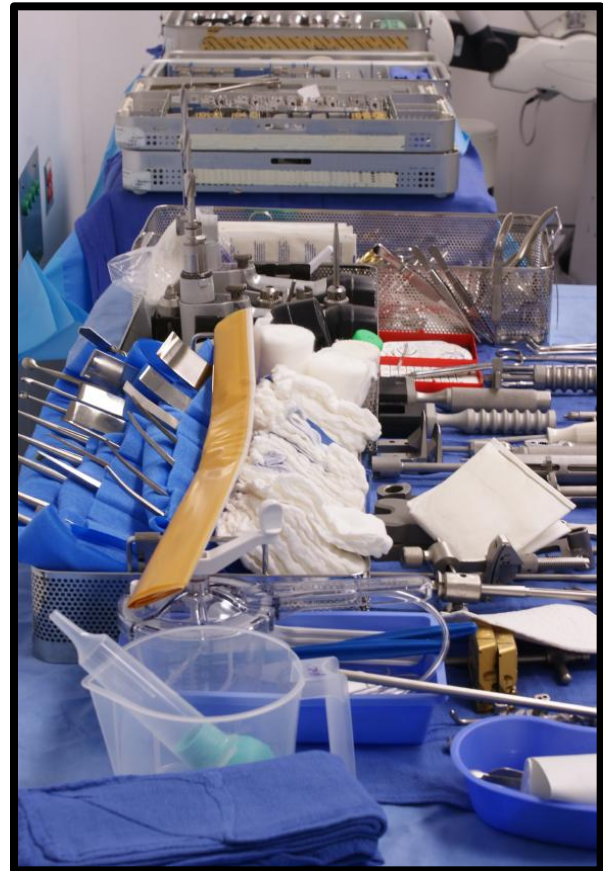
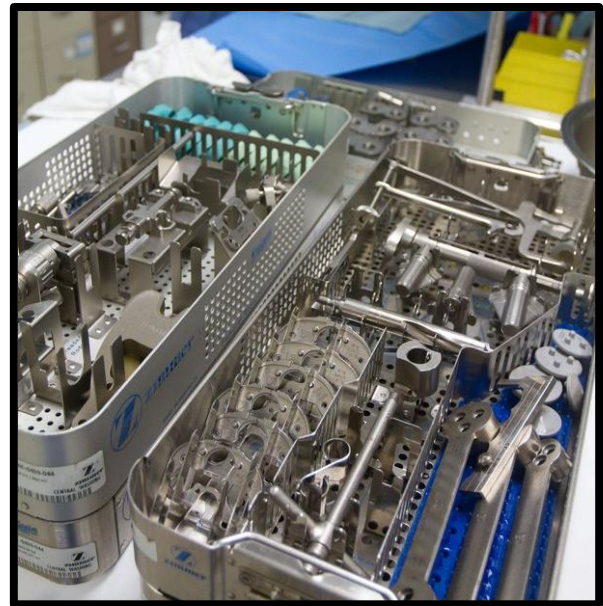
Surgical technologists are also responsible for the counts of supplies and instruments that were inserted into the patient during surgery to ensure they are extracted to prevent foreign retained objects, which can cause death in some cases, and in others, extreme pain and organ scarring, even after they are discovered and removed. The circulating nurse and the surgical technologist are co-responsible for counts.

Surgical technologist's most important role is to prevent surgical site infections. The surgical technologist is the professional in the operating room charged with the responsibility of maintaining the integrity of the sterile field. The sterile field refers to surfaces that sterile objects, such as surgical instruments, may contact. The sterile field includes the area immediately around a patient that has been prepared for a surgical procedure. Protecting the sterile field involves carrying out specific procedures using sterile technique. Surgical technologists must follow proper technique to prevent surgical site infections. Surgical site infections pose a significant problem and are the second most common health care-associated infection in the United States.



Above: a robotic surgery. The surgeon is pictured in the foreground. During robotic surgeries, surgeons are outside the sterile field when at the robotic console. **The personnel pictured near the patient are the surgical technologist and surgical assistant.**

To the right: Knee surgery instruments and supplies.



Below: Heart surgery equipment and supplies



Regarding Oregon House Bill 2876. Support Education and Certification of Surgical Technologists

Sponsored by Committee on Health Care



AMERICAN COLLEGE OF SURGEONS
Inspiring Quality: Highest Standards, Better Outcomes

[ST-47] Statement on Surgical Technology Training and Certification

The following statement was developed by the American College of Surgeons Committee on Perioperative Care, and approved by the Board of Regents.

Surgical technologists are individuals with specialized education who function as members of the surgical team in the role of scrub person. With additional education and training, some surgical technologists function in the role of surgical first assistant.

Surgical technology programs are accredited by the Accreditation Review Committee for Educational Programs in Surgical Technology—a collaborative effort of the Association of Surgical Technologists and the American College of Surgeons, under the auspices of the Committee on Accreditation of Allied Health Education Programs. Accredited programs provide both didactic education and supervised clinical experience based on a core curriculum for surgical technology.

Accredited programs may be offered in community and junior colleges, vocational and technical schools, the military, universities, and structured hospital programs in surgical technology. The accredited programs vary from nine to 15 months for a diploma or certificate to two years for an associate's degree.

Graduates of accredited surgical technology programs are eligible for certification by the Liaison Council on Certification for the Surgical Technologist, an administratively independent body from the Association of Surgical Technologists consisting of representative certified surgical technologists, a surgeon, and the public.

The American College of Surgeons strongly supports adequate education and training of all surgical technologists, supports the accreditation of all surgical technology educational programs, and supports examination for certification of all graduates of accredited surgical technology educational programs.

Reprinted from Bulletin of the American College of Surgeons, Vol. 90, No. 12, December 2005

Statements

This page and all contents are copyright © 1996-2014 by the American College of Surgeons, Chicago, IL

Re: Oregon House Bill 2876, Support Education and Certification of Surgical Technologists

Sponsored by Committee on Health Care



Minnesota Data Demonstrate Fewer Adverse Events in Facilities with Certified Surgical Technologists

The Minnesota Adverse Health Events Reporting Act requires public dissemination by healthcare facilities of 28 adverse medical events. **Analysis of the data from 2009-2013, by facility, reveals that reported adverse surgical events (wrong body part, wrong procedure, wrong patient, foreign retained objects) occurred 40% less often in hospitals that require education and certification for surgical technologists compared to hospitals that do not require education or certification for surgical technologists.**

The surgical technologist is the professional near the patient responsible for counting supplies and instruments to prevent foreign retained objects. **Foreign retained objects analyzed separately occurred 55% less in hospitals that require surgical technologist education and certification compared to hospitals that do not.**

Data were calculated using relative increase. Because of the confidentiality of root cause analyses of these events, it is difficult to determine exact fault. Nevertheless, the data decisively show that healthcare facilities that value competency in their surgical staffs experienced better outcomes.

Data source: <http://www.health.state.mn.us/patientsafety/>

**Re: Oregon House Bill 2876, Support Education and Certification of Surgical Technologists
Sponsored by Committee on Health Care**



Costs associated with extended stays due to surgical site infection reduced by 11% in facilities with Certified Surgical Technologists.

Though data about excess costs related to preventable surgical events are rare, data are available from a nonprofit statewide trade association of Virginia's hospitals about the cost of medical care related to extended hospital stays occasioned by a surgical site infection. The data are not specific to surgical site infections directly caused by a surgical technologist, uncertified or otherwise. **Nonetheless, the data reveal that facilities utilizing only credentialed personnel as surgical technologists - who are the practitioners primarily responsible for maintaining the sterile field and preventing breaks in aseptic technique - reduced by 11% the costs associated with extended stays due to surgical site infection.**

Source: vapricepoint.org, January 2007 – September 2007

	<i><u>Hospitals that require Certified Surgical Technologists (10 hospitals*)</u></i>	<i><u>Hospitals that do not require certification (37 hospitals*)</u></i>	<i><u>Both groups of hospitals (47 hospitals*)</u></i>
Average Number of Discharges for Post-traumatic and Post-operative Infection:	25.9	27.6	27.26
Average Length of Stay (days):	4.79	5.25	5.15
Average Charge Per Patient Stay:	\$14,712	\$17,118	\$16,606
Average Charge Per Day:	\$2,849	\$3,234	\$3,152
Median Charge Per Patient Stay	\$10,677	\$13,341	\$12,774

*Only hospitals that hire surgical technologists are included.