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Los Angeles County

APRIL 2009



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Job openings for Surgical Technologists in Los Angeles County will grow by 31% from 2008-2013, resulting in 757 new and replacements jobs during that period.

– Source: EMSI Covered Employment – Spring, 2009

Executive Summary

Surgical Technologists were one of the six allied health occupations with the highest growing demand, in a 2008 study of Allied Health in Los Angeles County, prepared by the Center of Excellence. As a key member of the surgical team, Surgical Technologists work most often in hospitals and surgery centers. Surgical Technologists see that the operative procedure is conducted under optimal conditions. Before the surgery they may prepare the patients, facilities, and instruments. During the surgery they may assist by passing instruments, checking vital signs, and handling specimens. After surgery they may help clean the operating room and move patients to recovery rooms.

Factors affecting the demand for Surgical Technologists include the growing number and complexity of surgical procedures, the shortage of operating room nurses, the aging population which requires more surgical procedures, the retirement of baby-boomers from the allied health workforce, and the current recession, which forces more people in to the public health care system, where they tend to develop more serious conditions and require more surgical interventions.

California does not require certification or licensure of Surgical Technologists. Two national organizations offer voluntary certifications and many employers prefer these. Existing programs in Los Angeles County are all operated by private, proprietary schools and are of a variety of lengths. None are at community colleges. Some, but not all, programs provide supervised clinical practice.

Employers who were surveyed for this study indicated that it is not difficult to find inexperienced Surgical Technologists, but it is “difficult” or “very difficult” to hire experienced candidates. Employers prefer candidates who are certified and some employers pay higher wages to employees who maintain their credential. Eight of the 11 employers who provided input for the study, stated that there was a need for a community college degree or certificate program in Los Angeles County.

Study recommendations include the development of a basic certificate program for Surgical Technologists and an advanced program, possibly awarding an AA-Degree, for certified Technologists to advance to the Surgical Assistant level. There are currently no accredited programs for Surgical Assistants in California. A community college would be the appropriate place for the first such program and would provide access to this growing occupation for a wide variety and diversity of students.

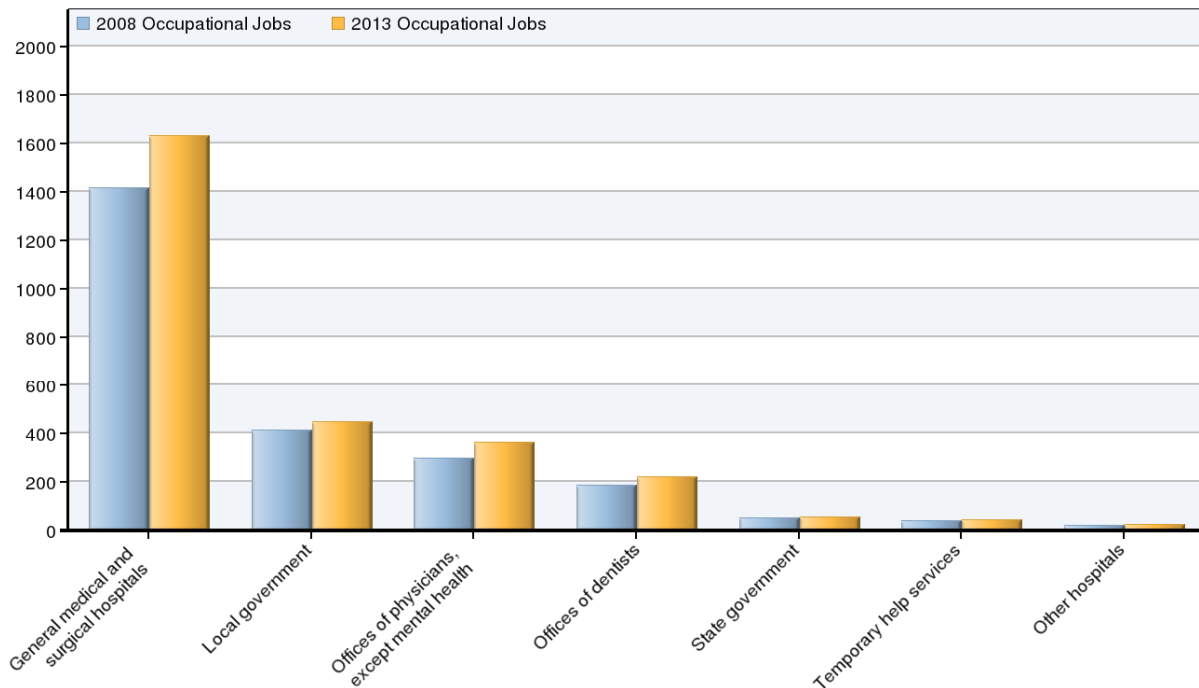
Introduction

A 2008 industry scan of allied health occupations in Los Angeles County identified Surgical Technology as one of the six occupations most likely to experience a shortfall of qualified job candidates in the coming 5 to 10 years. Presently, none of the community colleges in Los Angeles have certificate or AA-degree programs in Surgical Technology. This report is designed to help the colleges assess the potential need for such programs. The report responds to the California Community Colleges System charge to the Economic & Workforce Development (EWD) Network to identify industries and occupations with unmet employee development needs and introduce partnering potential for the colleges' programs.

Industry Overview

Surgical Technologists are a part of the surgical team and work primarily in hospital settings. Exhibit 1 and Table 1 show the large percentage of Surgical Technologists who work in hospitals at the current time as well as the projections for five years from now. Although jobs in settings like physicians' and dentists' offices and employment services are expected to experience a large percentage increase, these locations will still employ very small numbers of Surgical Technologists relative to hospitals.

Exhibit 1- Top Industries for Surgical Technologists in Los Angeles County, 2008-2013



Source: EMSI Covered Employment - Spring 2009

Table 1- Employment by Setting for Surgical Technologists in Los Angeles County

NAICS Code	Name	2008 Jobs	2013 Jobs	Change (New Jobs)	% Change
622110	General medical and surgical hospitals	1,417	1,631	214	15%
930000	Local government	410	445	35	9%
621111	Offices of physicians, except mental health	297	361	64	22%
621210	Offices of dentists	184	218	34	19%
920000	State government	51	53	2	4%
561320	Temporary help services	39	42	3	8%
622310	Other hospitals	21	24	3	15%
Total		2,419	2,774	355	15%

Source: EMSI Covered Employment – Spring 2009

The large majority of Surgical Technologists work at private hospitals, public organizations and offices of physicians. Total employment in Los Angeles County was 2,419 in 2008 and is expected to reach 2,774 by 2013. There will be 355 new jobs and 402 replacement jobs, totaling 757 openings for Surgical Technologists.

Industry and Demographic Trends Affecting Surgical Technology

In hospital settings, the shortage of operating room nurses has contributed to a higher demand for Surgical Technologists. As a result of hundreds of interviews of employers and professionals in the field, the Healthcare Navigator identified several factors affecting this occupation: “Some hospitals assign Surgical Technologists a greater number of operating room tasks due to cost containment efforts. Because California regulations governing the Surgical Technologist scope of practice are not considered to be rigid, Surgical Technologists are performing more highly skilled tasks under the supervision of operating room nurses. Additionally, as efforts to control health care costs escalate further, a shift toward performing minor surgery on an outpatient basis should contribute to a further need for Surgical Technologists.”¹ Furthermore, the growing complexity of surgical procedures results in a need for more staff in the operating room. Technological advances like fiber optics and laser technology are also creating new surgical procedures and increasing the demand for surgery in general. Operating rooms will soon incorporate computers, lasers, fiber optics, electronics and robotics to carry out routine patient care. As a key member of the surgical team, the Surgical Technologist must be prepared to handle these advanced tools.²

The volume of surgical procedures is expected to continue to increase as the population grows and ages, because older people tend to require more surgeries. In California, people over the age of 65 are the fastest growing population group. The state’s elderly population is

¹ Peninsula and South Bay Area Guide to Healthcare Careers found online at <http://www.healthcarenavig.org/surgicaltech.html>

² The Association of Surgical Technologists, “Surgical Technology: A Growing Career,” found online at <http://www.ast.org/pdf/GrowingCareer.pdf>

expected to increase by 75% from 2000-2020. One indication of the increased demand for health care services among this population is the fact that average health care expenditures increase fourfold between age 65 and 97.³

Along with the aging of patients and the general population, the allied health workforce (including Surgical Technologists) is also aging, resulting in increased numbers of retirements. Another demographic issue in the workforce is the need for diversity among the workers who have direct contact with a highly diverse patient population. This need for diversity is based both on cultural and linguistic factors. As the diversity of the population increases, the demand for Surgical Technologists who can deal with diverse patient populations also grows.⁴The current recession has heightened the problems that already existed in hospitals and affects every part of the health care industry.

In 2006, Godbe Research stated that: “Hospital profitability is predicted to decline in the foreseeable future as cost burdens are shifted to hospital facilities, hospital costs exceed Medicare and Medicaid reimbursements, and hospitals treat a growing number of uninsured patients. Forty-six percent of hospitals and health systems have low credit ratings, and many hospitals operate with low to negative profit margins; according to California’s Office of Statewide Health Planning and Development, more than half of California hospitals have negative patient care margins. Because of the economic slowdown, California’s uninsured population is expected to increase. Indigent care in itself tends to be more costly by default; because uninsured individuals lack a regular (and therefore preventive) source of care, health problems are usually addressed when it is most costly to do so at the emergency room.”⁵

Supply and Demand Drivers

Table 2 - Surgical Technology: Occupation-Specific Supply and Demand Drivers

Demand Drivers	Supply Drivers
↑Increasing volume of surgical procedures	↔Competition for workers between hospitals and ambulatory settings
↑Cost Pressures	↑Short Duration of Training
↑High stress work environment can lead to turnover	↓Clinical instruction sites can be hard to find and programs can be expensive to operate

Source: Health Workforce Solutions, “Closing the Health Workforce Gap in California: An Education Imperative” Appendix A⁶

³ Health Workforce Solutions, “Closing the Health Workforce Gap in California: An Education Imperative,” November 5, 2007, The Campaign for College Opportunity, San Francisco, pp. 2-3 available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

⁴ Health Workforce Solutions, “Closing the Health Workforce Gap in California: An Education Imperative,” November 5, 2007, The Campaign for College Opportunity, San Francisco, pp. 2-3 available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

⁵ Godbe Research, “Orange County Healthcare Industry Report,” Orange County Workforce Investment Board, April 2006, found online at <http://www.ocwib.org/Docs/Orange%20County%20Healthcare%20Industry%20Report.pdf>

⁶ Health Workforce Solutions, “Closing the Health Workforce Gap in California: An Education Imperative,” November 5, 2007, The Campaign for College Opportunity, San Francisco, Appendix A, p.48 available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

Occupational Overview

Surgical Technologist Duties

Surgical Technologists are commonly known as scrubs or operating room technicians. They work as part of a team with doctors and nurses in all aspects of a wide variety of operative settings. Their job is to see that the operative procedure is conducted under optimal conditions.⁷ Before surgery, they may prepare the patients, facilities, and instruments. During surgery they may assist by passing instruments, checking vital signs, and handling specimens. After surgery they may help clean the operating room and move patients to recovery rooms.⁸

Generally, Surgical Technologists' duties are divided into "sterile" and "unsterile" functions. For example, a circulating technologist is the "unsterile" member of the surgical team who interviews the patient before surgery; prepares the patient; helps with anesthesia; obtains and opens packages for the "sterile" people to remove the sterile contents during the procedure; keeps a written account of the surgical procedure; and answers the surgeon's questions about the patient during the surgery. On the sterile side of the spectrum, Surgical Technologists take on the scrub role during the surgery. With additional specialized education or training, they also may become the surgical first assistant. The surgical first assistant, as defined by the American College of Surgeons (ACS), provides aid in exposure, hemostasis (controlling blood flow and stopping or preventing hemorrhage), and other technical functions under the surgeon's direction that help the surgeon carry out a safe operation.⁹

Demand for Surgical Technologists

Table 3 - Occupational Change Summary for Los Angeles County

SOC Code	Description	2008 Jobs	2013 Jobs	Change (New Jobs)	% Change	New & Rep. Jobs	% New & Rep.	2009 Median Hourly Earnings
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29-2055	Surgical technologists	2,419	2,774	355	15%	757	31%	\$20.75
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Source: EMSI Covered Employment – Spring 2009

⁷ Health Professions Network, "Surgical Technology: A Growing Career," found online at http://www.healthpronet.org/ahp_month/09_04.html

⁸ Health Workforce Solutions, "Closing the Health Workforce Gap in California: An Education Imperative," November 5, 2007, The Campaign for College Opportunity, San Francisco, Appendix A available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

⁹ Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2008-09 Edition, Surgical Technologists, on the Internet at <http://www.bls.gov/oco/ocos106.htm>

Certification

Individual employers set the requirements for their surgical technology staff. Most candidates get their education in one-year certificate or diploma programs that include both theoretical and clinical instruction.¹⁰ California does not license or register Surgical Technicians, but two different voluntary national certifications are available (see below). Both of these national certifications require renewal every four to five years.¹¹

Some employers require certification by the Liaison Council on Certification of Surgical Technologists, which is now known as The National Board of Surgical Technology and Surgical Assisting (NBSTSA). Only graduates of accredited programs are eligible to sit for this national exam.¹² Once certified in this way, the Surgical Technologist can use the Certified Surgical Technologist (CST) designation.

Voluntary certification may also be obtained from the National Center for Competency Testing (NCCT). To qualify to take the exam, candidates must follow one of three paths: complete an accredited training program, undergo a two-year hospital on-the-job training program, or acquire seven years of experience working in the field. Technologists certified in this way can use the Technologist in Surgery – Certified (TS-C) designation.¹³

There are several advantages to being certified. When there are a large number of job candidates in the market, those who are certified are more likely to get jobs. Furthermore, 46% of Certified Surgical Technologists (CSTs) and 52% of Certified First Assistants (CFAs) reported that employers compensated them for maintaining their credential. An increasing number of employers are compensating employees for certification. The value of certification was also evident in an online survey of surgical technologists conducted by NBSTSA. Hourly wage differences between certified versus non-certified staff ranged from a low of 50 cents per hour to a high of \$5 or more for earning the credential. Most frequently, CSTs earned \$1-\$1.99 per hour in increased wages.¹⁴

In 2008, 8,919 examinees took the Certified Surgical Technologist (CST) examination nationally. Of these, 5,808 passed (65% pass rate). Also in 2008, 291 examinees took the Certified First Assistant (CFA) examination. Of these, 162 passed (56% pass rate).¹⁵

¹⁰ Health Workforce Solutions, "Closing the Health Workforce Gap in California: An Education Imperative," November 5, 2007, The Campaign for College Opportunity, San Francisco, Appendix A available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

¹¹ Health Workforce Solutions, "Closing the Health Workforce Gap in California: An Education Imperative," November 5, 2007, The Campaign for College Opportunity, San Francisco, Appendix A available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

¹² State of California Employment Development Department, "Surgical Technologist," Health Care Careers, found online at <http://www.calmis.ca.gov/file/healthcare/hcc-surgical-technologists.pdf>

¹³ Godbe Research, "Orange County Healthcare Industry Report," Orange County Workforce Investment Board, April 2006, found online at <http://www.ocwib.org/Docs/Orange%20County%20Healthcare%20Industry%20Report.pdf>

¹⁴ Association of Surgical Technologists, found online at http://www.ast.org/professionals/professionals_about_prof_stats.aspx

¹⁵ National Board of Surgical Technology and Surgical Assisting, found online at <http://www.lccst.org/about/index.html>

Employer Needs and Challenges

Surveys and studies done throughout the state underscore the strong preference by employers for certified and/or community college prepared Surgical Technologists. (See study results at <http://www.healthcarenav.org/surgicaltech.html>.) Even though the California regulations do not technically require a job candidate to complete a formal course of study, employers indicated that they would be highly unlikely to hire someone who had not successfully completed an accredited program.

In a recent statewide study, interviewed stakeholders cited Surgical Technologists as one profession being in short supply, but labor market projections used in the report did not reflect that. The discrepancy may be due to weak workforce data collection in California. **“When a profession is unlicensed, like Surgical Technologists, it can be hard to assess how many workers enter the profession.”**¹⁶ Because of this situation, the results of the employer surveys are important to the conclusion and recommendations of this report.

A survey was completed of Los Angeles County employers who hire Allied Health professionals. Sixteen employers responded and eleven of those who responded reported that they employ Surgical Technologists. They indicated that it is “difficult” or “very difficult” to hire experienced Surgical Technologists, but not difficult to hire inexperienced Technologists. Of the employers surveyed, half reported that they require previous work experience of 1-2 years. The rest of the employers surveyed indicated a preference for up to 5 years of previous experience. Five employers require national certification and the rest of the surveyed employers prefer it.

Although most of the employers surveyed did not have a preferred school or training program for job applicants, they did express the following educational preferences:

- Willingness to learn, desire for perfection, respect—understanding of their responsibility to patient care
- Prefer a good grasp of anatomy and physiology, English composition and sciences with labs
- Accredited course work and comprehensive clinical experience
- Previous hospital experience
- Background experience in multi specialty services, for example, neurology (spine cases), cardiovascular, ophthalmology, gynecology, orthopedics, pediatric surgery, urology, maxilla-facial, general/specialty surgeries

When asked “What skills or job requirements do applicants often lack?” responses included:

- Team spirit
- Technical inclination; can trouble shoot, pay attention to instructions and know how to anticipate: “Give the surgeons what they need, not what they ask for.”

¹⁶ Health Workforce Solutions, “Closing the Health Workforce Gap in California: An Education Imperative,” November 5, 2007, The Campaign for College Opportunity, San Francisco, p. 19, available online at http://www.collegecampaign.org/assets/docs/hcwfs/cco_alliedhealth_report_10-30-07_final.pdf

- Common sense
- Relevant clinical experience (“A clinical experience doing C-sections, for example, will not prepare someone for the variety of cases most Techs are expected to scrub in for in the hospital or ASC setting”)
- Work experience; since most applicants are recent graduates with only internship experience, they are unable to function on major cases
- Only being able to do general cases or just one specialty (We are a trauma facility and need people who can scrub all types of cases from the minimal to very involved) (2 responses)

Eight of the 11 employers who were surveyed said that they saw a need for community colleges to develop a program for Surgical Technologists. Although there are numerous programs and graduates in the current job market, they indicated that the preparation of the current graduates is “mediocre”. They would also like to see the occupation opened up to more candidates than just those that can afford expensive private programs. Several employers indicated that they felt community college graduates would be more well-rounded and mature. They recommended that the community college program include a rigorous and varied clinical component, with close supervision of students. See details of the survey in Appendix B.

College Response and Issues

There are a number of private programs training Surgical Technologists in Los Angeles County (e.g. American Career College, Everest College, Glendale Career College and Newbridge College). There are no community college certificate or degree programs at this time. Because Surgical Technologists are not certified or licensed by the state, there are a wide variety of programs of different lengths. Some, but not all, programs provide clinical practice.

Model Programs

In other regions of California, have community college programs for Surgical Technologists. The certificate program at Mira Costa includes 38 units of work. Details of the program can be found in Appendix C. In Michigan, at Macomb Community College, students have the option of earning an AS or AA degree in Surgical Technology and/or Certificates in specialties like Central Processing Distribution Technician.

Career Ladder

Surgical Technologists usually advance by specializing in a particular area of surgery, such as neurosurgery or open heart surgery. They also may work as Circulating Technologists. With additional training, some Technologists advance to First Assistant. Some Surgical Technologists manage central supply departments in hospitals, or take positions with insurance companies, sterile supply services, and operating equipment firms.¹⁷ Several of the employers surveyed for this report also suggested that Surgical Technologists can become nurses with the appropriate education.

¹⁷ Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2008-09 Edition, Surgical Technologists, on the Internet at <http://www.bls.gov/oco/ocos106.htm>

Surgical Technician and Medical or Clinical Laboratory Technician¹⁸

Registered Nurse/Operating Room Nurse	
Radiological Technician	
Medical or Clinical Lab Technician	Physician's Assistant
Surgical First Assistant	
Surgical Technologist	
Sterile Processing Technician	
Certified Nurse Assistants, Medical Assistants, Unit Assistants, Home Health Aides, Respiratory Therapy Assistants, Physical Therapy Aides ¹⁹	

Other opportunities for advancement include:²⁰

- Specialization in an area of interest such as cardiac, orthopedic, or pediatric surgery (although certification as a CVS or OS is no longer possible. See <http://www.lcc-st.org/news/index.html>)
- Employment as a traveling Surgical Technologist
- Employment by a medical corporation to represent products
- Research and product development
- Employment in the materiel management or central supply areas
- Assumption of supervisory responsibilities
- Surgical technology educator
- Military service

¹⁸ Explore Health Careers.org, "Career Ladders Help Health Workers Move up Faster" found online at <http://www.explorehealthcareers.org/en/Article.164.aspx>

¹⁹ Godbe Research, "Orange County Healthcare Industry Report," Orange County Workforce Investment Board, April 2006, found online at <http://www.ocwib.org/Docs/Orange%20County%20Healthcare%20Industry%20Report.pdf>

²⁰ The Association of Surgical Technologists, "Surgical Technology: A Growing Career," found online at <http://www.ast.org/pdf/GrowingCareer.pdf>

- Volunteer opportunities (such as the Peace Corps)
- Technical writing, illustration and photography
- Employment as a consultant

Conclusion and Recommendations

Create a Community College Program

The Association of Surgical Technologists (AST), Accreditation Committee for Review of Programs in Surgical Technology (ACR-ST), and the National Board of Surgical Technology and Surgical Assisting (NBSTSA) have all supported an AA-Degree requirement for Surgical Technologists since the early 1990's. Since most states do not regulate Surgical Technologists, this recommendation has not yet been adopted, but efforts have been renewed and it is predicted that in 7 to 10 years, the requirement will be set. At this time, over 40% of the accredited organizations that are educating Surgical Technologists are offering AA-degrees (but none of these are in Los Angeles County).²¹

In 2005, all three organizations adopted the following resolution:

“The associate degree requirement for entry-level education of the Surgical Technologist is a primary strategic direction for the profession, because it raises the quality of patient care, increases professionalism and professional recognition for legislation, and helps to develop a better overall practitioner through increased levels of training. Our goal is implementation within seven to ten years without a high level of program loss to alternate accreditation bodies and alternate certifying bodies”.²²

The following year, the organizations decided to support the “CST credential as a condition of employment and the AA-degree as a model for entry-level education.” Accredited programs are adding AA-degree options at an increasing rate. At this time, students in Los Angeles County do not have the option to participate in an AA-degree program while they prepare to become Surgical Technologists. Current recommendations to create degree programs include 1+1 articulation agreements between hospitals and other accredited training organizations and community colleges. These agreements would allow students to do one year of work at the accredited training organization and then a second year of work at the community college, resulting in an associates' degree. These arrangements have been proposed because of the large number of accredited training providers that do not have the capacity to award associate's degrees.²³

²¹ Orloff, Keith, “The Question, Considerations, Constraints, and Options (Part 3 of 3),” Association of Surgical Technologists Instructors Newsletter, 11:6, January/February, 2009, p. 4 found online at http://www.ast.org/pdf/Newsletters/Instructors/2008_2009_Dec_Jan.pdf

²² Orloff, Keith, “The Question, Considerations, Constraints, and Options (Part 3 of 3),” Association of Surgical Technologists Instructors Newsletter, 11:6, January/February, 2009, p. 3 found online at http://www.ast.org/pdf/Newsletters/Instructors/2008_2009_Dec_Jan.pdf

²³ Orloff, Keith, “The Question, Considerations, Constraints, and Options (Part 3 of 3),” Association of Surgical Technologists Instructors Newsletter, 11:6, January/February, 2009, p. 4 found online at http://www.ast.org/pdf/Newsletters/Instructors/2008_2009_Dec_Jan.pdf

Given the amount of time it takes to bring a new community college program to life and graduate the first class of students, a college starting the process in the near future would most likely graduate its first class just a year or two before the industry achieves its goal of making the associate's degree mandatory. Although there are already a large number of Surgical Technology graduates coming out of private programs in Los Angeles County, the majority of the employers who were surveyed voiced a desire for a community college program to train Surgical Technologists. One respondent noted, "Right now there are many programs but the Techs they prepare are mediocre."

Employers surveyed also felt that graduates of a community college program would have a strong, well-supervised clinical experience and would be more "versatile and well-rounded." They also said that the high cost of the private programs is reducing the number of students who can participate.

In order to start a program that would offer a clear advantage to students over the existing private programs, several key program features are recommended:

- New programs should have a robust clinical component and should be designed in collaboration with at least one of the large hospital employers in the area. In this way, the clinical experience can lead students into entry-level jobs that might otherwise be reserved for experienced Surgical Technologists. This is common practice in other allied health professions where students are often offered their first job assignment at the site of their clinical practice.
- The program should emphasize the career ladder opportunities open to students and promote long-range career planning. Students who start in allied health careers with an associate's degree have learned "how to learn" and built a strong foundation for future education and career moves.
- By adding a program for Surgical Technologists to a college where other allied health programs already exist, some of the barriers to starting a new program may be reduced. For example, a school with other allied health programs would already have contact with clinical sites that could be used for Surgical Technology students. It is possible that equipment and labs could be shared with other programs. Knowledgeable faculty in related allied health programs could possibly participate in the program and curriculum development and help recruit faculty for the new program.

Programs for Surgical Technology Specialties and Surgical Assistants

Employer comments during the survey completed for this report indicate a need for programs that would prepare practicing Surgical Technologists for specialties such as open-heart surgery or neurosurgery. The move from Surgical Technologist to Surgical Assistant could also be supported by a community college program. At this time, there are no accredited Surgical Assistant Programs in California. (See Appendix C for information on one accredited program in Michigan that could serve as a model and Appendix D for more information about Surgical Assistants.)

Although some Surgical Assistants start with degrees in nursing or as Physician Assistants, Surgical Technologists who are certified are eligible to enter the programs to be trained as Surgical Assistants. These programs are generally 10-22 months long and usually result in a certificate. However, for students entering such a program who do not already have a degree,

it would be advantageous to offer the AA/AS-Degree to program completers. All program graduates would need to sit for one of the credential exams, so ideally the program would be accredited by the National Surgical Assistant Association (NSAA) and the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The Liaison Council on Certification for the Surgical Technologist (LCC-ST) offers the Certified Surgical Technologist/Certified First Assistant (CST/CFA) credential, and the National Surgical Assistant Association (NSAA) offers a Certified Surgical Assistant (CSA) credential. To be eligible for LCC-ST testing, individuals must be graduates of a CAAHEP-accredited surgical assistant program or a CST with current certification who meets a number of other eligibility requirements.²⁴

Community College Programs as Career Ladders

A community college program for Surgical Technologists in Los Angeles County could provide the first step in a career ladder that might lead to Radiologic Technologist or Registered Nurse. The program could serve students who are waiting to enter impacted programs, who want to get into allied health and see if it is a good “fit” for them, or who know that they will need a good paying job to put themselves through a longer course of study, like an R.N. program. In order to be useful as a career ladder program, the program will need “bridges” to other allied health programs so students would not have to start completely from the beginning if/when they decided to switch occupations and train to move up the career ladder.

Conclusion

Although Surgical Technology is currently unlicensed and unregulated, there are numerous reasons to establish an AA-degree program in Surgical Technology for Los Angeles County. Changes in the regulatory environment that are being pushed by the professional organizations, along with support from employers who were surveyed, provide a positive atmosphere for establishing a community college program for Surgical Technologists and Surgical Assistants in Los Angeles County.

²⁴ Commission on Accreditation of Allied Health Education Programs, “Surgical Assistant,” found online at <http://www.caahep.org/Content.aspx?ID=52>

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- National Board of Surgical Technology and Surgical Assisting, found online at <http://www.lcc-st.org/about/index.html>
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- Peninsula and South Bay Area Guide to Healthcare Careers found online at <http://www.healthcarenav.org/surgicaltech.html>
- State of California Employment Development Department, "Surgical Technologist," Health Care Careers, found online at <http://www.calmis.ca.gov/file/healthcare/hcc-surgical-technologists.pdf>

Appendix A: How to Utilize this Report

This report is designed to provide current industry data to:

- Define potential strategic opportunities relative to an industry's emerging trends and workforce needs;
- Influence and inform local college program planning and resource development;
- Promote a future-oriented and market responsive way of thinking among stakeholders; and,
- Assist faculty, Economic Development and CTE administrators, and Community and Contract Education programs in connecting with industry partners.

The information in this report has been validated by employers and also includes a listing of what programs are already being offered by colleges to address those workforce needs. In some instances, the labor market information and industry validation will suggest that colleges might not want to begin or add programs, thereby avoiding needless replication and low enrollments.

About the Centers of Excellence

The Centers of Excellence (COE), in partnership with business and industry, deliver regional workforce research customized for community college decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Technical Education (CTE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The total grant amount (grant number 08-305-016 for \$205,000) represents funding for multiple projects and written reports through the Center of Excellence. The Centers aspire to be the premier source of regional economic and workforce information and insight for California's community colleges.

More information about the Centers of Excellence is available at www.coecc.net.

Important Disclaimer

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

Appendix B – Results of Employer Survey

Results of Survey of Allied Health Employers in Los Angeles County

Organiza- tion Size	Name of employer	No. surgical techs employed	Anticipate hiring # next year	Difficult to hire experienced ?	Difficult to hire in- experienced ?	Work experience required?	Certification required?
Not Reported	Cedars-Sinai Medical Center	100	Not reported	No	No	Prefer 5 yrs	Yes
5600	Long Beach Memorial Medical Center	37	17	Very	No	1 yr	Preferred
4500	Kaiser Permanente (L.A. Service area)	80	10	Very	n/a	1-2 yrs	yes
Not reported	Kaiser Foundation Hospitals (Bellflower)	Not reported	Not reported	Difficult	No	2 yrs	Yes
2300	Glendale Adventist Medical Center	17	2	Difficult	No	Prefer 2 yrs	Yes
2200	Methodist Hospital	9	Unknown	Very	No	2 yrs	Prefer
1700	Providence Health	25	0	No	No	1-2 yrs for higher levels	Some levels
25	San Fernando Valley Surgery	6	0	Difficult	No	Prefer 2 yrs	Yes
Not reported	Pomona Valley Hospital Medical Center	17	0-1	Difficult	No	1 yr (prefer 2 yrs)	Prefer
Not reported	Southern California Specialty	4	0	Very	No	Prefer 5 years	No
44	Specialty Surgery Center	7	1	Very	No	Prefer 1	Prefer

In your organization, what training/education do you prefer job applicants to have for this position?

- Willingness to learn, desire for perfection, respect—understanding of their responsibility to patient care
- Prefer a good grasp of anatomy and physiology, English composition and sciences with labs
- Graduate from an accredited Surgical Technology program or accredited course work and comprehensive clinical experience
- Two years in all specialties
- Previous hospital experience

- Background experience in multi specialty services i.e. neurology (Spine cases) cardiovascular, ophthalmology, gynecology, orthopedics, pediatric surgery, urology, maxilla-facial, general/specialty surgeries

Do you prefer graduates of certain schools or programs?

No- 9

- It is more about the person and how they present the education they have

Yes- 2

- Those with 6 mos or more in the field (externships)
- Simi Valley Adult School has provided the best training overall

What skills or job requirements do applicants often lack?

- Team spirit, about their egos---more “us” vs. the nurses attitude
- Technically inclined; can trouble shoot, pay attention to instructions and know how to anticipate: “Give the surgeons what they need, not what they ask for.”
- Common sense
- Clinical experience (A clinical experience doing C-sections, for example, will not prepare someone for the variety of cases most Techs are expected to scrub in for in the hospital or ASC setting)
- Experience, most applicants are recent graduates with only internship experience, unable to function on major cases
- Only being able to do general cases or just one specialty (We are a trauma facility and need people who can scrub all types of cases from the minimal to very involved) (2 responses)
- Previous hospital experience for at least 1 year
Either one of the national certifications

Career Ladder Questions:

- Do you promote from within? Yes -6 No - 5
- Which job titles can be promoted to Surgical Tech?
 - Surgical Tech I can be promoted to Surg Tech II, III or Lead
 - Surgical Tech II (Orderly)
 - Varies
 - Central Processing Tech

- “We have a good student program and have taken students from that.”
- What is the next logical step up the career ladder for Surgical Techs?
 - Higher levels of Surgical Tech
 - Surgical Tech II, who is able to scrub open heart (2 responses)
 - Lead Surgical Tech
 - Nursing (3 responses) O.R. Nurse (1 response)
 - Physician Assistant

Is there a need to develop a community college certificate or degree program?

Yes- 8

- It would assure Techs who are well-rounded in their education and more mature
- Only if the program provides excellent clinical experience, fails those who do not meet passing criteria, provides ample oversight in the clinical field, and hires top-notch teachers. Right now there are many programs but the Techs they prepare are mediocre.
- This would allow more people to be educated. The current schools are very expensive.
- Complete and thorough didactic program. Close follow-up in clinical setting. Evaluation – “marked by full detail”

No- 3

- We require national certification – we do intern students from a couple of schools in the area and they go on to be nationally certified

Other comments regarding the role of the community colleges in preparing students to work as Surgical Technologists:

- When students are not closely supervised during clinical practice, they learn the “bad habits” of the people they are working with
- Would love to participate in planning for a community college program.
- Current private programs do have trainees train in various hospitals.

Appendix C - Model Programs

Mira Costa Surgical Technology Certificate Program

(See <http://www.miracosta.edu/OfficeOfThePresident/PIO/Publications/catalog.pdf>)

Certificate of Achievement Surgical Technology

The Surgical Technology certificate prepares graduates to work on a multidisciplinary team that includes registered nurses and physicians who are caring for patients in an operating room or surgical practice setting. The program, which requires two semesters of full-time study, integrates theory, laboratory simulations and clinical practice, and prepares students to take the National Exam for Certification as a Surgical Technologist.

Required courses:

SURG 101 Principles of Surgical Technology 8
 SURG 101L Surgical Patient Care Concepts 5
 SURG 103 Clinical Practice for Surgical 11
 Technology
 SURG 104 Surgical Specialties 4
 SURG 104L Surgical Procedures 1
 NURS 151 Body Systems Survey for
 Health Professions 3
 NURS 155 Basic Medical Terminology 3
 PHAR 100 Basic Pharmacology--Dosages
 And Calculations 3

Total Required Units: 38

Macomb Community College (Macomb County, Michigan)

See

<http://www.macomb.edu/Current+Students/Educational+Offerings/Associate+Degrees/Program+Descriptions/Surgical+Technology.htm>

Certificate in Surgical Technology - Surgical Technologist

The curriculum is designed to enable students to perform a variety of duties as well as provide technical support to the surgical team in an operating room before, during, and after surgery. The surgical technologist is trained to maintain a sterile and safe surgical environment. Duties include but are not limited to the following: setting up sterile supplies, equipment, instrumentation, and drapes for surgical procedures; gowning and gloving the surgical team members; positioning patients for surgery; passing instruments, sponges and sutures to the surgeons or their assistants; preparing specimens for laboratory analysis; cleaning and sterilizing equipment and supplies, etc.

Certificate in Surgical Technology - Surgical First Assistant

The Certificate in Surgical Technology - Surgical First Assistant program provides opportunities for career growth for experienced operating room/surgical personnel in the field of Surgical Assisting. This is an advanced practitioner certificate and is designed toward earning a degree in higher education. The Surgical First Assistant directly assists the surgeon with the operation.

The Surgical First Assistant is specially trained to handle tissue, provide exposure using surgical instruments, provide homeostasis, and suturing during surgery.

***Skill Specific Certificate in Surgical Technology -
Central Processing Distribution Technician***

Taking these courses provides the fundamentals of central processing, supply, and distribution of hospital instrumentation, supplies, and equipment. These courses are designed to give instruction and practice in aseptic techniques, patient center concepts, and theories and practices of central service departments. Students will receive from Macomb Community College a Skill Specific Certificate in Surgical Technology - Central Processing Distribution Technician. Students who receive this certificate from Macomb are eligible to sit for the American Society for Healthcare Central Service Personnel (ASHCSP) National Certifying Examination or the International Association of Healthcare Central Service Material Management

Appendix D – Surgical Assistant

Occupational description (Source: <http://www.caahep.org/Content.aspx?ID=52>)

As defined by the American College of Surgeons, the surgical assistant provides aid in exposure, hemostasis, closure, and other intraoperative technical functions that help the surgeon carry out a safe operation with optimal results for the patient. In addition to intraoperative duties, the surgical assistant also performs preoperative and postoperative duties to better facilitate proper patient care. The surgical assistant to the surgeon during the operation does so under the direction and supervision of that surgeon and in accordance with hospital policy and appropriate laws and regulations.

Job description

In general, surgical assistants have the following responsibilities:

- Determine specific equipment needed per procedure
- Review permit to confirm procedure and special needs
- Selection and placement of x-rays for reference
- Assist in moving and positioning of patient
- Insert and remove Foley urinary bladder catheter
- Place pneumatic tourniquet
- Confirm procedure with surgeon
- Drape patient within surgeon's guidelines
- Provide retraction of tissue and organs for optimal visualization with regard to tissue type and appropriate retraction instrument and/or technique
- Assist in maintaining hemostasis by direct pressure, use and application of appropriate surgical instrument for the task, placement of ties, placement of suture ligatures, application of chemical hemostatic agents, or other measures as directed by the surgeon
- Use electrocautery mono and bi-polar
- Clamp, ligate, and cut tissue per surgeon's directive
- Harvest saphenous vein, including skin incision, per surgeon's directive
- Dissect common femoral artery and bifurcate per surgeon's directive
- Maintain integrity of sterile field
- Close all wound layers (facia, subcutaneous and skin) as per surgeon's directive
- Insert drainage tubes per surgeon's directive
- Select and apply wound dressings
- Assist with resuscitation of patient during cardiac arrest or other life-threatening events in the operating room
- Perform any other duties or procedures incident to the surgical procedure deemed necessary and as directed by the surgeon

Employment characteristics

Certified surgical assistants assist in a variety of surgery specialties:

- General surgery
- Orthopaedic surgery
- Neurosurgery
- Spinal surgery

- Otolaryngology
- Obstetrical surgery
- Gynecological surgery
- Craniofacial surgery
- Radial neck surgery
- Genitourinary surgery
- Cardiac surgery
- Thoracic surgery
- Vascular surgery
- Trauma surgery
- Plastic surgery
- Ophthalmologic surgery

Educational programs

Length. Current CAAHEP-accredited programs range from 10 months to 22 months. Surgical assisting is a specialty profession that requires specific training over and above a degree in science, nursing, physician assisting, or another health profession.

Prerequisites.

Recommended eligibility requirements for admission into a surgical assisting program are:

- Bachelor of Science degree (or higher)
- Associate degree in an allied health field, with 3 years of recent experience
- CST, CNOR, or PA C, with current certification
- Three years of current operating room scrub and/or assisting experience within the last 5 years
- Military medical training with surgical assistant experience
- Proof of liability insurance
- Current CPR/BLS certification
- Acceptable health and immunization records
- Computer literacy

Students also must be able to show proof of successful completion of basic science (college level) instruction, including:

- Microbiology
- Pathophysiology
- Pharmacology
- Anatomy and physiology
- Medical terminology

Curriculum

Course content includes:

- Advanced surgical anatomy
- Surgical microbiology
- Surgical pharmacology
- Anesthesia methods and agents
- Bioscience
- Ethical and legal considerations
- Fundamental technical skills
- Complications during surgery
- Interpersonal skills
- Clinical application of computers

Students must possess a working knowledge of operating room fundamentals, including aseptic principles and techniques, before moving on to the advanced levels of the program. In addition, the National Surgical Assistant Association requires clinical training “at the table” to reach the advanced skill level requirements to be eligible to sit for the NSAA’s certification examination.

Credentialing

The Liaison Council on Certification for the Surgical Technologist (LCC-ST) offers the Certified Surgical Technologist/Certified First Assistant (CST/CFA) credential, and the National Surgical Assistant Association (NSAA) offers a Certified Surgical Assistant (CSA) credential. To be eligible for LCC-ST testing, individuals must be graduates of a CAAHEP-accredited surgical assistant program or a CST with current certification who meets a number of other eligibility requirements.