



## Advanced Emergency Nursing JOURNAL

Presents

### Collected Clinical Tips©

*from the experience and wisdom of its Editors  
as published on its website*

## 2015

### # 85 Better bang for the buck

The fastest deployment of Nitroglycerin is with the metered-dose oral spray. Absorption isn't delayed by a dry mouth, linguistic understanding to lift the tongue, spillage of tiny tablets or their decay by having been left uncapped.

Pharmacy and Administrators may pushback due to higher cost, or insistence upon charging to a single patient via the automatic dispensing cabinet.

Argue, instead, that immediacy of need, and reliable efficacy without wastage, mandate the spray and that it can be kept in a "M.I. Box" or Code Room Cart.

For the pulmonary edema patient *in extremis*, start with several quick sprays, underneath the CPAP or NIV mask, equivalent to the starting dose of the NTG infusion being prepared, and you'll have great combination therapy to save the situation.

### # 86 Of Capulets and Montagues

{The original text of this Tip has been lost. Here is an approximate summary.}

When warring factions are present in the Emergency Department at the same time, it is wise, insofar as possible, to separate them and keep them under observation. One does not wish further violent action to occur in the E.D.

It may be necessary to call in off-duty security officers or ask law enforcement authorities for extra support to ensure adequate surveillance. If other facilities are available, especially with

custodial units ("Jail Wards"), consider transferring some patients to lessen the security and surveillance burden.

When adequately reinforced, gather the factional leaders, away from their followers, with several imposing officers, and explain –with determination– that it is wise for them as leaders to require their members to be strictly peaceful and neutral while in the E.D. and hospital campus. Officers (and staff) should also be on their best behavior. Everyone needs a place to go when they're hurt. Even Hatfields and McCoys.

### **# 87 Arteriotomy**

It's not uncommon when patients are phlebopenic, that one must needle or cannulate an artery for blood samples.

One way is to use the ABG set to draw and either divide or use a 3-way stopcock for other tests. Often the best way to do this is with a winged needle+stopcock+2 syringes; an assistant is needed to do the draws and transfers while you steady the needle.

The usual "overhand" grasp of the wings can be awkward, especially with very young children. Sometimes, an underhand grasp of the wings will allow you to stabilize your hand on a hard surface, approach with a shallower angle, and avoid perforation of the back of the vein.

When the blood return is slow, be sure your assistant has small syringes (3 ml, even 1 ml) and draws s-l-o-w-ly and gently to avoid excessive negative pressure that may collapse the vessel. Doing so also avoids hemolyzing turbulence; as long as the flow is gentle and in continuous motion, with occasional inversions of the syringe to prevent clotting, all should be well. Large volume syringes and high negative pressure will agitate or sputter the draw, leading to hemolysis. The flexible tubing of the winged needle makes manipulations by your assistant easier.

Remember, always, to perform a Modified Allen's Test for ulnar supply of collateral circulation when doing the Radial artery; and to maintain 3-5 minutes of uninterrupted pressure of the puncture site after withdrawing the needle.

### **# 88 When the chest is in the way of the laryngoscope handle**

We shall feature in the Blog: "Emergencies of the Third Trimester." Additionally, some gravid females may be morbidly obese. Some males may be morbidly obese, have a "no neck," or have an increased anteroposterior chest diameter so that the chest physically blocks the laryngoscope handle.

Firstly, assure that the patient is ramped at a 25 degree head-up angle. This gives increased functional reserve capacity, if adequately preoxygenated and a **NODESAT** technique is used, increased safe apnea time will result. Aspiration is less likely. Your ability to visualize improves, and physical work is decreased. The facial plane should be parallel to the ceiling. The "ear hole" should be above the level of the sternum at the notch.

Turn the handle and blade at a right angle to insert. If not successful, separate the blade from the handle; insert into the mouth; reconnect the handle; and proceed. If available, a shorter "half-handle", or "stubby handle" can be used.

## # 89 Removing Football Helmets

Super Bowl XLIX is over, but the passion for American Football never goes away. High level professional and college teams have strong medical organizations. If you receive a patient from a school or youth team, you may need, in the context of potential neck injury, to know how to safely remove the helmet. Here's [the statement from the American College of Sports Medicine](#).

[Additional ACSM positions can be found: Team Physician Conference Consensus Statements](#)  
[Link added: 4/13/2015], and [Current Comment Fact Sheets](#).

Emergency Physicians Monthly suggests "[How to Safely Remove Helmet and Pads After a Football Injury](#)". Medscape has an article: "[Helmet Removal](#)." There are videos found on YouTube {not reviewed}.

If you provide direct support to a team, remember there are significant differences among models and year of manufacture. A worthwhile joint in-service education for your department and prehospital providers would be a review of preparations and techniques for the injured or ill player presented by a qualified Sports Trainer or Team Physician.

## # 89-A Keep the patient warm!

From "Online Editor's Suggestions 2/2/2015

"[The Trauma Professional's Blog](#)" (RegionsTrauma Pro) is an interesting and useful blog on Tumblr and posts announcements on Twitter [[#TraumaPros](#)].

"[The Two-Sheet Trauma Trick](#)" is something that I should have put in "Clinical Tips" as I've used it for many years; don't forget to add socks (feet often stick out) and the warm blanket head and neck wrap. (*Added advice follows.*) Using the upper-half & lower-half method with typical warmed cotton blankets yields four layers of insulation per blanket versus two. The key task is to lift only for minimal exposure briefly, and replace. When blankets have lost their warmth, arrange replacements on top of the old; then, "presto change-o", do a quick flip so the warm is underneath next to the patient, instead of losing its heat to the air and cold blankets below. If the patient is quite cold or wet upon arrival, layers of warmed blankets should be placed for insulation and absorption underneath just before the transfer to the gurney.

[Rapid Noninvasive Rewarming Using a Hubbard Tank](#) provides tips for severe hypothermia.

## # 90 More Helmet Removal

There are many types of helmets, often sport-specific; and no universal agreement as to how, when, or if to remove before arriving at a medical center. Additionally, there are different proprietary removal devices and tools.

It is important to consider the reasoning and merits of each article or recommendation. No endorsement is intended by AENJournal. Any authority resides in the recommending body, the Team Physician or Athletic Trainer at the scene, or the protocols of the responding agencies. Best practices should be sought from them or validated trauma literature and professionals. Reviewing citations and references is wise.

You may be assessing a patient who is restrained in cervical precautions with or without a helmet (shoulder pads, etc.), or be asked for a recommendation. Controversy exists as to: always remove; always secure in place; or removal of faceguards to allow airway access in case of vomiting or altered mental status.

National Athletic Trainers Association's 2001 32 page [Prehospital Care of the Spine-Injured Athlete](#). Other [useful statements from this group](#).

[Maryland Fire and Research Institute](#) has a 2012 [ppt and instructor's guide upon helmet removal](#).

McSwain, N. E., & Gamelli, R. L. (1997). [Helmet removal from injured patients](#). BULLETIN-AMERICAN COLLEGE OF SURGEONS, 82, 42-44.

Branfoot, T. (1994). [Motorcyclists, full-face helmets and neck injuries: can you take the helmet off safely, and if so, how?](#). Journal of accident & emergency medicine, 11(2), 117-120.

[The C-Spine / Helmet Issue](#) April 3, 2010 by Steve Whitehead - See more at: <http://theemtspot.com/2010/04/03/the-c-spine-helmet-issue/#sthash.HbGZ2HZ7.dpuf>

"MrMaxStorey" 92014) [How to Remove A Motorcycle Helmet After A Crash](#). motorcycles.classiccruiser.com

[Crash helmet removal](#). A British demonstration of simple two-person helmet removal on YouTube.

[Sports-Related Head Injury](#) from [American Association of Neurological Surgeons](#).

## # 91 Sports Concussions

[Concussion](#) is of increasing [concern](#); standards and care are evolving. Youth sports are increasing lifetime duration of exposure. More extreme sports appear. Great athletes like [Steve Young](#) withdraw after repeated injury. No one thinks that boxing did not play a role in [Muhammed Ali](#)'s neuro problems. It is a contest between "won't happen to me" and "it will happen to you, but how soon, how often, and how bad?" Even [cheerleading](#) has become more competitive and dangerous.

The CDC comments and gives resources: [Injury Prevention & Control: Traumatic Brain Injury](#). [Recovery advice](#). [HEADS UP program for children and teens in youth and school sports](#). [Link added: 4/13/2015]

Harmon, K. G., Drezner, J. A., Gammons, M., Guskiewicz, K. M., Halstead, M., Herring, S. A., ... & Roberts, W. O. (2013). [American Medical Society for Sports Medicine position statement: concussion in sport](#). British journal of sports medicine, 47(1), 15-26.

Mayo Clinic (For Medical Professionals) [Diagnosing and Treating Sports-Related Concussion](#) ©2015

[American Academy of Neurology Sports Concussion Tool Kit](#) | [2015 60" TV PSA](#) | [Coaches Pocket Card](#) from [www.sportsconcussion.com](#).

Of concern is the [potential for re-injury](#), and controversy as to "rest" in recovery.

Bey, T., & Ostick, B. (2009). [Second impact syndrome](#). Western Journal of Emergency Medicine, 10(1), 6.

[Repetitive Head Injury Syndrome](#). Author: David Xavier Cifu, MD; Chief Editor: Craig C Young, MD  
emedicine.medscape.com Updated 3/27/2014

Schneider, K. J., Iverson, G. L., Emery, C. A., McCrory, P., Herring, S. A., & Meeuwisse, W. H. (2013). [The effects of rest and treatment following sport-related concussion: a systematic review of the literature](#). British journal of sports medicine, 47(5), 304-307.

[Second Impact Syndrome: A Rare But Usually Fatal Condition. Second blow to head before brain has healed from initial concussion](#). By Lindsey Barton Straus, JD Reviewed by William P. Meehan, III, M.D. [www.momsteam.com](#).

[New Study Claims Strict Rest After Concussion May Not Speed Recovery. Study faces mounting criticism as being methodologically flawed](#). By Lindsey Barton Straus, JD [www.momsteam.com](#)

[TBI: What Does 'Brain Rest' Really Mean?](#) Flora K. Winston, MD, PhD August 13, 2012 (video)  
[www.medscape.com](#)

[Post-concussion Cognitive Rest: How Much Time Is Enough Time?](#) Naomi J. Brown, MD February 03, 2014 (video)  
[www.medscape.com](#)

[Concussion Recovery Starts With Both Physical and Cognitive Rest](#). By Lindsey Barton Straus, JD  
[www.momsteam.com](#).

[Standardized Assessment of Concussion: A Valuable Tool for Sideline Evaluation. Full Evaluation Needed After Brief Assessment on Sports Sideline](#). By Lindsey Barton Straus, JD [www.momsteam.com](#).

## # 92 It hurts when I move

Convalescing trauma victims, who must return home with little assistance, may need some thoughtful suggestions. If clothes were cut, obtaining replacements might be the start.

Transfers into a car are awkward and painful. Occupational therapy may help with seat

cushions and transfer devices. One victim used a plastic bag and towel as a sliding surface for a temporary expedient (which should be removed when the vehicle is in operation). Reemphasize seatbelt use and an alternate driver until focus and pain control is stable.

Stress the importance of opioid-sparing pain relief strategies, and graded activity. Ensure there is a plan to ease expected effects such as constipation, and sedation cautions.

Talk out arrangements for BRP; obtaining meals; cleaning house and person; appointments transportation. Social Work, if available, can be a great facilitator.

## # 93 Non-Shocking News

\*\* [“The Sceptic’s Guide to Emergency Medicine”](#), a blog reviewing evidence in EM, reports [the work of Dr. Manrique Umaña from Costa Rica regarding “hands-on defibrillation.”](#)

In short, tests indicate higher leakage currents (testing four types of gloves) to the CPR person than thought, and may be potentially dangerous.

\*\* Need rapid securement of your central line? Consider wound glue or staples. (Check policies, product info, and with surgical colleagues to be sure it’s OK.)

Kerber, R. E. (2012). [Editorial. Hands-On Defibrillation—The End of “I’m Clear, You’re Clear, We’re All Clear”?](#). Journal of the American Heart Association, 1(5), e005496.

Neumann, T., Gruenewald, M., Lauenstein, C., Drews, T., Iden, T., & Meybohm, P. (2012). [Hands-on defibrillation has the potential to improve the quality of cardiopulmonary resuscitation and is safe for rescuers—a preclinical study.](#) Journal of the American Heart Association, 1(5), e001313.

Abbott, Rick (2011) [Clear!!! Life in the Fast Lane](#)

Reid, Cliff (2012) [Superglue for CVCs. Resus.me](#)

Motonaga, G. K., Lee, K. K., & Kirsch, J. R. (2004). The efficacy of the arrow staple device for securing central venous catheters to human skin. *Anesthesia & Analgesia*, 99(5), 1436-1439.

Hightowel, D., March, J., Ausband, S., & Brown, L. H. (1996). [Comparison of staples vs suturing for securing central venous catheters.](#) *Academic Emergency Medicine*, 3(12), 1103-1105.

## # 94 A tight problem

\*\*\*The patient must be catheterized, but has a tight phimosis, and a dorsal slit procedure is neither indicated nor acceptable to the patient. What to do?  
Retract as best able. Your helper can use a nasal bi-valve speculum to spread the prepuce and gain exposure.

If you do not have a helper, or if the prepuce is adherent to the glans, long cotton applicators with saline or hydrogen peroxide, can be used to lift, cleanse, and separate the tissues. Maintaining retraction and leaving the applicators standing, like a four-poster bed, can expose the meatus for cleansing and catheterization.

\*\*\*If catheterizing an infant, of course, have an open cup to catch the "fountain" of urine if the prep is too much stimulus. Using a small catheter on the infant, pre-connect a partially open 10 ml syringe to the catheter, so that flow begins into the syringe as a closed system. Gentle aspiration to increase the volume is OK. If a scant volume is within the bladder, continuous aspiration upon slow withdrawal will recover the urine near the outlet.

\*\*\*In adults, if a larger specimen (toxicology or culture) is needed on a one-time catheterization, attach a 2 oz. (60 ml) catheter-tip syringe to the catheter in like manner as above. Urine is recovered without waste (or spilled bowl). Knot the catheter, or while pinching it, insert male end into female end, to prevent dribble while disposing of it.

## # 95 From one end to the other

Apart from being an excellent upper airway adjunct, the nasopharyngeal airway, often called a trumpet (from its belled flange) has other utility.

Difficulty is reported to you in passing a nasogastric tube: "it won't turn and go down" despite curling the distal tip. Ah, but you have a solution. You insert into the nose, already anesthetized, an appropriately sized nasal trumpet lubricated inside and out, the lesser curvature of which has been cut with scissors, and the tube is passed through the trumpet which infallibly directs the NG tube caudad towards the esophagus without poking the posterior nasopharynx. Holding the NG tube firmly in position with the heel of your hand seated on the cheekbone, either you or the nurse withdraw the trumpet peeling it away through the slit that you made.

Another patient, being boarded and awaiting an upstairs bed, is a bounce-back from the prior stay, but now has *C. difficile* colitis running liquid stools and whose peri-anal skin is excoriated and at risk. A trumpet is chosen, lubricated, and the flanged end is inserted into the rectum. A drainage bag is connected to the exterior tubing so that flow is now drained and contained, as is the aroma.

Watterworth, B., & Ryzeuski, J. (2005). [Managing fecal incontinence](#). [Journal of Wound Ostomy & Continence Nursing](#), 32(4), 217-218.

## # 96 Smoother moves

*Primum non nocere*. Truly expert caregivers avoid inflicting any additional discomfort to their patients. We all seek to do this, especially in patients not yet medicated for pain.

We use a friendly greeting, attempt to engage with rapport, alleviate anxiety, explain intention, and caution before acting.

Slowing down and cautioning before a bump from the elevator sill, or connections between buildings.

Holding firmly to bony points and supporting well while “log-rolling.”

Using transfer assist devices whenever indicated.

Stretcher bearers should walk “out of step” to avoid a rhythmic sway or jog. A pole-type “Army” stretcher (with extended handles, ideally with shoulder straps, also) should be carried with both bearers facing the direction of travel. EMS metal frame stretchers (without extended handles) require that the team face each other (one walking backwards) and aren’t suited for long distances.

In a vehicle (or wheeled stretcher), a surface may have two suitable speeds to cross over, a slow and a fast, where the periodicity of movement is scarcely noticeable. Better, is to slacken speed and glide over, with neither acceleration nor braking that might place a kinetic load upon the free action of the shock absorbers. If the path can be deviated safely, so that only one side traverses the hump in the road (speed bump), only one wheel crosses at a time.

In hallways, the wheeled stretcher should only use speed on straight-aways with clear vision, and —take turns very slowly at a near right-angle to avoid nausea or vertigo in the horizontal patient looking at the ceiling.

When patients have fallen, rather than extend a hand pulling them up, it may be best to have a team place a blanket or lifting device under the patient before a team lift to bed height. (This should be practiced.)

## **# 97 Magnifying relationships**

In Clinical Tips #12 and #30, I pointed out some uses of pocket magnifiers. Most EDs are usually pretty good at having sufficient light for procedures, at least, those done in rooms —less likely, if you’re forced to do it in a hallway. Likewise, for convenient magnifying instruments to be handy.

A standing fluorescent ring-light with large magnifying lens, the magnifying Woods Lamp, a binocular loupe or magnifying Surgeon’s Spectacles, can help enhance exam and treatment in less than perfect conditions and less than perfect vision (especially, if you’ve had LASIK surgery or have an implanted intraocular lens). Documenting your search for a foreign body under magnification helps your chart to be more defensible (of course, not neglecting indicated imaging or ultrasound).

More human-focused uses exist, perhaps interesting a child in what is seen to spark interest and understanding; possibly even a future clinical career. Using a lens communicates caring,

and desire for sureness of diagnosis and precise treatment. Often, patients do not trust that we're rightly naming the very familiar lesion being seen: "Why, she barely even looked at it!" They don't always cue us with "Are you sure?"

Even patients with formication or "psychogenic infestations" can respond to your "I've looked very carefully and I don't see the bugs that you're telling me about, but I'm sure that what you're feeling is very real to you ... you're here, aren't you?" "Here's what we can try doing ... "

### **# 98 When being backwards can be forward-thinking**

[Christine E. Whitten, MD](#), is the author of the popular book [Anyone can intubate](#) now in its fifth edition; she blogs at [The Airway Jedi](#).

After a sedated procedure, when the pain and anxiety are relieved, the patient may renarcotize and slip deeper into sedation, possibly losing his airway and ventilatory drive. She writes in [Opioid Induced Respiratory Depression: A Balance in the Force](#).

A more dangerous scenario can occur if the respiratory depression does not begin until the trip down the hallway to the recovery area has begun. During this trip the patient may be semi-sitting, with the face hidden from us as we push the gurney from behind. If the patient is hypoventilating, a vicious cycle can start.

In the ED setting, this destination may be an ordinary cubicle with a nurse carrying a full patient load who will need to settle the patient and then catch up with other tasks: frequency of acute observation may be lessened. C.f., [Recognizing Airway Obstruction May Save Your Patients Life](#).

EMS crews are usually two persons, facing each other with the patient in-between, during short travel with frame stretchers (no long handles) thus the patient is watched. Hospital wheeled stretchers may be awkward to push backwards due to length and steerability issues with swivel casters, yet it may be helpful when the patient must be continually watched by one persons.

Go slow to avoid dizziness, and take bumps gently as the axle is directly under the patient. If the patient is at high risk, have a qualified airway manager also. When the patient nods off, typically the head will flex forward and cause obstruction; keep it in view, check actual airflow, open the airway, reevaluate.

### **# 99 When "PM" should not mean *post mortem***

Some suicidal ingestions or gestures involve over the counter "sleeping aids." Nearly all are the antihistamine: Diphenhydramine (two are Doxylamine succinate). The toxidrome is mainly anticholinergic. Beware: gastric emptying may be delayed and ileus present make [serial acetaminophen levels](#) desirable.

Many “PM” analgesics or multi-symptom cold remedies are acetaminophen-diphenhydramine combinations. Other significant ingredients may be present. Read the actual labels, as famous “name brands” may co-brand other drugs or combinations, and generic or private-house branding is common.

What I’ve noticed most is a peculiar AMS, an awake *absence*, internally preoccupied, looking about or reacting without comprehension or speech, with occasional [irregular eye movements](#); when familiar, it points to the diagnosis as one walks through the door.

I’ve found sinus tachycardia and decreased blood pressure that don’t respond as expected to a fluid bolus. Absent bowel sounds, dry axillae and membranes further suggest the anticholinergic basis.

Contact your [Poison Center](#). Treatment is supportive. Consider charcoal. Be alert for cardiac dysrhythmias. Consider Sodium Bicarbonate or Physostigmine. Be alert for seizures: control initially with benzodiazepines.

[Situations where an initial nontoxic acetaminophen level may not be sufficient](#) August 8, 2012 – [ThePoisonReview.com](#).

[Is hemodialysis effective in diphenhydramine overdose?](#) December 27, 2010, - [ThePoisonReview.com](#).

[Abnormal eye movements in diphenhydramine poisoning \(video\)](#) – January 24, 2011 [ThePoisonReview.com](#). Posting links to [NEJM’s video](#) and [case review](#).

Carstairs, S. D., & Schneir, A. B. (2010). [Opsoclonus Due to Diphenhydramine Poisoning](#). New England Journal of Medicine, 363(27).

[Anticholinergic Toxicity Treatment & Management](#). Author: John J Bruns Jr, MD, MPH,†; Chief Editor: Asim Tarabar, MD. Updated: Mar 27, 2014. [emedicine.medscape.com](#)

## # 100 Migration; not a good thing for an ETT

When the tube is secured does not mean the airway manager, respiratory therapist, or nurses can relax. As attention drifts to other tasks, strange things happen:

- An unsedated patient, unparalyzed, unrestrained patient “tongues” the tube.
- The field tube may not be so well placed as thought.
- Diaphoresis may “float” adhesive tape from the face.
- The tube may not have been placed with the cuff one inch (2.54 cm) below the vocal cords.
- If the ETT has not been recut close to the mouth, the additional weight of an unsupported breathing circuit may have leverage that drags the tube from its intended place.

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

- Someone may snag and jerk the tubing accidentally while moving the patient or himself.
- If the patient starts talking to you, or the SpO<sub>2</sub> starts dropping, something is *wrong!*

Suggestions:

- Remember that flexion and extension of the head and neck change the depth of the tube tip; sometimes critically.
- Placing a visible tape marker of desired depth on the ETT is useful.
- Comparing the visible amount of tube, to prior checks, is good. It is not necessary to have 30+ cm of ETT on an orally placed tube.
- Using a commercial tube holder, or prepping the skin to be clean, dry, and with skin protectant, such as Cpd. Tinct. of Benzoin, helps the securement.
- Use waveform capnography and pulse oximetry at all times.
- Using a long flexible connection during transfers with a BVM, *i.e.*, the NRB valve on the patient's tube, then corrugated tubing interposed between the valve and the bag, gives additional length and comfort while walking and lessens the likelihood of pulling on the tube; this does not alter dead space when done as described.
- Recheck tube placement and security after all transfers. Have kit with you to replace, if needed. Have the mask or supraglottic rescue airway (with ability to be a conduit for intubation/endoscopy) to ventilate if the tube is lost.

Durge, N. (2012). [Recognition of endotracheal tube migration](#). Emergency Medicine Journal, 29(1), 85-85. (Images in Emergency Medicine series)

Gillman, L., Leslie, G., Williams, T., Fawcett, K., Bell, R., & McGibbon, V. (2006). [Adverse events experienced while transferring the critically ill patient from the emergency department to the intensive care unit](#). Emergency medicine journal, 23(11), 858-861.

Divatia, J. V., & Bhowmick, K. (2005). [Complications of endotracheal intubation and other airway management procedures](#). Indian J Anaesth, 49(4), 308-18.

Asai, T., & Shingu, K. (2001). [Case report: a normal capnogram despite esophageal intubation](#). Canadian journal of anaesthesia, 48(10), 1025-1028.

Carlson, J., Mayrose, J., Krause, R., & Jehle, D. (2007). [Extubation force: tape versus endotracheal tube holders](#). Annals of emergency medicine, 50(6), 686-691.

Campion, MG. (May, 2011). [To Assess Tube Placement, Keep it Simple. Depth measurement bests auscultation in new study](#). VOLUME: 37:5  
Anesthesiology News

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

Bruce Cload, PhD, MD; Daniel W. Howes, MD; Marco L.A. Sivilotti, MD, MSc;† Jay J. Ross, MD;‡ John A.C. Murdoch, MB ChB‡. (2006). [Where is the ET tube? Diagnostic Challenge](#). Canadian Journal of Emergency Medicine. [CJEM Vol 8, No 6, p436](#)

Bruce Cload, PhD, MD; Daniel W. Howes, MD; Marco L. A. Sivilotti, MD, MSc;† Jay J. Ross, MD;‡ John A.C. Murdoch, MB ChB‡. (2006) [Where is the ET tube? - Answer](#). Canadian Journal of Emergency Medicine. [CJEM Vol 8, No 6, p446](#)

Hagberg, Carin A., MD. (2014) {Annual Supplement}. [Current Concepts in the Management of the Difficult Airway](#). [Anesthesiology News](#).

### **# 101 The persnickety problem of paper-thin skin**

A frequent and time-consuming problem is the repair of skin tears in thin, paper-like tissue, damaged by old age, steroids, solar radiation, or disorders such as Ehlers-Danlos Syndrome, that is friable and easily injured.

Problems are the need to meticulously appose viable wound edges, secure them without further injury, and provide best healing conditions. With a mixture of modern materials and methods, better results can be gotten and more tissue saved.

After preparing the wound, often a combination of suture, adhesive closures for reinforcement, and wound glues, with modern dressings, will provide great care.

Lin, B. "[Fragile/Thin Skin Technique](#)" in [Closing the Gap ~ Wound Closure for the Emergency Practitioner](#). Wound Blog.

Pacifico, M. D., Teixeira, R. P., & Ritz, M. (2009). [Suturing of fragile skin](#). *Journal of Plastic, Reconstructive & Aesthetic Surgery*, 62(12), e637-e638.

Davis, M., Nakhdehvari, A., & Lidder, S. (2011). [Suture/steri-strip combination for the management of lacerations in thin-skinned individuals](#). *The Journal of emergency medicine*, 40(3), 322-323.

[Mellick, Larry](#). (2015) [Repairing Thin \(Bleeding\) Skin Lacerations of the Elderly](#). Youtube video from Medical College of Georgia.

Singer, A. J., Quinn, J. V., & Hollander, J. E. (2008). [The cyanoacrylate topical skin adhesives](#). *The American journal of emergency medicine*, 26(4), 490-496.

LeBlanc, K., Christensen, D., Orsted, H. L., & Keast, D. (2008). [Prevention and treatment of skin tears](#). *Wound Care Canada*, 6(1), 14-30.

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Holmes, R. F., Davidson, M. W., Thompson, B. J., & Kelechi, T. J. (2013). [Skin tears: care and management of the older adult at home](#). Home healthcare nurse, 31(2), 90-101.

Peters, P., Abdel-Malek, L., & Lun, K. (2015). [Adhesive Retention Tape Supporting Atrophic Skin on a Tripolar Advancement Flap A Novel Wound Closure Option for Atrophic Skin in an Aging Population](#). Journal of cutaneous medicine and surgery, 19(1), 8-9.

### **# 102 Tongue Blade Torsion Test; Jaws; and Feet**

You may already be using this clinical screen. When concerned for a fracture of the jaw, one examines for asymmetry ("lost smile"), or misaligned, loose, or tender dentition, and looks for movement or crepitus of the joints. Screen, with a tongue blade, tapping suspected teeth, then having the patient bite firmly upon the tongue blade, bilaterally and anteriorly; twisting the blade will evoke a pain response and the patient "lets go" if there is fracture. Anecdotally, it's always worked for me, and radiographic concordance with suspicion hasn't failed.

I thought, where's the evidence? Looking at PubMed, I found this article in the last ten years. "Based on the test characteristics calculated (negative predictive value 0.92, sensitivity 0.95, likelihood ratio -0.07), the TBT is a useful screening tool to determine the need for radiologic imaging." It is also stated that CT is superior to plain films. (This may or may not obviate a "Panorex" tomogram for your oromaxillofacial specialist referral.)

A new, to me, technique for reducing jaw dislocations was cited by Ryan Radecki in Emergency Medicine Literature of Note; it, and ongoing links to source, are below.

Remember, too, that when the patient is struggling to get the foot into the shoe or slipper, tongue depressors make nifty little shoehorns.

Caputo, N. D., Raja, A., Shields, C., & Menke, N. (2013). [Re-evaluating the diagnostic accuracy of the tongue blade test: still useful as a screening tool for mandibular fractures?](#). The Journal of emergency medicine, 45(1), 8-12. [PMID: 23490109](#)

Radecki, R. [TMJ Dislocations: A Better Mousetrap? Emergency Medicine Literature of Note](#). October 14, 2014.

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### # 103 *Tempus fugit*

In the USA, [Memorial Day](#) is coming fast upon us. Commemoration apart, secular festivities include the first barbeque of summer to come. Regardless of your hemisphere or climate, the season is changing and it's a good time to update your seasonal health education and injury prevention campaign and displays. Coordinating with special-interest health organizations can enhance the resources available and the effectiveness of your outreach. The [US Health Observances list](#) is useful, and you may have a national, or global, list or group for your country.

AENJ also [celebrates and congratulates](#) nurses through [National Nurses Week](#) and [International Nurses Day](#). May 12<sup>th</sup> is the anniversary of the birth of [Florence Nightingale](#).



Click on the photo for larger images, and an amazing tour of a [Museum where Nightingale worked in Turkey](#). Courtesy of [Ansley Snapp, CRNA](#).

**Happy Nurses' Week  
Happy International Nursing Day  
Happy Birthday, Florence Nightingale**

### # 104 Two years below the masthead

With apologies to [Richard Henry Dana, Jr.](#), we'd like to point out, with pride, that "# 104" above means that this Clinical Tips episode marks the two-year anniversary of the column. While not "*before the mast*," it is definitely two years below the website's masthead.

This is the most active section of the website; weekly postings of practical tips, hints, and links.

[You are invited to send and share your own tips and be credited!](#)

### # 104-A Taking the pain and fear away

Fast, effective, analgesia is not only kind, it is a patient/customer satisfier. It builds trust and confidence. It fixes a basic human need. Absent special knowledge, patients are known to delay care for serious conditions if “well, it *wasn't* hurting.” They will tolerate longer stays, or more specific treatment, if they are comfortable.

Review [Clinical Tip #47 The old “One-Two Punch”](#). Quick and easy, if patient is calm: put a flush syringe on a winged-needle; inject a vein, give a decent dose of fentanyl; flush; give ketorolac; flush; remove needle. Minimal equipment cost. Veins have minimal pain *versus* an IM injection.

Patients fear dental regional blocks; yet the relief is excellent. Ease it, by swabbing the site with topical lidocaine; *wait for effect*; as the mouth opens to insert the syringe, grasp the contralateral cheek firmly between thumb and index finger. This helps you sense and control pull-away, and steadies the approach. A moment before, and during the injection, give the cheek a firm continuous wiggle!. This distracts, and diffuses sensation, from the small gauge needle injection; and the “shot” is hardly felt, but for taste and numbing. You will have a pleased patient.

Have to divide a large volume injectate for pediatrics? Two injections given *simultaneously* are felt as only one.

One patient, (104 surgeries), showed me that scratching her skin ~2" away (3 cm) from the injection site before and during the injection distracted greatly from the sensation of the needle and the chemical.

### **# 105 Against medical advice**

Patients may have legitimate, scrupulous, or even irrational reasons to refuse the offered treatment or hospitalization. With few strictly delimited exceptions by law, it is their right to do so. (Not discussed here.) However, just as “informed consent” is required, it is wise to negotiate within a framework of “informed refusal.” Ethically, we want the patient to understand the choices and consequences, nor do we wish to abandon them if they wish to limit or refuse treatment.

It is rash to say “just sign this before you go” and assume that the “AMA” form gets you off the hook. It is not a “Get out of Jail free” card from the Monopoly® game. The form, if used, is a springboard for discussion; which if documented, provides evidence of your care, concern, and attempt to seek agreement or alternatives.

First, ascertain, if possible, the patient’s felt need or reasoning, and negotiate upon that. Offer an acceptable lesser treatment or medicine to temporize, while his business is settled, and facilitate a direct admission return or referral.

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Thoroughly explain the “benefits” and “risks” of proposed and lesser treatments chosen. Try to involve a trusted companion to help the patient with his needs and his return. (Document that you have done so.)

Although the patient may be, for now, limiting or ending his relationship with you, convey a sense that he’s *welcome* to return without penalty, that you care for a good diagnosis and outcome, and a willingness to help in the meanwhile. Essentially, you provide as full a normal discharge process as permitted, with the patient’s concerns and limitations noted, his apparent capacity to do so, and efforts that you’ve made to give a proper understanding.

[“Against medical advice.”](#) Wikipedia. May 6, 2015

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Darves, Bonnie. [What should you do for AMA patients? Few doctors write prescriptions or come up with a care plan.](#) January 2014 issue of [Today’s Hospitalist](#) [reports study by Jason Edwards, MD, of Wright State University.] *viz.*

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Al Ayed, I. (2009). [What makes patients leave against medical advice?](#) [Journal of Taibah University Medical Sciences, 4\(1\), 16-22.](#)

Schumann, John, MD. [Does leaving against medical advice stick patients with a bill? KevinMD.com](#) March 8, 2012 [argues that saying “insurance won’t pay the bill if you leave” is untrue and unnecessary]

## **# 106 Waiting for the “P” in the U-Bag**

“It’s always darkest before the dawn” and *time is longest waiting for the pee in a febrile infant exam!* It’s a truism that ill infants need to be kept warm, swaddled or clothed, in a stress-free environment. Frequently unwrapping the child to “check for pee” interferes with this. Fever control and hydration will hasten reappearance of the urine, but how to know when it’s there?

If a urine-bag collection system will produce a suitable specimen, and avoid catheterization or suprapubic needle aspiration, then clean the skin and carefully

apply the bag. Before replacing the diaper, tear or cut a hole in the diaper through which the bag can protrude! Now, briefly inspect by lifting the blanket. This also eliminates “missed” specimens, and wringing out or weighing diapers.

A syringe is the easy way to acquire the sample; a blunt cannula can give you longer reach; if you must perforate the bag to reach the sample, then clean the bag with alcohol before inserting the needle.

### **# 107 Ready on The Right?**

Some things are conventional. The head of the bed is backed up to the utility wall (for best access; unless there is too much clutter and tangle) and the feet towards the door (so the patient can be observed by passing staff). The Monitor is on the utility wall (wires). The Airway Manager is at the patient’s vertex (to observe and ventilate/intubate). *The Airway Manager can’t see the monitors!* Plan to add a large second screen where all can see it. Safety and efficiency shall ensue.

Most EDs do *not* have an anesthesia cart on the intubator’s right to centralize needed goods and monitors. This is where your most adept airway assistant should be. One who can think and work intuitively with you through the problems. Most people are right-handed, thus most laryngoscopes are left-handed, for the most “dexterous” freedom to manipulate tasks. What can your “Right-Hand Man/Woman” do for you?

- Observe patient and monitors from better vantage point.
- Assist with positioning and “ramping” of patient.
- Hold running Suction device and “prepped” ETT/SGA in left hand; spare nearby.
- Report effect of RSI measures.
- Prepared to “tip table”, if control is on side.
- Provides cricoid pressure, if used.
- Manipulates Thyroid Cartilage to enhance visualization, if needed.
- Can “POCPOM” [Pull Out Cheek, Push On Maxilla], if needed to make space and visibility.
- Can provide “Inverted Jaw Thrust” facing patient, lifting mandibular rami towards ceiling, for better visualization.
- Assists with 2,3,4, handed mask fit and ventilation when difficult masking occurs.
- Acts as Airway Manager’s “Reminder” (second voice) to avoid task fixation when things do not go well.
- Requests “Call for Help,” if needed, and you do not.
- Has NexT Plan device or task ready to go.
- Has Emergency Surgical Airway prepped; assists or performs.
- Helps fixate airway to prevent loss.

## # 108 “Lightweight, slippery, oxygen”

Your patient is failing, —struggling to breathe through a narrow airway. His effort is maximal. True fear is seen in his anxiety. Therapies are not yet effective. What now? As the oxygen mask is connected to a different tank, you lean close to his ear and confidently say to him: “we’re going to give you a *special, lightweight, slippery oxygen*; you’ll be breathing easier.” A few breaths later, a flicker of surprised pleasure on his face transitions into visible relaxation, and vital signs moderate.

This is one of those magical moments in emergency care. The instant reward: like 50% Dextrose, Naloxone, Adenosine, —a revivifying therapy. While [Heliox](#) is not specific (doesn’t reverse pathology), it is a valuable temporizing measure that lessens the effort and increases the tolerability of breathing in obstructive conditions.

Heliox is 1/3<sup>rd</sup> the density of Nitrogen: being less viscous, it flows more easily through tight passages, whether due to bronchospasm, stenotic tracheal anastomosis or segment, tumor encroachment, irremovable food bolus, or other obstruction. The patient doesn’t need to “suck” as hard, and relaxes, contributing to less turbulent flow.

What are your Heliox resources? In the department? On call? Who do you call? How fast does it arrive? ICU control? Ask the questions, so that you have the answer when your patient needs it.

In the past, literature has been sparse, and without strong conclusions, often underpowered. Increasing clinical usage and cumulative evidence suggests value when indicated. Through non-drug means, it immediately lessens the work of breathing, the catecholamine drive to sustain it, improves ventilatory delivery, and decreases anxiety thereby.

Choose the {He/O<sub>2</sub>} concentration that provides normoxia at your altitude. (i.e 80%/20%; 70%-30%, 60%/40%) Supplemental oxygen can be added, but a “normal” FIO<sub>2</sub> has the most helium and least resistance to flow.

Driver, Brian, MD.(2013) [Heliox & Upper Airway Obstruction \(Video\)](#)  
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Brown, Andy, RRT-NPS (2013) [Safety and Efficacy of Heliox Delivery {pptx}](#)  
FOCUS Fall, Las Vegas

Reuben, A. D., & Harris, A. R. (2004). [Heliox for asthma in the emergency department: a review of the literature](#). Emergency medicine journal, 21(2), 131-135.

[Cochrane Database of Systematic Reviews: Issue 6 of 12, June 2015](#) to search “heliox.”

Fink, JB. [Opportunities and risks of using heliox in your clinical practice.](#)  
Respir Care 2006;51(6):651-660

Hashemian, S. M., & Fallahian, F. (2014). [The use of heliox in critical care.](#)  
International journal of critical illness and injury science, 4(2), 138.

[Wikipedia Article: Heliox](#)

### **# 109 Don't move! Stay just like that!**

Sometimes, you absolutely need the patient to hold a particular position and he is unable to cooperate. When positioners, tape, sandbags, or safety belts, don't do it, consider using your Plaster of Paris or fiberglass splinting roll to *mold* the *hold* that you need.

Possible candidates may be agitated patients with very "positional" IV flow (and for whom the customary arm boards are failing), or patients needing a "just-so" exposure for their difficult wound repair. —Application and "setting" is swift, padding is included, bias-cut stockinette bandage, if needed, to secure, and you're done.

Remember to observe all cautions for pressure points and neurovascular compression, and use for the brief period needed to resolve the presenting situation, removing as soon as possible. Use slab or gutter-style splints. Avoid circumferential application. Do perfusion checks.

### **# 110 Seasonal safety & self-help outreach**

Now is come the major turning of seasons: Summer in the Northern Hemisphere; Winter in the Southern Hemisphere. As people change their work and recreations, the emergencies encountered will change, too. This is a good time for your educational outreach and/or marketing. Many of the conditions that we will be presented are preventable or environmentally enhanced.

Do you *not* have an educational outreach program or public safety awareness program? If not, *why* not? We, who have acquired special knowledge and skills that are essential and beneficial to those in need from illness or injury, owe an obligation to share that with others. Education may prevent or mitigate harm, increase self-reliance, decrease the societal burden of care, lessen our workload, convey our concern and compassion, and inspire others to join our cause or recruit to our occupations. Teaching is a mission.

Consider topics such as:

- Basic first aid and CPR, of course.
- Seasonal accidents in travel, harvesting, or subsistence.
- Sport & outdoor recreation injuries; weather stressors.
- Natural disasters: flash flood, monsoon, wildfire, cold/heat.

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- Needs of the very young and very old.
- Illnesses of gatherings: Norovirus, respiratory, alcohol, mass casualties.
- “Never Events” such as drowning, fireworks injuries,

If you are going to have an “open day” mass event, consider training youth groups, such as Scouts, to present and assist; “Train-the-trainer” here may reap long-term rewards.

### **# 111 Grace and finesse under pressure**

The most widespread error of concept and execution in using a resuscitation mask is that the mask is pressed firmly, and in difficulty –ever harder, upon the face.

In desperate moments, pressing *too hard* may be the cause of the leaks by deforming the mask’s edges so that its fit is eccentric: adjusting fit and decreasing tension can solve the problem.

Over years, mask design has changed styles of interface. Examine and analyze what you use. Early anesthetic masks were metal or glass. The “anatomic mask” of the early 20<sup>th</sup> century was a contoured black rubber cone with an inflatable air-filled cuff. Latterly, clear shells were devised (vomitus, or cyanosis, could be seen). Cuff styles include rubber containing open cell foam, closed-cell foam, elongated rubber or plastic flaps lying upon the skin, low volume cuffs of more compliant material, and high volume highly compliant air-filled plastic cuffs. Some have a contoured edge without a cuff, but little compliant flaps within whose seal is increased by the positive pressure inside the mask. One mask *is* only a large donut-shaped cuff and a port for gas entry and seals the face.

Excellence of skill is shown by profound respect for the tissues and anatomy bringing them into alignment, holding the mask properly fitted, and pulling the jaw and face *into* the mask. Extreme mask pressure shouldn’t be necessary. For one-handed use, I describe the “OK” sign (now supplanted by the AHA’s term “CE grip”) and “spread it, mold it, clamp it” for adjustment of the mask to the face.

Excessive pressure can cause abrasions of the eye, neuropathies of the face, contusion, lip injury, and bruising (which can be remarkable if over-anticoagulated) in the shape of the contact of your hand and the mask.

Sometimes, conformability is improved by adding or removing air from the cuff, or with severely angular faces substituting water in the cuff as a last resort. Avoid so much pressure in the cuff that the mask is bouncy and rolls from where it is held.

Know what you use, and use everything that you know, adapting to circumstances at hand.

## # 112 Pumping to the beat



The American Heart Association [[@American\\_Heart](#)] used Twitter to announce an alternative to The BeeGees's "*Staying alive*" as background music for a good CPR compressions pace. Now, John Williams's "*The Imperial March*" from [Star Wars](#) is pronounced as a correct rate. San Diego's Comic-Con convention seems to be the venue. This may lend fun to practice sessions but may not be appropriate for "family presence during resuscitation." There are smartphone metronome apps that can be used to keep manual chest compressors on time with the beat.

Of course, CPR machines can do it tirelessly, unceasingly, with "*No sweat!*" But, the beauty of manual CPR and Mouth-to-Mouth resuscitation is that *if the rescuer is there, so is the equipment*. All that is needed until help arrives is indications for CPR, and the *will* to do it.

## # 113 Identifying the unknown patient ...

In mathematics, one must solve for the "unknown." In emergency care, we provide supportive care while attempting definitive diagnosis for the "unknown." This is much more complicated when the [patient is unknown to us and is unable to give information as in the Boston Marathon bombing](#).

Most of us carry [identifying documents daily](#) --from which we can be easily separated by loss, theft, in the locker at work or play. Even with [tattoos](#) --is it the patient's name, or some other memory?

Serving military will have their "[dog-tags](#)." If in field uniform, military may have a "[blood patch](#)" indicating blood type for transfusion. Some schoolchildren may have a [dog-tag or "identity bracelet"](#). Jewelry or "bling" usually doesn't give us

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medical information. Often, people buy a [drugstore ID tag](#), e.g., "I am diabetic" but such are useful only for the single fact stated.

[Flash drives](#), some wearable, have been offered or self-prepared by patients for detailed medical record files, or reference copies of ekgs, imaging, and other studies.

Schoolchildren usually have an "[emergency card](#)" at the Principal's Office or with the Field Trip Leader; parental consent for treatment is often included.

In assisted or [sheltered living situations](#), a similar card might be on the wall of the unit, or on file with the Manager. Similarly, a public campaign has urged people to keep a "[Vial of Life](#)" in the refrigerator to be found by emergency personnel.

[Fitness centers](#) may have some information on their members (ID, sometimes contacts or medical information). The athlete lying on the floor may not be recognized, if not well known, however. Check for ID on the shoe laces or wristbands, and music devices.

Currently, people are using their [smart-phones to record contacts and medical information](#). Even just [indicating "spouse" or "doctor" and other relationships in one's contact list can be a valuable clue](#).

Passcodes have been a barrier until the patient can grasp the question and give a usable reply. Now, phone manufacturers and available apps or tips provide ways of [accessing that information when the phone is locked](#). If the phone is dead, damaged, or stolen, it may not help. Does your ED have some chargers to help start up patient's phones?

Apparently, [microchips for humans](#), not just our pets, are now available.

#### **# 114 To the marrow of the matter ...**

A good tip from the excellent [ALIEM](#) blog ([Academic Life In Emergency Medicine](#)) is Dr. Jacob Avila's [Trick of the Trade: Squeeze test for confirmation of IO placement](#).

The rapid placement of an IO is a game-changer, well established, but too often not done until time has been wasted searching for veins. In Out Of Hospital Cardiac Arrest, many medics will go quickly to IO and a King Airway to hasten the resuscitation. If veins are obvious, use them. If not, when in crisis, go to IO.

Find answers to some of your questions on IO and difficult access at these links:

- Dr Michele Lin reports on blood values if drawn from an IO.  
[Paucis Verbis card: Interpretation of intraosseous blood.](#)

- Can RSI be done with an IO?  
[Intraosseous Rapid Sequence Intubation.](#)
- Which site is fastest?  
[Let It Flow! Intraosseous Flow Rates by Insertion Site](#) from "*Critical Care Anywhere.*"
- ALIEM's Dr Noah Sugerman suggests  
[Trick of the Trade: The PIPP for deep peripheral IVs in obese patients.](#)
- ALIEM's Dr Terrance Lee reviews  
[Approach to Difficult Vascular Access.](#)
- Dr Lee also suggests Dr Lin's slides  
[Difficult Vascular Access Alternative Approaches & Troubleshooting Tips.](#)

## # 115 Bring in the fans

In the Northern Hemisphere, these are the warmest months. With drought, global warming, wildfires, and an increasingly urbanized populace no longer in tune with the wisdom of rural elders in coping with weather stress, we face the likelihood of more heat illnesses and EDs with older physical plants less able to cope with inundations of "heat wave" victims. The new issue of AENJ has a nice article to see. [Heat Illnesses in the Emergency Department: A Hot Topic.](#)

In "[# 14 A Fresh Breeze](#)", we commented on several aspects of fan usage in the ED (*q.v.*). So, round up as many fans as you can obtain from the hospital, or buy more (but be sure they're inspected or modified by Hospital Engineering for electrical ground safety, hospital grade connecting plugs, or double-insulated casings, adequate finger guards, and screws securing the cage.)

If you delay obtaining enough, when everyone else wants a fan, there will not be enough to go around. Moving air can do much to abate stifling heat when the air conditioning (if you have any) is overwhelmed. Remember, A/C is like a heater in reverse, it can only transfer so many BTUs of heat elsewhere. If there is an electrical brownout, or heat exceeds your BTU transfer capability, or there is additional heat from severe weather or human overcrowding, you will be glad for the low demand of fans and the comfort they provide.

Remind Housekeeping to wipe down the screens daily to decrease accumulating dust. You will need to avoid dust being blown onto a sterile procedure, *e.g.*, a central line. In "[# 60 It's a gas, under there ...](#)" (*q.v.*), you'll find out how to use suction or compressed air to make the patient under the procedural drapes more comfortable.

The "sensible" solution in overwhelming heat, is to keep the air moving so that it can be "sensed" by the patient (easing distress, and for evaporative cooling) for greater comfort.

If "Heat Stroke" (*hyperthermia*, with altered sensorium and inability to regulate body temperature) is present, expose the patient as much as possible, use wet towels on exposed body surfaces (especially head and torso) upon which moving air from the fans can play, and place ice packs in the groin and axillae, as your initial measures while monitoring temperature and response and fluid infusion.

### **# 116 Mirrored cabinet on the wall**

Giving advice on first aid kits or medicine cabinets should be tailored to location and intent.

Most household medicine cabinets are in or near the bathroom. Have you thought to put one in the kitchen? Here is the home of burns and cuts; here is where kids congregate. Having a mirror-fronted cabinet here is a simple project if you have the wall space, is convenient to need, will avoid tracking blood to the bathroom, and gives you a quick chance for an appearance check before the meal. Consider waterproof bandages or vinyl gloves to protect the wound during cleanup and prevent contamination of food surfaces.

Bathroom medicine cabinets should be larger and deeper as they are often used for sickroom supplies and larger stores of medicines. If it's a semi-public bathroom, shared with kids or guests, you may want to put a lock on the door for drug and sharps safety, and if you don't want nosy guests surfing within to discern your history, or swipe your pain meds.

If you garden, or have a workshop, it might be good to take care of minor injuries right there, to resume work easily. If alone a good deal outside, have your cell phone with you. Some people keep a rural mail box in large gardens to hold a cordless telephone extension, spare gloves or lotion/sun block, *etc.*

Is there a small suitable first aid kit packed in your outdoor sports gear? For the car, don't forget a trauma kit, flashlight, warning triangles, reflective vest, and blanket.

### **# 117 Unsucking the waiting room**

Some shifts suck. And, the Waiting Room sucks, too. You've been seeing one patient after another, but they don't go anywhere. The admitted are being boarded. The "not-sick" are waiting on their labs or X-Rays, taking up space. (Some can be "Vertical Patients" who return to the WR to await the next step.)

Hopefully, you don't have to walk through the WR while carrying food just bought; —*bad form*, patients resent it, and feel neglected, if waiting NPO themselves.

Triage nurses and assisting technicians can ease the burden, using established protocols, to initiate X-Rays, labs, treatments such as antipyretics, analgesia, wound-irrigations, slings, or splints. Easing fever or pain immediately is comforting and improves tolerance to waiting, and the sense of progress with

simple treatments does also. On really busy shifts, the triage folks may not be able to keep with rechecks and rounding by themselves.

Some EDs have a provider at Triage during busiest times do streamline this care, and select patients to come back.

If there's no provider up-front at your ED, try to visit the WR periodically to see who's waiting. You won't likely make a disposition from there without a "Medical Screening Exam" documented. But, you can check for quiet patients in stoic agony; who's asleep peacefully vs. unresponsive; ask "how has your problem changed while you've been here?" A technician might follow you to recheck vital signs and inform you of those changed or abnormal. Give a brief assurance to everyone that "we won't forget you. We will see you. We're working quickly to get to you. Tell the nurse if things are worse," This can do much to settle things down. If you can, tell them "someone will be out to check on you again."

Perhaps someone can take half a load in back and be the WR expediter for the other half-load. Keep the Charge & Triage Nurses and the Attending Physician apprised so that appropriate reprioritization can be timely done.

### **# 118 FOF - Found on Floor (Hip Fx)**

Brought in by family or ambulance? Witness statements?

If fracture obvious, IV (simultaneous with exam) for analgesia and hydration. Labs drawn.

Exam and history:

- Focus: Antecedent events; medical or cardiac precipitant? Med effect? Mechanical fall? Confabulated HPI? Confusion or delirium? Consider EKG.
- Focus: Associated undiscovered injuries: CHI? Cervical Spine? Rib Fx? Pelvic Fx.
- Focus: Hypovolemia? Concealed Hemorrhage? Neurovascular impairment?
- Focus: Consequences? Compartment Syndrome?

Stabilize injury *per* local protocol: Pillows; Body-splinting; Plaster or Fiberglass Splint; Traction.

Imaging Plan: CT head vs CHI/CVA? Fx Radiographs; Associated injuries; CXR, if doubt suitable for general anesthesia.

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If "I've fallen and I can't get up"<sup>TM</sup>, check for paresis, rhabdomyolysis if down long; pressure injury to skin.

Consider early urinary catheter if obvious fx and surgery. Check urine for UTI, renal status, rhabdomyolysis.

If severe pain, consider nerve block to spare opioids. If significant opioids have already been given, ensure close nursing and SPO<sub>2</sub>/ETCO<sub>2</sub> monitoring, especially if risk factors for Obstructive Sleep Apnea exist.

Call orthopedic surgeon, admit. If surgery delayed, may patient eat?

Patra, D. (2015). [Comparative evaluation of femoral nerve block and intravenous fentanyl for positioning during spinal anaesthesia for surgery of femur fracture](#). *Indian Journal of Anaesthesia*, 59(8), 530.

Beaudoin, F. L., Nagdev, A., Merchant, R. C., & Becker, B. M. (2010). [Ultrasound-guided femoral nerve blocks in elderly patients with hip fractures](#). *The American journal of emergency medicine*, 28(1), 76-81. [PMID: 20006206](#)

Beaudoin, F. L., Haran, J. P., & Liebmann, O. (2013). [A Comparison of Ultrasound - guided Three - in - one Femoral Nerve Block Versus Parenteral Opioids Alone for Analgesia in Emergency Department Patients With Hip Fractures: A Randomized Controlled Trial](#). *Academic Emergency Medicine*, 20(6), 584-591. [PMID: 23758305](#)

Strony, R.J., DO, RDMS, RVT & Garbo, G., MD [Ultrasound-Guided Femoral Nerve Block emDocs website](#) July 29, 2015.

## # 120 A seeming semblance, Part II

### Patients:

- A) An ~60 yo ♂ is found on the floor of his residential hotel with aphasia and dense right hemiplegia. No history is available. There is no diaphoresis or tachycardia, eyes are spontaneously open, but cognition is impossible to discern. A small but competent hospital is one block away; the patient is brought directly to the ICU in lieu of the "First Aid Room."
  
- B) An ~80 yo ♂, brought by ambulance, with aphasia and ataxia with motor restlessness, there is a mild right nasolabial flattening. The Medics are attempting to keep both an oxygen mask and an SPO<sub>2</sub> sensor in place. The grief-stricken wife is hovering and loudly consoling her husband: "You're having a stroke, Dear. We're at the hospital, and they'll take care of you."

### Answers:

- A) Symptoms fully resolve and the patient regains his speech within minutes of a 50% Dextrose injection. The blood sugar is found to be 11 mg/dl. Thus, neuroglycopenia was responsible for his reversible symptoms. This occurred at a time when glucometers were not available in the field, and a place where prehospital care was by strict radio command from a remote hospital which would have taken longer than the transport.
- B) The Medics give a cursory history of several disorders including asthma. The fleeting SPO<sub>2</sub> seems to be 95%. Their concern is stroke. The patient is known to the Nurse. The movements seemed to be “*not* neuro” but more “agitation.” The rate and depth of the irregular gasping breaths suggested increased work of breathing and air hunger somewhat compensated by his efforts. Auscultation confirms faint wheezes in a nearly “silent chest.” A bronchodilating nebulizer treatment was begun with a “Mask & Horns.”

In two minutes, the patient is calmer and breathing easier; in three more minutes, he is able to speak clearly; and by the end of the treatment, his “neuro-stroke” symptoms have resolved and auscultation showed the chest had cleared. After further observation and treatment, he was discharged home. His severe asthma had precipitated his air hunger, which had confused the medics (and by the wife’s insistence), and the hypoxia had revealed the latent residua of his old stroke, with partial compensation giving a spurious side to the SPO<sub>2</sub>.

**Note:** Commonality of these cases and theme of this episode of Clinical Tips is that both patients have mimics of stroke.

Walker, Richard A., MD, FACEP FAAEM ["Identifying Diseases that Mimic Strokes."](#) JEMS - Journal of Emergency Medical Services - Feb 28, 2011. Accessed: 8/29/2015

Huff, J. Stephen. (2014). [Stroke Differential Diagnosis-Mimics and Chameleons.](#) FERNE Foundation for Education and Research in Neurological Emergencies. Accessed: 8/29/2015

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### # 121 A seeming semblance; Part III

#### Patients:

- A) It's 11:30 pm, and a store owner calls an ambulance to get rid of a customer who won't leave. His breath is strong for alcoholic drink. Oddly dressed, he's in slippers, pajamas, and a leather jacket. He's wandering the store with intent, but cannot clearly convey what he wants or who he is. He denies illness and suggested medical problems, and refuses the ambulance. He fumbles in his pockets, has keys, but no identification. Without police authority, he cannot be compelled to go, and it seems that he would resist. A chance touch of his pajama top shows that it is soaked with diaphoresis. Challenged, he fumbles and produces a candy wrapper.
- B) An old man is brought to you as "weakness" from a cheap residential hotel because he hadn't been seen for several days. He's dehydrated and unfed. His clothes and bedding were urine-soaked. His skin has non-blanching reddened areas at bony prominences and chafing. The mouth has some un-swallowed masticated residue. Bowel sounds are scant. He is non-verbal, with a taut open-mouthed appearance matching the stiffness of his body; forcing extension of limbs gives a jerky release to your effort. The only information is that in the last few days when seen is that his walking was worse and he was drooling. It is the end of the month.

#### Answers:

- A) Now, the patient admits to the Diabetes previously denied and is persuaded to come into the ambulance. With a working diagnosis, Medical Command is contacted, an IV started, and 25 gms of 50% Dextrose is given with good clinical result. {Field glucose meters were not in use then.} Neuroglycopenia from diabetes is a common cause of altered mental status and may mimic stroke; it must be excluded in every case.
- B) He clearly has uncontrolled Parkinson's Disease, confirmed by medical records. He needs hydration, and admission for optimization of medications, activity & physical therapy, nutritional support, and skin care, with discharge planning to consider placement in a sheltered environment.

We can surmise from marginal living conditions and the weeks out from last payment of social benefits, that he may have run out of meds or cut doses, his activities of daily living decreased with worse mobility, and was bedridden without meds or nourishment until his absence was noted, and is perhaps no longer safe to live alone. The neurologist concurs.

**Note:** Commonality of these cases and theme of this episode of Clinical Tips is that both patients have mimics of stroke.

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

Walker, Richard A., MD, FACEP FAAEM "[Identifying Diseases that Mimic Strokes.](#)" JEMS - Journal of Emergency Medical Services - Feb 28, 2011. Accessed: 8/29/2015

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## # 122 Cultivate your Techs, Nurses, Pharmacists, Clerks

The art of accomplishing much is skillful delegation. Know and cultivate your Techs and Nurses; they are your extenders, facilitators, watchdogs, and patient advocates. Without them, your shift is like [blind men examining an elephant](#).

Touch base with them frequently:

- Wound irrigation | What did you see? How was it injured? How is he tolerating it? Do you believe the story?
- Crutch fitting | How did he do? Will he cope at home? Is he still at risk for another fall?
- V.S. & Family Interactions | Stable? Hydrating? Family supportive? Dysfunctional Family? Does patient comprehend events, teaching, plan?
- Meds & Interventions | Effective? Change dose or med? Safe for discharge?
- Pharmacist | Is polypharmacy the problem? Explore/Coordinate multiple meds & providers. Adverse effects. Patient teaching. Toxicology resource. Contraindications. Preparation of infusions and meds.
- Clerks | Calls in; Calls out. Schedules studies. Call for house wide resources. Bed-Finder. Observes patient interactions. Extra eye for security problems. Tracks staff activity. Contacts family for information. Checks referral facilities.

These personnel are friends and allies in a common goal directed at the best outcome for the patient. Even the Transporter can tell you how well the patient did during that out-of-department study. Study results don't include how the patient felt or moved.

## #122 “*Let’s think positive!*” —CPAP and sedation.

Some patients do better under pressure: Continuous Positive Airway Pressure. Applying the gas being breathed to the airway with a dynamic flow that provides positive end expiratory pressure and matches inspiratory flow —so that inhalation is never a negative force, helps distend the airway pneumatically preventing the inward collapse of soft tissues that can obstruct flow during sleep or sedation. Many people use home machines to prevent Obstructive Sleep Apnea and the snoring that heralds the onset of obstruction.

Patients identified as having OSA, or the strong possibility of having OSA, should never be sedated without having the means of positive pressure support and ventilation present. A “CPAP machine,” from home or hospital, is great, but the ED’s ventilator can probably be configured to do it. Skillful use of an “anesthesia bag” (soft, without non-rebreathing valves) can do this and other things; but sadly is a skill not commonly found in EDs. The Nasal Mask or “Nasal Pillows,” often used with CPAP machines, or a High Flow Humidified Nasal Cannula system can be useful with claustrophobic patients.

The NODESAT technique (O<sub>2</sub> nasal cannula 15 LPM) used for apneic oxygenation during intubation, in combination with a BVM *and* PEEP valve (~15 cm H<sub>2</sub>O pressure) can provide a CPAP effort to the patient. Without the nasal oxygen and PEEP valve together, the ordinary BVM allows airway pressure to drop to ≤0 cm H<sub>2</sub>O which permits airway soft tissue collapse and obstruction. With CPAP, resuscitation can be effected and supported until awake without using oral or nasal airway tubes that may cause problems during the waking transition.

Prevention is better than cure, so CPAP during sedation can avoid calamity in those who have OSA or other soft tissue obstruction. A knowledgeable airway manager is vigilant for this potential.

“Provision for ‘the worst case scenario’ of persistent upper airway obstruction should be made even with patients with mild OSA and a breathing circuit capable of delivering CPAP should always be available when the presence of OSA is known or suspected.”

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Levitan, RM, MD. “[NO DESAT!](#)” Emergency Physicians Monthly. December 9, 2010.

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## # 124 Injuries to Equestrians

Magnificent steeds, companionable travels, and the thrill of speed have fascinated man for millennia. From Pony Books, to first horse, to Olympic victory, the challenge of teaming with an equine athlete brings joy and occasional injury.

Try to get the best witness evidence of mechanism of injury. The rider's use of alcohol can be a factor.

The mass and quickness of a horse's natural "prey animal" instincts can lead to injury from shying, running, rearing, kicking, even just shifting weight. Small children's lack of fear, and story-book expectations, can put them at risk when close to an animal.

Horses have strong jaw muscles for grazing; they can give substantial bites with the leverage of their teeth. *C.f.*, Weese, below.

Stepped on? Look for fractures and crush injury.

Head Injuries are common due to the rider's height above ground, falls, striking things, or being kicked. Helmets help. Cervical Spine Injury, *e.g.*, Christopher Reeve, is less common.

Trampled? Or, Rollover? Look for rib fractures; pelvic or extremity injuries; blunt trauma to head, chest, or abdomen. Strongly consider FAST exam and CT. Jockeys and rodeo performers wear Kevlar™ vests.

Dragged? Thorough musculoskeletal exam. Rule out head and neck injury. Cleanse all "trail rash."

Always review [Tetanus immunizations](#)' status.

Remember that even in conurbations and suburbia that there are still horses about.

"[Statistics & Facts](#)" [Riders4Helmets.com](#) ©2015 [no author]

Cooke, Sonia van Gilder. [Equestrian Eventing: The Olympics' Most Dangerous Sport? The slightest miscalculation in the cross country can cost medals, as well as possibly lives.](#) TIME magazine. July 28, 2012.

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Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

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## # 125 The not-so-lowly safety pin

One of the sure signs of a junior clinician in training, apart from fresh lab coat and hospital manual in the pocket, is the strong likelihood of one or more safety pins on the coat for the neuro exam.

There are more uses than just sharp-dull discrimination (I prefer an EKG caliper as it's good for two-point discrimination also) or pinning the elbow pocket on a triangular bandage arm sling. {Of course, remember to put the knot to the side of the neck rather than pressing centrally on the base.} Oh, yes, it can be used as a fish hook in a survival situation.

[See a video with a number of field/austere care uses.](#) A safety pin is good to secure a tube in extemporized cricothyrotomy, so that it neither is expelled nor lost in the trachea. Be sure not to damage the inflation line. It also can transfix the tongue for airway control if you don't have suture or a surgical towel clip.

Similarly, bent paper clips are often suggested as eyelid retractors; however, avoid those with poor plating or paint that may leave particles in the eye.

Paperclips or safety pins may be used as radiographic skin markers to point to the area of concern. Be brief. Avoid forgetting to remove the marker: the patient might acquire a pressure injury to the skin.

In a "smelly" room, a small gauze with one or two drops of an aromatic essential oil can be pinned to the curtain.

Always be sure that an improvisation is appropriate by policies and exigency of circumstances.

["Tactical Medical Solutions Improvised Medicine Part II- The Safety Pin"](#) No Author. No Date. TacMedSolutiond.com.

Crane, Desiree H., DO. ["Don't Forget Your Safety Pin – 30 Ways it Can Save Your Life"](#) [pdf of ppt] Desiree H. Crane, DO. UCSF-F Wilderness Medicine Fellow. High Sierra Wilderness Medicine Conference. February 2014.

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Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

Lin, Michelle, MD. [Tricks of the Trade in Emergency Medicine](#). CME Presentation. 2011.

## # 126 Dog and Cat Bites

Patients often have wounds from small mammals, frequently companion animals. (Familiarity breeds ... disregard for the animal's basic nature, regardless of socialization.) Some victims are too trusting due to childishness. Some are recklessly irresponsible ("My Pit Bull wouldn't do that; he's just protective.}). Some are drunk. Some, dog-fighters, are inhumane and criminal.

We must tend the psyche, as well as the wound, in the innocent; and teach that any animal, however tame, may respond to stimulus to its primeval self. The others need education as to their foolishness, and animal abusers need separation from animals, education, and the negative-reinforcement of the law.

Owners bitten by their own vaccinated pets may lie to you as to how they were hurt, fearing either quarantine of their pets or the prevalent misconceptions about the old Rabies treatment with abdominal injections. This may respond to current information re quarantine policies in your jurisdiction (sometimes, at "home") and education re modern vaccines. Explain, also, that different wound care and antibiotics would apply to an animal bite, and sub-standard care might be rendered if erroneously informed.

"A knife in the sink" would not have caused punctate ripping wounds, triangular tears, crushing, or repeated injury.

Many animal lovers are injured trying to separate fighting dogs. Refer them to ASPCA's web-article "[Breaking Up a Dogfight](#)." This is important knowledge in advance to avoid injury.

### [Animal Bites in Emergency Medicine](#).

Author: Alisha Perkins Garth, MD; Chief Editor: Joe Alcock, MD, MS.

Updated: Jan 26, 2015. <http://emedicine.medscape.com/>.

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## # 127 ACE-Inhibitor Angioedema

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

Of the angioedemas<sup>[Wilkerson]</sup>, those induced by use of ACE-Inhibitors, are not only scary from threat of airway closure, but unpredictable in occurrence, and with a growing population (40,000,000+) of ACE-I users is of increasing concern; incidence is 0.1%-0.7%. The presentation may not be immediately clear as to causation between types of angioedema which affects treatment choice. Incidence is greater in women, and five-fold increased incidence in African Americans.<sup>[Farkas]</sup>

Safety of the airway is the primary concern. Early evaluation by nasopharyngolaryngoscopy, or CT, is essential, and preemptive nasal fiberoptic-guided intubation of an awake patient would be the best choice when the airway is threatened. *In extremis*, cricothyrotomy or tracheostomy may be necessary.

Treatment approaches have been guided by case reports and series. Current research, funded by pharma, is only on expensive new drugs. Use of Fresh Frozen Plasma for enzymatic destruction of bradykinin excess is supported by case experience, but not by RCTs.

Epinephrine, antihistamines, and steroids appear to work only on *allergic histaminic* angioedema.<sup>[Farkas]</sup>

Treatment of ACE-I and hereditary or acquired angioedemas are discussed in the references. The references should be reviewed thoroughly as the scope is greater than can be dealt with here.

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## # 128 Cerumen Impaction

Three patients:

1. Trauma patient: R/O Hemotympanum.
2. Pediatric: Otagia; Otitis *media* vs. *externa*?
3. Adult with hearing loss or dizzy: Cerumen or posterior stroke?

What do you see? Wall-of-wax!

What to do? Remove it.

—Don't dismiss without treatment if +symptoms (dizzy, muted hearing, ?infection, etc.), or medical need to examine. Don't delegate if you have concerns. Always question if prior perforated TM or ear surgery (atrophic, weak TM).

- Most use irrigation/manual removal or combo (±softening drops).
- If a child might be uncontrollable, consider mild sedation, parental presence, and "papoose" restraint.
- Always "straighten" canal: adult/child. Use body-temperature irrigant; minimize force. Be compassionate. Educate.
- Absent ENT endoscope; there is value to old-fashioned head mirror and metal speculæ giving brighter, freer access due to broad light coaxial with your vision, and wider, reflective aperture. Some prefer a cold-light headlamp and operating loupes.

Roland, P. S., Smith, T. L., Schwartz, S. R., Rosenfeld, R. M., Ballachanda, B., Earll, J. M., ... & Wetmore, S. (2008). [Clinical practice guideline: cerumen impaction](#). Otolaryngology--Head and Neck Surgery, 139(3 suppl 1), S1-S21. [\[PDF\]](#)

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## # 129 *Tempus fugit* & Calendars

Calendars are not always handy, but sometimes are essential. What is your work process for dating the history?

How often have you asked in the HPI or ROS: What was the first day of your last normal "period?" Or, when did you first feel ill? The reply might be "The Wednesday before last" or "Ten days ago," or "Two days before the weekend?"

These *relative* dates can be very awkward when reviewing a chart sometime hence in the future. It can be the clue to the natural history of the disease, or the index case of a clustered outbreak. Exact times and dates of proximal causation or fatalities, may even be essential in determining sequence of deaths, order of inheritance, criminal relevance, or even successions in noble houses.

Think how confusing it can be if a leap year's day is thrown in, or even just "daylight savings time." Documentation of time is enhanced if a standardized and synchronized clock and notation (24 hour clock time, and an "atomic clock" reference for the standard) is used. Noting daylight savings time or standard time can give clarity on those nights when it changes.

Record what the patient says, and translate *relative* dates to the correct specification. If using a computer, one can look backwards on the calendar for the date; if making a manual record, try to have calendars on the wall or clipboard. For four decades, I've used not only a digital watch, but have wristband calendars on it to verify date *versus* description. This has helped clarify my charting so no confusion arises. Consider it, "for when the time comes."



### # 130 Epistaxis

Troublesome nosebleeds often come, or are sent, to the ED. What's been done so far? How to make it stop? Wouldn't you like to have an additional tool when it's awkward to pack?

ACEP <sup>[Gilman]</sup> has a good review; as do the links, also below, for Wagner, Iowa Head and Neck, and UCLA. However, the use of [FLOSEAL Hemostatic Matrix™](#), has some advantages for difficult to reach bleeds, except for those that are forcefully bleeding, especially in anticoagulated patients. Studies have been done. Discuss cost.

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

EMOttawa at The Ottawa Hospital has prepared a YouTube video upon this topic.

Gilman, Charles, M.D. [Focus On: Treatment of Epistaxis](#). ACEP News June 2009. ©2014.

[EM Ottawa. Floseal for Posterior Epistaxis - YouTube](#). Published on Apr 29, 2014.

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### # 131 Tongue Depressor Uses

In [# 102](#), use of the tongue blade to detect jaw fracture, reduce dislocated jaws, and as a shoehorn were described. Many other uses are known.

- Finger splint.
- Inserting oral airways.
- Applicator of topical medicines.
- Mixing crushed or liquid medicines in food.
- As a spoon in feeding patients.
- Help reset ground fault circuit interrupters near sinks.
- Measure depth of wounds, or voids.
- Reaching fallen objects in recesses.
- Open privacy locks on doors to rescue patient.
- Temporary door stop or locking prevention where security is not an issue.
- Two or more taped together as a nose-squeezer for epistaxis.
- For throat exam or laryngoscopy with a flashlight.
- Monitor cables organized to attached electrodes.
- As a stylus to indent skin (LP site) or sensory check.
- Prefabricate adhesive tape holders for ET tubes, insert behind patient.
- Label the bathroom key on its ring.
- Letter-opener.
- Smoothing wrinkles from adhesive strapping.
- Reinforcing joined tubings or cables.

- Moving and detangling bloody hair from scalp wounds.



*Tongue blade + electrodes = Tidy Cables!*

### **# 132 *Portrait parle'* – speaking a likeness**

There is considerable interaction between emergency care and law enforcement. We may deal with the same clients or their victims; and occasionally we may need the help or rescue of the other.

Some EDs may have video surveillance. Fewer still may insert photographs of the patient in the electronic record. Most will ask for a government photo identification to register the patient (if available).

In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, as criminal identification systems were developed, an essential step before fingerprinting was the *portrait parle'* that bespoke the appearance of the subject.

Sometimes, we may need to give a description of a person's physical appearance to authorities. Fortunately, we may already have some skill at this, as we so often chart a description of the patient's illness, lesion, injury, or general characteristics. We can practice this by careful observation. We should think of two types: full details for a complete identification, and a terse and hasty brief of essentials (usually followed by "*he went that way!*") to aid in a "hot chase."

Assessment for potential difficult airway teaches much about features of face, neck, habitus, and syndromic clues, which can be of great use. Eyes, ears, nose, mouth, face shape, and jaw line can enliven the visage presented. Practice estimating height and weight of patients, by comparison, or by height markers on doors or walls.

Body shape, gait, impairments, tics, or deformities may yield recognition at a distance. Voice quality, grammar and vocabulary, may give clues about the subject and his intellectual and psychological state.

If you are observing suspicious, threatening, or criminal behavior, be careful and "fade into the background." If you can safely take surreptitious photos or video with a smart phone, do so. High resolution digital images can be useful. If being controlled by the suspect and the phone's camera can be left running, or as an "open microphone" to the emergency number, useful information may be overheard.

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

Chicago Police Department. [How to Describe a Suspect](#). Copyright © 2013 Chicago Police Department.

Bailey, Lisa. [“How can police sketch artists draw what another person saw?” “Ask a Forensic Artist.”](#) Copyright © 2015.

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[Alphonse Bertillon](#)

[Anthropometry](#)

[Mug Shot](#)

### **# 133 Problems with tracheal stomas**

In emergency care, the skill of making an emergency surgical airway is rightly emphasized. However, we will more often be asked to evaluate outpatients having a problem with their established tracheostomy or laryngectomy.

1. Always call for Respiratory Therapist, Anesthesiologist, or Head & Neck Surgeon depending on resources. Not only do they have skills and tools; they may even know the patient. Extra hands, and extra brain, are useful.
2. Patients with stomas having anything more than the briefest stay in ED in transit to an appropriate bed should have heated aerosol mist delivered to them at the needed FIO<sub>2</sub>; a water trap for condensation should be included below the level of the patient. Absent such, mucous and sputum will thicken and plug airways.
3. If there is a stoma, respiratory failure, and no tube *in situ*, breathing support can be done by bag/vent with an infant mask, or smaller laryngeal

- mask airway held carefully to the "hole" with the neck straightened. In extremis, mouth-to-stoma can be done. {2015 ILCOR/AHA have not changed the 2010 recommendations as there has been no new study.}
4. Remember a laryngectomee will have no passage between lower airway and upper airway. Some tracheostomees may have the same problem from tumor or scarring. Most tracheostomees may be mask ventilated from above, or even intubated from above; the stoma may be occluded with an adhesive film or dressing.
  5. If the stoma is intact and healed, when possible use the appropriate cuffed tracheostomy tube, or appropriately sized cuffed endotracheal tube *per stoma* as a replacement.
  6. If the stoma is fresh, has had false passage or dissection, verify intra-tracheal placement by finger, bougie, optical stylet, flexible endoscope or small straight laryngoscope blade, to see or feel rings or even carina. Flexible devices allow railroading of a mounted tube into the trachea.
  7. If the presentation is of an older stoma with reported *intermittent tracheal hemoptysis*, there is grave potential of a tracheoinnominate fistula! **DO NOT PROBE BLINDLY**. Allow reasonable permissive hypotension; aggressive fluid replacement can "*pop the cork*" and restart bleeding. You may convert a "sentinel bleed" to a massive hemorrhage that hits the ceiling. Proper examination would be flexible/rigid bronchoscopy in the OR. <sup>[Ailawadi]</sup> In *emergency*, overinflate the cuff to achieve tamponade. If no tube, use endotracheal tube *per stoma*.
  8. Remember, also, that lung transplant patients <sup>[c.f., Cypel]</sup> may have recurring critical stenosis at the tracheal anastomosis, even if recently checked. If breathing has increased work and prolonged I:E times, especially if anxiety or work increase distress, there may be critical stenosis and negative-pressure pulmonary edema. If distressed, bi-level pressure noninvasive mask ventilation may ease work of breathing. There may be problems with granulation or infection. Consultation necessary.

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Additional FOAMED Resources {from Morgenstern, *op. cit.*}

- § [National Tracheostomy Safety Project](#)
- § [Respiratory Distress in a Tracheostomy Patient on LITFL](#)
- § [LMA to stoma ventilation on RESUS.ME](#)
- § [Trouble with Trachs - Recannulating the Stenosed Trach Site on Taming the SRU](#)
- § [Tracheostomy emergencies at Intensive](#)

### # 134 "**Over the river and through the woods ...**"

In the late fall and winter of the Northern Hemisphere, travel conditions worsen as holidays and social convention encourage journeys to visit family or vacation places. We are confident that technology will ensure a safe and comfortable journey, yet give insufficient respect to Nature's fierce rawness which is as ever strong as in horse-drawn days.

Every year there are flight delays, blizzards, vast chain-reaction car accidents, and stranded persons. We rely upon cell phones, GPS, carry-on luggage, and credit cards, to relieve all emergencies. However, exhausted batteries, absent signal reception, hunger, exposure, hypothermia, can make survival impossible from even a minor mishap.

In travel by personal vehicle, the most important things are:

- A detailed "flight plan" left with persons who can notify authorities when you are overdue (no unannounced deviations from the travel plan).
- Reserve supplies of appropriate clothing (for *outside weather*, not the heated cabin that you're in) and sources of warmth, water and food, lighting and signaling.
- Consider clothing carefully: cotton and denim are not suitable for wet and cold weather.
- Have warning devices if the vehicle fails or runs off the road (and *shelter off the road* away from the *next* collision).
- Conserve your signal batteries by preplanned calling for (say) five minutes every even hour after the initial attempt.

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

- Text, for lower battery consumption, if voice signals are not heard. Search authorities may be triangulating your “ping”; don’t run down the battery before they find you. Keep the battery warm inside your clothing for best strength.
- Don’t drain your car battery, when it can’t turn over the engine (but can still make a spark to light a fire). Your car is less of a shelter and more of an icebox. Running the engine for heat and light exhausts your precious fuel and risks carbon monoxide poisoning. Have, or make, a shelter.

[Veevid4u. Over the river and through the woods w/lyrics. YouTube.com.](#)

*c.f.* [Clinical Tips # 29 Warmest Holiday Wishes.](#)

*c.f.* [Clinical Tips # 70 What’s in your trunk?](#)

*c.f.* [Clinical Tips # 89-A Keep the patient warm.](#)

*c.f.* [Clinical Tips # 110 Seasonal safety & self-help outreach](#)

*c.f.* {For our Southern Hemisphere readers}  
[Clinical Tips # 115 Bring in the fans](#)

## # 135 Celebrations, Exacerbations, Excesses

Only 100 years ago, my mother was able, as a little girl, to see the Christmas Tree festively lit with candles, when a traditional *Fröhliche Weihnachten* was kept. There were rules: an adult with a fire bucket had to always be in the room; and it was only lit for 20-30 minutes. Now, there are competitions of homes elaborately lit with many thousands of computer-synchronized diodes playing to music. How far we have come! Whichever festival you celebrate, I hope that it is with great joy for all.

Most patients who come to us during this time because of their celebration will be due to their excesses or to exacerbations of their ongoing problems.

- Alcohol intoxication
- Dyspepsia, Gall Stones
- Poor control of Diabetes
- Hypertensive Urgency, Congestive Heart Failure.

Accidental causes may include fishbone ingestion, esophageal food boli, "slip & fall" injuries, *etc.*

An uncommon, but potentially fatal, problem of which to be wary at this season masquerades as so-called "Chest pain, N/V", that doesn't respond to cardiac treatment.

Herman Boerhaave <sup>[Whonamedit]</sup> reported the fatal case of Dutch Admiral Baron Jan von Wassenaer who ate a prodigious amount of food, vomited violently, and ruptured his esophagus causing a mediastinitis and shock.

Collected Clinical Tips from Advanced Emergency Nursing Journal, by The Editors.

Mortality is said to be 35% [Roy] ... "The best outcomes are associated with early diagnosis and definitive surgical management within 12 hours of rupture. If intervention is delayed longer than 24 hours, the mortality rate (even with surgical intervention) rises to higher than 50% and to nearly 90% after 48 hours. Left untreated, the mortality rate is close to 100%." [Roy]

In a case that I diagnosed, the patient's pain was refractory to morphine, and his nausea also refractory. Mindful of this syndrome, the key clinical question was "Which started *first*? The pain or the vomiting? He had vomited first, and other symptoms followed. Radiography confirmed the diagnosis; emergent surgical intervention was prompt, and the patient survived.

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### # 136 A burn for all seasons

In the Northern Hemisphere at this time of year, burn injuries may occur from fires due to faulty heating or wiring, and supplemental use of fire for heating or lighting. In the Southern Hemisphere, burns may occur from recreational or subsistence use of fire, and outdoor or sporting equipment.

Damaging the largest organ of our bodies can make a route for infection, alter its function, and make it difficult to maintain homeostasis to the point of death, or be permanently disfiguring.

- Know your local resources for onward care.
- Ensure early notification by, and good training of EMS.
- The threatened airway should be controlled early.
- Begin protocol-driven fluid resuscitation and analgesia.
- Protect Burn Wounds and give care by burn center protocols.

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\*[American Burn Association website.](#) [A resource page of burn center and disaster related information.] ©2014.