

# **Advanced Emergency Nursing JOURNAL**

# Presents Collected Clinical Tips©

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

# 2016

# # 137 Hypothermia & heart-warming thoughts

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Presently, the tilt of the earth tips the Northern Hemisphere farther (and colder) from the sun, and the Southern Hemisphere is closer (and warmer) to the sun. This week, we look at Hypothermia, and next week, we will look at Hypothermia.

The best understandings, and treatment, for Hypothermia, are complex and unsettled. 
[Giesbrecht. Li.] The 2015 AHA-ILCOR Guidelines make no changes for accidental hypothermia from 2010. [Lavonas]

- Remove from cold stress to shelter. The heat loss from conduction, convection, and evaporation, due to cold/wet/wind conditions, is intense.
- Handle the profoundly cold victim gently to avoid dysrhythmias.
- Use low-reading thermometers and probes. Do not use Tympanic Thermometers. Avoid intra-fecal placement. [Li]
- Initial measures include removing wet clothing and drying victim; warmed & humidified oxygen; warmed IV fluids; forced air warming blankets or heat packs to groin, axillae, abdomen, neck and head.
- Check Glucose.
- Larger hospitals should rapidly place vascular access catheters for bypass or ECMO. If not possible, Hubbard Tanks can be feasible, if awkward. Warm cavitary, or open-chest cardiac lavage are possible methods. [L]
- Mildly hypothermic patients who can drink and eat should take warmed nourishing broths or soups.
- Resuscitation should be aggressive and prolonged, and declaration of death should be avoided unless there is severe danger to rescuers or the patient has a

frozen chest. Remarkable recoveries (without neurologic sequellae) have occurred even in profound hypothermia.

\*Giesbrecht, G. G. (2001). <u>Prehospital treatment of hypothermia</u>. Wilderness & environmental medicine, 12(1), 24-31. Also at Expeditionmedicine.co.uk.

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\*Zafren, Ken, MD FACEP. Alaska Department of Health and Social Services; Division of Public Health; Emergency Medical Service Unit Downloads - Publications. Revised Cold Injuries and Cold Water Near-Drowning Guidelines. [PPT] 1/4/2016.

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<u>Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care</u>. Circulation, 132(18 suppl 2), S501-S518. [PDF]

\*Li, James, MD. Hypothermia Treatment & Management. Updated: Sep 25, 2015. Medscape.

Weinberg AD: Hypothermia. Ann Emerg Med. February 1993;22 (Pt 2):370-377.] <u>Hypothermia Special Situations</u>. Found at <u>Hypothermia.org.</u> Hypothermia Prevention, Recognition and Treatment. Articles, Protocols and Research on Life-saving skills.

#### # 138 Hyperthermia: just chill, man

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The least common and most deadly of heat stress illnesses is Heat Stroke. Not merely dehydration with electrolyte loss, but an inability to regulate body temperature with hyperthermia leading to multi-organ failure. Sometimes classified as either exertional or "classic"/non-exertional. Other factors can be impaired thermoregulation by aging, drug effects, or inability to escape the environment. Prolonged "heat waves" in temperate climes may affect many who are unprepared in training or equipment. Major heat waves producing excess deaths include: Chicago 1995 [U.Chicago]; Europe 2003 [Robine; Ledrans]; India 2015 [Reuters]; Pakistan 2015 [Masood]; and may be a trend with global warming [Mallapur].

Characteristically, there is altered mental status and loss of consciousness. Previously loss of sweating was a defining element, but it is no longer so. History of collapse from heat stress, altered mental status, and rectal/core temperature  $\geq$ 40°C (may be lower if there were prior cooling attempts) = Dx. of Heat Stroke.

- Remove or shelter from environment.
- Antipyretics are useless. Dantrolene has no value.

- The body loses heat by radiation, conduction, convection, and evaporation. Maximize these, rapidly <30'. Beware delay by CT. [U.Chicago].
- Monitor temperature, VS/ECG/Labs/Urine output & concentration.
- Rehydrate.
- Cool to ~38°C, observe for "overshoot" hypothermia; continue monitoring. Watch for rhabdomyolysis, kidney injury. Follow Labs.

\*Nickson, Chrs. 3014. Heat Stroke. LITFL | Critical Care Compendium | Heat Stroke, Life in the Fast Lane.

\*Tagg, Andrew. January 23, 2014. <u>It's getting hot in here!</u> <u>Don't forget the bubbles.com</u>. [Pediatric aspects of treating and preventing heat stroke.]

Wu, X., Brady, J. E., Rosenberg, H., & Li, G. (2014). <u>Emergency department visits for heat stroke in the United States</u>, 2009 and 2010. Injury epidemiology, 1(1), 8. [PDF]

\*Helman, Robert S., MD. Heatstroke. Updated: May 01, 2015. Medscape.

\*Walter, E., Venn, R., & Stevenson, T. (2012). <u>Exertional Heat Stroke—The Athlete's Nemesis.</u> Journal of the Intensive Care Society, 13(4), 304-308. [PDF]

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Reuters. <u>India heatwave: death toll passes 2,500 as victim families fight for compensation</u>. <u>The Telegraph</u>. June 2, 2015.

Masood, I., et al. <u>The Deadly Heat Wave of Pakistan, June 2015</u> <u>The International Journal of Occupational and Environmental Medicine</u>. Vol 6, No 4. October 2015.

\*Schraga, E.D., MD. Cooling Techniques for Hyperthermia. Medscape. Updated: Dec 14, 2015.

Proulx, C. I., Ducharme, M. B., & Kenny, G. P. (2003). <u>Effect of water temperature on cooling efficiency</u> during hyperthermia in humans. Journal of Applied Physiology, 94(4), 1317-1323.

# # 139 What you were thinking ...

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You are "coding" a patient in whom resuscitation is futile. You are fortunate if you have a staff member, —for family liaison, who is gifted with thoughtful speech and a compassionate nature, who can ascertain and communicate family mood and needs and prepare them to witness (if desired) the resuscitation and cessation of efforts.

Opening discussion with the survivors isn't always easy. Many will take the news with grace, and some will crash into Kubler-Ross's "Denial" stage in long-lasting loud hyperdynamic anguish (becoming the *new* patient). Some will have stoically prepared for this moment: I've found caregivers who have washed and redressed the body *before* calling the emergency service to provide a declaration of death.

Most people will have a layman's sense that death has occurred or is inevitable, especially if the person was known to them as ailing, or elder, or there has been recognizable trauma. Lack of response, movement, breathing, or pulse, is very telling.

If your liaison has communicated the family's expectation, or you note a pragmatic affect in the family (who may even have transported the patient or attempted resuscitation), it can be useful and therapeutic to lead off with "Yes, what you were thinking is true ... your mother died today."

Or, if a little uncertain, ask "Tell me about how she was doing. What did you expect would happen?" You may hear immediately about her most recent decline, and "we didn't think that she had much time left." This lets all of you to fill in the data gaps, and reveal that they *had* expected death. It gives respect to their expectations and is a good opening for heartfelt conversation.

It's good to use the word die or dead (in a frank and gentle tone) to emphasize the reality rather than euphemisms that are less finite or have religious overtones. Monitors should be off at the time of viewing (lest there may be spurious post-mortem activity).

Explain, or delegate the task, what happens next: hold for coroner or mortuary, PMD for certification of cause of death (when possible), and ask about immediate religious or family needs for now, and the next few days.

Perhaps, Hospital Social Work can follow up or facilitate resources. Organ Donor networks usually prefer themselves to discuss options with the identified family representative. Offer privacy, coffee or food, and telephones (although cell phones have largely taken over) to their use.

# # 140 Suctioning the swamp

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Here's an excellent article regarding a recurring airway problem (and nightmare), Twitter comments, and useful video links to prevent aspiration and soiled airways.

\*Anesthesiology News advice against flooded airway:
Han, JS & Fisher, JA. <u>Airway Management During Persistent Flooding Of the Oropharyngeal Airway - Anesthesiology News</u>. January 21, 2016. <u>Anesthesiology News</u>.

Some Twitter commentary on above:

- Overwhelming regurgitation/hematemesis Diverting Esophageal Tube
- Intubating the Gastrointestinal Bleeder
- Suction-Assisted Laryngoscopy Assisted Decontamination (SALAD)
- Bougie-Assisted Tactile Blind Digital Intubation
- <u>DL CMAC3 Mannequin Suction Epiglottoscopy Laryngeal exposure ELM Bougie Tube</u> delivery
- Dynamic SALAD Meconium Aspirator Weingart
- Influence of Ramped position on aspiration SALAD Simulator
- Upgraded SALAD Simulator Hi-D Suction Dr Riess

# Don't forget to Tip the Table! (Trendelenburg's Position to drain airway)

\*Own the Airway! Chris Nickson's overall review of emergency airway management with Internet Videos. 2014. LITFL.

#### # 141 Skin Marker and Scalpel on the Airway Tray?

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"There are some things for which there is no substitute." While that might describe your specialty coffee or other elegant object, when it comes to a bad airway — you don't want to have to be searching for things!

One Attending Physician starts each shift by asking each provider if he or she had a scalpel in the pocket.

Q. Who can be the most critical person in an intubation?

A. The *last* person to stock/check the Airway Cart!

Q. In the military, whose responsibility is it if the company cook makes everyone ill?

A. The Company Commander! This is the difference between authority to do something and responsibility to ensure that it's right.

Of course, you always check it yourself at the shift beginning, and before arrival of the patient. But, sometimes you just walk in and it's already chaos.

"For want of a nail, the battle was lost." Great matters can hang upon small things and screw-ups. Prepare for error.

Assess the airway. Give each patient a Laryngeal Handshake. If high potential for cricothyrotomy, **Mark** the incision point of the cricothyroid membrane, prep. Scalpel – Finger – Bougie – Tube.

If you prep your tubes with a bougie instead of the usual stylet, you'll be able to see more and deal with a difficult tube placement with less help in a more self-reliant way; there are several different grips to control the proximal end. This can be done with the smaller (6.0 mm ID) ETT for cricothyrotomy. Either approach can give you tactile confirmation of tracheal rings.

Trimble, Tom. Fix This Airway! ©2006-2008 Emergency Nursing World!

Chow, Yen. Levitan, the "Laryngeal Handshake" and the "Cartilaginous Cage". November 17, 2013. PHARM: Pre-Hospital and Retrieval Medicine.

Levitan, RM. <u>Cricothyrotomy with laryngeal handshake, sternal stabilization, tracheal hook as a place holder, Shiley insertion.</u> 2015. <u>Vimeo</u>.

Bryant, Rob. The Surgical Airway 2014.

Weingart, Scott. EMCrit Podcast 131 – Cricothyrotomy – Cut to Air: Emergency Surgical Airway. August 26, 2014. EMCrit.org.

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Cong, Minh Le. D grip bougie by Dr James Ducanto. 2013. PHARM: Pre-Hospital and Retrieval Medicine.

Cong, Minh Le. <u>DuCanto & Chow describe an improvement on the Kiwi & Pistol Bougie grips</u>. 2013. PHARM: Pre-Hospital and Retrieval Medicine.

Ducanto, James Twitter page. C.f., An alternative to D-Grip by Yen Chow @TBayEDguy

# # 142 Stand up on a good footing, and brace!

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As part of your own health maintenance and injury prevention, protect your body parts. You may be in (relatively) good health now, but our work can be physically demanding (instantly), exhausting, and likely to incur acute injury with life-long consequences! Think of how many colleagues you have known to have bad backs, or are tired and "snappy" at shift's end.

Stylish footwear may "feel good" psychically, but are they supportive and protective physically? Shoes should be closed with reinforced toes, have supporting insoles or even an orthosis (for arch support and good posture), and sturdy non-slip soles. Essentially, you are "hiking" each day and you want that sort of shoe or boot. Get good "cushiony" socks too. You want to be able to stand for a long procedure, bear a heavy load if need be, avoid a "slip & fall", be protected from errant gurney wheels going over your toes (or give a good sound self-defensive kick if you must).

Consider whether you would be helped by elastic support stockings to lessen fatigue and to improve circulation. Your safety and comfort helps your energy and mood as the hours go by. Without a good footing, your musculoskeletal system will scream at you.

Even if you can delegate most "heavy lifting' to others, especially if you have prior back problems, consider a supportive brace for the long standing, the sudden rescue assist, and as a mental reminder to get help and use good technique. Even bends to adjust a wheelchair can be damaging. Back pain kept me off work for a week after slipping a diaper under a 5 kg baby's butt that was a little lower and farther reach than I thought it to be.

A regular fitness program and shedding some "extra" weight can add to your strength, mobility, and endurance. Adequate sleep and rest breaks help both physical and mental fitness too.

#### # 143: Some Penetrating Remarks

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Size does matter ... When piercing tissue with a needle to either deposit medication or to withdraw some substance, it's important to have sufficient lumen to convey the substance easily, sharpness and stiffness to overcome resistance, and length to reach the intended tissue.

Studies show that needle thoracotomy to relieve tension pneumothorax often fail due to insufficient length of needle, even lean military men may have thick chest walls and the obese trauma victim may have piles of tissue to pass through. Urging of scalpel-finger thoracostomy has resulted, yet longer 14 gauge, 12 gaauge, and 10 gauge cannulae over needle units are available.

I recall a large patient who needed a deep IM injection in a specified location. I could not successfully compress the adipose to ensure a standard needle would reach. Pausing, I substituted a spinal needle, bringing it in behind my back and quietly asked "Could you turn towards the window?" (away from the needle) and made a good injection to the correct depth without frightening the patient as to needle length.

In a difficult airway situation, preemptive subglottic oxygenation may be done with a central line catheter or sheath to support efforts at endotracheal intubation or other management; oxygenate; and provide a route (with wire) for cricothyrotomy cannulation.

With large needles or cannulae, the resistance to insertion increases due to cross-sectional area or friction of the material of the cannula. This can push the skin off the needle or move the structure being reached. It can be useful, like a carpenter, to make a smaller-bore hole with a finding needle or your local anesthetic needle, before the larger one (a skin nick is sometimes necessary).

Weingart, Scott. 2011. Podcast 62 - Needle vs. Knife II: Needle Thoracostomy?. EMCrit.org

Bishop, D. G., Farina, Z., & Wise, R. D. (2011). <u>Difficult airways: a reliable "Plan B"</u>. Southern African Journal of Anaesthesia and Analgesia, 17(2), 186-189.

#### # 144 That's gross ... Constipation

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The number 144 is a merchant's "gross," a unit of 144 like items, *i.e.*, 12 dozen or 12 X 12. In our case, this is the one hundred forty-fourth episode of weekly Clinical Tips for you, each with several useful hints. Imagine, a quarterly journal that gives you tips *every week!* {Please "like" or follow us on <u>Facebook</u> and <u>Twitter</u> to receive reminders.}

A chief complaint of "Constipation" strikes some as a self-care or primary care deficit yet may represent pathology. History and exam should be sufficient to determine threatening pathology; (ultrasound may be helpful and avoid radiation); referral to primary care (or pt's specialist) is desirable. Do not omit reviewing medications and polypharmacy. Ask the patient what he has tried so far. {I recall a patient who died from perforated rectum and water intoxication.}

Counseling on diet is needed, usually, as much as relief of symptoms. Special care is needed if there is history of adhesions, cancer, gastrointestinal disease, past resections, or stomas. A needed radiologic study with water-soluble contrast may be both diagnostic and therapeutic.

Distal stimulation, *e.g.*, suppositories, enemas, may provide some relief but do not address motility of the intestinal column "from above." Provide the patient who is to be discharged with a plan to continue resolution and follow-up.

If stools are very hard, a long interval has passed, or fissures or hemorrhoids cause distress, oral Mineral Oil may provide a film between stool and lumen to ease passage

and encourage motion. Caveats are competent swallowing (aspiration), and that chronic use may interfere with absorption of oil-soluble nutrients.

Likewise, a mineral oil retention enema may soften hard stool in the rectal vault and precede a cleansing enema. All solutions should be warmed to body temperature for comfort and to avoid cramps.

Fecal impaction may masquerade as urinary retention that it is causing, and *vice versa*: a large volume in one may obstruct outflow of the other.

Basson, Marc D, MD, PHD, MBA, FACS. Constipation. Updated: Sep 29, 2015. Medscape..

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Ramakrishnan, K., & Scheid, D. C. (2003). <u>Opening Pandora's Box: The Role Of Contrast Enemas In Abdominal Imaging</u>. The Internet Journal of Gastroenterology, 2(1).

Gay, Spencer B., MD, et al. <u>Introduction to Gastrointestinal Radiology</u>. 2013. University of Virginia Health Sciences Center, Department of Radiology. Accessed. 02/21/2016.

#### # 145 Stress-Dose Steroids: Don't Stress! Give it!

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- Primary Adrenal Insufficiency arises when the adrenal glands fail from infections, autoimmune atrophy, or some metabolic conditions and do not secrete Cortisol, Aldosterone, or Androgens.
- **Secondary Adrenal Insufficiency**, can occur from failure or destruction of the Hypothalamus-Pituitary-Adrenal Axis that regulates natural Cortisol secretion (as in surgery or infarction).
- Adrenal Suppression can be caused by the corticosteroid therapy that benefits
  many acute or chronic conditions. This exogenous dosing suppresses natural
  production ("Why should I work so hard?"); inadequate recovery causes
  Secondary Adrenal Insufficiency that may not meet the needs of physiologic
  stress: and Adrenal Crisis (no replacement or inadequate replacement when in
  physiological distress) may threaten life.

It is easy to underestimate the physiological effect of the "total steroid burden" who may receive inhaled, intranasal or sinus lavage, topical, oral, or parenteral doses acutely or chronically. For those with severe or brittle disease, supraphysiologic doses may be frequent. This information may not be readily available from multiple providers or by a patient who discounts some atopic problems as less serious than others or doesn't realize the consequences of treatment. You may have to detect the clues yourself. Symptoms of insufficiency and early stress can be non-specific and seem like the stressor illness itself, which may prevent the patient, or his providers, from recognizing dire straits.

Question the failure to respond to treatment in patients with fever, nausea, vomiting, and chronic illnesses treated with steroids. The patient who "crashes" quickly from illness or trauma, especially if disproportional to the problem is suspect.

These patients can be rescued with <u>timely</u> "stress doses" of hydrocortisone, often astonishingly so. If history is suggestive, (history is critical) an immediate "spot" cortisol level can be drawn; or if need be, empirical treatment (without waiting for confirmation) can be done. [Klauer] Dexamethasone allows treatment without interfering with testing. [Klauer] Stimulation-Suppression testing can be done later.

For Rapid Sequence Intubation, Ketamine would be a wiser choice than Etomidate (further suppression). [Klauer] Do NOT wait for "the Hospitalist" or "Admitting Service" to make the decision for stress dose steroids. It should be done early as part of the 'resuscitation'. {Check your local policy.}

While there is some controversy whether *routine* perioperative stress doses should be given when lower stress is expected, or prior usage is remote, *etc.*; it is reasonable to give a single dose in the emergency department to patients who are not doing well.

Ideally, such patients will have Emergency Medical Identification {my <u>personal</u> recommendation is <u>MedicAlert</u>}, a self-administration kit (hopefully used before arrival), or cards or letters from their physician(s). If not, that recommendation or arrangement for Emergency Medical Identification should be made before discharge if a significant crisis was endured. Follow-up with an endocrinologist.

Ahmet, A., Kim, H., & Spier, S. (2011). <u>Adrenal suppression: A practical guide to the screening and management of this under-recognized complication of inhaled corticosteroid therapy</u>. Allergy Asthma Clin Immunol, 7(7), 13.

Margulies, Paul, MD, FACP, FACE, NADF Medical Director. <u>Secondary Adrenal Insufficiency</u>. <u>National Adrenal Diseases Foundation</u>. Accessed 2/28/2016.

Wakim, J. H., & Sledge, K. C. (2006). <u>Anesthetic implications for patients receiving exogenous corticosteroids</u>. AANA journal, 74(2), 133.

Whitcomb, W., & Safety, M. P. <u>Are Stress-Dose Steroids Indicated in Patients with Adrenal Insufficiency Hospitalized with Noncritical, Nonsurgical Illness?</u> December 1, 2010. Accessed 2/28/2010.

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Klauer, Kevin M., DO, EJD, FACEP. <u>Adrenal Crisis in Emergency Medicine</u>. Updated October 30, 2015. Accessed 2/28/2016.

# # 146 Uplifting Thoughts in Critical Care

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Part of the Rapid Response Team (Medical Emergency Team)?

No IV Pole in the room, hallway, or lobby, to which you have responded?

#### Try these:

- Hang the bag from the hooks on the bed's curtain.
- Get a coat hanger from the closet and use it to hang the bag from the rail.
- Assign bystander to play "Statue of Liberty" with the bag. "Keep it up!"
- Several strips of tape will strap the bag to the wall.
- Squeeze the bag and clamp the tubing under pressure to flush.
- If not needed during actual transport (more than 3 minutes), do a proper flush and clamp under pressure.
- Least sure in delivery and needing more effort to ensure transit of drug through the tubing, is the weight of the patient's shoulder or hip to squeeze the bag. Be wary of the air in the drip chamber that it does not go inline as an embolus.
- If a pressure-infuser, or blood-pressure cuff is used around the bag (with an air-free system), it can be difficult to know how much fluid is given.

#### # 147 The Ides of March - He didn't have a chance

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The assassination of Julius Caesar by a faction within the Roman Senate has shocked and fascinated people since it occurred in 44 BC on March 15th (The Ides of March). The murder succeeded, but the attempt to "save" the Republic ended it, with Octavian becoming Emperor Caesar Augustus. The conspirators all died in the 3-year aftermath, failing to control the military and the government.

55 yo  $W_{\circ}$ , assaulted by erstwhile friends and colleagues. No guards present. Supposed "weapon-free zone." Daggers smuggled within document cases and togas. The victim was approached, surrounded, a distracting ploy of a scroll being given; then seized, and his purple toga ripped from his shoulder. Startled, Caesar stabbed one in the arm with a metal stylus, and resisted, but was overcome by the furious gang, who even wounded themselves in the tumult. 23 wounds to Caesar are reported, the physician saying one to the chest was fatal.

"The Liberators", as they styled themselves, were perhaps 40-60 in number. One group did the deed; another probably repelled intercession; one person, outside, delayed Mark Anthony from entering; and a band of gladiators was in reserve nearby. Exact cause of death is uncertain, but most likely exsanguination or the intrathoracic trauma. It is likely that 6 meters of woolen toga and a linen tunic might have somewhat resisted or deflected the blades had not the garments been pulled away.

Parallels to modern gang assaults are obvious, and the tactics are not dissimilar to prison murders by "shank" (improvised stabbing implement). "When you need a cop, there's never one around." 'Dagger-Free Zones' are no protection. One can resist with what is at hand, but larger groups prevail. Always be alert and know the nearest exit.

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# # 148 Nothing stinks like that except ...

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Bitter Almonds & Cyanide [CDC]

Fruity-Acetone breath odor. [Hamdy; Westerberg]

Melena/Hematochezia [Sarko]

Retained Foreign Bodies [Rempe]

Beer/Bread or Fish [Girerd; Hainer]

Toxic Socks Syndrome [Morse]

C. difficile Colitis [Cohen; Burdette; Rao]

Bilious or Feculent emesis [Anderson]

Oil of Wintergreen [TOXNET]

"Strep Throat" Breath. [Artemis]

- Many odors from patients are distinctive, and thought to be diagnostic.
- Some are greatly malodorous and offensive.
- Some odors are not recognized by all people.
- Accuracy, sensitivity, and specificity are variable, not well documented, and not always reproducible in lab tests.
- Confidence may be misplaced or rewarded.

Osborne, Bridget, Dr. Putting the 'nose' back in 'diagnose.' Obs Gynae & Midwifery News. April 3, 2013.

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Bijland, L. R., Bomers, M. K., & Smulders, Y. M. (2012). <u>Smelling the diagnosis: a review on the use of scent in diagnosing disease</u>. The Netherlands journal of medicine, 71(6), 300-307.

Centers for Disease Control. (2004). Facts about cyanide.

Hamdy, Osama, MD PhD. Diabetic Ketoacidosis. Updated: Aug 13, 2015. Medscape.

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American College of Medical Toxicology, Guidance Document: Management Priorities in Salicylate Toxicity, © 2016.

Artemis. You Stink! MothersInMedicine.com. August 19, 2008.

# # 149 The Crux of Asphyxia

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The last week is holy to several religions, and for many people the central event is in remembrance of "an in-custody death" (an execution, rather than accident) by "positional asphyxia." While there have been many theories as to the cause of death for Jesus; ably recounted by DeBoer & Maddow [q.v.] (Emergency Flight Nurses), we may never know which factors predominated in causing death. Was the cause of death: positional asphyxia; shock; hemorrhage from wounds; cardiac rupture; stress cardiomyopathy; intrathoracic injuries; hypothermia; or the soldier's spear to his side?

Biblical accounts lack the CSI accuracy of modern science. While the disciple Thomas needed to check the wound, there was no Medical Examiner; belief and faith is sufficient for religious purposes.

Similarly, in the Common Era, there have been puzzling and vexing deaths in custody or in "use of force" incidents ascribed to an Excited Delirium Syndrome. It is agreed by ACEP that such a syndrome exists but "with uncertain, likely multiple, etiologies." [Vilke JEM]. ACEP supports appropriate sedation and analgesia by well-trained ACLS units. [ACEP]

Discussion in the last three decades has been confused because of drug or alcohol abuse, psychiatric disorder, unhealthiness of the subjects; and the force, chemicals, or electrical weapons used by police [Truscott; Hutson].; and the contentions of affected groups

and their advocates regarding "choke holds," positional asphyxia, hobble restraints, and interference with breathing during takedown. [Takeuchi]. Doubt has existed as to actual existence of the syndrome. It has also been noted that even in patients with ExDS, there have been true anatomic causes of the agitation, whether fatal or in surviving patients. [Kodikara]

Treatment has been reviewed by Takeuchi and Vilke [JFLM].

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American College of Emergency Physicians. <u>Out-of-Hospital Use of Analgesia and Sedation</u> in <u>Policy</u> Compendium 2016 Edition.

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#### # 150 There's a word for it ...

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Would you like to better understand older patients? Have fun with historical novels or treatises? Pepper your handoffs with charming *bon mots*? Make subtle references for colleagues without disclosing to patients?

Then, you should apply eyes and ears to learn some of the lost language of medicine. Vintage, even archaic, terminology can add cultural luster to otherwise humdrum daily usage which itself is likely to be overrun with the acronyms and abbreviations *du jour*, or the constrained coding of electronic medical records.

Certainly, one shouldn't enter any of these *mot*s <u>justes</u> in official records or do anything that degrades the precision of modern *nosology* or clinical descriptions.

Apart from medical historians and etymologists, surprisingly, genealogists often have resources (for translating old documents).

Consumption or pthisis.

French Pox or Naples disease.

General Paralysis of the Insane.

Softening of the Brain.

**Shaking Palsy. King's Evil.** 

**Coal Miner's Lung or Black Lung.** 

Wool-Sorters' Disease Milk Leg.

Ague Blackwater Fever

**Grippe Grocer's Itch Dropsy**.

Scrivener's Palsy.

**Summer Diarrhea/Cholera Infantum.** 

**Bloody Flux.** Camp or Jail Fever.

Lumbago Rheumatism.

Pott's Disease. Weil's Disease.

Blind Drunk Kissing Disease

Mother's Ruin.

One sees a focus on symptoms or place, rather than true pathologic process or organism. Lack of precision, and regional variation, cause overlap of definition (one term includes several things) or different terms for the same thing.

Better sanitation, prevention, cure, and urban specialization of labor have made some diseases go away or be rarely seen. Some still torment us, depending on where we live.

WhoNamedIt.com to learn the eponyms and of the persons for whom things are named.

Old Disease Names Frequently found on Death Certificates.

Medical& Medicine » Diseases & Medical Terms in Cyndi's List of Genealogy Sites on the Internet.

List of Medical Terms found On Old Death Certificates, Doctors Reports and in Old Letters,

Some Medical Terms Used in Old Records.

Old Disease Names By Sylvain Cazalet ©2009.

Glossary of Medical Terms Used in the 18th and 19th Centuries.

Diseases on Scottish death certificates from 1855.

"A Description of Typical Diseases in Urban Neighborhoods of the United States at the Turn of the 20th Century," by Paul Buelow at University of Illinois at Chicago.

" Health and Illness in Chicago's River Wards and the Near West Neighborhood" by Paul A. Buelow at University of Illinois at Chicago.

#### # 151 Pediatric Procedures

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

<u>Flavoured Masks - Make Your Own Anywhere</u>. Sedating a child? Need to avoid <u>Mask-Fear</u>? As Mary Poppins said: "In ev'ry job that must be done There is an element of fun You find the fun and snap! The job's a game."

Many parents are already helping with their phones: <u>Induction Distraction for Kids</u>. Keep child warm & snug pre & post-procedure, hand-in-hand with a *calm* parent is ideal.

<u>COMFORT TIPS: Techniques for Keeping Children's Hospital Experiences Positive</u> from <u>ChildLife.org</u>
<u>Pediatric EM Morsels</u> makes a nice comparison of <u>Online Educational Tools</u> and suggested videos of <u>PEM procedures</u>.

<u>Successful Tracheal Intubation In Children With Difficult Airways: Seven Secret Techniques Every Anesthesiologist Should Know.</u>

The Congenital Difficult Airway In Pediatrics.

# # 152 Gardening ... a healthy hobby?

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

#### [When asked what happened to their first drummer]

David St. Hubbins: "He died in a bizarre gardening accident..."

Nigel Tufnel: "Authorities said... best leave it... unsolved."

This is Spinal Tap (1984)

The very thought of gardening betokens healthy sunshine, growing things, communion with the earth; a low-risk activity. Hmm, let us see. Solar radiation. Lifting heavy things. Sharp & heavy tools; chain-saws & power mowers. Wet surfaces & falls. Ladders. Toxic chemicals. Fungi, molds, & bacilli. Manure. Thorns. Animals & Insects. What could possibly go wrong?

Although well controlled by immunization, <u>Tetanus</u>, which is omnipresent in gardening and agricultural milieu, is potentially the most lethal threat from even a small wound. Emergency care providers are renowned for their vigilance in its prevention. After the primary series, every ten years a booster is due.

Wounds need meticulous care, reliable follow-up, possible culture, and consider antibiotics.

Elders are disproportionate spenders in gardening and suffer more accidents and injuries then other age groups: tripping on hoses; falls; rollovers with riding mowers. Their injuries are more likely serious or fatal.

Chronic unprotected exposure to the sun's <u>UV rays</u> thins skin and makes it friable, therefore easier to wound and difficult to repair.

The use of <u>chemicals</u> is less in recent years, and some past classic killers are no longer permitted. However, transcutaneous absorption, inhalation, eye splashes, or ingestion from unlabeled containers, still occur.

Water features, pools, or spas, claim <u>drowning</u> deaths each year. Vector control of <u>mosquitoes</u> by draining still water is important for <u>Malaria</u>, <u>West Nile Virus</u>, and <u>Zika Virus</u>.

Baldwin, Ian. Crash! The 2015 National Gardening Survey Returns Us to Reality. Aug 17, 2015.

U.S. Consumer Product Safety Commission. SPECIAL REPORT: Emergency Room Injuries Adults 65 and Older. July 18, 2012.

Poison Control Hotline 1-800-222-1222.

National Pesticide Information Center (NPIC) 1-800-858-7378.

CDC Tetanus Vaccines & Immunizations Home,

Tdap VIS (Vaccine Information Sheet).

Td VIS (Vaccine Information Sheet).

CDC New Vaccination Criteria for U.S. Immigration FAQs

Baumgardner, D. J., MD. <u>Soil-Related Bacterial and Fungal Infections</u>. 2012. <u>Medscape</u>. Originally in J Am Board Fam Med. 2012;25(5):734-744.

#### # 153 Empty the tavern; fill the ward

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Every ED treats drunks. Some are incidental to a nice party. For others, as one chronic inebriate said: "I'm *not* an alcoholic. I'm a <u>Drunk!</u> It's a *Lifestyle!* If you're an *alcoholic*, you have to go to meetings."

All inebriates need thorough standardized exam. Beware of hypoglycemia, hypothermia, co-intoxicants, concealed and confounding conditions, and deeper trauma. All should be nursed and supervised continuously in a high-visibility area; unless some are mutual combatants, they should be cohorted together for nursing ease. Aspiration and falls are continuing risks.

"Regulars" should have Case Management available to them for consistency of care and coordination of public services. All should get "brief interventions" to encourage change towards sobriety.

Youthful drinkers should be talked with, not only about this episode, but how it was mere luck that they avoided accidental injury, death, or "what's worse than death —survival in a state of dependency or vegetative existence; victimization by others bent on theft, sexual crimes, or worse predation. Attempts should be made as to identifying

precipitating events or life problems driving this behavior. Emphasize the importance of remaining in control of self and ability to make safe decisions that avoid victimization potential.

Always maintain a positive outlook and encouragement for detoxification and rehabilitation. "The Drunk" above, and others, despite years of public drunkenness achieved life-changing sobriety. It <u>was</u> worth it! To see "regulars," whom everyone knew on a first-name basis, resume productive and satisfying lives is truly a great reward.

Levine, Michael D., MD. Alcohol Toxicity Treatment & Management. Mar 25, 2015. Medscape.

Scott R. Snyder, BS, NREMT-P, Sean M. Kivlehan, MD, MPH, NREMT-P, Kevin T. Collopy, BA, FP-C, CCEMT-P, NREMT-P, WEMT. Acute Alcohol Poisoning. Mar 1, 2014. EMSWORLD.

Meehan, Timothy J. <u>5 Minute Emergency Consult. Alcohol Poisoning.</u> (sample). No Date. <u>Emergency Central at Unbound Medicine.</u>

Verelst, S., Moonen, P. J., Desruelles, D., & Gillet, J. B. (2012). <u>Emergency department visits due to alcohol intoxication: characteristics of patients and impact on the emergency room</u>. Alcohol and alcoholism, 47(4), 433-438.

#### # 154 "Just in case ... "

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Are you a "Be Prepared" kind of person?

Do you respond to codes in other parts of the hospital?

Do you do split-time as a hospitalist?

Are you at an Urgent Care Facility?

Are you at a small or Critical Access Hospital?

Do you go on medical missions or disaster support?

Do you just not like not having "Just in Case" stuff on you or with you?

Such activities may present you with an airway emergency <u>without</u> the variety and selection of devices that one would have in an ED or O.R. Are the ward's "code carts" minimally equipped? While some rescue devices are expensive; none is as expensive as defending a bad *outcome*.\* What's the minimum to get you by without special equipment and skilled helpers? (c.f., \*\*)

One EM Residency Director started each shift by checking that her crew each had a #10 scalpel in the pocket. Cricothyrotomy, tracheotomy, finger thoracotomy: covered. Add a bougie; even better. "Scalpel, finger, bougie." It's done.

The bougie can aid in awkward intubations, awkward locations, awkward positions (e.g., crumpled in a stairwell or crushed car). The ETT can be used as a nasal tube (small mouth opening) or with "tube tip in pharynx" with lips closed around it and nostrils pinched if no good mask seal can be obtained or an LMA/SGA isn't available.

I'd add a good LED flashlight, to transilluminate the cricothyroid membrane aiding in difficulty finding cords, and because stand-by generators sometimes don't turn on when the power is out.

Bougie-assisted Tactile Blind Digital Intubation in ~20 seconds, Jorge Cabrera, 2015 from AirwayNautics Vimeo.

Kristensen, M. S. (2005). Tube tip in pharynx (TTIP) ventilation: simple establishment of ventilation in case of failed mask ventilation. Acta anaesthesiologica scandinavica, 49(2), 252-256. <a href="PMID: 15715630">PMID: 15715630</a>.

\*Make this argument when requesting equipment: minimally a supraglottic airway that permits conduit intubation; better, a single-use videolaryngoscope or optical stylet. TT.

\*\*Chow, Yen. <u>@TBayEDGuy</u>. 2016 - <u>#10 Scalpel, Bougie, 6.0 mm ID Endotracheal Tube</u>. or Miesemer, Branden. Surg+needle cric kit.Twitter.

Weingart, Scott. Scalpel Finger Bougie Cricothyrotomy for SMACC 2014. Vimeo.

Paix, B. R., & Griggs, W. M. (2012). <u>Emergency surgical cricothyroidotomy: 24 successful cases leading to a simple 'scalpel-finger-tube'method</u>. Emergency Medicine Australasia, 24(1), 23-30.

Weingart, Scott. <u>EMCrit Podcast 131 – Cricothyrotomy – Cut to Air: Emergency Surgical Airway</u>. 2014. <u>EMCrit.org</u>.

#### # 155 One Drug, or Two?

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The blog, <u>Emergency Medicine PharmD</u>, makes valid arguments against "<u>4 & 4 Por Favor: Prophylactic Ondansetron + Intravenous Opiate - Is It Necessary?</u>" Its authors note widespread ED usage of prophylactic Ondansetron with opiates, but feel that this off-label usage complicates things, is costly, very likely unnecessary and may not take effect in time to do what is expected.

They found "When discussing with nurses in the ED, N/V is anecdotally associated with how quickly the IV opiate is administered and generally occurs within 5 minutes of administration." I've seen this in the practice of other nurses. Often, the fast and heavy thumb on the plunger, whether through inattention, time-pressure, patient-pleading, or "just-get-it-over-with," does produce more nausea, dizziness, dysphoria, and hypotension.

Even if the patient says "Put it right there at the hub, and you can give it fast, I can take it", I've given the drug in small increments, (frequently diluted for easier control), over several minutes, while giving anticipatory guidance or *verbal endorphin enhancement*.

Using principles of <a href="https://hypnosis">hypnosis</a> to engage rapport, pacing with the patient's rhythms, suggesting distraction or focus, and to disarm likely sensations from fear, one can say "It'll work for you just as fast, just as strong, and just as long, without feeling woozy or queasy." "You may, or may not, notice a <a href="https://little.clean.nd/">little</a> dryness in your mouth; if you do, that's just an additional effect that lets you know that it's working for you. It's not a real thirst, just a little chemical dryness." "You might notice beginning to relax or even a little drowsy; you're welcome to enjoy that as much as you like ..."

Consequently, vomiting or hypotension were very rare, the patient relaxed more completely and had better benefit than one would expect from the dose-weight of the drug. Side-effects; none. Cost; none. Added time; negligible versus benefit. Fewer repeat doses, too.

If this can be a consistent practice with all staff, the benefits should obtain throughout the department. Patients perceive an additional focus and caring upon themselves, and express satisfaction with their visit.

#### # 156 A 1-2-3 ... Three-fer, Plus

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

As Clinical Tip # 156, <u>AENJ</u> has completed *three full years* of free, weekly, open-access tips, from a quarterly journal — the best of its kind, for hard-working emergency nursing advanced professionals to enhance their practice. We will keep on giving the best print and online content for you.

Let us look back at some of these milestones. Yet, each of us has knowledge and creations that haven't reached others ... compile these, and <u>share</u>, to advance the art and practice in coming years.

#### **2013** #1:

Starting with foot problems and podiatry referrals, we offered:

Be sure to check the footwear and gait of patients with back, hip, or knee pain as poor footing and gait may directly contribute to pain in those locations; not just for foot problems per se.

For those patients "carrying a little extra weight," it's good to suggest the correlation: "You know, the pounds per square inch on your feet worsen the collapse of your arches. Wouldn't you like to improve things for your feet?"

#### **2014-#53**:

A review of patients' assistive devices and personal belongings frequently lost, included: Hearing Aids (Over the Ear, In the Ear): Can be damaged by MRI. Can be easily missed if covered by hair, or very small deep canal "In the Ear" types. Turn off by opening battery door. Leave open to dry. Use padded container with a closed lid. Work over a soft surface in case of dropping.

#### **2015-#105**:

Reviewing the complexities of "AMA" discharges, and that a signed form is not sufficient, we said:

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.

#### **2016-# 156**:

Ending our third year, and beginning our fourth year, we ask:

No doubt, you've devised and collected a number of practice tips and "golden nuggets" of useful information. Have you put them in writing? Start now, so that they're saved, and able to be passed on to your students, or <u>even to other readers here</u>. Keep Index Cards handy in your pocket. (Tip #31).

# # 157 {Encore performance of Episode # 69, enhanced} | #69 Nearly a Sleep Lab, V2.0

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Emergency clinicians would dearly like to avoid the burden of "primary care" problems that come to them. There are unavoidable areas of overlap for which we are ideally placed to recognize and act upon matters *not* found in the usual office visit. What we do can be key to managing disease and preventing future health catastrophes. Alertness for potential Obstructive Sleep Apnea should always be part of our assessments.

Extended 'Length Of Stay' is common. Our patients are exhausted and medicated in an environment of airway-trained staff and physiological monitoring. Visitors may be sleep witnesses. Spoken clues may be dropped as to difficulty of regulating blood pressure, poor sleep quality, "wake up still tired," sleeping in a chair, mood changes, inappropriate sleepiness, or near accidents. \

There is probably no better place for detection and discussion of Obstructive Sleep Apnea, previously undiagnosed, than the E.D. It should be considered a <u>major mission</u> of the ED to report for follow-up, all patients observed to have apnea-hypopneas during sleep; all patients with difficulty in airway management suggestive of sleep apnea; and those in whom "microsleeps" or sleep apnea induced sleep deficits affecting their cause of accident, safety, ADLs, or medical management; all staff should be expected to contribute their clinical observations before discharge.

Do you have a "possible sleep apnea" discharge instruction and referral template? Do you generate a "Dear Doctor" report for the primary care provider? Our hospital's Sleep Center; were agreed to an arrangement for direct referral to them for screening. We kept their pamphlets on hand. We had computer desktop shortcuts to print out the information for the patient and family.

"Hi, it's good to see you again. I got that sleep study that you mentioned. I'm now on CPAP, and my life and health have turned around! Thank you."

#### **STOP-BANG Questionaire**

Chung, F., Subramanyam, R., Liao, P., Sasaki, E., Shapiro, C., & Sun, Y. (2012). <u>High STOP-Bang score indicates a high probability of obstructive sleep apnoea.</u> British journal of anaesthesia, 108(5), 768-775.

Vasu, T. S., Doghramji, K., Cavallazzi, R., Grewal, R., Hirani, A., Leiby, B., ... & Witkowski, T. (2010). Obstructive sleep apnea syndrome and postoperative complications: clinical use of the STOP-BANG questionnaire. Archives of Otolaryngology—Head & Neck Surgery, 136(10), 1020-1024.

Chung, F., Yang, Y., & Liao, P. (2013). <u>Predictive performance of the STOP-Bang score for identifying obstructive sleep apnea in obese patients</u>. Obesity surgery, 23(12), 2050-2057.

# Berlin Questionaire

#### American Thoracic Society on Berlin Questionaire

Vearrier, D., Phillips, B., & Greenberg, M. I. (2011). <u>Addressing obstructive sleep apnea in the emergency department</u>. The Journal of emergency medicine, 41(6), 728-740.

# # 158 What are your aspirations?

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Just put in an urgent nasogastric tube? Want to immediately check where the tip is and how well it works? You watched it go down carefully. You think that it should be OK. The syringe for the tube is packaged with the plunger all the way in. Just aspirate as your first step. Save the step of putting air in and listening. Aspiration of a good gastric return is your evidence of where you are. If there is a GI Bleed or Bowel Obstruction, then decompression is needed.

If the aspirate is from tracheal soiling, it needs to be gone. So aspirating is good. You'll still confirm placement by all required means. You may still need to instill air and listen for the gastric *whoosh* if the placement is esophageal or curled. Your hospital may require other tests, eg. pH, or X-ray. It's wise to do an X-ray if there is any doubt; the patient was resisting or is confused; or is unconscious *before anything is instilled*.

Never forget that an endotracheal tube, *in situ*, <u>does **NOT** prevent</u> an NGT passing alongside it into the trachea; it may even make it *easier*. Listening at the open end of the NGT may detect breathing though the tube, but false negatives are possible. It is entirely possible for an NGT intubation of the lungs to occur without any sign of distress in patients whether unconscious or conscious.

**NEVER RISK FILLING THE LUNGS AND DROWNING THE PATIENT.** 

#### # 159 Eh? What's that?

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Your first patient of the day, a young man of 20 years of age, says "I can't hear very well in my left ear; it was fine yesterday, but it seems like either my allergies are real bad or I've got a plug of ear wax." Exam is normal, except for marked hearing loss, and +some tinnitus, - vertigo.

You consult an otologist, who says "Start oral prednisone today, have him see me tomorrow." What's going on here?

Idiopathic, sudden sensorineural hearing loss, or sudden deafness, occurs suddenly (often wakening with symptoms) or over hours within three days. Audiometry often shows loss over ≥ three frequencies. Most often, it is unilateral or greater on one side. Presentation is often delayed by the patient not noticing or not aware of the seriousness of this chante, supposition of wax, sinus trouble, or allergies. When seen, it should be treated immediately as an "emergency". Albeit, not life-threatening, the prospect of permanent hearing loss is of concern.

The most reasonable treatment is beginning a steroid at once, with prompt follow-up. Studies are not usually controlled or randomized, but partial or full recovery is seen; quicker recovery of most of the loss is more encouraging. Imaging is sometimes done but should be discussed with the consultant. Other organic causes must be ruled out.

# Sudden deafness - NIHCD

Hain, Timoth C., MD - Sudden Hearing Loss - May 14, 2016 - Dizziness-and-balance.com.

Mathur, Neeraj N, MBBS MS - Sudden Hearing Loss - Updated May 17. 2016. Medscape.

#### # 160 Not what it seems ...

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

An ambulance was called to help a patient with "weakness." A 55 year old man was on the floor, without injury, complaining of headache, and increasing weakness over 3-4 days. He was fully alert but unable to get up, markedly dehydrated, and had a bizarre ECG monitor tracing with tachycardia, and multiple aberrantly conducted atrial and ventricular arrhythmias. He noted nausea, vomiting, abdominal discomfort, and some diarrhea. He had been treating himself with stolen tablets of his "buddy's aspirin; three tablets every three hours." There was no tinnitus and no Kussmaul's Respirations.

The Paramedics asked to see the aspirin. A wholesale-size jar was found of tablets of 200 mg of extended-release Theophylline, similar in appearance to ordinary aspirin, from which the patient had been helping himself. Toxicity of this drug accounted for the positive and negative findings of the examination. The patient had no history of respiratory disease. He did have wonderful breath sounds with exceptional air entry due

to the bronchodilation by the drug. In short, the totality of the patient's presentation was a veritable catalog of toxic symptoms.

When negotiating Arms Limitation, Ronald Reagan said "Trust, but verify." Remember to question incongruities, question assumptions, and validate purported truth. Scientific method can inform clinical inquiry. From truth, we can proceed confidently in our treatment plan.

National Library of Medicine. Hazardous Substances Data Base. Toxnet: Toxicology Data Network. Theophylline CASRN: 58-55-9.

# # 161 Which came first? The Chicken, or The Egg?

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Knowing the natural history of disease and the major complications thereof is important, and often critical. It also allows for mental "skip-branching" when aligning diagnostic elements; the time-saving in making jumps to a precision diagnosis can be life-saving. Here are two examples.

The first is a 70-year-old man in respiratory distress brought by ambulance with lights and siren, described as "shortness of breath, and coughing." At an ordinary cubicle bed, he is moved to the hospital gurney, during which his non-rebreather mask falls off, and he *instantly* turns the deep color of old blue jeans. The only diagnostic question needed was "Which came first: the coughing or the shortness of breath?" (Coughing.) The only exam needed was to percuss each hemithorax (Right=tympanitic.) *Stat.* chest tube for tension peumothorax due to bronchopleural fistula induced by coughing stress.

The second is a 69-year-old man with "chest pain and vomiting" with symptoms unusually refractory to medication. "Which came first?" (Vomiting.) Boerhaave's Syndrome was confirmed, operated, and the patient did well.

We must be accurate, careful, alertly mindful of other possibilities (less common), as we move quickly through our differential diagnoses when dealing with a life-threatening event.

#### # 162 I'm looking into it.

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

There are 3 types of endoscopy done in the ED:

1. Ad hoc: The emergency provider does it because it must be done and no one else will.

- 2. On Behalf Of: "I'm sending this guy to be checked, but I'm not coming in, unless you find something bad."
- 3. <u>In Aid Of</u>: "We need to do this guy, *but* our lab is closed, O.R. won't help, and I'd like you to do the sedation because you've got better drugs."

Beware of providing *anesthesia* services to other services "out of hours". It's better to use the on-call anesthesia provider, as you are unlikely to have special equipment and knowledge for procedures *not usually performed*, or readiness to receive another emergency patient. Liability trap.

Tongue blade, head-mirror or head-light, penlight; direct or video laryngoscope used in tomahawk fashion (after topicalization); flexible nasopharyngoscope or flexible bronchoscope, may be in the ED. The location of some metallic foreign bodies might be indicated by the security officer's search wand, or by x-ray. Rigid endoscopes (°angle tips vary); other flexible endoscopes and specialized instruments, {or *better*, a <u>consult</u>} may need to be gotten from ENT, GI, PULM., and O.R.

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#### # 163 Norovirus, & other diarrheal illness

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Few people realize how incapacitating and deadly a diarrheal illness can be. It is easy in developed countries to forget what devastation occurs from outbreaks of cholera, typhoid, and other enteric pathogens. Problems lie in the need for basic clean water, sanitation, and hygiene. Coupled with needed vaccination, access to health knowledge and care, and breaks in prevention of transmission, the impact can still be great.

Far from being merely a "cruise ship virus," Norovirus is of serious concern:

"Worldwide, about one out of every five cases of acute gastroenteritis (diarrhea and vomiting illness) is caused by norovirus. Globally, norovirus is estimated to be the most common cause of acute gastroenteritis.

<sup>\*\*</sup>View endoscopic videos with narration.

<sup>\*\*</sup>Small randomized study suggests fewer admissions, no change in outcomes or mortality.

<sup>&</sup>quot;Admin" re Meltzer, AC, MD. Video Capsule Endoscopy in the ED. October 21, 2013. Physicians Weekly.

<sup>\*\*</sup>Suggests 92% agreement between EM & GI physicians, and possible triage tool for disposition.

It is responsible for 685 million cases every year, 200 million of these cases are among children younger than 5 years old. This leads to an estimated 50,000 child deaths every year, nearly all of which occur in developing countries." [CDC]

Looking at deaths related to Water, Sanitation, & Hygiene:

"An estimated 801,000 children younger than 5 years of age perish from diarrhea each year, mostly in developing countries. This amounts to 11% of the 7.6 million deaths of children under the age of five and means that about 2,200 children are dying every day as a result of diarrheal diseases."[CDC]

"Diarrhea kills 2,195 children every day—more than AIDS, malaria, and measles combined."[CDC]

Fortunately, treatment is supportive, mainly directed at correcting dehydration, preferably with an Oral Rehydration Solution done early and continuously until illness abates, and preventing further spread of contaminants. Reporting for testing and surveillance is mainly to identify clusters and outbreaks. Results may direct treatment for new patients in the outbreak.

Where recreational water activities are popular, operators of pools should promote bathing before entering water, closure after fecal 'incidents' to allow disinfection to work, and to bar participants for two weeks after a diarrheal illness.

Consult the many comprehensive pages at CDC and WHO.

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#### # 164 Simple things that make a difference

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

- 1. Most people just "swab" willy-nilly when starting an IV. Get in the habit of rubbing with the swab <u>only</u> in the direction of flow; distal to proximal; it'll help fill the vein by pushing the blood past the valves. Of course, <u>never</u> touch the site "one last time" before insertion. Just fix your gaze and mind upon the spot until the needle's in.
- Need a "bag" urine specimen for that febrile child workup? Want to avoid frequent re-peek checks for urine? When attached, poke or cut a hole in the diaper for the bag to protrude. Kid stays dry; you see the pee right away!

3. Tired of dry skin, or the greasiness of lotion? Do a faster, easier, cheaper job, by applying lotion when your hands are still a little moist and the towels slightly damp. Use less lotion than you usually might and rub well into your hands. As you finish the lotion, resume drying your hand with the same damp towels. Your hands are now soft, freshly clean, and non-greasy. You have enhanced the absorption and eliminated the excess. Move on to the next patient or task.

# # 165 Respect the trajectory

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Should you find yourself and family in a place where imminent violence may occur, have a "no-questions-asked" code word for "we are <u>leaving</u> right now. This may happen when young men, perhaps similarly dressed or having gang colors, seem to be either moving or milling purposely towards you or another objective. Backpacks and inappropriate clothing are particularly of concern.

As with X-Rays and other ionizing radiation, your protective modalities are Time, Distance, and Shielding. If you are about to be "in the wrong place at the wrong time," rapidly put Distance/Time and Shielding between you and the threat. You may not see the person who launches a projectile towards you, nor will you be able to "dance" around it, as in a John Wu movie. Bullets will hit whatever is in their path regardless of your good character and intentions. Do not ask "Why?" Just leave. Do not spectate at a riot.

The best shielding, if you are within range, is "Cover." <u>Cover</u> is an intervening object of substantial mass that will protect you from most missiles fired at it. "Concealment" merely obscures you from view of your assailant, but will not withstand fire against it; bullets or explosives penetrating through it and wounding you without the direct vision of your assailant. Think of a cardboard box *versus* a reinforced concrete wall. Behind which, should you hide?

Having cover, do not forsake leaving - as soon as possible, - as quickly as is safe. Do not linger or retrieve personal items. If there may be explosives, do not slow down until you have ~400 meters or more behind you; unlike the movies, you cannot outrun an explosive. Within 15-20 meters, death is virtually certain; beyond that your chances of survival increase with every additional meter. If an explosion occurs, drop to the ground facing away and cover your head; shelter behind sturdy cover helps if available; but some cover will be blown over by the pressure wave.

You, and the people that you care about, should have codewords; communications (although cell phones may be jammed by either terrorists or authorities); and a plan for reunion if separated. Beware of potential accomplices and possible secondary explosions or targeting.

You are on your own. The perpetrators will not likely attack when police are present, or they will immediately kill police or security first, to have a free hand and maximum body count for their propaganda. They probably do not care about surviving. You must be your own First Responder. "Help" is later than you can afford. Be able to give trauma care to yourself or your loved ones.

When in public places, always be aware of activities around you; the nearest exits (including the less obvious one through the kitchen or the back); sit near a wall near that exit with each adult taking a field of view to "keep watch." When you must fight back, do so with "no holds barred" vigorously with all your strength so as to immobilize the assailant and break free to better safety; this is no time to be nice, or to prevent injury. It is not a patient; it's a terrorist or violent criminal actor.

CDC. Explosions and Blast Injuries A Primer for Clinicians.

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#### # 166 The ties that bind ...

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

You need to apply a tubular gauze bandage and the darned applicator is missing again! Choose a suitably sized syringe barrel. Cut off the distal end with a cast-cutter saw. Smooth the cut edges. Stage the bandage over the syringe barrel and apply it to the digit in usual fashion. You are done, and you have a new applicator

Some have used a vaginal speculum, but this might cause raised eyebrows and need an explanation. A hollow-core toilet paper roll holder can be used for larger digits. A bayonet forceps can be used for little digits. Order the proper replacement and endeavor not to lose it. Especially avoid leaving it in the bed linen that will be put in a laundry hamper or chute. Be mindful to not discard the tools in the trash bin,

Tubular gauze that has had both ends split, becomes a four-tailed bandage, allowing for pressure and coverage of body points such as the tip of the nose, the shoulder, or back of the elbow, heels, *etc.* Bulky dressings can have excess snipped to shape and a Maltese cross shaped gauze dressing works well at the point of digits under a tubular or recurrent bandage, elbows, chins, shoulders.

# # 167 Skunked! Or, parfum de polecat ...

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It seems always to be in the night, that one's person will be assaulted or one's pet loses a "contest of territoriality" with a skunk; that North American weasel-family creature possessed of powerful stinky musk that can be skillfully aimed up to 20 feet away.

People do not usually come to the ED to be "de-skunked," but *might* if other injury occurs, or asthma exacerbated, but they may call for advice. The folk remedy of bathing with tomato juice, has inherent difficulties when stores are closed. It is said to be not very effective in neutralizing the several Sulphur-thiol chemicals in the spray.

The low-cost, common, and stable ingredients for what authorities concur in recommending for use, can be kept easily, and mixed at time of use. It works by oxidation to split the compound. Use while it bubbles. Do not enclose it; the bottle will be blown apart as pressure rises.

As with other emergency procedures, it is best to study it first, and have ingredients on hand rather than getting flustered when used.

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#### # 168 Those small veins ...

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Intraosseous infusions are well established as a ready rescue method of vascular access in critical cases for small children and infants; but most kids will need a peripheral IV instead. Neonates may have Umbilical veins cannulated. (How recently have you practiced that?)

If there is no neonatal or pediatric colleague to call in, how should one proceed? (Now, that is a *practicum* to consider arranging.)

The general rule that "safety" cannulæ must be available does not preclude specialty use of non-safety types; find out what your colleagues recommend or share in their purchase.

Choose your vein carefully. Consider immobilizing *before* insertion. Beware areas of flexion. Plan the securement, and skin protection, beforehand. Have a helper; extra hands may be needed even if you think it will be easy. Use firm traction to keep the skin and vessel from being pushed away by the needle or cannula; avoid collapsing the vein.

If quite small, consider removing the flash chamber cap and pre-flushing the needle with saline; this allows easier viewing of more viscous blood. The syringe, if used as a handle, should also have saline and the plunger be slightly pulled back. Skin penetration and vessel entry are separate tasks.

It may be useful to enter with the *bevel down* to avoid perforating the back of the vein (as the sharp precedes the cannula). At first flash, STOP advancing the needle; lower the angle of insertion to lift the bevel away from the wall. Now, you or your helper should advance the catheter into the vein, as the needle is held steady; if one can rotate the cannula as this is done, it may help the sheath to glide into the vein rather than impinging on the back wall or an inner angle.

If blood return is slow, dribble it (after wasting the salinized part) into lab tubes down the wall; cap and invert several times to mix. Flush and "lock" the cannula. Complete securement. Begin your infusion as needed.

If you were thoughtful enough to have inserted ear plugs, you may now remove them. If the child did **NOT** cry or fuss; it may not be just your excellent technique, <u>strongly</u> consider that the child may be more ill than thought. Even with minimal noxious stimulus, children fuss at being restrained by strangers.

#### # 169 Deep problems

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

When we think of "barotrauma," our bias is to think first of iatrogenic ventilator injuries which is properly feared. Yet, unaided, fragile Man thrives within a narrow range of physiologic conditions. However, we have ventured and sojourned in high mountains and the vacuum of space, and in caissons, cofferdams, diving bells, and submersibles in deep waters. Divers in their own skin and on held-breath challenge depths that most of us could not bear, and SCUBA or hard-hat divers achieve remarkable records.

If our catchment area includes coastal areas of recreational or maritime importance, we may encounter emergencies related to the barotrauma of great weighs of water; even if we are inland, there may be a crisis expressed after travelling home. Without a wet-suit and tanks, only the history of the diving may reveal the cause.

Fortunately, there is a "Free Internet Edition" of <u>Diving Medicine for Scuba Divers</u>, in its 6th Edition (2015) available at: <a href="http://www.divingmedicine.info">http://www.divingmedicine.info</a>. Dr. Carl Edmonds, Dr. Bart McKenzie, Dr. Robert Thomas, and Mr. John Pennefather, are the authors whose work has evolved through several editions to its Internet distribution.

Your department's computers should share links for that book, the Divers Alert Network; and any local resources or rescue agencies; if there is a hyperbaric chamber for medical treatment, that link should be available; they are, however, quite few, and possibly usual supportive care will be all that is needed. Having this information may be priceless.

Of course, there are many other varied medical aspects of dive medicine and the marine environment than just changing pressures. They are fascinating to study and informative to your practice.

<u>PSDiver.com</u> (Public Safety Dive Teams)

Dive Adventures Scuba Glossary

The ship captain's medical guide {gov.uk} pdfs

Ship Captains Medical Guide {Witherby Seamanship free ebook}

The Ship's Medicine Chest And Medical Aif At Sea (US 2003)

International medical guide for ships; including the ship's medicine chest (WHO 1988)

#### # 170 Pride, and Prisoner Relationships

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

[Prior Tips on topic: # 20 SOCMOB; # 64 What's the Tueller Rule? Why do I care?; # 147 The Ides of March; #165 Respect the trajectory.]

Most people consider the "helping professions" as caring and compassionate. We also think so of ourselves. We work hard. We are well-meaning. We are good. The public perception helps us. The latter usually helps but can set us up to be victimized. Our manners also get in the way.

When confronting an "alleged" criminal or evil-doer, curiosity and repulsion vacillate, but for self-assigned reasons, we try hard to not let it show. "What if he's really "<u>Jean</u> <u>Valjean</u>"? "I want him to trust me and not be upset." We innocently try to seem friendly. As he responds, we let our guard down. Do not let "*Pride goeth before* (your) *fall*."

We do not know the true motivation for the visit. Real injury or illness, or feigned? Respite from prison? Easier location from which to escape? Score medicines? Gain weapons materiel? Confederates coming to "break him out?" Opportunity for rape or assault? Seeks convalescing restrictions to beat a work detail or avoid an adversary? Does your friendliness give rise to an obsession?

You probably remember to remove pens, tools, and tie back hair. Do you remember to remove your nametag (or at least turn it over)? Noncommittal introduction: "I'm the person taking care of you." Review all records; the patient may not be forthcoming or truthful. Check drug screens despite denials; specimens must be witnessed, and evidentiary "chain of custody" practiced.

The State acts "<u>in loco parentis</u>"; tell very little to the "child". No dates of future visits, no self-care supplies to the patient, no personal favors like "calling his family." Leave nothing within reach or not mentioned to the guards. Do not insist, "remove those shackles", to ease your principles and personal moral distress; only minimal modification of restraint as needed for treatment and permitted by guards.

Nearby sharps are not the only possible weapons; are there electric cords? T-shirts or gowns? You can be strangled with either. Heavy objects? Furniture? Even his chains. Stay between the door and the patient; back out of the room. The patient's name, if used, is confidential and should not be shown, disclosed, or inquiries answered. He's the man who isn't there.

#### # 171 Noxious Stimuli

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What I call "The First Law of Neurology" is "Use *enough* stimulus." Using a feeble penlight to check pupils in bright daylight does not work. First bring the patient into a shaded environment (and have a *good* penlight) before you can "sense" pupil size and reactivity with/without stimulus. Sometimes, one can check pupils by shielding the eye from bright glare then pulling away to expose it to light.

Some people have large pupils as their normal. {They will do well in modelling. Check the etymology of "Belladonna.") You can verify this (or baseline anisocoria) with a magnifier from their ID or social network photo.

"Sternal Rubs" tend to abrade and bruise and should not be used, nor such barbarities as nipple-twisting. Squeezing a nailbed with fingers or pen and gradual pressure is reliably effective without drama; cease with withdrawal.

A nasal trumpet, gently inserted, remains protective of a stuporous drunk's airway; when the hand floats toward the nose to withdraw the airway, it indicates lightening of the level of consciousness.

Feigned unconsciousness will usually stop after a simple neuro exam and a kindly chat without the intended audience present. If need be, checking corneal reflex with a wispy applicator should be sufficient. Cold-Caloric testing should only be used with the comatose as part of the Neurologist's exam..

Veteran staff may remember the loud clangor from sudden dropping of several stainlesssteel bedpans to elicit a startle response!

The "Gag Reflex," as a test of airway protection <u>is not a good choice</u>, as a "significant percentage" of people have it absent as a normal variant; more so in the elderly.

# # 172 Why do cops wear dark glasses?

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Why do cops wear dark glasses? Protection. But, also to look cool, be part of the gang, and share in the unofficial uniform attributes. It looks "badass." But, there is more. Do you remember the guard in mirrored sunglasses in "Cool Hand Luke"?

"What we've got here is ... failure to communicate." If "eyes are windows to the soul," communication was not intended.

If you consider the potential for violence, it's safest to not "watch the eyes" as cowboy movies suggest; always watch the <u>hands</u> whence danger comes. A sociopath or psychopath gives nothing away by the eyes; they simply do the evil they intend. Hamlet said, "a villain may smile and smile, yet still be a villain."

Thus, cops will wear dark glasses to ensure the discretion of looking where they must, without giving away the direction of their gaze. The cultural norm is to engage the eyes; we feel uncomfortable if caught not doing so. But, masking the gaze gives a tactical advantage.

Yes, they obtain protection from wind and glare, and in the days of revolvers from blow-back or side-splash of unburnt powder or lead shavings if the cylinder was out of time. But the main advantage is deflecting the personal challenge, and not giving back cues when being baited by taunts upon his ancestry, or by threats. Even clear lenses, can help us somewhat in doing the same thing.

We know, and often practice, avoiding the "confrontation" of a volatile patient by avoiding direct gaze, or seeming smaller and quieter (near the door) without appearing to be submissive. Respectful, rather than Alpha-vs-Alpha escalation.

A wise Chief Resident once revealed "On the first day of residency, I threw away all my contact lenses, and wore the biggest, widest, eyeglasses that I could find." She thereby protected herself from fingers, most splashes, and dusts, *etc.* In a *planned* situation, proper goggles, shields, and masks are better; but in the *unplanned* situation, her eyes were covered. Some glasses with side-shields are available for everyday use. Additionally, while contact lenses have great optical advantages, and many feel --a better "appearance," a chemical or body-substance splash to the eye ruins the lens and effective irrigation is delayed.

# #173 When you volunteer...

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Our "helping profession" is a giving one. Apart from the work for one's livelihood, it is common to volunteer assistance for community events and groups or international health missions. Can problems arise? Perhaps.

Your malpractice coverage may be optimized for your primary employment; will it be effective in different circumstances? It's wise to review the actual document (with the long, long "fine-print") rather than a brochure summary or your employer's statements.

Circumstances and capacity may be important, e.g., are you performing as an agent for an organized charity that provides a global policy for its workers? Or, you there on your

own initiative for a charity run or youth event? Are you compensated, even if just room and board at a summer camp? This may make you an employee, and your employer is responsible for your actions. If your employer contributes only supplies or support for the event, are you acting directly or indirectly as their agent? What other organizations are doing similar work? Is their coverage better?

If you are somewhere other than your home "jurisdiction" or licensure, is this an exclusion in your coverage related to your authority to practice?

If uncertain about your coverage, ask the question of your insurer and the event organizer. For international volunteering, is the nation acting as your host or providing any immunity from prosecution or suit? Should any action arise, which country will have jurisdiction? Would you need to travel back to defend yourself? In that country, is there a presumption of guilt or innocence? Would you be "detained" or jailed awaiting trial?

Do not assume that your patient won't sue because the care was free. Consider, in many situations, that a signed agreement or disclaimer would be in order, especially as you cannot be sure of compliance with advice, or follow-up, and your diagnostic and therapeutic options may be limited. Caution against exactitude of diagnosis, and that success or freedom from complications cannot be guaranteed.

There is more involved with being a "Good Samaritan" than just having a kind heart.

#### # 174 Warm Weather Outdoor Intubation

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<u>Daniel, Habas, & Cruc</u> in a new article, describe an incident on a "scorching" day in Djibouti, give advice of the difficulty they had from solar glare, softening of ETTs and in using color-changers to check for CO<sub>2</sub>. They suggest shading, stylets or bougies, and syringe-checks.

Other possibilities come to mind. Just as infants have been burned by overheated laryngoscope bulbs, bulbs or blades that have been too long in the sun might burn tissues.

There is plenty of literature support for bougies improving view, tactile confirmation of tracheal placement, and making awkward intubations less clumsy and safer; it is reasonable to have as routine backup or because any outdoor intubation is awkward.

I recall, too, having to discard my IV cannula and re-prep the site because sweat from my face had dropped onto the cannula. (Tennis wristbands might have helped.) I've also had irrigation fluids needed to splash a heat stroke patient having become *hot* stored in the ambulance. Still, it was wet and did cool, (wasn't scalding hot) and conducts heat 10X>air, especially if air is forced over for evaporation and convection (We did.). If no ice, a thermal cooler might have delayed absorbing ambient temperature.

In a heat stress casualty, the increased capacitance of dilated vessels, coupled with dehydration, may make it hard to find a vein. Dependency of the extremity and a blood pressure cuff tourniquet may help, particularly if hands can help blood to pool. The old trick of having a helper raise the legs into the air may help (perhaps, draining any blood pooled in the

legs to drain towards central circulation).. Intraosseous access would be rapid, reliable, and would not require the set-up of a cut-down or central line placement.

While you are out in a hot sunny clime, remember to wear a high-crowned broad-brimmed hat to shade your eyes and keep you 10°-15° F cooler. Water supply, breakdown kit, communications and air-signaling gear, subsistence, all need to be considered. It's easy to drive farther than you can hike out, especially if having to stretcher-carry or man-pack a casualty with you.

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# #175 The Goose; does it have a purpose?

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Everyone fears "the goose." It is ignominy and shame to put an ET tube in the "esophagose." Actually, it's only ignominy and shame to have an <u>unrecognized esophageal intubation</u>. Not fixing it in time is "a clean kill." An example of satiric "gallows humor" is Gomer Blog's "<u>Updated 2015 Trauma Airway Algorithm</u>" By <u>Doktor Schnabel</u> - June 17, 2014, for surely, "tracheal vomiting syndrome" is horrific.

Follow @jducanto on Twitter; his work on #SALAD is to use simulation of a massively soiled airway. There are many discussions on simulating and training for airways filled with copious emesis or bleeding.

One old trick found effective and useful is **intubating the esophagus** (whether accidental or deliberate) *leaving the tube* in, and inflating the cuff, as a diversion for emesis keeping it out of the airway and permitting decompression of the stomach. This can be done preemptively in high-risk situations, or to allow decontamination of the pharynx and better laryngoscopy.

## # 176 The Man with No Face

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A peculiar sensation runs through one when examining and treating a victim of extreme violence to the face. When the face is crushed, or the mandible feels as crepitant as a beanbag, one senses the shattering of a 'personne', not merely a wound. "Fracas du visage," as francophones say, aptly describes a crush to the

face with further connotation in English of a tumultuous brawl, and the face as the countenance of the soul.

<u>Michael McGonigal, MD</u>, a Trauma Director in Minnesota, publishes "<u>The Trauma Professional's Blog</u>" (also by email as a newsletter), a commendably excellent resource. He notes the difficulty after securing the airway with a tube is how to secure the tube! His solution is clever.

If your tube-holder won't work, the older methods of tying with twill tape (umbilical ties) or plastic tubing such as oxygen tubing or IV tubing may be suitable.

- Clean and dry the ETT, where it will be fastened, with an alcohol wipe.
- Remember to tie on the side of the neck (for access), with a finger's width slack, and to frequently check the neck for an expansile mass from hematoma or subcutaneous air, that might require emergency decompression to prevent airway occlusion.
- Be sure of your knots.

If there is a stable tooth and jaw, ETTs can be sutured to a tooth to secure it without skin contact. A semi-permanent securement is that by sub-mental intubation (but requires surgical incision).

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## # 177 HazMat

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Definition: "Something horrible that happens somewhere else."

No, that is <u>NOT</u> true. HazMat, or hazardous materials, are materials with the potential to cause harm to health or safety, either in the immediate area, or by blast and toxic effect to wherever it might disseminate. [Not an official definition, but a workable one for this discussion.]

If you live, work, or travel near highways, ports, pipelines, industrial or chemical facilities, even hospitals, refrigeration facilities, public pools, or food trucks, you may be in danger from a hazardous substance.

Some can be subtle, such as a leaking propane cylinder on a grill; others through explosion, conflagration, or widespread toxic effect (Bhopal 1984; Tokyo Sarin release 1995; Chernobyl 1986) may be overwhelming disasters and may have long term effects.

We are often oblivious to vehicles with safety placards near us. What's in *that* tank? What would it do if there was a wreck? If victims showed up in my ED, what would I need to do?

So much to know, yet we tend to think: "(There's so much that I already need to know immediately, that) if I have time to look it up, I can look it up." It's likely that there will be

little time to study for the answer. Computers may be down. Paper references may be essential.

Fire Services usually have the duty of public emergency response, so information and training are available to them; but may not have adequate resources for a mass event that may require several agencies' mutual aid and state assistance, but coordination and timing can be difficult.

From time zero to identification of the offending agent and best available treatment may be an agonizing interval (delayed in Tokyo; <u>still</u> a state secret with the 2002 Moscow-Chechen hostage theater standoff). Remember also that in Tokyo, hundreds arrived unannounced at the nearest hospital in the first hour (no time to organize).

To acquire the knowledge that you will need, you must assimilate essentials before need.

- Ideally, take a HazMat First Responder awareness or operations course from FEMA or OSHA.
- Plan joint in-services with your fire service and disaster agency.
- Reread your institution's disaster plan.
- Hold "down-time" impromptu training sessions: 'What ifs?'
- Impromptu 'treasure hunts': "Quick, get <u>all</u> the atropine and PAM injectors!"
   "Where's the radiation meter?"
- Download HazMat guides to your phone.
- Behind a tank-truck? Decode that placard. "What do I do for an ammonia leak?"
- Review MSDSs (Material Data Safety Sheets) for substances in your department or hospital.
- Remember where to find & how to use paper copies of plans & guides for when power is out and flashlights suffice.
- Do a drill, without warning! Insert a trained "patient" into the patient mix. Force a
  triage/registration without computers as when "the system is down" or
  overwhelmed. Involve Lab, Security, instant lock-down and isolation, before "hot
  zones" and "decontamination" are set-up. How to keep the 'external disaster'
  from also becoming an 'internal disaster.'
- Operationally speaking, and to forethought and mindfulness, small frequent impromptu simulations and drills will have greater usefulness than a large annual 'exercise' by management. The latter are still necessary, but in a different way than user groups giving care.

<u>ERG 2016</u> app [Emergency Response Guide; U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration]

Hazmat Incidents (recently reported to US DOT) app.

Mobile REMM – Radiation Emergency Medical Management app.

WISER for iOS (Wireless Information System for Emergency Responders)

includes ERG 2016.

NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response.

## # 178 Making light of work

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"Clean and Jerk" is an Olympic weightlifting style. Jerking the patient from one bed to another is neither acceptable nor harmless. Poor lifting methods may injure both lifters and patient. Never have there been so many lifting aids available. Even with little or no equipment, the transfer to bed should be smooth, and scarcely perceptible by the patient.

In past years, an ambulance crew might transfer the patient with a pole and canvas stretcher, remove the poles from their sleeves and leave the canvas under the patient. Latterly, they might use a <u>breakaway stretcher</u> or a <u>scoop stretcher</u>; either gives a simpler transfer and is disassembled from the patient.

Hospital staff do not do as well as EMS teams, as staffing varies frequently each shift, and there is generally no group practice to be a team. With a higher proportion of female staff and mismatched heights and strength, the load is not well distributed. Most transfers being lateral, from beds alongside each other, the forward lean by staff is *greatly* damaging to backs. This causes a "*get-it-over-and-done-with*" mentality that fosters speed over quality. Few career-long bedside nurses escape having musculoskeletal issues.

Awake patients should be given a distracting task ("hold your elbows" or purse), and to "take a deep breath, and blow all the way out." At the end-expiration, the prepared team (with straight arms and straight backs, using their weight to shift the patient) *glides* the patient over. There is no muscular tension fighting them at end-expiration. With very difficult moves, it is worth a few moments time to rehearse the transfer.

A clinical leader should establish an ethos and expectation of smooth moves, always, in the department. Equipment should be provided in sufficient number, and maintained at hand, so that career-ending and patient-damaging short-cuts need not be taken. All providers and staff need to be trained and <u>expected</u> to help. There are no degrees or certifications that exempt one from providing assisting. Slackers should be disciplined. Low-friction transfer sheets, mechanical lifts, air-hover devices are all available. A light-hearted team-felt *joy* in providing an imperceptible lift and transfer should be the order of every day's work.

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#### **# 179 MISSING**

# # 180 Clinical Catchphrases

Tom Trimble, RN ORCID ID: 0000-0003-2516-8443

Recurring clinical situations and personal interactions may need an astutely apt phrase or *bon mot*. It's good to have a mental library of successful phrases to use again.

Instructions for the peak flow meter can be confusing. Most people try to "blow-blow-blow" as if for birthday candles. Say that the needle is "like a highway patrol speedometer –it flies up to your fastest speed and stays there" may get a laugh and a better performance.

- Sharing one's own allergy problems, "I feel like *my* Life is attached to my *nose!*" shows sympathy and empathy.
- The acute-on-chronic respiratory distress is eased in hearing "You know, ordinary people don't realize what a privilege it is to draw an easy breath." {Let me help position you to breathe with less work and get you some treatments to help."} {"What do you need most, right now, to help you feel better?"}
- The person straining with back pain will understand "there's an <u>old song</u> with the line 'Every <u>little movement</u> has a <u>meaning</u> all its own!" While the reference is not the same, the emphasis on movement is relevant to the present reality.
- A silly pun such as "needing a good <u>under</u>standing" highlights the importance of a good footing.
- Novices with crutches tend to look at the floor and their feet which makes them off-balance. Remind them that in diving "the body follows the head; --if you look at the floor, you'll end up on the floor."
- Persons dwelling on their symptoms, or if you're cautioning about a potential side-effect can be told: "But, you don't have to pay any attention to that and don't need to remember it ... 'these are <u>not</u> the droids that you're looking for" will remind them of <u>Star Wars</u> and that your 'Jedi Mind-Trick' is fun and that they may safely not remember the unpleasant experience.
- If more emphasis is needed, or you wish to enhance amnesia as wakening from sedation occurs, say again they don't *need* to remember, then add "just forget to remember, and remember to forget ... " This creates a psychological double-bind that loops itself creating confused 'forgettery'.
- When doing a shoulder pull-down to see C-7 on x-ray, decrease the muscle tension with visualization of walking through the airport carrying heavy bags (no wheels) and you're staying tall to carry them but your arms are stretching I-o-n-ge-r ... "

- Not sure which way the differentiation will go? Politely stall with "We'll know more when certain tests have been done." This also helps induce buy-in to the plan by the patient and family.
- Those anxious prognosis questions can be given assurance as my surgeon grandfather did with "you're doing as well as can be expected considering the circumstances." This non-committal phrase can be fine-tuned with different tone and affect to either be encouraging or cautionary.
- "How am I doing, Doc?" can get a hearty rejoinder "Why, you're doing the <u>best that you possibly can!</u> (± considering). "And, I expect that with a little more rest and medicine, you'll be feeling better yet." "How soon, I wonder, do you think you'll be able to feel that way?" "I imagine that you'll want it to be soon." This puts into play the powerful forces of expectation of a positive outcome.
- Have some simple accurate descriptions of pathophysiology and therapy. E.g.,
   "The heart isn't pumping out all the blood that it receives, so it backs up like
   traffic at the toll gate, so the liquid part is oozing out into the lungs." "No, it's not
   really a 'blood-thinner' like paint thinner, it just slows down the clotting a little bit
   so that it's less likely to sludge up in tight spaces."
- You and the patient are working with different mental lists during history-taking and review of systems. Avoid important omissions or kept secrets and anxieties, with a kind and trustworthy: "Tell me, now, anything that you haven't yet told me." If you've established a good rapport, and a yes-series or positive responses, then you will likely get some useful replies.
- Every good clinician will develop, over time, a personal 'patter' or internalized ready answers, ready questions, and ready assurances appropriate to many situations. You, too, should definitely do so.

The key is to be warm, engaging, cognizant of present difficulties yet optimistic and good-natured as to outcome and how to get there. If it comes from the heart, it will be received and felt in the heart.

## # 180 "What's in a name?"

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Yes, absolutely; *every* patient needs a *proper* ID Band, applied *properly* in one or more places on the body as *properly* described in institutional policy. No argument. However, sometimes things move *too fast* for that, and in the heat of the moment, the <u>one</u> band that came with the chart from registration is <u>sacrificed</u> for the sake of an IV, an ABG, or some other vital procedure.

When this happens, there are often one or more adhesive lab labels still at hand ... Apply a label directly to the middle of the forehead. If diaphoretic, dry the skin with alcohol and gauze before application. The "barcode in the middle of the forehead" is

sufficiently startling in appearance as to not be missed by CT Techs, Radiographers, even Surgeons. If you have extras, they can be applied to as many extremities as possible until *proper* bands are available.

Even if the patient goes to the Morgue, such a sticker placement is a final confirmation of identity, in addition to the correct labeling already applied.

It is <u>critically important</u> that all patients should always be correctly identifiable. Sometimes, *proper* labeling has to catch up with clinical circumstances. Do not allow any patient to not have identification. In extreme circumstances (*stat* to O.R.), ensure the patient is continuously attended by a staff person who can identify her until *correct and proper* identification is secured on the patient's person.

## # 181 "M.O.S.T. D. A. M. P."

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When I began in an advanced level of prehospital emergency care, I was given the mnemonic for severe CHF with Pulmonary Edema of "M.O.S.T. D. A. M. P."

The decode was:

**M**orphine {↓anxiety, ↑capacitance, ↓preload, afterload}

**O**xygen {↑oxygenation, ↓anxiety, hypoxia, acidosis}

**S**it 'em up {↑dependence, ↓preload, ↑FRC, ↑ respiratory mechanics,↑comfort}

<u>T</u>ourniquets {↓venous return & preload}

**D**igitalis {think rate, rhythm control, ↑ stroke volume.}

**A**minophylline {bronchodilator *vs* wheezing, bronchospasm}

**M**ercurial Diuretic {then strongest, supplanted by modern loop diuretic}

Phlebotomy {Reversible preload & afterload reduction}

Since then, some of these hoary precepts have been discredited. A good summary is at:

AAEM 2016- Don't Tell Me You Practice EBM If You... Routinely Use Diuretics In Acute Decompensated Heart Failure: Lecture Resources.

Furosemide in the Treatment of Acute Pulmonary Edema - emdocs

Morphine Kills in Acute Decompensated Heart Failure - R.E.B.E.L. EM ....

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While oxygen, Furosemide, and tourniquets, seemed to work well at the time (morphine came later in prehospital care). My personal epiphany was in seeing patients *in extremis*, nearing death and needing intubation, 'turning around' becoming pink, warm, and dry without distress by means of improvised IPPV —tracking spontaneous respirations with a hand-held demand valve, BVM, or CPAP with a Mapleson F flow-inflating bag.

Closeness to the patient allowed one to provide an audible stream of suggestions and encouragement for further improvement.

EDMD: "Why did you bring this patient in?"

Paramedic: "You should have seen her half an hour ago ..."

Ultimately, being able to add a nitroglycerin infusion in the ED would control things, but controlling the distress and anxiety was always faster with positive-pressure; even if both activities started simultaneously.

#### # 182 Two for Travel

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Use the TRAVEL mnemonic to sharpen history-taking of post-travel complaints.

- **T** Time of onset.
- R Room & Board.
- A Activities.
- **V** Vaccinations & Pre-trip Prophylaxis.
- **E** Exposure.
- **L** Location.

<u>Tiny Tips: History taking in a returning traveler</u> In <u>canadiEM</u>'s: Medical Concepts, Tiny Tips by Anali Maneshi. August 16, 2016.

## # 183 Speaking for, not out

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You may never be called upon to be the "spokesperson" for your unit, but if you *are*, here are some concepts to keep in mind:

- Defer. Avoid doing so until the hospital nursing supervisor, administrator-on-call, or public information officer can do it. They are trained for it, and the degree of separation permits a thoughtful circumspect response to questions. One individual should provide reports for consistency of approach.
- Prevent unwarranted press access to the unit. It interferes with work. Workers might be questioned. Privacy of patients and family may be invaded. "I'm sorry, we are working very hard here; you cannot go in there.
- A Press Working Area removes the above and allows centralization of information coordination and outflow. Seating, electrical outlets, telephones, even the proverbial "coffee and doughnuts" help with good relations.
- Identifications should not be made until <u>verified</u> and <u>authorized</u>; notification and reunion of families come first.
- Persons being treated are patients. Ascribing terms of suspect, perpetrator, driver who caused the crash, should NOT be done! Too little information is available.
- Do not ascribe *causation*. Investigations, even testing, may need to be made before this is none.
- Degrees of severity may be described, but clinical details should be limited until the situation settles.
- Truthfulness, respect, promptness of regular reporting, should forestall most press behavior problems.
- If the injuries occur at, or because of the hospital, it may be necessary to clear other-than-essential news with higher-ups in administration. "Please wait for Mr. Jones, while we do everything possible to fix this problem."
- If an external disaster is also affecting the hospital, try to assure patients' and workers' families that people are OK or being taken care of. Calls for volunteers or supplies should be coordinated and authorized by the Disaster Manager.

## # 185 Giving evidence

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The following is <u>not</u> legal advice. The writer is not an attorney. Rules vary in different jurisdictions. It is based on a general understanding of American law. If you are involved in a legal proceeding, obtain your own competent advice.

You may be asked or required to give testimony in a legal case, as a witness, to defend your actions, or to comment as an expert to the court. If so, be well prepared.

If your actions are questioned, you have no friend in the room but your own hired attorney. It is possible that the 'insurance lawyer' or 'hospital lawyer' may protect their interests better than your own.

Be familiar with the case and records. Dress neatly. Be polite, and *calm*. Speak clearly without rushing. Do not volunteer information. Take care not to be provoked. Let facts speak for themselves. If cut off, say that "I have not completed my statement." Minimize technical jargon and explain simply. Do not speculate beyond your expertise. Leave the courtroom when excused by the court.

If you've agreed to review the case or to give testimony for a fee, expect this to be brought up in court and to answer questions as to your qualifications and work done. Consider taking a preparatory course before starting a business of consultation.

Be sure that you understand the question, and its reasonable intent, before answering; if uncertain, ask for clarification. The lawyer is unlikely to ask a question for which he does not already know the answer and what he wishes to do with it.

Lawyers are <u>expert</u> at arguing, at words, and meanings. Do not try to 'game' them. Good ones will be as well-prepared in the medical matters at hand as yourself. They are also skilled in spotting responses and non-verbal communications. Stick to the facts, as known, and any necessary opinion that the court requires and permits. It's ok to take a few moments to collect your thoughts (or give an opportunity for counsel to object), then give your reply.

If there is a pre-trial conference, discuss any questions or anxieties. You may be asked in court if you were "coached as to what to say;" you simply discussed what to expect and to speak the truth.

A defendant caregiver does not have to be "right" in all that was done, but that another <u>reasonable</u> equivalently-experienced and knowledgeable person is likely to have made that choice given the same circumstances.