London Health Sciences Centre
Southwest Ontario Regional Base Hospital Program

SWORBHP LINKS

VOLUME 13 APRIL 2013

Inside this issue:

Hurry Up Spring!

ISSN: 1927-8276

Mapping Our Future

2013 at SWORBHP began with the departure of Severo (Tre) Rodriguez for his new role as Executive Director of the National Registry of EMTs. Over the past four years Tre led the transition from four previous base hospitals to one cohesive regional program that is now a leader in the Ontario EMS Community. SWORBHP Medical Council and LHSC Leadership recognized Tre's departure as an opportunity to move from transition to advancement. An opportunity to reflect on our past and decide how SWORBHP can best enable paramedics across Southwestern Ontario to deliver excellent patient care despite the challenges faced in our health care system. A strategic plan is the cornerstone of an organization's success.

The SWORBHP team embarked on an exciting grassroots strategic planning process in February 2013 by taking a critical look at where we have been over the past four years (environmental assessment). In April we will determine where we want to go over the next four years by creating our mission, vision, strategic themes and objectives. All of the elements of the strategic plan will then be translated to a strategic map that will allow our team and stakeholders to visualize cause and effect linkages between what we do every day and the ultimate goal(s). Every initiative that we undertake will be judged against the map/plan. Lastly, the team will determine if our current structure fits with the plan and adjust the organizational structure as needed. We will have an opportunity to define the skill set and background of the next SWORBHP Manager.

I look forward to keeping you in the loop as the strategic plan progresses. If you have any suggestions for the plan (initiatives we should consider, overall goals, objectives etc.) that you believe would help enable paramedics to provide excellent patient care please contact me at adam.dukelow@lhsc.on.ca.

Adam Dukelow, M.D., FRCP(C), MHSC, CHE
(A) Regional Program Manager
SWORBHP Strategic Planner

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The Importance of Treating Hypotension

What is Stable?

We have recently been sent a number of calls to review when a paramedic did not start an IV or administer a fluid bolus when their patient was found to be hypotensive.

- 54 year old complaining of weakness, a BP of 51/37 after her heart rate went up to 155.
- 87 year old with possible pneumonia, a heart rate of 72 and a BP of 82.
- 54 year old complaining of weakness, a heart rate of 87 and a BP of 74/46.
- 54 year old with weakness, a heart rate of 104 and a BP of 65.
- 87 year old with a shoulder dislocation, a heart rate of 56 and a BP of 71/45.

In all of these cases an IV was not even attempted. These cases represent a reluctance on the part of some IV trained paramedics to start an IV when it is clearly indicated. We wondered why this would happen so we asked the paramedics what their thinking was. In some cases, the paramedic did not start an IV because they thought the patient was “stable”. They based this on the patient being in no distress and being oriented. In others, the paramedics said the vital signs were “normal” for that patient.

In other cases we have looked at when IVs were not started or only one attempt was tried, the reasons fell into four categories. Some paramedics did not feel confident they would be able to start an IV in a hypotensive patient or they didn’t readily see a vein to attempt an IV. Second, they are afraid of being criticized for increasing their on scene time by delaying transport. Third, they didn’t trust the reading from the BP machine. Fourth, they didn’t believe the reading because the patient looked “too good” to have a BP as low as the reading.

In response to the first reason, no one will get better at starting IVs if they don’t try. Therefore, at least try to start an IV when it is indicated. While it is important not to prolong scene time, as will be discussed below, it is very important to treat hypotension. A person who is hypotensive needs to be treated! In response to the third reason of not believing the monitor reading, if for some reason you do not believe the monitor reading, validate the reading manually, and record the accurate reading on the ACR (not the incorrect reading).

Blood pressures in the 70’s and 80’s are not normal. This is especially true in the elderly who are unable to quickly mount a compensatory response by increasing their heart rate. For any cause of hypotension, the brain needs a mean arterial pressure of at least 60-70 mm to be able to auto-regulate its blood flow. Below that the brain does not perfuse well and the brain starts malfunctioning. If a patient’s BP is only 75 systolic there is little reserve left. Therefore, it is important to attempt to raise a patient’s BP to at least 90 systolic.

Another example will show the importance of not relying on how the patient ‘looks’. Patients who are bleeding will often tolerate a loss of up to 30% of their total blood volume BEFORE they start to become hypotensive. In an adult, this represents about 1.5 litres of blood. Therefore, patients can “look” ok with significant blood loss.

One of the clinical pearls of wisdom commonly taught to clinicians is to treat the patient not the monitor. In the case of vital signs, this advice may be misplaced. SWORBHP would like this to be changed to “treat the patient AND the monitor”. Patients can “look good”, be able to converse and seem perfectly normal to you with a low blood pressure. This doesn’t mean they are good. When a patient is hypotensive their reserve is small and once they reach the tipping point they will deteriorate very rapidly. Therefore, believe the vital signs readings and treat the patient when it comes to hypotension!

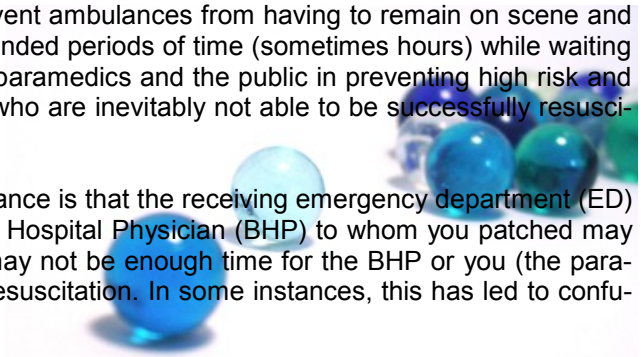
Paul Robinson, ACP, AEMCA, CPSO
Professional Standards Specialist

Don Eby, M.D., M.Sc., CCFP(EM) FCFP
Local Medical Director
Grey, Bruce, Huron, Perth

Kent Padfield, CMM-III, AEMCA
Deputy Chief-Quality Assurance
Bruce County EMS

Rolling Termination Of Resuscitation (TOR)

The Deceased Patient Standard (2010) allows for vehicles to continue on to the health care facility if a TOR occurs in the back of a moving ambulance. The rationale for this is to prevent ambulances from having to remain on scene and unable to respond to requests for emergency assistance for extended periods of time (sometimes hours) while waiting for a coroner to arrive. This stipulation also promotes safety for paramedics and the public in preventing high risk and high speed "code 4" transports over long distances for patients who are inevitably not able to be successfully resuscitated.



The only drawbacks to having a TOR applied in a moving ambulance is that the receiving emergency department (ED) team may not be familiar with the TOR procedure and the Base Hospital Physician (BHP) to whom you patched may have been at another site. Depending on the transport, there may not be enough time for the BHP or you (the paramedic crew) to advise the receiving ED as to the status of the resuscitation. In some instances, this has led to confusion.

While the so called "rolling TOR" is an acceptable process to follow, we suggest that it may be a better strategy to request a TOR on scene, when appropriate, and not in the moving ambulance. If transport times are relatively short, consider the time required to patch to the BHP, obtain a TOR, then in turn notify the receiving ED. If you decide that all of these steps cannot be accomplished during a relatively short transport, it may be equally advisable to continue on to the ED with continued resuscitative efforts and allow the ED physician to assume care of the patient.

The SWORBHP has contacted every ED within the southwest region to inform them of the process to follow once a paramedic crew arrives with a patient where a TOR has been applied. Nevertheless, some ED physicians may still be unfamiliar with the process. If you experience a situation where the receiving ED was unfamiliar with the TOR, please let us know and the Medical Directors from SWORBHP would be happy to follow up with the medical leadership from that facility.

Michael Lewell, B.Sc., M.D., FRCP(C)
Regional Medical Director

Reference

Deceased Patient Standard (2010). Retrieved from http://www.lhsc.on.ca/About_Us/Base_Hospital_Program/Education/No.111v.1.0DeceasedPatientStandardTrainingBulletinMemo.pdf

Technology at its Finest!

The blackberry Z10 has arrived at SWORBHP. I took the plunge and upgraded my blackberry for the latest 'techy' phone. The phone has some great features and cool Apps you can download, except for the one I really wanted...our SWORBHP App!

Our current App requires more updating and fine tuning before it will work on the new Z10. We have currently suspended downloading our App to any phone system as we work on updating them for compatibility and final approval from the MOHLTC. Paramedics who already have the App on their phone can continue to use it, but need to wait to update or upgrade it to another phone.

Thank you for your patience, we look forward to releasing our new version soon.

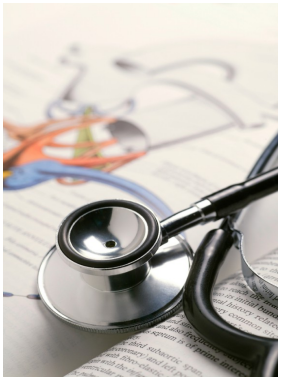
Tracy Gaunt, M.Sc.,NCEE,CPSO
Professional Standards Specialist

Look for us on the Web
www.lhsc.on.ca/bhp

SWORBHP's Medical Students, Residents and Fellows

Have you come across a resident during a rideout, viewed a webinar co-presented by a medical student, or had an EMS fellow participate in one of your recert courses and wondered why they are involved with SWORBHP?

Emergency Medicine residents complete a longitudinal EMS rotation as well as a mandatory one month block of EMS. The longitudinal component of the rotation consists of residents in their first and second years completing three rideouts per year to familiarize themselves with prehospital care. Residents will also complete one rideout during their fourth or fifth year.



During their third year of training, residents will complete a one month block with SWORBHP. In addition to doing four rideouts, residents will become familiar with the role of medical directors for an EMS system. Activities include learning about and assisting the Professional Standards team, familiarizing themselves with the PCP and ACP medical directives, completing ACR audits, participating in an educational project that is delivered to SWORBHP paramedics, attending relevant meetings that the local and regional medical director attends, familiarizing themselves with current and landmark prehospital research, and shadowing EMS physicians at ORNGE. Once this rotation is completed, residents will have the skills necessary to act as patch physicians and will start taking patch calls. The EMS rotations are a necessary collaborative experience for emergency medicine residents in order to gain a deeper understanding of their specialty.

Medical students with an interest in EMS can do a two week elective at SWORBHP. The experience is very similar to what residents do, but in a condensed version. This elective is now open to medical students from schools across Canada. SWORBHP will be hosting our first non-Western University medical students in the upcoming months.

Some residents have an interest in EMS and prehospital medicine. During their fourth year, they complete a year of training at SWORBHP. To date, we have had two residents complete this training. Fellows are involved with Professional Standards, paramedic education, conduct research and will assist the local and regional medical directors in order to gain a greater understanding of the physician's role in EMS.

Matthew Davis, MD, MSc, FRCPC
(A) Medical Director of Education - SWORBHP

Recently Uploaded and Ready for Viewing

The following Webinars have been uploaded to the SWORBHP Website and are now available for viewing.

February 13, 2013 - Hypothermia: Don't get left out in the cold!
February 25, 2013 - Midwives and EMS...What is your role?
March 13, 2013 - SOB: A complaint with many faces.
April 8, 2013 - Hydrogen Sulfide (H2S) Round Table Radio Chat

Click here to access these webinars on our website.

Michelle Frazer, CQIA
Certification Associate

Recapping 2012-13 Recerts as we Move Forward

It's true, we have officially completed our 2012-13 recerts! From the medical directors, coordinators, regional educators, and associate instructors - thank you for your participation, and congratulations everyone! Over the past year we recertified a total of 1,103 paramedics from Windsor to London to Owen Sound (988 PCPs, 115 ACPs). It took over 808 classroom hours and 25,720 teaching hours to complete all the recerts.

Plans for the 2013-14 recerts have begun. Once again, we asked for your feedback on which topics to teach and how to teach them. With recommendations from professional standards, Ask MAC, medical directors, regional educators, open forums, and your survey results, we have been developing a strategic recert program just for you! Look for practical scenarios, skills, and on-line pre-course work in 2013-2014.

Some of you asked for variety, so you'll be given the opportunity to choose some of your pre-course material. Others prefer to practice skills in a low key, stress free environment. You've got it! You'll have the chance to work in teams through skill stations and scenarios to build your critical thinking and assessment skills. You will discuss cases that affect us all, and surprisingly they aren't the most complicated cases out there.

You will be given the opportunity to discuss a unique call, question, or rhythm with one of the medical directors. The caveat to this endeavor is a little pre-course work for you with the bonus of getting your question(s) answered live in class. This is something we believe will be a very interesting component of the recert days.

If you have any ideas, questions, or concerns, please forward them to your regional paramedic educator for discussion.

Pete Morassutti, B.Sc., ACP, NCEE, NCI CMMII, CPSO
Professional Standards Specialist

Planning for 2013-14 Recerts

With the realization that recerts can be a stressful time for some paramedics, we have chosen to share some preliminary information with you in hopes of easing the potential anxiety. It appeared that most of you enjoyed the friendly, low-stress, group-type environment we offered last year, so we will offer the same this year. The day will be active - you will participate in scenarios and skill stations, as well as case discussions. For those who crave new technology, we've included some of that too! For those of you who are perhaps not so keen about the thought of technology creeping into your world of recerts, don't worry, you'll be in groups and we'll walk you through it.

Here's what we plan to cover:

- Level of Awareness & the Need for Glucometry
- Anaphylaxis
- DNR/Deceased Patient Standard
- Show and Tell (bring a call/case/rhythm/question, and we'll address it)
- Adult Cardiac Arrest
- Pediatric Cardiac Arrest
- Neonatal Resuscitation
- ECG Rhythm Interpretation

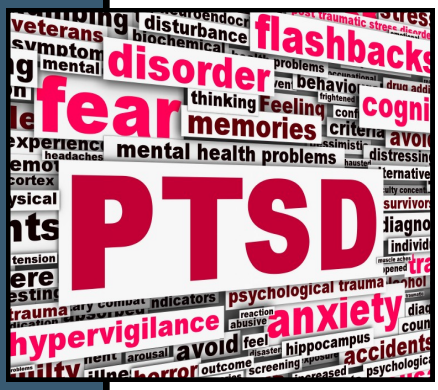
Now that I've shared this information, I know what you're thinking. Will there be a test? Yes, there will be, and you'll find it will be very similar to the one you wrote at your last recert. Online pre-course work is required; however, you will have the opportunity to CHOOSE your pre-course! There will be mandatory and optional pre-course material, so we hope you like where we're going with this!

If you have any questions or concerns, please feel free to contact me or your regional paramedic educator.

Stéphanie Romano, MScEd., HBSc., AEMCA, NCEE, CQPA
Education Coordinator

Post Traumatic Stress Disorder (PTSD) Supporting Paramedics Through Work Related Stress

In 2012, Essex-Windsor EMS, in collaboration with the University of Windsor and the Southwest Ontario Regional Base Hospital Program, completed a study looking at workplace stress in EMS. (Donnelly, Bradford, et.al. 2013). Specifically, we were interested in how stressors related to the provision of patient care (critical incident stress), stressors associated with the organization and the culture in which the responder is working (organizational stress), and the stressors associated with working on an ambulance (operational stress) contributed to post traumatic stress symptoms (PTSS). Because paramedics may seek help from a variety of sources to mitigate the effects of stress on their health, family life, and ability to work safely and effectively, we also wanted to find out where paramedics would be the most comfortable in seeking help.



Paramedics in a municipal-based Ontario service (annual call volume 80,000) were invited to complete a 167 item online questionnaire examining self-report levels of operational stress, organizational stress, critical incident stress, and post traumatic stress. Participants were asked to report the likelihood of seeking help from a supervisor, a partner or co-worker, a union representative, a base hospital educator, family, or a therapist.

145 paramedics (a 54% response rate) completed the questionnaire. We found that operational stress (the stress associated with working on an ambulance) was the most significant predictor of post traumatic stress ($p<.001$). We also found that critical incident stress "interacted" with operational stress; if someone has high levels of critical incident stress and high levels of operational stress, there is an even higher risk of post traumatic stress.

We asked about sources of social support; respondents were more likely ($p<0.001$) to seek support from family or a paramedic work partner than from any other source. Respondents were less likely to seek support from (sequentially) a co-worker, a therapist, a union representative, a supervisor, or a base hospital educator.

As access to employee assistance services for respondents is administered by the supervisory structure, stress levels were analyzed for individuals that were more or less likely to seek support from their supervisor. Analysis revealed higher levels of organizational ($p<0.001$) and operational ($p<0.05$) workplace stress in those individuals who were unlikely to seek support from their supervisor.

These findings indicate that health and wellness initiatives should address the impact of both critical incident stress and chronic work related stress. Investments in awareness and education on accessing help for paramedics suffering from work related stress should be spent on peer programs and open houses with family and friends rather than sending supervisors for extra training in stress identification. Thought should be given to create confidential access to employee assistance programs for work related stress issues to promote easier non-threatening access.

Many thanks to the paramedics of Essex-Windsor EMS for their participation in this research!

Elizabeth Donnelly, PhD, MPH, LICSW, NREMT
Assistant Professor
School of Social Work
University of Windsor

Paul Bradford, MD CCFP(EM) FCFP MDS
Local Medical Director Base Hospital
Essex-Windsor, Chatham-Kent

Reference

Donnelly, E.A., Bradford, P., Mellow, R., Hedges, C., & Morassutti, P., (2013). Relative Influences of Different Stresses on PTSD in a Canadian EMS Service. *Journal of Prehospital Emergency Care. 17*(1), 132

Paramedic Recognition Awards

Prehospital Save

Bruce County EMS
Lesley Pedlar, Bobby-Joe Barth - July 21, 2012

Medavie EMS Chatham-Kent
Vic Dimitru, Saskia Sanford - January 23, 2012
Ron McGregor, Jodie Wolfe - April 19, 2012
Ron McGregor, Ken Langlois - May 21, 2012
Jon Benoit, Dwayne Purdy - October 26, 2012
Jackie Dath, Whitney Dantzer, Nick Bondy - October 29, 2012

Essex-Windsor EMS
Josh Benoot, Anthony Jaroszewicz, Isidor Cusumano - August 13, 2012
Lori Poole, Hannah Chevalier - October 7, 2012
Kim Schroeder, Renee Mitchell, Andre Mongeau - October 13, 2012
Don Theriault, Hannah Colenutt, Nick Jovanovic - October 18, 2012
Andrew Bridgen, Chris Lizotte - November 22, 2012

Middlesex-London EMS
Chris Vanderydt, Leisa Terry, Jodie Milner (Fanshawe Student) - January 31, 2013
Lori Cook, Michelle Van Opstal - February 3, 2013
Chris Vanderydt, Leisa Terry, Jodie Milner - February 19, 2013
Chris Vanderydt, Leisa Terry, Jodie Milner, Derek Raine, Lee Waterman - February 24, 2013
LT Jimson, Dustin Carter, Adam Lund (Fanshawe Student) - March 8, 2013
Lee Nordstrom, Mike Bauldry, Chris Mortier, Scott MacDonald, Terry Irwin - March 8, 2013

Prehospital Newborn Delivery

Essex-Windsor EMS
Rick St-Pierre, Lori Poole, Angela Volpatti, Jackie Simpraga - January 2, 2013

Grey County EMS
Bryan Walker, Glenn Smith, Leo Verschuren - February 24, 2013

Middlesex-London EMS
Adam Tapp, Lorne Culbert - March 29, 2013

Congratulations everyone!

Cathy Prowd, CQIA
Operations & Logistics Specialist

Click here to access Recognition Awards forms online.

Upcoming CE Opportunities

- **Stress in EMS - April 26th - 9:30 a.m.**
- **ECG Series Part 2 - May**
- **ECG Series Part 3 - June**
- **Attention Words in EMS - June**
- **Trauma Pain Control in EMS - June**
- **Anaphylaxis - July**
- **Stroke - July**

Remember to check our website regularly for information on upcoming Webinars and rounds.

Click here to visit our website and view the page dedicated to Continuing Education.

Trivia…fast facts!

- 9 out of every 1,000 computers are infected with spam.
- Amazon sells more e-books than printed books.
- Your mouth produces 1 litre (1.8 pints) of saliva a day.
- On average, you blink 15,000 times a day. Women blink twice as much as men.
- An ounce of chocolate contains about 20 mg of caffeine.

Retrieved from: http://didyouknow.org

Comments?

If you have comments or feedback on the newsletter, or have an article you would like to have considered for publication in a future edition of LINKS, please send to:

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ISSN: 1927-8276

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