NOTES FROM THE CHAIR
by John M. Graybeal, CRTT

I hope everyone is having a good fall season and is keeping one step ahead of the “winds of change.” As we have mentioned repeatedly in previous issues, our profession is currently in a period of adjustment, and how we handle ourselves during this period will determine our future in the nation’s health care system. I remain optimistic that each of you has foreseen the changes that are occurring in your areas and have adequately prepared for them.

I want to thank Nick Widder, RRT, for the wonderful job he has done as guest editor this time around. Without his efforts, this issue of the Bulletin would not have been possible.

You will note the return of a popular column in this issue, the “Pro/Con Debate.” This time we are focusing on the issue of who should provide the intubation service in a hospital. The intent of this column is to stimulate discussion. Please read the opposing views presented here, and then take a minute to write down your comments and send them to me at the addresses/number on the back page of this issue. I’ll make sure your voice is heard in an upcoming issue.

As I write this column, I am looking forward to seeing you all at the AARC Respiratory Congress in New Orleans in December. If you are planning to go to the meeting, please attend the Section Business Meeting (check your convention program for time and location), as important material will be discussed. As always, your input is needed.

PRO/CON DEBATE:
RCPs AND NON-SURGICAL AIRWAYS

Editor’s Note: The following two articles debate the utilization of RCPs in the placement of non-surgical airways in the hospital setting.

PRO: RESPIRATORY THERAPISTS SHOULD BE UTILIZED AS PRIMARY PROVIDERS FOR THE PLACEMENT OF NON-SURGICAL AIRWAYS IN THE HOSPITAL SETTING

by Nicholas Widder, RRT

Nicholas Widder is with the department of respiratory care at Carolinas Medical Center in Charlotte, NC.

Respiratory therapists have long been associated with the provision and maintenance of the non-invasive airway in the hospitalized patient. It is not unusual to find at least one respiratory therapist at every cardiac resuscitation which occurs in the hospital, carrying out the primary duties of establishing and maintaining an airway, and establishing and maintaining ventilation.

Historically, respiratory therapists are among the first responders to such emergencies, and may also be called to assist with the care of such patients even before the arrest actually occurs. Due to their proximity and their quick response time, it is not unreasonable to use respiratory therapists to insert non-surgical, translaryngeal airways. Patients with emergent airways (“codes”) rarely need sedation or paralysis to facilitate the insertion of endotracheal tubes. Physician backup is generally expected in such situations. If a nontraditional approach should be necessary (i.e., retrograde intubation or cricothyroidotomy), it should be performed by the physician “backing up” the therapist. Should a surgical airway be required, the appropriate personnel can be located while a skilled therapist provides the best airway possible.

Several studies documented by Duke University Medical Center have shown a higher success rate and a lower complication rate for endotracheal intubation when respiratory therapists are used to perform the procedure than when medical house staff are used. This has been anecdotally noted in my experience as well. Another benefit of using RCPs to provide this service is that it is generally more cost effective. At my institution an intubation performed by respiratory results in a patient charge of less than $70. Depending on the charging practices of the individual physician,
But while establishing an airway in these patients is critical, the greater the chances of significant morbidity or mortality. The longer the patient remains hypoxic, the less likely the patient is to survive. The key to this debate is the phrase “primary provider.” While respiratory therapists should be trained in, and allowed to, provide an artificial airway, they should not be the primary provider. The primary provider should be someone with the knowledge and skills necessary to know what to do when intubation is unsuccessful. This individual must not only know how to detect failed intubation but also know how to establish an airway in the patient in whom endotracheal intubation has failed. In most cases this is a member of the anesthesia staff, but it may also be a member of the emergency room, critical care, or surgical staff, depending on training.

Cost of the service should not be a consideration. The cost of providing this life saving procedure is small when compared to the cost of the loss of a patient’s life. We are all in health care (hopefully) to provide quality care to our patients. Unfortunately, cost, professional pride, and “turf” have become centers of controversy. Let’s all get back to doing what’s best for our patients.

CON: Respiratory Therapists Should Not Be Utilized As Primary Providers for the Placement of Non-Surgical Artificial Airways in the Hospital Setting

by John Graybeal, CRTT

While respiratory therapists play an important role in the establishment and maintenance of the artificial airway, they should not be the primary providers of non-surgical artificial airways in the hospital setting. Professional and individual pride and enthusiasm should not be allowed to influence quality patient care. There are three groups of patients in whom non-surgical artificial airways may be placed. It is true that there are many of these patients who may benefit from having the airway placed by the first available person. It is also true, in many of these patients, that correct placement of the airway will be life saving, while incorrect placement of (or inability to place) an airway will lead to rapid death.

The first of the three populations of patients in the hospital who require intubation of the trachea for support of ventilation is the elective (or sometimes urgent) patient in the operating room preparing for an operation. Obviously, the anesthesiologist is the expert and should be the individual responsible for establishing this patient’s artificial airway. There is nothing more disastrous than having one of these patients die because the care provider was unable to successfully establish an artificial airway.

Another patient population requiring artificial airway placement consists of those suffering either a cardiac or respiratory arrest. Obviously, this population is best served by having a care provider who is able to establish an artificial airway available as soon as possible. Time is of the utmost importance. The longer the patient remains hypoxic, the greater the chances of significant morbidity or mortality. But while establishing an airway in these patients is critical to their resuscitation, it, alone, is insufficient to eliminate mortality in this population of patients.

Finally, the third population includes critical patients arriving in the emergency unit in respiratory failure or impending failure. These include trauma patients. Time, although more available here than in the cardiac arrest population, is more critical in this group than in the elective operative population. Inability to provide an airway in these patients can be disastrous.

The key to this debate is the phrase “primary provider.” While respiratory therapists should be trained in, and allowed to, provide an artificial airway, they should not be the primary provider. The primary provider should be someone with the knowledge and skills necessary to know what to do when intubation is unsuccessful. This individual must not only know how to detect failed intubation but also how to establish an airway in the patient in whom endotracheal intubation has failed. In most cases this is a member of the anesthesia staff, but it may also be a member of the emergency room, critical care, or surgical staff, depending on training.

Cost of the service should not be a consideration. The cost of providing this life saving procedure is small when compared to the cost of the loss of a patient’s life. We are all in health care (hopefully) to provide quality care to our patients. Unfortunately, cost, professional pride, and “turf” have become centers of controversy. Let’s all get back to doing what’s best for our patients.

Percutaneous Tracheostomy: the Better Technique?

by Ronald F. Sing, DO

Ronald Sing is with the department of surgery at Carolinas Medical Center in Charlotte, NC.

The tracheostomy is one of the most common elective surgical procedures performed. Its benefits include better patient comfort, easier pulmonary toilet, and, arguably, decreased ventilator and ICU days. The percutaneous technique is gaining popularity because of research regarding its safety and cost effectiveness.

Our preference for this technique is the Percutaneous Tracheostomy Set (Cook Critical Care; Bloomington, IN), using curved dilators. The technique, described by Ciaglia in 1985, accesses the trachea using the Seldinger technique. With the guidewire in place, the tracheostomy is sequentially dilated using a series of curved dilators. After being dilated up to a 36 or 38 French dilator, a tracheostomy tube is then inserted into the trachea over a suitably fitted dilator. The dilator and guidewire are then removed, and the inner cannula inserted. Placement is then immediately confirmed with an end-tidal CO2 detector and auscultation of the lung fields. The percutaneous technique is the preferred technique in many intensive care units, including ours, but, like any surgical procedure, it is not without its pitfalls. We perform most of our tracheostomies at the bedside in the inten-
sive care unit unless the patient requires the operating room for a concomitant surgical procedure.

Bedside performance has been demonstrated to be safe. The benefits of bedside performance are several. First, and most importantly, it avoids the hazards of transporting intubated and potentially critically ill patients. Secondly, bedside performance significantly reduces charges to the patient by avoiding the operating room. Furthermore, we administer narcotics, benzodiazepine, and neuromuscular blocking agents, which save significantly on anesthesia charges. Several studies have touted a cost benefit for the percutaneous technique; however, we perform both open surgical and the percutaneous techniques in our intensive care unit and have not observed a cost savings because the equipment costs are essentially the same.

From the experience at our institution there are several points in the procedural sequence that bear close attention. The first is the preparation phase. The patient is positioned the same for the percutaneous technique as for the open surgical technique. Intravenous narcotics are administered for analgesia, benzodiazepines for their amnestic effect, and a nondepolarizing neuromuscular blocker is also given. Although the procedure can be performed by an experienced physician, we prefer two surgeons (often a surgical or emergency medicine resident-in-training with an attending surgeon). In addition, someone must manage the airway and endotracheal tube — someone who is familiar with the percutaneous technique and capable of reintubating the patient in the event of an extubation. Quite frequently, in our institution, this is a respiratory therapist. It is our standard to have a laryngoscope, an endotracheal tube, and a CO₂ detector immediately accessible.

The second important phase is the initial percutaneous needle cannulation of the trachea. To accomplish this and the subsequent dilations without perforating the endotracheal tube cuff, the endotracheal tube must be withdrawn high into the trachea at the level of the cricoid cartilage prior to needle cannulation. Several authors have described the use of a bronchoscope to directly visualize the trachea via the endotracheal tube. Others use a Doppler probe over the trachea just distal to the cricoid. When the end of the endotracheal tube is withdrawn above this point, there is a characteristic increase in the Doppler signal. Our practice is to palpate the trachea through the initial skin incision and “feel” the endotracheal tube as it is withdrawn to the appropriate level. Problems can arise when the endotracheal tube is withdrawn too quickly (leading to extubation) or if it is not withdrawn enough (leading to perforation of the endotracheal tube cuff). Most of the time a cuff leak does not lead to ventilatory compromise for this short procedure; however, in patients with severe pulmonary dysfunction, this can be a critical issue. In addition, if the endotracheal tube is not “out of the way,” it will be impossible to pass the dilators without damage to the anterior tracheal wall.

The final point of concern with this technique is the insertion of the tracheostomy tube into the trachea. The operating surgeon feels a characteristic “pop” as the tracheostomy tube slips into the tracheal lumen. It is important that the endotracheal tube is not prematurely removed at this time without end tidal CO₂ confirmation of correct tracheostomy tube placement. If there has been an error (pretracheal placement), then the endotracheal tube can be easily advanced into the trachea. If the endotracheal tube has been removed in this setting, the airway is lost! There are reported cases of death caused by paratracheal insertion of tracheostomies using this technique.

The reported incidence of complications (bleeding, transient hypoxia, subcutaneous emphysema) associated with the percutaneous tracheostomy technique are similar to the open surgical technique. The incidence of tracheal stenosis has been reported to be higher and lower compared with standard open tracheostomy, depending on the reference.

Overall, our group prefers the percutaneous tracheostomy technique over the open surgical technique mostly because of the simplicity of the equipment needed to perform the procedure. We perform both open surgical and percutaneous tracheotomies at the bedside. Although “safe,” the percutaneous technique, like all surgical procedures, has the potential for serious complications and death. Knowledge of the pitfalls with this technique and preparedness for the occurrence of mishaps may avert a bad outcome. There is probably no real cost reduction to this procedure compared with open surgical tracheostomy. Any cost reduction is likely due solely to its bedside performance, which eliminates operating room and anesthesia charges.

References


SECTION MEMBER OF THE QUARTER: RUTH SUTHERLIN, RRT

Congratulations to Ruth Sutherlin, RRT, for being selected as our Section Member of the Quarter. Ruth has been an RCP since 1979 and is currently employed at Putnam County Hospital in Bloomington, IN. She is graduate of Indiana University School for Respiratory Therapy and is certified as a BLS instructor trainer and an ALS provider through the American Heart Association. Ruth currently serves on the Indiana Society for Respiratory Care's Advisor Board for Chapter 4 and is presently the Senior Director of Chapter 4. She was the recipient of the 1996 Clinical Practitioner of the Year for Chapter 4.

At Putnam County Hospital Ruth has helped to develop the Therapist Driven Protocol Manual, Policy and Procedure manuals for the RT, EEG, EKG, and ABG lab, and an extensive listing of patient education material relating to disease processes, medications, and treatment modalities. She is also a clinical preceptor for respiratory therapy students at Indiana University and Ivy Tech State College, and LPN students from Ivy Tech State College. Keep up the great work, Ruth!

ARCF SILENT AUCTION OFFERS UNPARALLELED OPPORTUNITY FOR RC MANAGERS

Attention RCPs! If you’re planning to attend the AARC’s 43rd International Respiratory Congress this December 6-9 in New Orleans there’s a new attraction you won’t want to miss. In an effort to raise funds for important projects aimed at improving quality of care for patients and positioning the RCP for success in our changing health care system, the American Respiratory Care Foundation is sponsoring the profession’s first-ever Silent Auction.

Thanks to the generous support of the respiratory care industry and others in the respiratory community, the auction will feature items ranging from Las Vegas casino/hotel nights and ski lift passes to Disneyland vacations. Medical equipment to be auctioned off includes items such as capnographs, ventilators, and an oxygen system. You may also want to take advantage of the many New Orleans packages available, including fine dining, cruises, and voodoo tours. Since opening bids on all items have been set at just 25% of estimated retail value, it’s a great way to take advantage of a good deal for yourself and/or your department while supporting your profession at the same time.

The auction will run throughout the four-day meeting and all AARC members and officially registered attendees at the meeting are invited to come by Auction Headquarters as often as they like to place and/or raise bids. A preliminary catalog of items published in the October issue of AARC Times tells how the bidding process works, and a final catalog with an updated items list will be available onsite. So take a minute to see what’s available, then come and join in the fun.

FYI...

Intensified radiotherapy improves lung cancer survival rates

British researchers have found that intensifying x-ray therapy increases survival rates in those with non-small-cell lung cancer. In a study of 550 people with the disease, half were treated with standard radiotherapy (30 treatments over six weeks) and half received a stepped-up version, 36 treatments over 12 days. The total dose for the traditional treatment group was 60 Gray units, while that for the experimental treatment group was 54 Gray units. After two years, the survival rate in the traditional group was 20%. The survival rate in the experimental group was 29%. The study was conducted at the Medical Research Council’s Cancer Trials Office in Cambridge and published in a recent issue of the British medical journal, The Lancet. (Source: Reuters, 7/17/97)

Sepsis syndrome more prevalent than thought in nation’s hospitals

Sepsis syndrome is more prevalent than previously believed, say researchers who documented 1,342 cases of the syndrome in 12,759 hospital patients at eight academic medical centers nationwide, 55% of whom were in the intensive care unit when diagnosed. The figures translate to two cases per 100 patient admissions. Past estimates placed the number of sepsis cases in the U.S. at about 500,000 annually.

Although over half of all cases in the study were diagnosed in the ICU, researchers believe many patients arrived with the deadly infection, which can result from a severe allergy and most often strikes those already suffering from an illness. Reasons for the rise, they continue, may range from the increased use of invasive medical devices to drugs which suppress the immune system.

The study, which was lead by researchers from Brigham and Women’s Hospital in Boston, MA, was accompanied by an editorial suggesting that lax hand-washing procedures in hospitals may be partially to blame as well. (Source: JAMA, 7/16/97)
Low-dose diuretics cut heart failure risk in half for elderly with high systolic blood pressure

Treating older people with high systolic blood pressure with a low-dose diuretic can cut their chances of developing heart failure in half, say the latest results from the Systolic Hypertension in the Elderly Program (SHEP), a long-term, multi-center trial supported by the National Heart, Lung and Blood Institute and the National Institute on Aging. Earlier results from the study indicated that treatment with low-dose diuretics greatly reduces fatal and non-fatal strokes and cardiovascular events in this population.

The new results are based on a study of 4,736 men and women aged 60 or older who were followed for an average of 4.5 years. Patients were randomly assigned to either a placebo group or treatment group. Those in the treatment group received a low-dose diuretic and, if needed, a low-dose of either a beta blocker or an adrenergic antagonist. About 500 of the patients had already suffered one heart attack at the time of enrollment in the study.

Both fatal and nonfatal cases of heart failure dropped dramatically among all segments of the treatment group, and were greatest in those who had already had a heart attack before entering the program.

According to the NHLBI, heart failure affects about 4.8 million Americans, 3.4 of them age 60 or over. The condition causes some 875,000 hospitalizations a year, making it the most common diagnosis for hospital admission among those 65 or older, and half of all patients with heart failure die within five years of diagnosis. High blood pressure is the chief risk factor for developing heart failure, and isolated systolic hypertension is the most common form of high blood pressure among those age 60 or older. (Source: NHLBI, 7/15/97)

British study sees little results from new heart attack drugs

Despite the proliferation of new treatments over the past decade, inpatient mortality rates for heart attacks have not declined, say British researchers who looked at all heart attack cases treated at two Nottingham hospitals over a ten year period. While use of drugs such as beta-blockers and thrombolytic drugs increased markedly from 1982 to 1992, inpatient mortality remained basically the same.

The study did show, however, that heart attacks became more prevalent at the two hospitals during the study period. The number of cases increased from 719 in 1982 to 960 in 1992, with many of the additional cases coming in the over 70 age group. The study was published in the British Medical Journal. (Source: Reuters, 7/17/97)

JAMA articles focus on managed care’s impact on clinical research

A series of articles published in the July 16 issue of JAMA confirm what many have suspected: when managed care comes into a market, clinical research suffers.

According to the articles, the decline in clinical research seen in intensely managed care areas of the country warrants concern, and some are suggesting a new tax on managed care companies to ensure that important studies continue to be carried out. Specifically, health officials are proposing a 1% tax over four years on health care premiums, with the money going to clinical research.

The managed care industry is understandably concerned, and has suggested that such a tax be levied on all industries in order to spread the burden of paying for clinical research evenly across the economy. The American Association of Health Plans (AAHP), which represents more than 1,000 MCOs nationwide, called the JAMA studies “incomplete and misleading,” but nevertheless issued a statement in support of funding for clinical research. Says AAHP President Karen Ignagni, “We would be very pleased to participate in discussions of how health plans can best contribute to establishing priorities for and advancing the nation’s clinical research agenda.” (Source: Reuters, 7/11/97)

Medicare HMOs reap undue rewards, says Florida study

The federal government’s push to enroll more and more elderly people in Medicare HMOs may be doing more harm than good to the financial status of the system, say results from a new study of enrollment trends among seniors. Researchers from the University of Miami School of Medicine have found that many elderly people in south Florida who are enrolled in Medicare HMOs switch back to the traditional plan once they become seriously ill and need extensive medical care—then switch again when their health is restored.

The study, which was published in the July 17 issue of the New England Journal of Medicine, was accompanied by an editorial suggesting that Medicare HMOs are reaping undue rewards from this trend. Since Medicare HMOs enroll more than their share of the healthier Medicare population but have premiums that are pegged to the average cost of the fee-for-service system, which cares for most of the sick patients, says Executive Editor Marcia Angell, they are “doubly rewarded.”

Even if Congress makes good on promises to reduce the reimbursement for HMOs from its current 95% of the average cost of providing medical care for an elderly person to 90%, says Angell, it may not be enough to even out the differences that currently exist. A recent government study showing that the costs of caring for Medicare patients in an HMO were 12% higher than those in the traditional, fee-for-service plan raises further concerns about discrepancies between the two forms of coverage. (Source: Reuters, 7/16/97)
JCAHO ACCREDITATION VISIT REPORT FORM

The following survey form is provided to enable the reporting of recent JCAHO accreditation site visits. Compiled results will be published regularly through select section newsletters and the AARC Times. Please return your completed survey to:

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Phone #(972) 243-2272 Fax #(972) 484-2720

Name: ________________________________
Facility: _______________________________
Address: _______________________________

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If you are willing to discuss your accreditation visit with others check this box ☐ and this information will be added to a list that is available to AARC members. If you do not check the box your response will remain anonymous.

Inspection Date: _________________________

Please check the type of accreditation visit you are reporting:
Pathology & Clinical Laboratory Services ☐ Home Care ☐
Hospitals ☐ Long Term Care ☐

What was the surveyors’ focus during your last site visit?

What areas were cited as being exemplary?

What suggestions were made by the surveyors?

What changes have you made to improve compliance with the guidelines?

Please offer any additional comments about the site visit that will be helpful to others. (use additional sheet if necessary)

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Don’t forget to make your nominations for the Adult Acute Care Outstanding Section Member of the Quarter award. The winner of each Outstanding Section Member of the Quarter award will be featured in an article in the Bulletin and our Specialty Practitioner of the Year will be chosen from these four winners. The winner of the Specialty Practitioner of the Year award will be honored during the Awards Ceremony at the AARC International Respiratory Congress. The recipient of this award will be determined by the Section Chair or a selection committee appointed by the chair. Each nominee must be a member of the AARC and a member of the section.

Use the following form to send in your nominations for this important award—

I would like to nominate ______________________________ for Adult Acute Care Outstanding Section Member of the Quarter because

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Nominee ___________________________________________ Your Name ___________________________________________

Hospital/School ___________________________________________ Hospital/School ___________________________________________

Address ___________________________________________ Address ___________________________________________

City, State, Zip ___________________________________________ City, State, Zip ___________________________________________

Phone ___________________________________________ Phone ___________________________________________

Mail or FAX your nomination to the Section Chair at the address/number listed on the last page of this issue.
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