London Health Sciences Centre
Southwest Ontario Regional Base Hospital Program

SWORBHP LINKS

VOLUME 1 ISSUE 1 APRIL 2010

INSIDE THIS ISSUE:

From the desk of the Regional Medical Director

Changes and More Changes

Welcome to the first newsletter from the Southwest Ontario Regional Base Hospital Program (SWORBHP). We are very proud of the excellent work that you do under such challenging circumstances. Keep it up!

I want to take a few moments and review some of the changes that have occurred over the past year. With a few minor exceptions, we have adopted common protocols throughout the region. This was a very important first step. For those of you working part time with various services, having a common set of directives prevents you from having to memorize different sets of protocols. In return, fewer errors are made, and patient care is safer and more consistent.

> "I remember when people used to complain that nothing ever changed in EMS".

In consultation with the medical directors, we have adopted a more consistent approach to auditing, investigations, and remediations. Our auditors have been trained in a standard process, so that your audits are more timely and consistent.

We have attempted to make the annual recertification day as non anxiety provoking as possible. We have standardized the content, based the topics upon issues raised by our QA data, as well as local needs. In the future, look for more innovative ways of delivery and more relevant topics tailored to your educational needs.

The last year has seen some services adopt CPAP, King LT, IV Programs for PCP, 12 lead acquisitions, STEMI diversion direct to PCI, and pediatric defibrillation. No wonder our education staff is tired…

At the Provincial level, we have been busy revamping the format of the entire package of medical directives. We have listened to your concerns about the prescriptive technician cookbook style protocols of years past. In the near future, watch for a brand new format to the Provincial Directives, CTAS revisions, revised Paramedic Stroke Prompt Cards, new Field Trauma Triage Guidelines, and a possible major change to the guidelines for cardiac arrest management. What is best - up-front CPR? Continuous compressions? More drugs? Less drugs? No drugs? Tubes? No tubes? It's all coming - stay tuned!

I remember when people used to complain that nothing ever changed in EMS. Those days are gone. Welcome to the dynamic, technology driven, cutting edge science world of resuscitation we call EMS. Welcome to SWORBHP. We're happy you're with us.

Mike

Michael Lewell, B.Sc., M.D., FRCP(C)
Regional Medical Director
Southwest Ontario Regional Base Hospital Program
London Health Sciences Centre
Associate Professor of Medicine
University of Western Ontario

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A Note from the Regional Program Manager

Welcome to Change

Welcome to change. This has been the calling card for the past several years when it comes to base hospital structures in Ontario. During this regionalization period a great deal has been discovered about ourselves, the services we provide, their externalities, and spill-overs. Ultimately, the continually evolving structure called the Regional Base Hospital is here to stay.

As the structures continue to evolve, becoming more efficient and quantitative, so has the manner in which we function, in all areas from education to medical direction. This is something to be celebrated. Welcome all.

Tre

Severo Rodriguez, B.A., M.Sc., NR-LP, AEMCA
Program Manager
Southwest Ontario Regional Base Hospital & RTC Programs

"...the program's commitment to quality continuing education has transcended regional and provincial standards achieving an international bench mark."

SWORBHP Achieves Educational Accreditation

LHSC's Southwest Ontario Regional Base Hospital Program (SWORBHP) was recently awarded Organizational Accreditation by the Continuing Education Coordinating Board for Emergency Medical Services (CECBEMS).

The Organizational Accreditation process was developed by CECBEMS to recognize entities that conduct ongoing EMS continuing education programs and who are committed to planning and implementing activities of a consistently high quality. Organizational Accreditation also allows accredited organizations to review and accredit courses planned in conjunction with cosponsoring organizations.

We are proud to say that LHSC is the only organization in Ontario to have received Organizational Accreditation for Continuing Education. This is an outstanding accomplishment which speaks to the dedication and commitment of the Regional Base Hospital staff.

What does this mean and how will it affect the paramedics? The Regional Base Hospital completed a comprehensive self-study and peer review process to verify that the program has the infrastructure, staff, medical direction, and leadership to ensure implementation of high quality continuing education designed to meet the needs of EMS providers. The Base Hospital will maintain student course completion records in its files and upload those records to the CECBEMS Accreditation Management System where they are maintained indefinitely. Further, the program's commitment to quality continuing education has transcended regional and provincial standards achieving an international bench mark.

The Base Hospital program is committed to the ongoing development of educational activities that will help EMS providers, educators and administrators maintain the competency required to deliver high quality care and enhance their professional development.

Cathy Prowd, CQIA
Operations & Logistics Team Leader

Inter-hospital Transfers

Recently, inter-hospital transfers have become a large part of EMS "business". Increased use of technology like CT scans that are not available at every hospital, and bed shortages contribute to this. These transfers place a strain on EMS resources. Although private transfer services are used widely, EMS still does the bulk of these calls.

Issues can arise during inter-hospital transfers. Whenever patient care is transferred, there is added risk to the patient. Information about the patient's condition is lost. Copies of records may be incomplete, but also lost is an appreciation of how the patient looks and changes over time. It is therefore extremely important that paramedics do an initial assessment and receive a thorough handover before leaving a sending hospital.

Paramedics must be comfortable with the "stability" of a patient they transfer. They must be able to care, within their scope of practice, for problems that develop en route to the next hospital. Sometimes, sending facilities understate the stability of a patient in an attempt to not send their staff on the transfer.

When nurses, RTs or physicians accompany the patient, they represent the "higher medical authority". Paramedics may assist these providers but should not do anything outside the Base Hospital medical directives or their scope of practice, even if "ordered" to. On occasion, this might lead to conflict. It is important to remember that paramedics must never practice outside of their scope of practice.

En route, if a patient's condition deteriorates or new symptoms develop, eg. chest pain, then take a history, do a physical exam, assess for treatment, including assessing for indications and contraindications. Patching to the Base Hospital physician is an option, but if the patient deteriorates significantly then going to the closest Emergency Department is indicated.

As inter-hospital transfers become a larger part of EMS business, it is important to do these calls well. Transfers of care are high risk events for patients, and paramedics have a vital role in making sure the patients are transferred as safely as possible.

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

Delivery of Online Focused Learning Events

McGraw Hill Higher Education has recently developed an innovative tool (Learnsmart) for delivering online education to a variety of professionals and industries.

SWORBHP staff have developed a relationship with McGraw Hill that has resulted in access to two online modules for a limited number of paramedics in the region. These two modules will be developed by SWORBHP staff and Medical Directors based on learning needs that were identified during the 2009-10 recertification process. Each module will have specific learning objectives and a post module evaluation.

Paramedics who are given access to the Learnsmart modules will be asked about their experience with this innovative tool. If the Paramedic experience is positive and the material is successfully learned (as determined by the post evaluation), Learnsmart may be used to deliver future focused learning events/modules.

Keep an eye on your email for further information about this exciting learning opportunity that may shape the future of online education in Ontario.

Dr. Adam Dukelow, M.D., FRCP(C), MHSC, CHE
Local Medical Director
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Who's Who? Introducing the Regional Base Hospital Staff...

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Cathy Prowd
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Regional Paramedic Educator

Pete Morassutti
Regional Paramedic Educator

Local Hydrofluoric Acid Protocol to be Accepted Provincially

"It melts through glass, and dissolves most rock."

Essex and Kent's Hydrofluoric Acid Protocol has recently been slightly modified and has been approved by the Provincial MAC and AMEMSO committees, for use by appropriately trained paramedics. Hydrofluoric acid is a very toxic substance, used in making medications, Teflon, and industrial cleaning agents. It melts through glass, and dissolves most rock. It forms a very toxic gas. When in contact with the body, it quickly absorbs, and binds with important elements in the body like calcium and magnesium. This can interfere with nerve function, in some cases interfering with initial sensation of pain in some patients. It can then penetrate the body causing hypocalcaemia, cardiac arrest, and death. It is extremely toxic to the cornea, and can cause severe lung injury as a gas or if aerosolized. It is produced in several different concentrations, including an anhydrous state, or pure form.

The largest producer in Canada is in a plant called Honeywell in Amherstburg, Ontario. The chemical is shipped via rail car or truck. Trucking is done with two man hazmat trained teams in case of problems (apparently picked for their sprinting ability). This substance is commonly shipped on highway 401.

Treatment on the new protocol includes standard patient decontamination; high flow Oxygen and the use of 2.5% calcium gluconate nebulization for suspected lung injuries. It is also recommended to massage a 2.5% calcium gluconate gel into the burn area. Eye treatment consists of topical anesthetic drops and copious irrigation. Look for these protocols to start appearing in the fall.

Paul Bradford, B.Sc., M.D., CCFP(EM)
Local Medical Director
Essex-Windsor, Chatham-Kent

Up Close and Personal

In each edition of LINKS, we will take you up close and personal with some of our staff. We hope this allows you an opportunity to get to know each of them a little better. In this first edition we would like to introduce you to Cathy Prowd and Dr. Adam Dukelow.

Cathy Prowd, CQIA
Operations & Logistics Team Leader

Cathy has been with the Base Hospital Program for 19 years. Prior to assuming her role as Operations & Logistics Team Leader with SWORBHP in October 2008, she was Program Manager of the Grey-Bruce-Huron Base Hospital. Cathy continues to work from her office at Grey Bruce Health Services in Owen Sound. "I have seen a lot of advancement in pre-hospital care over the years and am fortunate to be involved with this exciting profession we call EMS."

In June 2009 Cathy obtained her Certification as a Quality Improvement Associate through the American Society for Quality.

Cathy and her husband Don have three children and two grandchildren. They enjoy travelling, the theatre, their Koi pond, and most importantly spending time with their grandsons, six year old Benjamin and four year old Brayden. Being the ever adoring 'Nana' that she is, you can usually find her at the arena or ball park cheering wildly.

Adam Dukelow, MD FRCP(C) MHSC CHE
Local Medical Director

Dr. Adam Dukelow is an Emergency Physician and Local Medical Director for SWORBHP, providing oversight to Middlesex, Elgin, Lambton, Oxford, Perth and Oneida First Nations. He is also the Medical Director responsible for regional education. Adam is an Assistant Professor in the Division of Emergency Medicine at the University of Western Ontario. Adam is the current President of the SJHC Professional Staff Organization, a member of the city wide Medical Advisory Committee (LHSC & SJHC) as well as a member of the SJHC Board of Governors. Adam recently assembled a team of Emergency Physicians to complete a consulting project for the Chatham Kent Health Alliance Emergency Department focusing on quality of care and efficiency in patient flow.

Adam lives in Port Stanley with his wife Valerie, their six month-old daughter Madeleine and golden retriever Gryphon. Outside of a busy work schedule Adam and his family enjoy boating, UTV riding, walking on the beach, travelling and running.

SWORBHP and NREMT CAT Pilot

The SWORBHP team has been working with the National Registry of EMT's (NREMT) in Columbus, Ohio to develop a pilot Computer Adaptive Test (CAT) for paramedics in the region. NREMT has a bank of more than 20,000 validated exam questions that are currently used to certify new EMTs and Paramedics in 42 U.S. states and the U.S. Military.

With the support of multiple services in the region and the Ministry of Health Emergency Health Services Branch, SWORBHP and NREMT have developed a pilot test bank of questions that are applicable to the training and or practice of Canadian PCP and ACP medics. A number of services in the region will participate in the pilot run of this exciting opportunity. The initial sitting of the assessment will involve approximately 100 PCPs and 100 ACPs. SWORBHP staff and medical directors will not know how individual medics performed on the CAT. The blinded results of the exam will be used as a needs assessment to plan future education throughout the region.

After finishing the CAT, paramedics will complete a survey about their CAT experience, the applicability of the material tested to their practice, and the level of difficulty compared to previous SWORBHP testing materials. Survey data will help assess the utility of the exam for online recertification purposes and to plan future iterations of the CAT.

Keep an eye on your email for more information about this project and for the chance to participate in this exciting opportunity that may shape future paramedic recertification in Ontario.

Dr. Adam Dukelow, M.D., FRCP(C), MHSC, CHE
Local Medical Director
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"If you have a computer and internet connection, you're there!"

Paramedic Rounds Go e-Live

Paramedic rounds provide an excellent forum for all levels of paramedics to discuss current issues in paramedic practice. However, physically attending rounds in a formal setting is not always possible or convenient for many paramedics.

Beginning April 16, 2010, SWORBHP will offer paramedic rounds through **GoTo**Webinar. This internet based program allows paramedics to attend our rounds presentations from virtually any location in the world. If you have a computer and internet connection, you're there!

GoToWebinar allows the participant to hear the presenter and to see the presentation right on their own computer screen. It is an interactive session that includes pop-up polls during the session for viewers to answer, and the overall results are shared with everyone participating.

Webinar allows the viewer to submit questions to the presenter in a "chat box", and for the presenter to provide answers back to that viewer, or to the entire audience. Further, viewers can "raise their hand", and the presenter may allow you to ask a question or give a comment that everyone else hears on their computer. Finally, the session is recorded and will be posted on our website for future viewing.

Over the past several weeks, we have been testing the system using an expanding number of participants. Many of you have already joined in on a test session, and we appreciate your assistance and feedback. This has helped us to refine the process, and has also provided the participants with an opportunity to learn the Webinar system as well.

If you have not already joined us in a Webinar test session, we invite you to join us on Friday, April 9th at 9:00 a.m. for one final test before rounds on April 16th. All services have received an email invitation to pass along to staff, or you can contact SWORBHP for registration information.

We are excited to be able to provide this new opportunity for all paramedics affiliated with SWORBHP, and we hope that you continue to provide your valuable input for rounds topics and delivery models.

Follow the link to our website, then go to About Us ▪ Educational Materials where you will find a host of reference and resource materials.

www.lhsc.on.ca/bhp

David Vusich, ACP, A-EMCA, AdEd
Education Coordinator

Southwestern Ontario's First EMS Resident

SWORBHP Staff and Medical Directors are very excited to welcome Dr. Matthew Davis to the team as of June 2010. Dr. Davis graduated from McMaster Medical School in 2007 and is currently a third year resident in Emergency Medicine at the University of Western Ontario. During the fourth year of his residency program (from June 2010 to May 2011) Dr. Davis will work on research projects, education tools and quality assurance with the SWORBHP team. Paramedics will see Dr. Davis during his ambulance ride-outs. He will attend provincial Medical Advisory Committee Meetings and numerous EMS conferences.

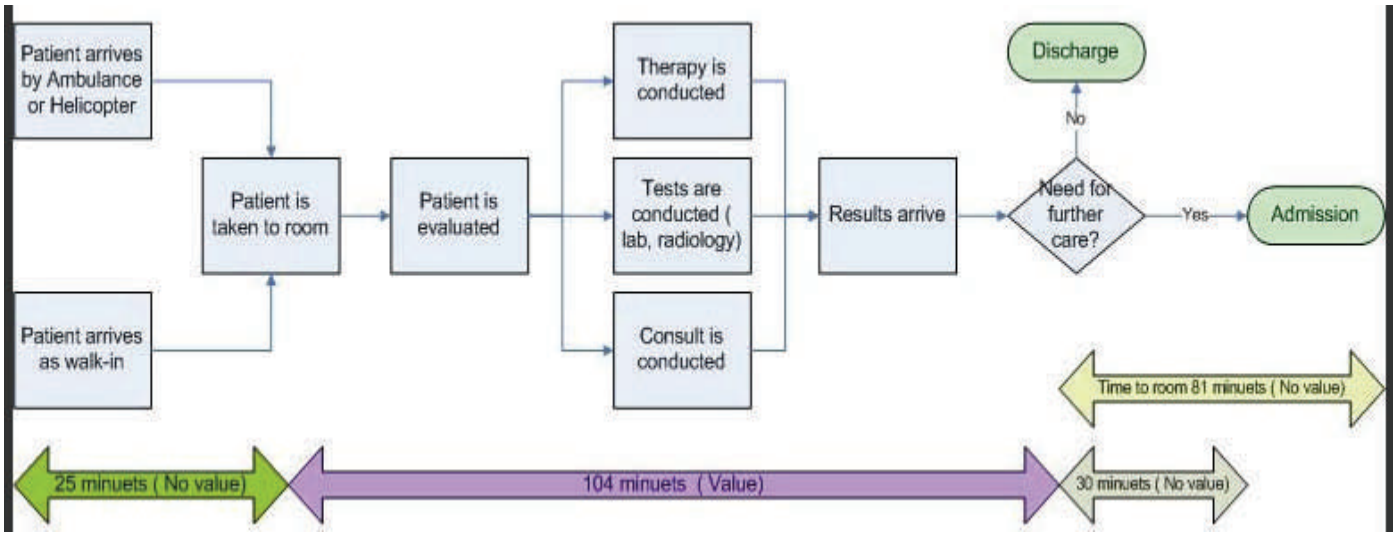
Please join us in welcoming Dr. Matthew Davis to the team. Dr. Davis' official title will be EMS Resident. He can be reached at matthew.davis@londonhospitals.ca.

Dr. Adam Dukelow, M.D., FRCP(C), MHSC, CHE
Local Medical Director
Middlesex, Elgin, Perth, Oxford & Oneida

Improving Performance
Healthcare Providers in Ontario Embracing New Concepts: Value Stream Mapping

Hotel Dieu Grace Hospital (HDGH) in Windsor is one of the leading examples of an enterprise wide Transformational Plan of Care, which as an organization, will allow it to build capacity through enterprise wide improvements in our region. Let me introduce you to one of the key concepts of initiating performance improvement by way of a journey within an organization's Value Stream Mapping (VSM). VSM is a method of creating a visual picture of all processes that take place in an organization or in one of its business units, from the time a customer places an order for a product or service, until the customer has received that product or service.

The key objective of VSM is to identify both value adding and non-value adding (Waste) processes in the "Flow" of material and information from the customer's perspective. This takes place within the organization or one of its business units where the order was placed, thus forcing the product or service provider to re-think, re-design, re-arrange, and improve processes.



As shown above, quantification of the end-to-end process from the perspective of time and value when added to a process map, becomes a value stream map. An effective value stream map should have all activities in the value stream translated to the common dimension of time. Once every activity within a value stream can be quantified by time consumption — a defect consumes time to correct, a patient or activity that is waiting for the next step consumes time, room turnover can be measured in time. The common element of time provides a language of improvement that every individual involved can understand.

So how does VSM apply to healthcare? To truly improve, an organization must clearly understand all the forces and actions that might impact the delivery of treatment for a specific medical condition. This understanding can be accomplished by creating a patient value stream map. A patient value stream map captures end-to-end information regarding the current condition of the care delivery system for a particular medical condition. It follows a patient or patient case from arrival at a healthcare facility (hospital or clinic etc.) through to the point of leaving the facility, and includes all actions that take place — both value added and non-value added — as well as the outcomes expected. A typical EMS service example is from call placed to patient transported to ED.

Adeel Ahmed
Process Analyst

References:

Hôtel-Dieu Grace Hospital, www.hdgh.org

FAQs: Nitro Use

FAQ:

Can I give nitroglycerin to a patient (without an IV) that has a prescription for it, but has never used it?

Answer:

This is hopefully a rare event, but it is a common question during recerts. The directive states that "the patient must have used Nitroglycerin in the past, or an IV is established and the paramedic is certified in IV therapy". While not stated explicitly in the directive, the Base Hospital teaching philosophy has always been previous "medically authorized", or ideally prescribed use. Therefore, the patient must have been prescribed the NTG, and have used it already.

Patients that have a prescription for NTG but have either not filled the prescription or have not used the NTG they received, do not meet the criteria of "previous medically authorized use" - it is prescribed, but it has not been used. Conversely, the patient that has never been prescribed NTG, but has used his wife's NTG, his neighbour's NTG, or anyone else's, also does not meet the criteria - it has been used, but not medically authorized.

However, a patient that has been treated in the ED for chest discomfort, and received NTG while in the care of the ED physician, meets the criteria - the NTG was both used and prescribed for that patient by the attending physician. Also, a patient that was transported to the ED by paramedics with chest discomfort and received NTG from the paramedics meets the criteria - it was used, and medically authorized, in this case by Dr. Lewell.

Patients that have used medically authorized NTG in the past can receive treatment without an IV (provided of course that all other indications/contraindications are confirmed). Otherwise, the IV certified paramedic must start an IV prior to administering NTG.

David Vusich, ACP, A-EMCA, AdEd
Education Coordinator

Upcoming Paramedic Rounds

Remember to mark your calendar...

April 16, 2010— Stroke—This will be the first Rounds presented by Webinar

May 21, 2010— Tachyarrhythmias—Thames EMS—presented by Fanshawe College ACP Students

Comments to the Editor

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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