

A Newsletter for the Members of the Puerto Rico ACEP Chapter



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From the President **Fernando L. Soto-Torres, MD, FACEP**

This year's Caribbean Congress was a success!

Many excellent presentations and valuable information was shared with our colleagues in Puerto Rico.

We regularly post comments on our chapter [Facebook](#) page. Some of the presentations from the congress will be posted on the chapter website, in our newly created [Caribbean Congress](#) tab, as they become available. Please regularly check the chapter website for more news from the chapter.

During the chapter annual meeting held this year in June, many interesting topics were discussed. The chapter discussed a variety of goals for the future and will gradually implement them in the upcoming years. In addition, after a unanimous vote, the chapter members present at the meeting, agreed to increase the chapter dues to \$100. This dues increase shall take affect in September of this year.

In the meantime, we always look forward to hearing about how the Puerto Rico ACEP Chapter can improve the yearly congress, help you, and welcome your suggestions on ways to improve the chapter. If you have any ideas, please send us an [email](#).

From a Member of the Chapter Hilsa Quinones-Ramos, MD, FACEP

Cricothyrotomy: New Techniques

Introduction

Cricothyrotomy is a lifesaving procedure for which all emergency physicians are trained but still is a very challenging procedure to be done in a chaotic, high-stress environment. Surgical cricothyrotomy is a procedure in which an incision is made in the cricothyroid membrane and a tracheostomy tube or ET tube is placed into the airway to ventilate the patient. The primary indication for surgical airway is a “can’t intubate, can’t ventilate” patient. Sometimes the cricothyroid membrane being an important landmark for this procedure is usually not easily identified by palpation resulting in device misplacement. New techniques have been developed to easily identify neck anatomy and decrease adverse outcomes.

Anatomy Review

The thyroid cartilage is the largest of the laryngeal cartilages. It consists of two laminae joined together at an acute angle in the anterior midline. This prominence is commonly known as the “Adams apple”. The inferior border of the thyroid cartilage is attached to the cricoid cartilage by the cricothyroid membrane. The cricothyroid membrane can be identified in the neck as a shallow depression between the thyroid and cricoid cartilages. If the cricothyroid membrane is not easily identified its location can be estimated at four fingerbreadths above the sternal notch.

Traditional Technique Review

Table 1

Indications	Contraindications
<ol style="list-style-type: none"> 1. Can't intubate, can't ventilate 2. Failure of orotracheal intubation 3. Facial trauma 4. Upper airway foreign body 	<ol style="list-style-type: none"> 1. Age younger than 5 years 2. Tracheal transection 3. Hematoma over cricothyroid membrane 4. Obstruction below cricothyroid membrane

To perform a surgical Cricothyrotomy you will need:

- Scalpel with a # 10 blade
- Tracheostomy tube or endotracheal tube 6 mm
- Lidocaine with epinephrine for local anesthesia
- Tracheal hook
- Trousseau dilator
- Gum elastic bougie
- Bag valve mask device
- Suction devices

Patient should be placed in supine position with the neck slightly hyperextended if no cervical trauma is present. Stand to one side of the patient at the level of the neck. Immobilize the larynx with your non-dominant hand and palpate the cricothyroid membrane with your index finger. Once the cricothyroid membrane is identified a vertical midline incision is made through the skin and subcutaneous tissues. Once the cricothyroid membrane is visualized a 1 cm horizontal incision is made through the cricothyroid membrane. The tracheal hook is inserted in the opening of the membrane and rotated cephalad. Grasping the inferior border of the thyroid cartilage with the hook ask an assistant to provide upward traction. Introduce the tips of the trousseau dilator into the opening in the membrane then insert the tracheostomy tube between the tips of the dilator. Carefully remove the dilator and the obturator. Replace the inner cannula of the tracheostomy tube and inflate the balloon. Ventilate and confirm tube position. Secure the tube in place.

Ultrasound Assisted Cricothyrotomy

Bedside ultrasound is a valuable and versatile tool available at ED. It is not exclusively used as diagnostic tool but has a great value in performing procedures including surgical airway. Sonography can be used to properly identify neck anatomy and mark the cricothyroid membrane before procedure is done specially in obese patients in which landmarks are hardly palpated (see image 1 below).

A linear high frequency transducer should be used for proper imaging of superficial neck structures. Bony structures such as the hyoid bone are hyperechoic. Cartilaginous structures such as thyroid and cricoid cartilages are homogeneously hypoechoic. The linear transducer is placed midline in the neck longitudinally. The cricothyroid membrane appears as a hyperechoic band linking the hypoechoic thyroid and cricoid cartilages.

In the longitudinal plane the thyroid cartilage can be easily identified by its anterior and superior position, appearing as a hyperechoic line. As you move caudally the cartilage abruptly ends and an echogenic horizontal line is observed. This is the cricothyroid membrane. Caudal to the membrane is the cricoid cartilage which appears as an ovoid structure with varying density.

Image 1.1: Longitudinal View Neck

Image 1.2: Transverse View Neck

Once the cricothyroid membrane is identified it can be marked with a pen and proceed with traditional cricothyrotomy approach (see image 2 below).

Ultrasound Guided, Bougie Assisted Cricothyrotomy

This new technique has been done on cadavers. Many studies have showed an improvement in success rates and a decrease in the severity of injuries.

The linear transducer is held with non-dominant hand in the longitudinal orientation with the probe marker toward the patient's head. Once the cricothyroid membrane is identified a single horizontal incision is made medial to the probe. The scalpel is rotated ninety degrees. The bougie is inserted into the incision through the membrane. The scalpel is then removed. An endotracheal tube is placed over the bougie and inserted into the trachea.

Curtis et al reported a median time to identification of the cricothyroid membrane of 3.6 seconds and median time to endotracheal intubation of 26.2 seconds.

Conclusion

Sonography is a great tool available 24 hrs in the emergency room. Is of great value for identification of neck landmarks specifically in those patients in which digital identification is almost impossible. With this new techniques adverse outcomes are reduced making cricothyrotomy a less stressful procedure.

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Image 1

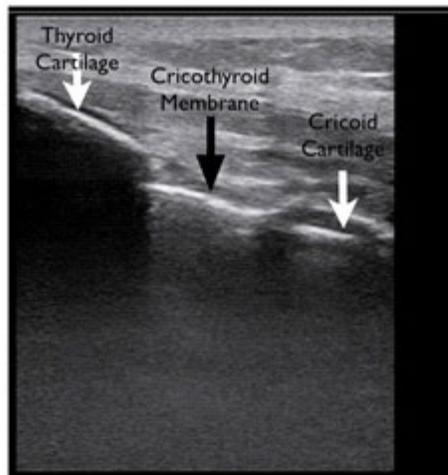


Image 2

Resident's Corner
Gerald L. Marin-Garcia, MD

Influenza: Do we test or simply treat?

What would you do if you had a 45 year old diabetic patient who presents acute onset high fever, sore throat and cough? Do you test him with the influenza rapid test with a sensitivity of 90%? Would you treat him even though the test was negative due to low sensitivity? Do you treat him by clinical gestalt due to presenting influenza-like symptoms?

Influenza affects up to 20% of the US population each year, causing more than 200,000 hospitalizations and 3,000 to 49,000 deaths (Dugas et al 2013). It causes a great deal of morbidity to specific populations, and leads to a great number of Emergency Department (ED) visits and excessive costs. Currently, the Center for Control of Diseases (CDC) and the World Health Organization (WHO) recommend treating Influenza only if the patient is less than 2 years of age, older than 65 years, morbidly obese, suffering from a chronic debilitating medical condition such as diabetes mellitus or COPD, resides in a health care facility, pregnant or who presents a complicated clinical course. These guidelines take into consideration the fact that this is the population that benefits the most from the antiviral regimen. This should be very simple. As physicians, just follow the guidelines and that is it. The problem happens when our current diagnostic tools are either very sensitive, but expensive and time consuming or not so sensitive but affordable and fast.

Thirty years ago it was arguable, maybe unheard of, that we should base our treatment on cost effectiveness. But in today's healthcare landscape, a collapsing system pushes to do as much as we can with as little as possible. Therefore, it might be correct to search for the answers to the above questions using a cost-effectiveness perspective.

This perspective was undertaken by Dugas et al 2013, his group developed cost-utility decision analysis model, in order to identify the most cost-efficient strategy to treat influenza. His findings suggest that the "treat all" mentality is the most cost efficient if the prevalence of Influenza is above 7%. In his study patients presented with acute onset fever, cough and/or sore throat and were treated empirically for Influenza it produced an incremental cost-effectiveness ratio of approximately \$6,000 per quality-adjusted life-year gained. This means that the health care system would invest only \$6,000 to give the patient another year of good quality life. To take this into perspective, in the United States it is acceptable to invest up to \$50,000 per quality-adjusted life-year gained (Steve W. Goodacre 2013).

Taking into consideration that in 2015 alone 20,147 people were reported to have influenza leading to 781 hospitalizations in Puerto Rico (PR Health Department 2016), the strategies described by Dugas et al, could be applied to our population. Let us return to our 45 year old diabetic patient, with acute onset fever, cough and sore throat. He looks like he might have

influenza, he is currently within the CDC guidelines, well then just treat it. Empirical treatment of this patient would improve Emergency Department's flow, decreased morbidity and mortality of the patient at a low expense of the already collapsing health care system.

Clinical News

Avoid Airway Catastrophes on the Extremes of Minute Ventilation

Emergency airways commonly involve challenges of tube placement and oxygenation before and during the procedure. There are a handful of instances, however, when the issue is ventilation and, more specifically, extremes of minute ventilation. Minute ventilation is the amount of air the patient moves in one minute; it is a product of the ventilatory rate and tidal volume (minus dead-space ventilation).

[Read more](#)

When to Use Fluoroquinolones in Pediatric Patients

The best questions often stem from the inquisitive learner. As educators, we love—and are always humbled—by those moments when we get to say, “I don’t know.” For some of these questions, some may already know the answers. For others, some may never have thought to ask the question. For all, questions, comments, concerns, and critiques are encouraged. Welcome to the Kids Korner.

[Read more](#)

Benzodiazepine Prescriptions, Overdose Deaths on the Rise in U.S.

Even as opiate abuse has become a growing problem in the U.S., overdose deaths involving sedatives and antiseizure medications in the benzodiazepine category have also risen steeply, according to a recent study. Prescriptions for benzodiazepines have more than tripled and fatal overdoses have more than quadrupled in the past 20 years, researchers found.

[Read more](#)

Make A Difference: Write That Council Resolution!

Many College members introduce new ideas and current issues to ACEP through Council resolutions. This may sound daunting to our newer members, but the good news is that only takes two ACEP members to submit a resolution for Council consideration. In just a few months the ACEP Council will meet and consider numerous resolutions.

ACEP's Council, the major governing body for the College, considers resolutions annually in conjunction with Scientific Assembly. During this annual meeting, the Council considers many resolutions, ranging from College regulations to major policy initiatives thus directing fund allocation. This year there are 394 councillors representing chapters, sections, AACEM, CORD, EMRA, and SAEM.

The Council meeting is your opportunity to make an impact and influence the agenda for the coming years. If you have a hot topic that you believe the College should address, now is the time to start writing that resolution.

I'm ready to write my resolution

Resolutions consist of a descriptive Title, a Whereas section, and finally, the Resolved section. The Council only considers the Resolved when it votes, and the Resolved is what the Board of Directors reviews to direct College resources. The Whereas section is the background, and explains the logic of your Resolved. Whereas statements should be short, focus on the facts, and include any available statistics. The Resolved statement should be direct and include recommended action, such as a new policy or action by the College.

There are two types of resolutions: general resolutions and Bylaws resolutions. General resolutions require a majority vote for adoption and Bylaws resolutions require a two-thirds vote. When writing Bylaws resolutions, list the Article number and Section from the Bylaws you wish to amend. The resolution should show the current language Bylaws language with additions identified in bold, green, underline text and red strikethrough for any deleted text. Please refer to the ACEP Web site article, "Guidelines for Writing Resolutions," for additional details about the process and tips on writing a resolution.

I want to submit my resolution

Resolutions must be submitted by at least two members or by any component body represented in the Council. The national ACEP Board of Directors or an ACEP committee can also submit a resolution. The Board of Directors must review any resolution from an ACEP committee, and usually reviews all drafts at their June meeting. Bylaws resolutions are reviewed by the Bylaws Committee to ensure there are no conflicts with the current Bylaws. Any suggestions for modifications are referred back to the authors of the resolution for consideration. Resolutions may be submitted by mail, fax, or email (preferred). Resolutions are due at least 90 days before the Council meeting. This year the deadline is July 27, 2015.

Debating the resolution

Councillors receive the resolutions prior to the annual meeting along with background information

and cost information developed by ACEP staff. Resolutions are assigned to reference committees for discussion at the Council meeting. You, as the author of your resolution, should attend the reference committee that discusses your resolution. Reference committees allow for open debate and participants often have questions that are best answered by the author. At the conclusion of the hearings, the reference committee summarizes the debate and makes a recommendation to the Council.

The Council considers the recommendations from the reference committees on the second day of the Council meeting. The reference committee presents each resolution providing a recommendation and summary of the debate to the Council. The Council debates each resolution and offers amendments as appropriate. Any ACEP member may attend the Council meeting, but only certified councillors are allowed to participate in the floor debate and vote. Non-councillors may address the Council at the discretion of the Speaker. Such requests must be submitted in writing to the Speaker before the debate. Include your name, organization affiliation, issue to address, and the rationale for speaking to the Council. Alternatively, you may ask your component body to designate you as an alternate councillor status and permission for Council floor access during debate.

The Council's options are: **Adopt** the resolution as written; **Adopt as Amended** by the Council; **Refer** to the Board, the Council Steering Committee, or the Bylaws Interpretation Committee; **Not Adopt** (defeat or reject) the resolution.

Hints from Successful Resolution Authors

- Present your resolution to your component body for sponsorship consideration prior to the submission deadline.
- Consider the practical applications of your resolution. A well-written resolution that speaks to an important issue in a practical way passes through the Council much more easily.
- Do a little homework before submitting your resolution. The ACEP website is a great place to start. Does ACEP already have a policy on this topic? Has the Council considered this before? What happened?
- Find and contact the other stakeholders for your topic. They have valuable insight and expertise. Those stakeholders may co-sponsor your resolution.
- Attend debate concerning your resolution in both reference committee and before the Council. If you cannot attend, prepare another ACEP member to represent you.

I need more resources

Visit [ACEP's website](#). Review the "Guidelines for Writing Resolutions" prior to submitting your resolution. There is also information about the Council Standing Rules, Council committees, and

Councillor/Alternate Councillor position descriptions. Of special note, there is a link to Actions on Council Resolutions. This link contains information about resolutions adopted by the Council and Board of Directors in prior years.

Well, get to it

Writing and submitting Council resolutions keeps our College healthy and vital. A Council resolution is a great way for members to provide information to their colleagues and ACEP leadership. Please take advantage of this opportunity and exercise your rights as part of our Emergency Medicine community. Dare to make a difference by submitting a resolution to the ACEP Council!

Update on ACEP 911 Grassroots Network "Triple E" Campaign

Although the "[Triple E Campaign](#)" contest concluded last year, our work isn't over! Efforts to "**Expand – Enhance – Engage**" participation in the 911 Legislative Grassroots Network are ongoing.

Several chapters and organizations were recognized during ACEP15 for their [outstanding efforts](#) during the campaign:

- Arizona Chapter ACEP (AzCEP),
- Emergency Medicine Residents' Association (EMRA),
- Michigan College of Emergency Physicians (MCEP),
- North Carolina College of Emergency Physicians (NCCEP), and
- Texas College of Emergency Physicians (TCEP).

ACEP continues to seek new participants in the 911 Network and there are still congressional districts that do not have ACEP member representation in the 911 Network. View current Chapter progress and encourage ACEP members to sign-up with their login credentials on the [ACEP Grassroots Advocacy Center here](#).

ACEP's 2016 "Leadership & Advocacy Conference" brings hundreds of Emergency Physicians to Washington, DC and Capitol Hill

A record number of nearly 600 emergency physicians visited with federal legislators and staff on Capitol Hill on May 17 during the ACEP 2016 Leadership and Advocacy Conference in Washington, DC. Conference attendees (including residents and many first-timers) from 47 states, the District of Columbia and Puerto Rico participated in 405 meetings in Capitol Hill offices with legislators and/or their health care staff.

The conference touched on several important topics such as ACEP's Registry (CEDR), recently released regulations shaping the new physician payment system, strategies to deal with out of network billing issues and the importance of physician involvement in the political process. During ACEP's "Lobby Day" on Capitol Hill, ACEP members:

- Asked legislators to re-engage legislative efforts to expand access to psychiatric services and provide appropriate mental health resources for constituents and patients with mental illness.
- Informed legislators and staff on emergency medicine principles for opioid prescribing.
- Asked legislators to "co-sponsor" bipartisan legislation to protect the current practice of using written "standing orders" by physician medical directors overseeing care provided in the field by paramedics and other EMS practitioners.
- Thanked the 100 plus sponsors of the "Health Care Safety Net Enhancement Act of 2015" (H.R.836/S.884), legislation that provides medical liability relief for physicians providing care under the EMTALA mandate, and asked other legislators for support.
- Invited legislators and their staff to visit a local Emergency Department.

The Lobby Day issue papers are available on the [ACEP Advocacy website](#) with your ACEP login credentials.

ACEP President Dr. Jay Kaplan introduced LAC attendees to a brand-new advocacy platform powered by Phone2Action. The tool has many uses including social integrations, telephone services, and email tools that provide multiple ways to engage with lawmakers on critical public policy issues. Several state chapters have already utilized Phone 2 Action for advocacy campaigns on the state level.

During LAC, participants used the platform to alert legislators that ACEP members were coming to Capitol Hill and to provide materials in advance on the key issues that would be discussed in the

meetings. In just a few minutes time, simply by using their smartphones, LAC attendees sent more than 1,200 communications to legislators instantly via email, Twitter, and Facebook.

[Watch Dr. Kaplan cheer on LAC attendees as their messages were sent live to legislators from all over the nation.](#)

If you were unable to attend the LAC16 Conference this year, you can participate in ACEP's "Virtual Lobby Day" by visiting the [ACEP Grassroots Advocacy Website](#) and clicking "Take Action."

Welcome New Members

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