THE ASATT SENSOR

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THE QUARTERLY NEWSLETTER OF THE
AMERICAN SOCIETY OF ANESTHESIA TECHNOLOGISTS AND TECHNICIANS

PRESIDENT'S MESSAGE...

1995 AND BEYOND

by Chris Patterson

As we start the New Year, the Board of Directors and I want to wish all members and their families **A Happy and Prosperous New Year**. We are dedicated to serving and representing all members of our Society across the country and we will do so to the very best of our abilities. I am grateful for your past support and for the privilege to serve in the coming year as president. Our thanks and appreciation are given to Lee Amorin, our outgoing president.

ASATT's Gratitude to our Benefactors: The American Society of Anesthesiologists recently presented our Society with a $5,000 donation to help pay for the administration costs of our national certification program. In speaking for all members of the ASATT, we extend our sincere thanks and gratitude to all officers and members of the ASA for their generosity and support. We also want to take this opportunity to acknowledge the following officers of the ASA:

Bernard V. Wetchler, MD, Incoming President, ASA
Wilson C. Wilhite, Jr., MD, Immediate Past President, ASA

ASA has continued their professional relationship with ASATT by appointing William H. King, MD, of the University of Texas Medical Branch in Galveston, Texas, as ASA liaison to the ASATT. We are very grateful to Dr. King for all his efforts on our behalf. I know that I am representing all anesthesia technicians and technologists and the entire ASATT Board of Directors when I say, "THANK YOU, ASA!!" The financial assistance and continued support is greatly appreciated and comes at a most opportune time.

Again, it is my pleasure on behalf of our Society to offer a warm message of appreciation for yet another $5,000 contribution presented to the ASATT's certification fund. We would like to acknowledge this generous donation from OHMEDA, Inc., as follows:

OHMEDA, Inc., a Division of the BOC Group, Ltd.
Mr. Paul Baumgart,
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All submissions pertinent to the objectives of the ASATT will be considered for publication. Preferred format: 3 1/2" micro floppy disk, IBM format. Photographs, preferably black-&-white are also welcome and will be returned.

Deadline for the next issue is February 15, 1995

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THE CERTIFICATION PROCESS IN BRITAIN

by Grainne M. Senier, AT
Santa Clara Valley Medical Center
Santa Clara, CA

(Note, to avoid confusion, American equivalents will appear in parentheses.) ASATT was pleased to welcome a delegation from the United Kingdom to our Annual Meeting this year in San Francisco. The three distinguished anesthesia care team members were: Dr. John Ballance, a Consultant Anaesthetist (senior, Board-Certified Anesthesiologist) practicing at Hereford Hospital, and President of the British Association of Operating Department Assistants, or "BAODA". Mr. John Butterworth of Rugby, one of only six technician operating room managers in Britain and Editor of *Technic*, the official journal of BAODA. Not least, Jenny Walker, an Anaesthesia Technician ODA who works at Battle Hospital in Hastings where Dr. Brain invented and developed the Laryngeal Mask Airway. Jenny won her trip to San Francisco and title of Ambassador in a contest sponsored by BAODA and Intavent LTD., the U.S. marketing company for the LMA.

The team discussed the various aspects of life for anesthesia technicians in Britain, including the history of their quest for certification, current scope of duties, and the implications of the emergence of a new classification of operating room personnel, the Operating Department Practitioner.

It was in 1945 that the British operating support personnel first established their own professional association, the Institute of Operating Theatre Technicians, "IOTT". It was not until twelve years later that members were able to take a voluntary self-test similar in nature to that which is currently being prepared by ASATT. Successful completion allowed most hospitals to recognize a basic level of proficiency. But it was not until 1976 that IOTT succeeded in having the proposed two-year course of formal training and subsequent examination sanctioned by the government. The more descriptive, nationally recognized title of Operating Department Assistant was awarded to these technicians who were deemed competent in three areas of practice - scrubbing, circulating, and anesthesia technical support. In keeping with the change, the Institute simultaneously renamed itself, becoming BAODA.

Upon graduation, the ODA was entitled to specialize in one area or another depending on the needs of the institution. Over time, approximately 90% chose anesthesia support services, with the majority of surgical support positions being filled by Registered General Nurses (RN's). When the chronic, general nursing shortage reached crisis proportions--also in the mid-seventies--the trend was, in turn, highlighted in the O.R.. The government acknowledged these staffing problems and set about finding a long-term, cost-effective solution. The role of the nurse anesthetist was not developed as it was not considered viable, since it was by definition, self-limiting. Instead, the government opted to create a new category of personnel, to train"Operating Department Practitioners" to provide highly competent assistance in any and all support positions in the O.R. and Recovery Room (PACU). A continuing decline in the number of newly qualified nurses seeking training in "Theatre" (O.R.) skills--in part due to changes in the basic nursing training program, which exclude specialty rotations and subsequent exposure--accentuated the timely introduction of the Practitioner's "National Vocational Qualification, Level 3" in 1992. Applications for assessment and further training are accepted from qualified Senior ODA's, RGN's, and other health care personnel who satisfy the educational and training prerequisites. All candidates are required to be active members of BAODA.

Despite sometimes greater demands on staff depending on the degree of geographical isolation, the type of institution, adequacy of staffing, etc., there are few official differences between the actual function of ODA's and "Anaesthetic" or "Theatre" nurses in the O.R.—the most important being that RGN's are licensed to administer IV medications. Nonetheless, the graduate ODA may obtain additional qualifications allowing them to claim further specialization, such as the Intubation and Infusion Certificate which is desirable for those who become "Resuscitation Officers"—official members of the code team, who may also go out on calls as part of a Transport Team. Other ODA's may become orthopaedic, urologic, or other service technicians. Promotion possibilities are limited by and large only by the skills, determination, and suitability of the individual, who may also become a Course Coordinator (educator), or, indeed, an Operating Room Manager.

The advent of Operating Department Practitioners has been greeted with mixed reactions. Some O.R. professionals are concerned that the overlap of skills may precipitate redundancies within their chosen ranks; others feel that it is an extravagance to employ people who are over-qualified to perform certain tasks, depending upon the post. With this in mind, parameters are currently being refined for a second level of Practitioner or "NVQ 2", who would perform other ancillary functions such as instrument care, patient transfer, and some duties hitherto performed by the circulator. Many look forward to the opportunity to master more skills and expand their scope of practice. Others, understandably, are daunted by the task of solving the problems, (geographic variables in access to instruction and funding, etc.), in the introduction of such a nationwide training scheme, which are compounded by the flux of proposals for National Health Service reforms. (At present the only formal impediment to otherwise full professional status is the lack of common policy between two governing bodies, which delays the establishment of a final examination and a national registry to oversee a code of conduct and disciplinary system to ensure accountability.)

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CERTIFICATION...

THE NECESSITY OF JOB ANALYSIS FOR EXAMINATION DEVELOPMENT

by Andrew J. Falcone, Ph.D.
Program Director, Research and Development,
Applied Measurement Professionals, Inc. (AMP)

ASATT, with the assistance of Applied Measurement Professionals, Inc. conducted a "Job Analysis Advisory Committee" meeting on October 18, 1994 in San Francisco, CA. This meeting was the first in series of committee meetings that will eventually lead to an ASATT certification examination for technologists and technicians. Participating in this first meeting were members of the ASATT Board, as well as representatives from ASA and AANA. The conscientious and diligent work of the committee led to the development of a job analysis survey that was mailed to the ASATT membership. The purpose of this job analysis will be to establish a basis for the development of the "content outline" for the examination.

A properly conducted job analysis is the cornerstone for a technically sound, and legally defensible certification examination. A job analysis is a process whereby the elements of a job are dissected into their component parts, and these parts or components are studied in order to decipher the nature of the work. The objective of a job analysis is to define a job in terms of the activities or behaviors necessary to safely and effectively perform the job at a certain level of expertise.

A job analysis is essential in establishing test score validity. The type of validity that we are primarily concerned about, is that of "content validity". Evidence of content validity addresses the extent to which the content of the exam is appropriate for the intended interpretation of the test scores. A question that can be posed would be: "Does the content of the exam cover a representative sample of the behavioral domain or practice areas of the anesthesia technologist and technician?"

In a document jointly developed by the Equal Employment Opportunity Commission (EEOC), the Civil Service Commission, the Department of Labor, and the Department of Justice entitled *Uniform Guidelines on Employee Selection Procedures*, job analysis for content validity is clearly discussed.

> "There should be a job analysis which includes an analysis of the important work behavior(s) required for successful performance and their relative importance and, if the behavior results in work product(s), an analysis of the work product(s). Any job analysis should focus on the work behavior(s) and tasks associated with them. If work behavior(s) are not observable, the job analysis should identify and analyze those aspects of the behavior(s) that can be observed and the observed work products. The work behavior(s) selected for measurement should be critical work behavior(s) and/or important work behavior(s) constituting most of the job."

In establishing this foundation of job activities, one has to examine the job in its most elemental form; the task statement. This statement has to be written in job-based, practitioner-oriented terms. Some example statements that were included on the survey are as follows: "Deliver results of blood tests to anesthesia and perfusion", and "Identify and properly handle respiratory and anesthetic gases". These and many other task statements were rated for importance as they related to the safe and effective practice of the anesthesia technologist and technician.

Once all of the surveys are returned and the data analyzed, ASATT will be able to determine which tasks are the more important ones, and should be included on the content outline for the examination. From this point, test questions can be written which mirror the practitioner written and approved job-oriented task statements. In other words, test questions will be written in a way that they will be directly tied to actual practice and will contain strong content validity. The results of the survey analysis will be available for committee review in January of 1995.

LETTER TO THE EDITOR...

Dear Editor,

In April of 1994, I was fortunate to discover and join the ASATT and the California Association of Anesthesia Technologists and Technicians (CAATT), not as a technician, but as a corporate business. The first symposium I attended was in Monterey which was sponsored by the CAATT and I must say I was impressed. "Too good to be true", I thought, but in October, I attended the ASATT Fifth Annual Meeting and Educational Program in San Francisco. My only complaint was that it was too short.

A big congratulations is in order for the organizers. The new president, Chris Patterson, deserves a "well done" award. I realize that she had help from other officers and staff, so, "well done to all".

The lecturers were GREAT, and the subjects were appropriate for the eventual courses that will be required by the anesthesia technologists and technicians who will attain certification. This certification will be a reality before the end of this century. The twenty-first century will bring with it greater changes in the surgical suites than can be imagined.

Thank you for the super annual meeting. I'll see you in Monterey and Atlanta.

Sincerely,

Shirley A. Joyal
Anesthesia Safety Consultant
Roseda, California

OPEN FORUM...

by David Mastalski
VA Medical Center
Portland, OR

This section of the Sensor *is new and geared toward all anesthesia technicians, aides, technologists, etc.... It is an open forum section to be used for whatever you, as members of ASATT and readers of this newsletter, would like to hear about. With nearly 1,000 members nationwide, we are a diverse group of professionals striving for our identity and a defined role within the medical community. It is our responsibility, as a group and as individuals, to strive for improvement and excellence through training and education. This new section of your newsletter will be an opportunity for all members to ask questions or voice your opinions on issues regarding anesthesia technology.*

All questions and pertinent comments or letters may be addressed to:

ASATT SENSOR OPEN FORUM, 9805 N.E. 116th St.-#A183, Kirkland, WA 98934-4248 or FAX (503) 721-7859

Dear Open Forum,

I have been the only anesthesia technician at our 100 bed, 6 OR hospital for about 3 years. I am essentially self-taught with no formal training or background. Although I have the support of our anesthesiologists, I am worried about job security. I hear that some form of national certification for anesthesia techs is coming soon. What can I do to prepare myself for this?

Lansing, Michigan

Open Forum:

The next year will be an important time for anesthesia support personnel across the country. It is essential that all technicians interested in participating in the ASATT sanctioned certification program prepare themselves for testing, which will be part of the process. The most important thing to remember is that you are not alone. The ASATT has contacted and hired experienced people to develop the certification process. There are steps you can take to be ready when the time comes for testing.

In the next several weeks, ASATT members will be asked to complete a job survey questionnaire. The information from the survey will be summarized and compiled into a comprehensive job description on which a certification exam will be based. The job survey questionnaire should be completed accurately and in a timely manner. This survey will give you a chance to examine your duties and responsibilities. Focus on these and ask yourself what your strengths and weaknesses are. Contact your ASATT Regional Director and ask for a copy of the "Self-Examination for Technicians" which will give you a good indication of some of the areas in which you need more training or concentration. Participate in your state technical society and network with other technicians in your area. Let your anesthesiologists and/or CRNA's know that you are preparing for a certification program. It will be in their best interest for you to succeed. Perhaps they can offer some suggestions as to areas of study, or provide you with study and background material and resources.

Finally, keep reading *THE SENSOR*. The ASATT board of directors and editorial staff are committed to providing all members with as much information and resources as are available. We plan on providing more technical data and self-testing in each issue. For your convenience, we have changed the format to allow all issues to be kept in a binder to use as a resource.

Dear Open Forum:

One of our anesthesiologists asked me if I had heard the warning about carbon monoxide (CO) being produced in the absorbers of anesthesia machines and causing potential danger to patients. Can you provide me with any information on this? Should I be doing anything to prevent this?

Salt Lake City, Utah

Open Forum:

Over the last several months, there has been some literature describing a possible patient hazard concerning the interaction of high flow halogenated anesthetic agents and carbon dioxide absorbent (Sodasorb/Baralyme) producing unusually high levels of carbon monoxide (CO). But, according to the latest research published in the fall issue of the ***Anesthesia Patient Safety Foundation Newsletter*** (vol. 9, No.3, 25-36), there is no cause for immediate alarm, although there were some rather interesting findings.

Researchers at the University of California, San Francisco conducted a study involving the potential hazards of carbon monoxide being developed and unintentionally administered to patients. Some of the questions being raised: Is there a potential hazard in the administration of halogenated volatile anesthetics with regard to CO? Why are the reports of measurable levels of CO rare? Why do the cases appear to occur in patients anesthetized on Mondays' first cases or after
a period of non-use of the anesthetic equipment for two days? Why does the development of CO not consistently correlate with the duration of use of the absorbent?

The results of these studies suggest guidelines that should prevent the production of carbon monoxide. And, according to

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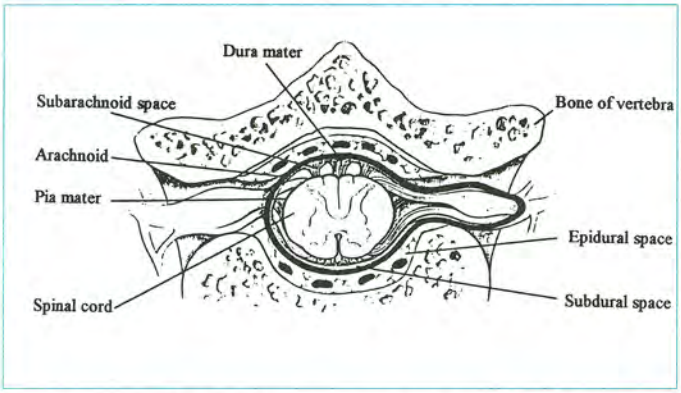
ANESTHETIC PROCEDURE: EPIDURAL AND SPINAL BLOCK

by Mareta Patton Grandona
San Diego, CA

BASIC ANATOMY AND PHYSIOLOGY

There are 33 vertebrae in the spinal column. They are referred to as cervical in the neck, thoracic in the upper back, and lumbar in the lower back. The vertebrae are separated by a cartilagenous disc though which epidural and spinal needles can be introduced. The central nervous tissue of the spinal cord extends down the back through a canal running through the center of the vertebrae. There are 3 meninges (membranes) covering the brain and spinal cord. They are the **P**ia mater, **A**rachnoid, and **D**ura mater. It is easy to remember their order by thinking of them forming a **PAD** between the nervous tissue of the brain and spinal cord, and the bone of the skull and vertebrae. The pia mater is closest to the brain and spinal cord,



and adheres closely to them. The dura mater is closest to the bone. The epidural space lies between the bone and the dura mater. The subdural space is a potential space between the dura mater and the arachnoid. The subarachnoid space is between the arachnoid and the pia mater. It contains cerebrospinal fluid or CSF.

EPIDURAL BLOCKS

Epidural blocks can be used for operations on the perineum and legs, especially in patients with severe cardiovascular, respiratory, or metabolic disease. Epidurals are frequently used in obstetrics—both for vaginal delivery and for caesarian section. They can be used in conjunction with a general anesthetic for major abdominal surgery and thoracic surgery for post-operative pain management.

The injection of drugs into the epidural space may be made as a single shot through the needle, or a catheter may be passed into the epidural space to allow for repeat injections of local anesthetic and/or opiate solutions. This enables analgesia to be continued into the postoperative period.

As the nerves leave the subarachnoid space, they pass through the adjacent epidural space which is filled with a fatty tissue and which also contains the epidural venous plexus. By injecting a local anesthetic solution into the epidural space, it is possible to obtain good analgesia, sympathetic blockade, and good muscle relaxation. The local anesthetic acts on the nerve roots in the epidural space in an area centered on the site of injection.

Spread tends to occur up and down the space from the site of the injection, the degree of spread being proportioned to the volume and dose. Specific gravity of the injected solution has no effect on the spread. Gravity itself, however, tends to have some effect on the spread of solutions. The higher the injection, the higher the level of the block. For lower limb procedures, injection is made in the lumbar region. For patients undergoing upper abdominal surgery and for postoperative pain relief after thoracic surgery, the injection is made in the thoracic epidural space.

COMPLICATIONS

Hypotension due to peripheral and splancnic vasodilation. This can be minimized by preloading with 1000-1500ml of IV fluids. Treatment includes further IV fluids and ephedrine.
Nausea and vomiting may be due to hypotension or to traction on hollow viscera by the surgeon (vagal stimulus). Treating the cause will usually alleviate the symptoms. Reassurance and attention to general comfort, slow deep breathing, and supplementary oxygen may also be of benefit.
Headache due to CSF leakage from inadvertent dural puncture by a wide bore (16g-18g) epidural needle. Treatment may include keeping the patient flat, administration of IV fluids, and blood patch to the dura using autologous blood.
Backache or local tenderness over the injection site for up to 48hrs is common, due to the relatively large bore of the needle used.
Hematoma is particularly a problem in patients with an existing coagulopathy. If an epidural vein is punctured, bleeding into the epidural space can occur which could produce pressure on the nerve roots and require laminectomy.
Retention of urine can occur when an epidural catheter is used to achieve prolonged analgesia due to a loss of bladder sensation. Insertion of a urinary catheter can prevent (or alleviate) this problem.
Breakage of catheter is a problem especially when the detached piece of epidural catheter is left in the patient's back. The distal portion of the catheter can be sheared off on the bevel of the tuohy needle if an attempt is made to withdraw the catheter through the needle. Always verify an intact catheter when it is removed.
Toxicity of local anesthetic agents is a possibility when accumulations of repeated doses through epidural catheters reach levels exceeding those which a specific patient can tolerate.
Total spinal can occur during an epidural if the needle accidentally pierces the dura and the mistake is not noticed. If the injection of local anesthetic solution that is intended to be epidural, is accidentally injected into the subarachnoid space, the

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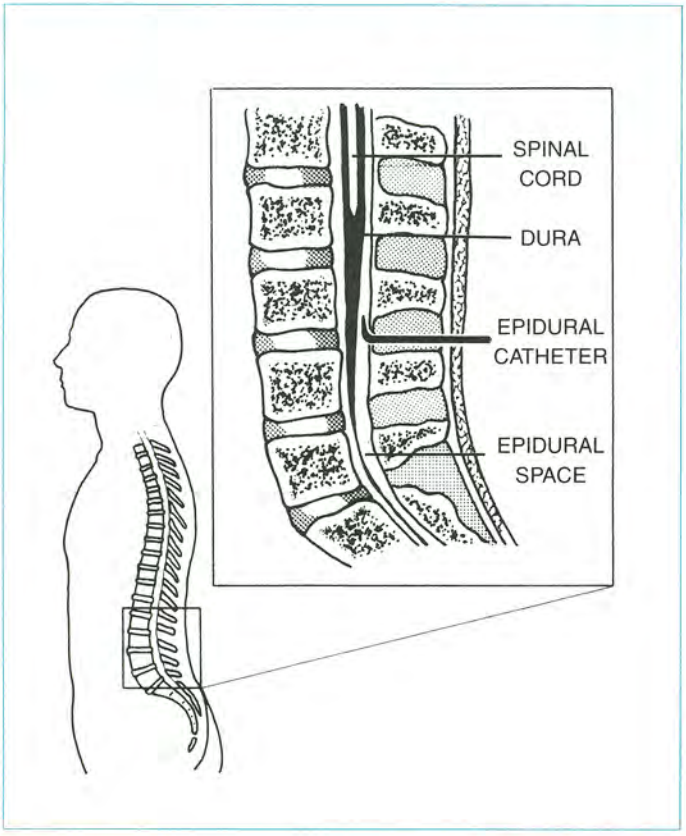
TECHNOLOGY...*continued from page 6*

volume (usually 10-20ml) is sufficient for the anesthetic to reach the cranial subarachnoid space. This results in paralysis of the respiratory muscles and the cranial nerves. This causes apnea, profound hypotension, and loss of consciousness.

PROCEDURE

An epidural set-up is prepared on a sterile field. After attaching monitoring equipment to the patient, he/she is assisted into a curled position, usually on his/her side with the knees up, chin tucked into the chest, and the back arched outward. Someone should remain with the patient to support him/her, assist in maintaining the position, and reassure him/her. The epidural insertion site is prepped and draped by an assistant and/or the anesthesia provider. The anesthesia provider inserts a tuohy epidural needle by feel. A loss of resistance syringe is filled with air or saline and attached to the hub of the needle. As the needle is advanced, gentle pressure is applied to the plunger of the loss of resistance syringe. While the needle is in the ligmentum flavum, the plunger will rebound, however, once the needle passes into the epidural space, there is a loss of resistance to the injection of air or saline. Once the epidural space has been reached, the local anesthetic can be injected, and/or



an epidural catheter can be fed through the needle. The catheter is fed approximately 2cm into the epidural space. The tuohy needle is withdrawn over the catheter and the filter and cap are attached to the catheter. The catheter is dressed and secured in place, and the patient is assisted with lying onto his/her back.

SPINAL BLOCKS

Spinal anesthesia can be used for operations involving the lower limbs, perineum, inguinal hernias, appendectomy, prostatectomy, and caesarian section, especially in patients with severe cardiovascular, respiratory, or metabolic disease.

The subarachnoid space is filled with cerebrospinal fluid (CSF) and surrounds the spinal cord. The spinal cord extends to the upper border of the 2nd lumbar vertebra. An injection of local anesthetic into the subarachnoid space produces motor, sensory, and autonomic blockade by bathing the nerve roots with local anesthetic solution as they leave the spinal cord. Spinal puncture above the L2-3 interspace may result in damage to the spinal cord.

FACTORS AFFECTING SPREAD OF SOLUTION

Different liquids have different densities. This is called specific gravity. It is calculated relative to water at a given temperature. The specific gravity of CSF is 1001-1009 at body temperature. The simple salts of local anesthetic solutions have specific gravities very similar to that of CSF. They can be made heavier (hyperbaric) by adding dextrose to the solution, or lighter (hypobaric) by adding water to the solution. If the solution has a specific gravity which is the same as CSF, it is called isobaric.

When two liquids are mixed, the one with the higher specific gravity sinks under the influence of gravity, to the bottom of the container. If a hyperbaric solution is injected into the subarachnoid space, it rapidly sinks in the CSF. If a patient is in the lateral recumbant position when a hyperbaric solution is injected, it will sink and its effect will be felt on the downward side of the patient. If a hypobaric solution is injected, it will rise and thereby affect the uppermost side of the patient. This of value, for instance, when performing a spinal anesthetic for fractured neck of femur when the patient can be positioned with the injured side uppermost and a hypobaric solution is used.

If the patient is turned onto his back following the injection, the effect that the curvatures of the spine have on the injected solution becomes apparent. The injection is usually made at the L2-3 or L3-4 interspaces. This is approximately at the summit of the lumbar convexity, thus part of the injection runs toward the sacrum (caudal), and part runs toward the thoracic concavity—toward the head (cephalad). Once the upper portion reaches the lowest part of the thoracic concavity, it is prevented from spreading further cephalad by the upwards slope leading out of the concavity. This represents a built-in safety feature of spinal anesthesia in that it is virtually impossible for a normal volume of spinal anesthetic solution to spread much higher than the midthoracic level of the spinal cord unless the patient is left head-down while in the lateral position, or with the head much too far down in the supine position.

Spinals can also be performed with the patient in the sitting position. The patient may then be immediately laid down, or more commonly, left in the sitting position for some minutes, in which case there is almost no analgesia above the level of insertion of the needle.

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Technology... *continued from page 7*

COMPLICATIONS

Hypotension, same as with epidural...see above.
Nausea and vomiting, same as with epidural...see above.
Headache due to CSF leakage can be avoided by using a small bore sprotte (pencil point) needle.
Infection is always a risk with any invasive procedure. Careful attention to aseptic technique is vital.
High block results in a profound decrease in blood pressure, heart rate, and respiration. It may lead to respiratory arrest and/or loss of consciousness. Treatment aimed at restoring the blood pressure may include elevating the legs, IV fluids, and administration of ephedrine and atropine. Supplementary oxygen and ventilatory assistance may be required.
Toxicity of local anesthetics, same as with epidural...see above.
Total spinal can occur if the local anesthetic solution reaches as high as the cranial subarachnoid space. This results in paralysis of the respiratory muscles and the cranial nerves. This causes apnea. There is also profound hypotension and loss of consciousness. With the small volumes (1-3ml) that are used for spinal injection, this complication is only likely if a patient is left steeply head down after an injection of a hyperbaric solution. It is more likely to be seen if during the course of an epidural injection, the needle accidentally pierces the dura mater unnoticed and an epidural dose (10-20ml by volume) of solution is injected into the subarachnoid space.

PROCEDURE

A spinal set-up is aseptically prepared on a sterile field. After attaching monitoring equipment to the patient, he/she is assisted into position which is similar to that used for epidural placement. If the desired position is lateral, determine which side the anesthesia provider wants uppermost. Someone should stay with the patient to support him/her, assist in maintaining the position, and reassure him/her. The spinal needle insertion site is prepped and draped by an assistant and/or the anesthesia provider. The spinal needle is inserted by feel. When the subarachnoid space is reached, CSF can be seen at the hub of the needle (or it can be aspirated—with very small bore needles, the CSF does not leak back as freely). The classic description of CSF is "a crystal clear drop of fluid". The local anesthetic can then be injected and the needle removed. It is not usually necessary to dress the puncture site. The patient may be left in the lateral position, remain sitting, or be assisted to lie on his/her back.

MAJOR DIFFERENCES

EPIDURALS	SPINALS
Usually use Tuohy needles.	Usually use Sprotte (pencil point) or Quincke needles.
16-18g needles.	22-25g needles.
10-20ml medication volume.	1-3ml medication volume.
Usually use a catheter.	Usually single shot only.
Uses epidural space.	Uses subarachnoid space.
No CSF involved.	CSF returns through needle when space is reached.
Loss-of-resistance technique.	Needle-only technique.

Open Forum... *continued from page 5*

the APSF article, "no report has indicated that patient harm has resulted from the production of carbon monoxide during general anesthesia, avoidance of such a risk would seem prudent and in the best interest of patient safety". Based on the UCSF research, the article makes the following recommendations:

- Ensure the use of standard absorbents containing the full compliment of water. Use of relatively low fresh gas inflow rates for the majority of procedures should provide a sustained level of moisture in the absorbent, thus avoiding CO production.
- Discontinue the inflow of gases (*i.e.* turn the anesthesia machine OFF) if there is a significant delay between patients. It further recommends that if an inflow of fresh gas has been accidentally continued (*i.e.* the anesthesia machine left ON) over a weekend, replace the absorbent with fresh absorbent. (Although all the data regarding this is not complete.)
- The use of soda lime rather than Baralyme should decrease the likelihood of producing appreciable amounts of CO.

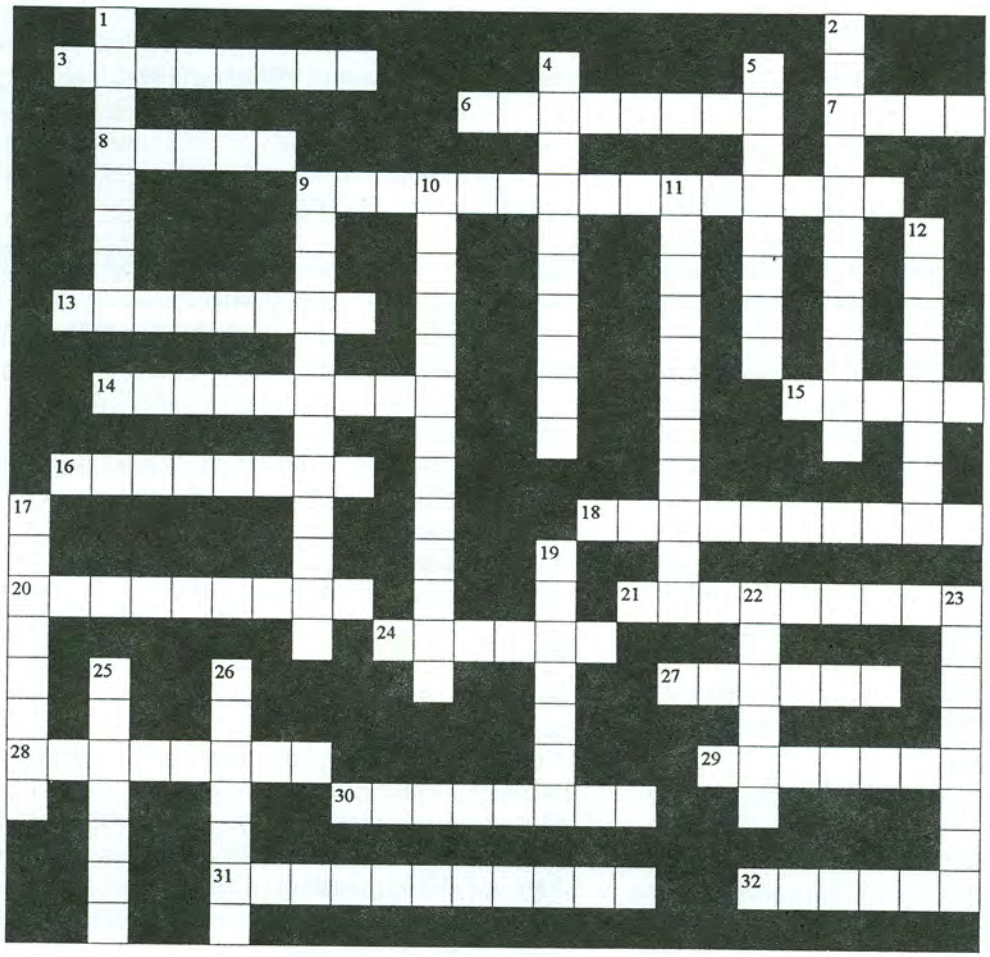
You must remember to present this information as preliminary. The data is being submitted to a formal peer-reviewed manuscript and should be published soon. For further information, contact your anesthesia machine representative and ask for their recommendations, or contact the Anesthesia Patient Safety Foundation.

The View From... *continued from page 3*

Foreigners wishing to apply to train or work in the British system would do so by applying to the base hospital of the Training Centre (-er) in one of fourteen national "Regional Health Authority" divisions. Education and experience equivalencies would be translated and assessed and personal interviews conducted. However, as even training involves actual employment, a work permit is required; these are difficult to obtain unless one is a citizen of a Commonwealth or a European Economic Community country. And while member countries strive to establish a working system of reciprocity to allow free movement within the EEC job market, negotiations continue in order to define equivalencies. The British delegation underscored the desirability of the UK and US working toward a similar goal.

Our distinguished guests stressed the importance of supporting our professional associations and extended an invitation on behalf of the members of BAODA to join them in celebrating their 50th Anniversary at their Annual Meeting which will take place between the 3rd and 5th of May 1995 in Eastbourne—a seaside resort on the south coast of England. (We hope to enjoy the mild weather that is fairly typical of Spring in England!) If you would like to join the growing number of ASATT delegates who are planning to attend, please contact Chris Patterson.

TECHNICIAN CROSSWORD



TECHNOLOGY POST-TEST: Epidural and Spinal Blocks

Use this crossword puzzle to test your knowledge on the "Technology..." article from page 6. Puzzle answers are on page 11 of this issue.

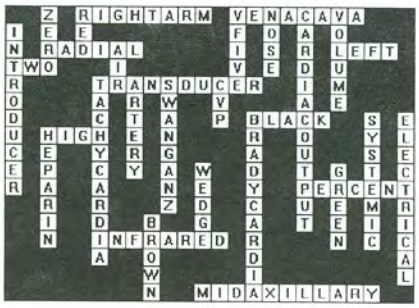
ACROSS

3 Name for the membranes covering the brain and spinal cord
6 A hazard of withdrawing an epidural catheter through the needle
7 Epidurals can be used in post-op ___ management
8 Common type of epidural needle
9 A solution's ___ determines whether it will rise or sink in CSF
13 Term meaning toward the head.
14 Outermost membrane surrounding the spinal cord and brain
15 Type of anesthetic frequently used in epidurals
16 Complication caused by CSF leakage
18 Technique used to ease a spinal headache
20 Membrane between the outer and innermost membranes surrounding the spinal cord
21 Type of solution that will rise in CSF
24 Term meaning toward the sacrum
27 A total ___ can occur if epidural medications are accidentally injected into the CSF
28 Space between the bone and dura
29 Epidural and spinal set-ups should be placed on a ___ field
30 Potential space between the dura and arachnoid
31 Number of vertebrae in the spinal column
32 Type of vertebrae in the lower back

DOWN

1 Additive to spinal medications to make them hyperbaric
2 A complication of epidurals and spinals
4 A technique for epidural needle placement is called loss-of-___
5 Type of vertebrae in the neck
9 Space used for spinal injections
10 Type of fluid found around the spinal cord
11 A high spinal can cause ___ arrest
12 Type of vertebrae in the upper back
17 Membrane closest to the brain and spinal cord
19 The medication volume of a spinal injection should be ___ than that of an epidural injection
22 Type of drug frequently used in epidurals
23 Repeat injections are made possible by an epidural ___
25 Type of spinal needle
26 A type of pencil-point spinal needle

ANSWERS TO PREVIOUS PUZZLE:



REGIONAL SOCIETY ACTIVITIES...

Let us announce what's happening in your area. Send a brief report of recent or future activities for the next issue by February 15, 1995 to your ASATT Regional Director or to Dianne Holley. Send newsletters, if available, or give your info on the answering machine at (512) 451-7457, if no one answers. Photos (captioned) are also welcome, and will be returned.

ASATT Region 1:

For information on future events:
Jacqueline Polak at (718) 283-7188 [work] or (718) 979-8644 [home].

New York

For information on future events:
John Armstrong at NYSATA, P.O. Box 23073, Rochester, NY 14692-3073.

ASATT Region 2:

For information on future events:
Wilma Frisco at (216) 541-5710.

Maryland/DC

For information on future events:
Robert Bowling at (410) 225-8176.

Michigan

For information on future events:
Louise Martin at (313) 593-7696 or Jim McEvoy at (313) 343-4766.

Ohio

See "Ohio News..." on page 13.
For further information:
Wilma Frisco at (216) 541-5710.

Pennsylvania

For information on future events:
Vicki Carse at (412) 232-5807.

Virginia

For information on future events:
Linda Ferris at (703) 985-8351.

ASATT Region 3:

For information on future events:
Marc Dickens at (404) 987-2036.

Florida

For information on future events:
Jerry Guttery at (904) 374-6051 [work] or (904) 472-3925 [home].

Georgia

The **Georgia Society of Anesthesia Technologists and Technicians** has a 2-day seminar scheduled at the Holiday Inn in Atlanta, March 25-26. Educational topics include the LMA, pharmacology: pre-op to post-op, and trouble-shooting seminars for Ohmeda and Drager anesthesia machines.
For information on future events:
Alfred Yin at (404) 248-4031, or
Marc Dickens at (404) 727-3580.

North Carolina

For information on future events:
Kathline Leahan at (919) 681-5228.

Tennessee

For information on future events:
Sharon Baskette at (615) 322-4000[W] or (615) 646-1599[H], or Tammie Carr at (615) 322-4000.

ASATT Region 4:

A meeting for **Region 4** is tentatively being scheduled for early May in Chicago. More details will be forthcoming. See "Illinois" (below).
For further information:
Jim Underwood at (309) 968-6998.

Illinois

Region 4 joined the **Illinois Society of Anesthesia Technicians** at their 3rd annual meeting which was held in Oakbrook on November 5. The meeting was very well attended and speakers included Jim Underwood who spoke on the topic of certification and administered the ASATT Self-Examination. New **IISAT** President Pat Zueck was introduced to the membership. The next meeting is slated for February 25 at Glenbrook Hospital in Chicago. The one-day meeting will be for both business and educational purposes.
For further information:
Pat Zueck (217) 788-3780.

Iowa

The **Iowa Society of Anesthesia Technicians and Technologists** held its final meeting of '94 at Mary Greeley Medical Center in Ames on November 12. Ideas and plans were discussed for a '95 meeting in conjunction with the ISA in April in Des Moines. The next meeting will be held on February 25 in Des Moines at Iowa Methodist Hospital. The snow date is March 4.
For information on future events:
Sheila White at (319) 589-8665[work] or (319) 556-8234[home].

Wisconsin

For information on future events:
Noreen Soeller at (715) 387-7179 [work] or (715) 387-4792 [home].

ASATT Region 5:

Start planning now for the *Crash '95 Anesthesia Tech Meeting and Ski Vacation*. Dates are March 3-6, 1995, and the location is Vail, Colorado. This is a great opportunity to improve your clinical skills and keep up with the new technology in anesthesia. For more information, contact Phyllis Tuller, Course Coordinator, or Judy Russell at (303) 270-4092.
For further information:
Ann Martin at (303) 270-8275 [work] or (303) 987-3907 [home].

continued on page 11...

Colorado
The **Colorado Society of Anesthesia Technicians'** next meeting will be at the end of January 1995.
For further information:
Teresa Chavez at (303) 320-2121.

Mississippi
Historic Vicksburg, Mississippi is the location of the next meeting of the newly formed **Mississippi Society of Anesthesia Technologists and Technicians** on March 18. The one-day meeting will feature a program including an anesthesia machine workshop, difficult airway seminar, **MSATT** business meeting, and a panel discussion on the changing role of anesthesia technicians. That evening's plans include a dinner at a nearby casino restaurant with further entertainment at the casino being optional. For more information about late changes to the itinerary contact Sue Moss at (601) 268-8442 or the following persons:
For further information:
Earl Coleman at (601) 984-5951, or
Nancy Marret at (601) 973-1656.

ASATT Region 6:
The Second Annual Educational Meeting for **Region 6** will be held in Chandler, Arizona at Chandler Regional Hospital on February 18. Topics include LMA's and difficult intubation, malignant hyperthermia, and recognition of EKG patterns. Snowbirds welcome!
For further information:
Dean Rux at (602) 821-3279[work] or (602) 497-9709 [home].

California
The 11th Annual Meeting of the **California Society of Anesthesia Technologists and Technicians** is scheduled to take place in May in Monterey.
For further information:
Ron Turner at (510) 674-2241.

Texas
Educational meetings are regularly held in San Antonio [Raul Sanchez at (210) 675-1564], Dallas [Kyle Logsdon at (214) 820-2165], Austin [Dianne Holley], Houston [Freida Francis(713) 397-0206], and El Paso [Estella Ramirez at (915) 544-0606].
For further information:
Dianne Holley at (512) 451-7457.

Utah
The newly formed **Utah Society of Anesthesia Technologists and Technicians** has tentatively scheduled their first statewide meeting in February or March. Officers are: Jeff Mann, (801) 585-3619, President and Director for Salt Lake City area; Kirk Hansen , (801) 627-2800, Director for Ogden area; and Janice Merryweather, (801) 288-8762 x 4157, Director for Provo area and Meeting Coordinator.
For further information:
Jeff Mann at (801) 585-3619.

ASATT Region 7:
An ASATT **Region 7** meeting is scheduled to coincide with the **ASATT Board of Directors** annual spring meeting. The Board is meeting on March 3 and the **Region 7** meeting takes place on March 4. Both are meeting at the Red Lion Inn at the Quay in Vancouver, WA. Topics for the Regional meeting are: a Membership Address by Chris Patterson, ASATT President; Anesthesia Machines by Grace Chien, MD; Fiberoptic Bronchoscopy by Michael Jamond, MD; The Diverse Anesthesia Tech by Dave Mastalski; Balloon Pumps by Dennis Galvin; and PA Catheters: Use and Need in the OR by John Ross, MD.
For further information:
Ruth Ochoa at (503) 370-5200 pager 225[work], or (503) 390-0736[home].

Oregon
A Meeting and Educational Lunch Lecture was held by the **Oregon Association of Anesthesia Technologists and Technicians** on November 12 at the VA Medical Center in Portland.
For further information:
Dave Mastalski at (503) 642-1537, or
Guy Buckman at (503) 370-5200 pgr 227.

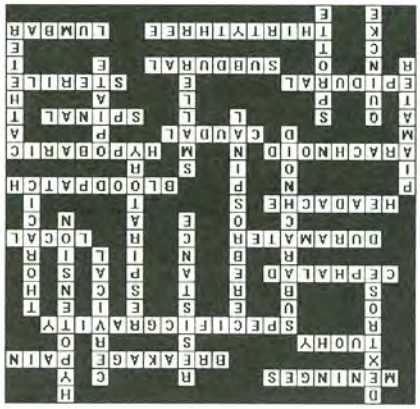
Washington
For further information:
Don Millbauer at (206) 228-3450.

ASATT
BOARD OF DIRECTORS

WISHES ALL ASATT MEMBERS AND THEIR FAMILIES THE VERY BEST FOR A

HAPPY NEW YEAR

ANSWER TO CROSSWORD PUZZLE FROM PAGE 9:



SOUTH OF THE SAN FRANCISCO BAY

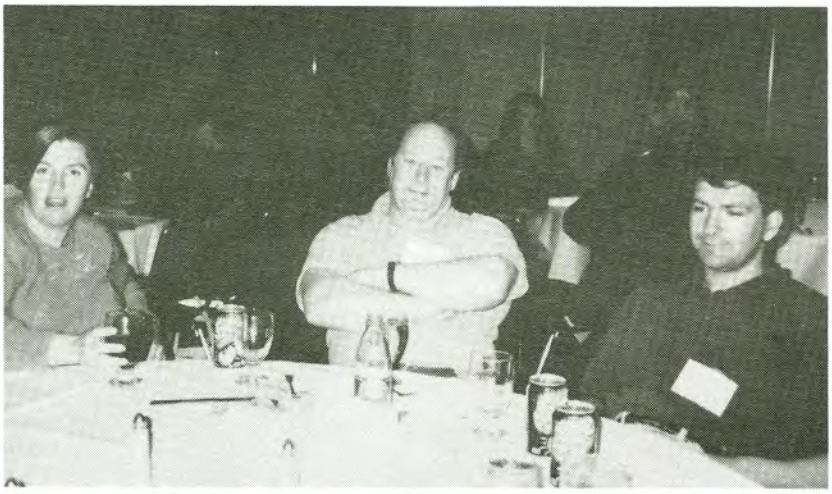
by Wilma Frisco
ASATT Director, Region 2

The Fifth Annual Seminar and Educational Program of the American Society of Anesthesia Technologists and Technicians was held in October 15-17, 1994, at the South San Francisco Conference Center in South San Francisco, California. The seminar was coordinated by Chris Patterson, ASATT President.

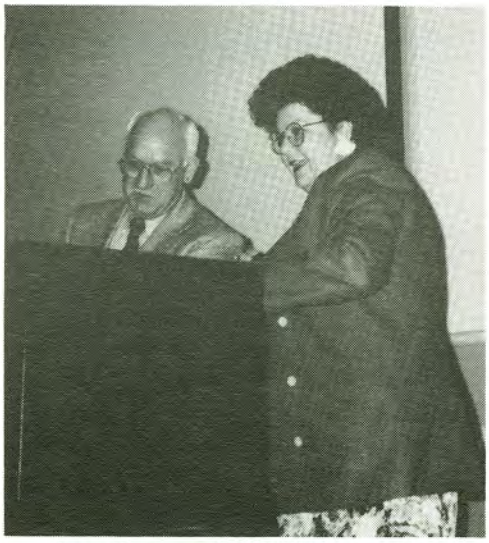
With the theme, "Wisdom in the West", as it directly relates to the evolution of anesthesia technology, Chris Patterson encouraged some of the most profound men and women in the field of anesthesiology to share with ASATT their expertise in the didactic and technical aspects of anesthesia. With a host of vendors, the anesthesia technicians and technologists from 36 states and 4 countries were exposed to some of the latest marketable equipment in anesthesia technology. North American Drager and Ohmeda each hosted a one-day certification workshop.

As the gavel was passed from Outgoing President, Lee Amorin to Incoming President, Chris Patterson, Lee expounded on the progress of ASATT. He acknowledged that the members of ASATT are continuing to pursue a professional level of technical support to the anesthesia care providers. Lee stated that certification was his goal during his tenure; he also acknowledged that the foundation for certification had been established.

With a beautiful smile and a "go get them" attitude, Chris Patterson, ASATT President expressed to ASATT her goals for 1994. Chris stated that she was very pleased with the progress of the Certification Team, and that she will strive, as President, along with the Board of Directors, to represent ASATT in a caring and professional manner.



New Zealand delegation: Maretta Grandona (now of San Diego), Ivan Batistich, and David Ron Wilson



Jerry Guttery, ASATT Vice President, presents the 1994-95 Jami Blue Award to Vilma Young, Spectrum Anesthesia Services, Inc.

Doug Draper, Chief Anesthesia Technician, U.C. Davis, CA

John Butterworth, Editor of Technic, *Rugby, England*

SPECIAL RECOGNITION:

William H. King, MD, ASA/ASATT Liaison
Vilma Young, 1994-95 "Jami Blue Award" Recipient
Ohmeda
North American Drager
Nursing Staff, San Jose Medical Center, California

EDUCATIONAL STAFF:

J.H.W. Ballance, MD, United Kingdom
John Bush, MD, Fort Worth, TX
Wesley T. Frazier, MD, Atlanta, GA
Rory S. Jaffe, MD, Davis, CA
William Clayton Petty, MD, Capt. MC, USNR, Bethesda, MD
Earl Ransom, MD, Chapel Hill, NC
Martin Iyoya, Clinical Pharmacist, San Jose, CA
Doug Draper, AT, Davis, CA
Jenny Walker, ATC, United Kingdom
David Ron Wilson, ATC, New Zealand
Ivan Batistich, Anes. Eng., New Zealand
Linda Sielaff, Ohmeda
Jim Yoder and Craig Himmelwright, North American Drager

SURROUNDED BY THE BEAUTIFUL FALL FOLIAGE IN THE RUSTIC CITY OF NEWARK, OHIO

by Wilma F. Frisco
ASATT Director, Region 2

The Cherry Valley Lodge in Newark, Ohio, was the site of the one-day seminar of the Southeastern Region of the Ohio Society of Anesthesia Technologists and Technicians. The coordinator of the seminar was Mrs. Barbara E. Powell, Supervisor of Anesthesia and Supply Services, at the Bethesda Hospital in Zanesville, Ohio.

The speakers for the seminar were: Dick Baker, Technical Director, Ohio State University - "Latex Allergies, Laryngeal Mask Airways, Emergency Airway Management, and Malignant Hyperthermia"; Joyce Connway, Ohmeda Representative - "Agent Monitoring"; Glenn Hellman, Ohmeda Service Representative - "Basic Cleaning and Daily Checklist"; Lisa Geissinger, Ohmeda Representative - "Desflurane Update"; and Dr. Wolfe, Anesthesiologist, Ohio State University - "Pain Management, the Technical Role".

The entire day, Saturday, October 1, was an educational experience to all who attended the seminar. New information and techniques were emphasized. The day also included a vendor fair with vendors and gifts from Ohmeda, Vital Signs, Datex, Sims Medical Cardinal Breathing Specialties, Clinical Technology, Stuart, DeRoyal Industries, O.E. Meyers, and Rusch.

Display at the OSATT Meeting

All the representatives and speakers extended encouraging thoughts to the OSATT and ASATT. They stated that anesthesia technicians have made a tremendous impact on the medical community, and there is a rapidly growing demand for technicians and technologists, who are pursuing the "ever changing" technology in anesthesia.

PRESIDENT'S MESSAGE... *continued from page 1*

Thank you Mr. Baumgart, and thanks to others in your organization. All of us appreciate this most helpful contribution from OHMEDA.

The generosity of others continues. I am pleased to announce additional contributions received from the following organizations:

ORGANON, Inc., New Jersey—$1,000
SIMS Medical Systems, R. S. P., Inc.—$1,000

Again, thanks and appreciation from the members of the ASATT for your support.

The Need for Support: It is YOU, the individual member, the anesthesia technician or technologist from Florida, or Kentucky, or New York, or Oregon, or whatever location, who is the fabric and lifeblood of the ASATT and your State Society. Without your interest and participation, the goals and achievements of your society are seriously curtailed. Our national certification program is now moving forward at a fast pace through the combined efforts and devoted service of many members, including both past and present officers of this society and affiliated state societies. As the process goes onward, the Board of Directors and I ask for your continued participation. The ASATT is dedicated to promoting and sponsoring continued education and professionalism, to the support of our affiliated state societies, and to reaching out and increasing membership across the country. As an old adage states, " There is strength in numbers".

About Certification: Our Advisory Committee, chaired by Mr. Jerry Guttery, ASATT's Vice President/President-Elect, held its first meeting a few months ago. The meeting took place in San Francisco on October 18, under the direction of Dr. Andrew Falcone, Program Director from Applied Measurement Professionals, Inc.. An outstanding group of physicians and nurse anesthetists from the ASA and AANA along with a team of anesthesia technicians from ASATT convened as a panel to work on complex issues of national certification. Our initial meeting was very successful. Goals have been set and standards are being developed. This is an historical event for our Society and I want to thank all individual members who helped in the past in forming the groundwork.

This edition of your newsletter contains a report on certification from Dr. Falcone. All active ASATT members may soon be asked to participate in various aspects of this vital program. If any of you know of a colleague who has allowed his or her membership to lapse, please urge them to renew it. Only members in good standing are eligible to take part in the certification process. This is an extremely important step forward for us and we need the full backing of our membership. We, along with other medical professionals, will be establishing consistent standards of training and competency for all anesthesia technicians and technologists.

Our 1994 Annual Meeting With International Colleagues: Last October, we held our Fifth Annual Meeting and Educational Program at South San Francisco, California. Although a report of the seminar is in this edition of *The Sensor*, I want to point out that our Seminar took on an "international flavor". We had technicians in our meetings from Canada, New Zealand, and England. We were honored to have J.H.W. Ballance, MD, President of the British Association of Operating Department Assistants (BAODA) in attendance. He addressed our membership and explained the duties required of anesthesia technicians in England and told of their certification process. Dr. Ballance is an accomplished and interesting speaker, and he contributed greatly to our program. We were also fortunate to have had Mr. John Butterworth at the seminar. He is the Theatre Manager of the Hospital of St. Cross, Rugby, England, and the editor of *Technic*, the Official Journal of the BAODA. Ms. Jenny Walker, AT, also an honored guest from England, delivered an excellent talk on job tasks and skills required of anesthesia technicians in England. It was a great opportunity to learn from friends who have already traveled the road of certification. You will find an excellent article written by Ms. Grainne Senier, AT, about England's certification process in this edition of our newsletter.

Our Colleagues in England Extend an Invitation: All ASATT members have an open invitation from Dr. Ballance to travel to England in May of this year and attend the 50th Golden Anniversary of the British NATN and BAODA (operating room assistants and technicians). This significant event will be held in Eastbourne, England. The conference runs from May 3 through May 5, 1995. A separate news article in this edition of *The Sensor* has the specific details of the conference. For all those interested parties, you can either make your own travel and accommodation arrangements, or you can write to our home offices and receive information about group discounts for lodging and registration. Several colleagues are already saving their money and making plans to attend. We hope that you too will have the means and opportunity to attend.

The Possibility of Exchange Programs: Your Board of Directors and I have held brief preliminary discussions with our English colleagues about the possibilities of establishing an exchange program for anesthesia technicians in England and the United States. We will be exploring this opportunity further as well as similar programs with Canada and New Zealand. At this point, the matter is only in the early stages of discussion. We will report to the membership on these issues later, should they prove practical. Do you have any suggestions on this subject? If so, please write to your regional director or to our home offices. Your ideas are welcome.

More Thanks: Thanks again to the entire ASATT membership and Board of Directors for your support. The Board and I are dedicated to serving you. We are interested in hearing from you. Write to us or call and give us your suggestions and constructive criticism. They will be appreciated and valued.

Membership Application

American Society of Anesthesia Technologists & Technicians

9805 N. E. 116th St. #A183, Kirkland, WA 98034-4248

(Please print clearly or type)

NAME: Last_____, First_____, M.I._____

Home Address_____

City_____, State (Province)_____zip (mail code)_____

Home phone (_____)_____, May ASATT release your name to other members? Yes___, No___

Employer_____, Dept._____, Job title_____

Address_____e-mail address_____

City_____, State (Province)_____zip (mail code)_____

Phone (_____)_____, ext._____, pager _____,fax (_____)_____

Applicants signature here to be valid_____, Date_____

Please check your membership category listed below and send the correct amount of membership dues in U.S. currency.

*Active: $50____ , This category shall extend to anyone who works in a health care facility under the supervision of an anesthetist and functions in the capacity of technologist, technician, assistant, or aide. **(U.S. members only.)**

***To authenticate that Active membership is the proper category, you are required to have your supervisor verify that you belong in this category by having him/her place their signature where provided below.**

_____ _____

(Print your Supervisor's name and title here.) *(Supervisor's signature here for application to be valid.)*

**Individual: $60____, This category is open to anyone who has an interest in the anesthesia field.

**Associate: $60____ , This category shall extend to Anesthesiologists, C.R.N.A.'s, and Anesthetists.

**Institutional: $100____, This category is open to academic, medical, hospital, philathopic, scientific, governmental, or other non-profit organizations with an interest in anesthesia technolgy.

**Corporate: $100____, This category is open to businesses and other profit oriented organizations that manufacture, distribute, and provide services that otherwise have and interest in anesthesia technology.

**Change of Address____

(for official use only)

Date rec'd_____, Region_____,Mem#_____, Check#_____,Amt_____

Comments:_____

Advertising Rates for The Sensor

Effective 1 August 1993

Display Ads:

Announcements of products, services, or educational programs relevant to the theory, maintenance, of application of anesthesia technology.

Rates: Display Advertising (camera - ready, mechanicals, one - color process):

Half-Page Horizontal	7 ½" wide x 4 ¾" deep:	$200 per insertion
Half-Page Verticle	3 ½" wide x 9 ½" deep:	$200 per insertion
Quarter Page	3 ½" wide x 4 ¾" deep:	$100 per insertion

Corporate Member Discount: 25%

Classified Ads:

Individuals seeking employment, or employers seeking candidates in anesthesia technicial support.

Width: 3½", CG Times or Times New Roman type, 12-point. Typeset by editors.

Rate: $8/line, 5-line minimum. ***Active Member Discount: 25%***

For further information contact ASATT Advertising at 9805 N.E. 116th St. - A183, Kirkland, WA 98034-4248 or call 1-800 352-3575

ASATT reserves the right to refuse advertising copy for any reason at any time.

ASATT American Society of Anesthesia Technologists & Technicians

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