2015-2016
ANNUAL REPORT

Centre for Prehospital Care

Health Sciences North

www.hsnsudbury.ca/prehospitalcare

CONTENTS

Centre for Prehospital Care

Health Sciences North

INTRODUCTION

On behalf of the staff and Medical Directors of Health Sciences North Centre for Prehospital Care (HSN CPC), it is our pleasure to present the annual report for fiscal year 2015-2016.

We have completed another productive and successful year. This report follows the reporting template provided by the Emergency Health Services Branch (EHSB) of the Ministry of Health and Long Term Care and demonstrates how our organization has addressed the key performance indicators listed in the performance agreement.

Key achievements during this fiscal year:

- We audited 5,334 calls
- We certified 84 new paramedics
- We facilitated 120 educational sessions

We acknowledge the work of all our staff as we continue to seek new and innovative methods of delivering our services to our stakeholders while meeting and, in some cases, exceeding the expectations defined in our performance agreement.

DR. JASON PRPIC
REGIONAL MEDICAL DIRECTOR

NICOLE SYKES
REGIONAL MANAGER

OUR MISSION AND VISION

Our Mission

The HSN Centre for Prehospital Care fosters exceptional prehospital care to improve the health and wellbeing of our communities by supporting paramedics through:

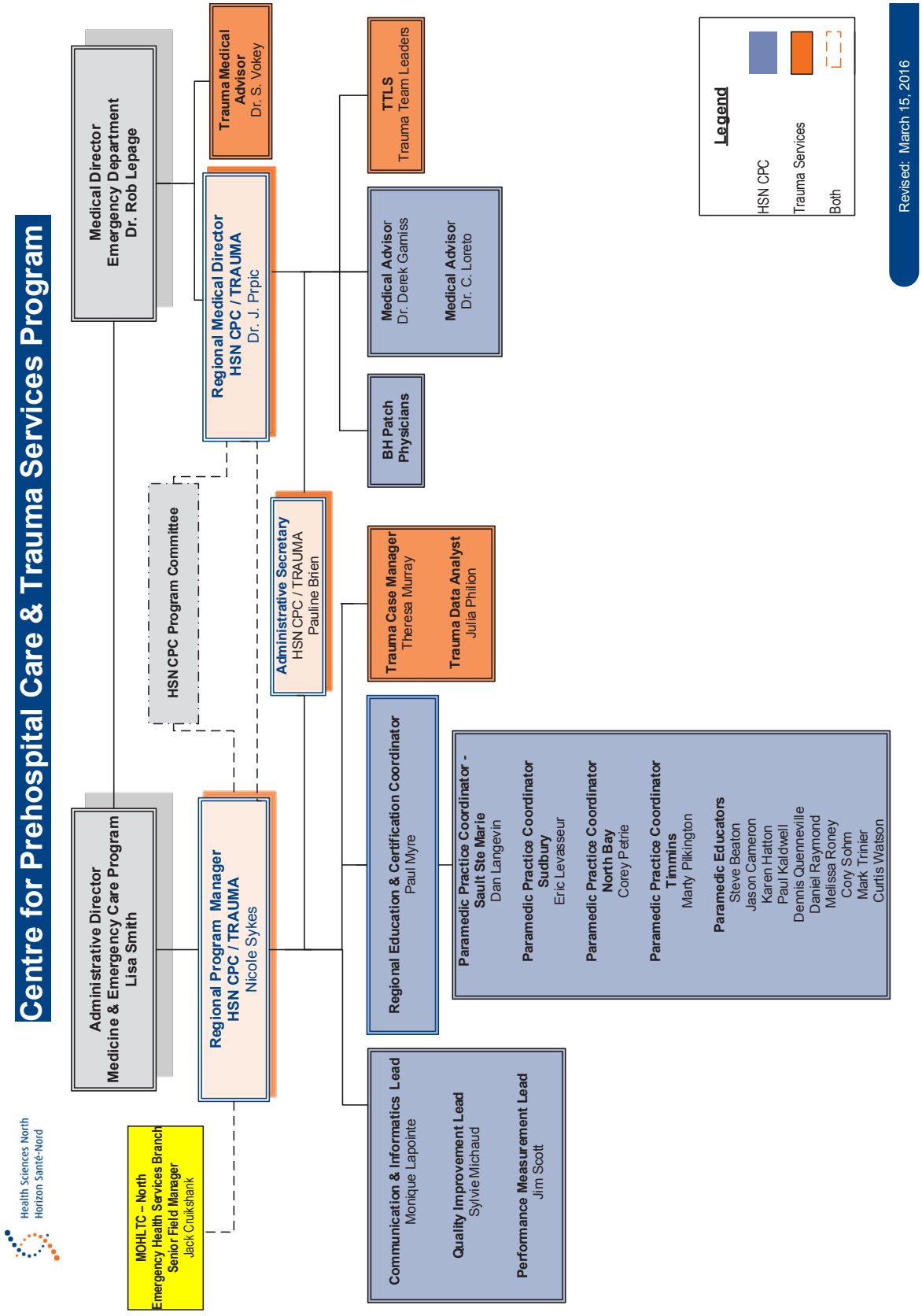
- Innovative education delivery;
- Research;
- Responsive quality programming; and,
- Medical delegation and oversight consistent with approved standards and expert practices.

Our Vision

Leading advancements in prehospital medicine through innovation, research, and education.

ORGANIZATION CHART

As of March 31, 2016



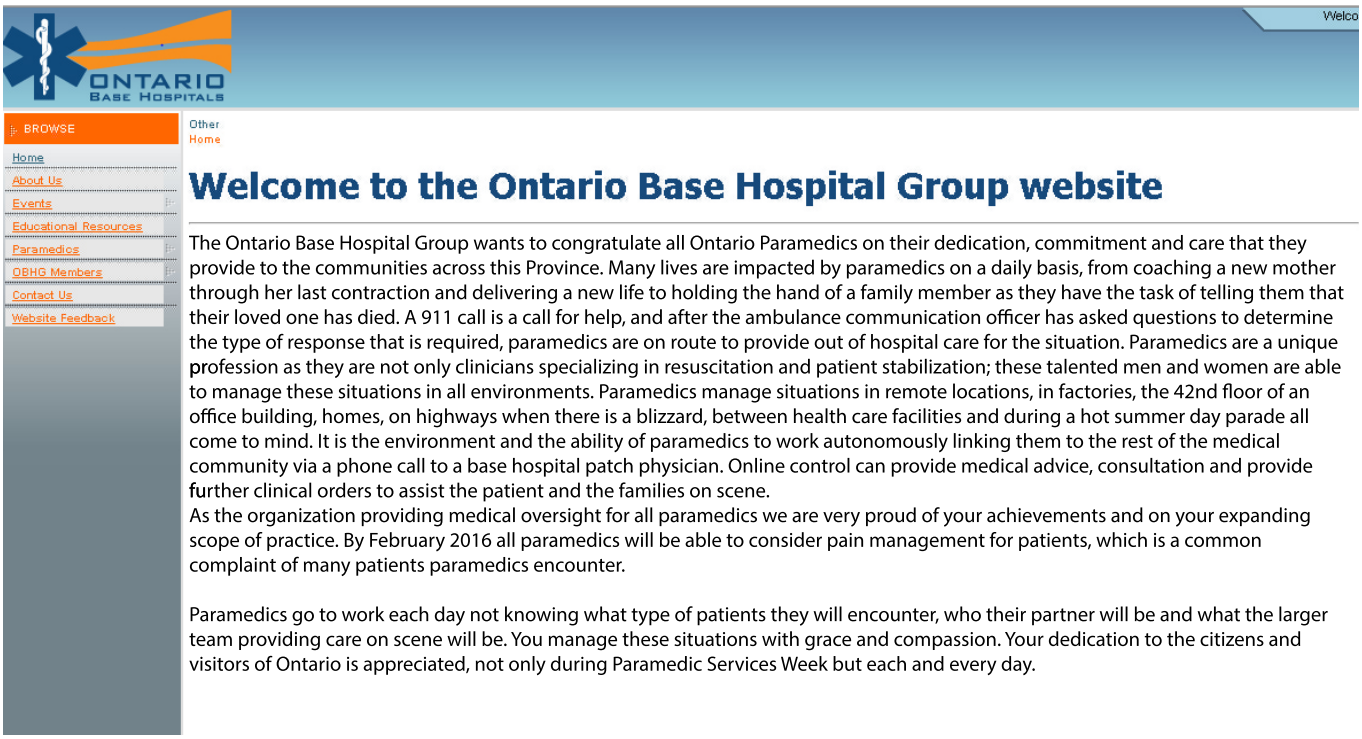
INTRODUCTION

HIGHLIGHTS

May 24-30, 2015

Celebrating Paramedic Week - MAY 24-30, 2015

In recognition of Paramedic Week, Dr. Jason Prpic, along with the Ontario Base Hospital Group, expressed how proud they were to work alongside such dedicated paramedics. Paramedics provide an invaluable access point to care through the 911 system. Paramedicine is a unique profession! Paramedics are not only highly trained and skilled clinicians, but are also able to manage situations in the most difficult of environments. Paramedic Week is a time to reflect on paramedics' accomplishments as well as dedication to the profession and ongoing advancements in prehospital care.



Role of city's paramedics goes beyond emergencies

May 25, 2015 9:26 PM by: Jonathan Migneault

Mayor Brian Bigger tries his hand at CPR during the Paramedic Week proclamation this morning at the Lionel E. Lalonde Centre in Azilda. Photo by Jonathan Migneault.

Sudbury's paramedics were recognized for the expanding role they play in health care during a ceremony the Lionel E. Lalonde Centre in Azilda Monday morning to officially kick off Paramedic Week.

Sudbury Mayor Brian Bigger declared the week of May 24-30 as Paramedic Week in Greater Sudbury.

"It's great to have recognition of what we do," said Matt James, an advanced care paramedic in Sudbury.

James said that even in his six-year career, his role as a paramedic has evolved, along with his level of training.

He recently returned to school for a year so he could receive his advanced care certification.

And in the past year, many of Sudbury's paramedics have received mental health and addictions training thanks to a $45,000 grant from the province.

"That's definitely an addition to our skillset," James said. "We weren't doing that before."

He said the mental health and addictions training has helped him and his colleagues better direct patients to the care they need.

Instead of bringing a patient with a severe mental illness to the emergency department, where they might have to wait a while before they receive care, they can bring them straight to the hospital's Mental Health and Addictions Centre on Cedar Street.

"It's a much more comforting and appropriate place to bring them," James said.

For people who are addicted to alcohol, the withdrawal management services are Pin Street are also more appropriate than the emergency department, he added.

In January 2015 Sudbury's paramedic services Transitions Care program, which also expands the role paramedics play in the community.

The Ministry of Health and Long Term Care granted the city $300,000 to launch a pilo program that has assigned three paramedics to conduct preventative home visits wit patients who have chronic obstructive pulmonary disease, diabetes or heart failure.

"Paramedics are well suited, with their training, to do some of the more acute care at home, which the hospital is really looking to do," said Dr. Jason Prpic, the regional medical director of the North Eastern Ontario Prehospital Care Program.

Prpic said the Transitions Care program helps the hospital meet its mandate to provide more care in the community, where costs are lower.

Trevor Bain, the city's chief of fire and paramedic services, said Paramedic Week is a chance for the public to better understand the changing role paramedics play in the community, and the skill involved in the job.

He said paramedics' skill levels have increased "100-fold" in the last 20 to 30 years.

HIGHLIGHTS

Sudbury Paramedic Service


Sault Ste. Marie

Nipissing EMS


Manitoulin-Sudbury DSB


Moose Factory

Attawapiskat

Kashechewan


Moosonee


Fort Albany

June 15, 2015

ED and Mental Health and Substance Abuse Diversion Program Collaboration

Collaborating with Greater Sudbury Paramedic Services, Health Sciences North Mental Health and Addiction Program as well as HSN Centre for Prehospital Care, with funding from the LHIN and support from the MOH Northern Field Office, Sudbury started a pilot project where lower acuity, mental health and/or substance abuse patients were diverted to the Out-patient Crisis Intervention Center located downtown Sudbury or the Detox Centre located on Pine Street in Sudbury.

Utilizing set triage criteria, paramedics could proceed to the alternate destinations as part of the hospital. This pilot project was presented to, and approved by, the Medical Advisory Committee (MAC) and the MOHLTC-EHSB Field Office from the designated area. The Pilot went Live on June 15th, 2015. Training was provided by the HSN Mental Health Program. All diverted patients were followed making sure that there were no adverse events during the Pilot.

Sep 14, 2015 4:04 PM by: Sudbury.com Staff

Dr. Jason Prpic, medical director of the Northeastern Ontario Prehospital Care Program at Health Sciences North; Jennifer Amyotte, commander of community paramedicine and professional standards with the City of Greater Sudbury's Paramedic Services; and Catherine Watson, clinical manager of the hospital's withdrawal managment services and Safe Bed Program celebrated the success of the hospital's emergency diversion program. Supplied photo.

MOHLTC Review

June 16 - 17, 2015

HSN CPC underwent a Base Hospital review June 16 and 17, 2015. Dr. Roy, HSN CEO, Grace St. Jean, Associate VP, Lisa Smith, Administrative Director for Medicine and Emergency Care Program, and Helene Cameron, Field Manager MOHLTC-EHSB attended the kickoff meeting to greet reviewers, and the exit meeting where preliminary

observations were shared. In August 2015, our draft report revealed four observations, and one commendation.

One of the observations was related to the emphasis on the need for enhanced BLS focused auditing in conjunction with the review of the identified ALS care. This was addressed at our September 2015 council meeting where all of our full time staff who perform audits were presented with a synopsis of these findings and provided with the direction of ensuring BLS issues are documented and provided to the responsible paramedic service for follow up.

This was a great opportunity to receive positive feedback from external reviewers and identify any areas of our program requiring improvement.

August 2015

Medic Buddy

On August 5, 2015, Apple™ approved the release of Medic Buddy in the App Store and most recently, the beta version of this App has become available for Android.

> 2,000 downloads
in this reporting period

https://itunes.apple.com/us/app/medic-buddy/id575951174?ls=1&mt=8

https://www.dropbox.com/s/nlfa3w3vcauq8ri/app-release-unaligned.apk?dl=0

Created by our very own Medical Advisor, Dr. Derick Garniss, this app was designed for Paramedics, with emphasis on the most up-to-date version of the Ontario ALS Standards. This unique tool provides paramedics with quick access to Standards, medication information, reference materials and the ability to add/modify personal notes. This tool can be used on an Apple or Android device using a generic login and password for access.

August 2015

Manitoulin-Sudbury DSB Audit Activities Overview

Health Sciences North Centre for Prehospital Care (HSN CPC) and Manitoulin-Sudbury District Services Board (Manitoulin-Sudbury DSB) Paramedic Services began working collaboratively to complete their respective Ambulance Call Report (ACR) auditing requirements as outlined in the HSN Performance Agreement with the MOHLTC-EHSB and their Inspections and Certifications requirements.

Manitoulin-Sudbury DSB utilizes the Zoll electronic ACR platform to complete patient care documentation while HSN CPC utilizes the Interdev platform to manage ACR data from across northeastern Ontario. Prior to this initiative, any documents created in the Zoll platform were sent via fax server to Interdev and HSN CPC paid to have those documents manually data entered into their Interdev platform for auditing and quality improvement initiatives.

Both HSN CPC and Manitoulin-Sudbury DSB were faced with challenges, mostly due to inefficient processes, which led to a collaborative approach between HSN CPC and Manitoulin-Sudbury DSB. The leadership from both programs agreed to develop a new approach to completing the auditing requirements by both parties that would result in the following efficiencies:

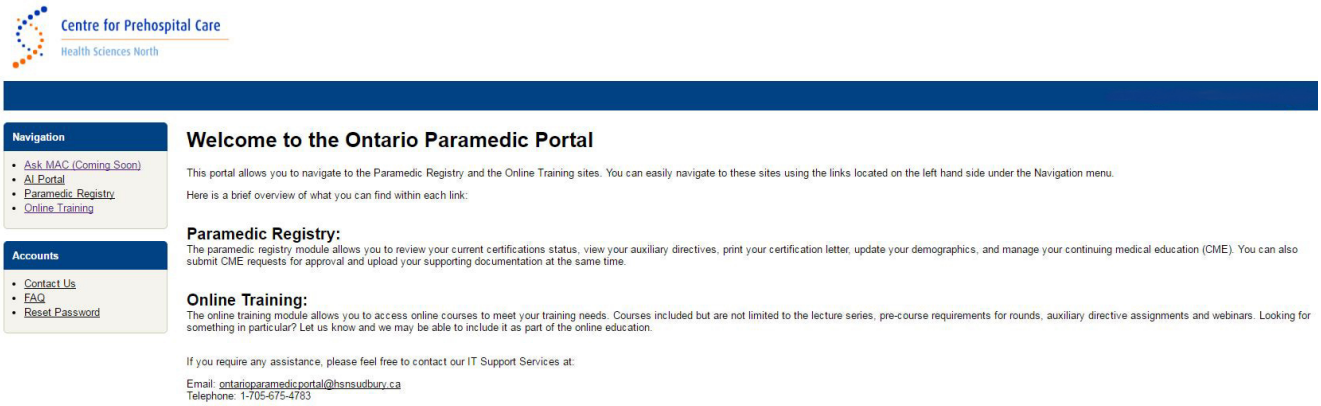
- Decreased costs paid to a third party vendor by HSN CPC
- Increased BLS auditing activity for Manitoulin-Sudbury DSB
- Decreased fragmentation of audit activities by both parties
- Synergy of process for communication between auditors and paramedics

Following extensive work, the new audit activities processes were launched January 1, 2016. Work is ongoing to further refine processes to benefit all parties.

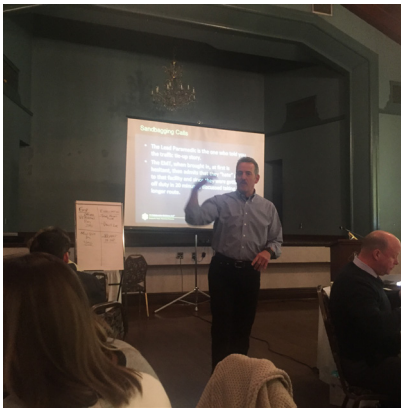
September 2015

Ontario Paramedic Portal

The Ontario Paramedic Portal is an integrated software solution consisting of a registry and learning management system. Portal was officially launched to Northeast Paramedics May 1, 2015. As part of the Ontario Base Hospital Group provincial standardization project, Portal was moved to the centralized infrastructure in September 2015. The move to the central site allowed for further development and refinement of Portal as well as onboarding of additional base hospitals. The live site currently includes HSN CPC, Northwest Region Base Hospital Program and Southwest Ontario Regional Base Hospital Program. The User Acceptance Testing (UAT) site also includes Sunnybrook Centre for Prehospital Medicine and ORNGE. The Central East Prehospital Care Program and Regional Paramedic Program of Ontario have access to the User Acceptance Testing (UAT) site for evaluation. A vulnerability risk assessment as well as penetration testing was conducted on Portal. The reported findings are currently under review.



October 5 & 6 2015
Just Culture Training



Paul LeSage provided this two day workshop on implementing Just Culture on October 5 and 6, 2015 at Bryston's on the Park in Copper Cliff. Paul LeSage has over 34 years' experience in emergency services as a provider and executive. He lectures in the emerging fields of Just Culture, Crew Resource Management, and High Reliability Event Analysis and Strategies.

This training was opened to all those within Ontario who manage, lead or operate in high-consequence, high reliability domains. Over 60 people attended from several different organizations and were introduced to six interlinked key focus points, and how outcomes and organizational culture can be improved. The training included actual scenarios allowing everyone to participate in teams to deconstruct incidents using the newly introduced risk mitigation strategies.

January 2016

IQ EMS

Health Sciences North Centre for Prehospital Care, London Health Sciences Centre Southwest Ontario Regional Base Hospital Program and Sunnybrook Centre for Prehospital Medicine are collaboratively pursuing standardization of quality assurance software and working toward the delivery of a centralized data quality management solution using Intelligent Quality Evaluation & Management Suite (IQ EMS), originally developed by Sunnybrook Centre for Prehospital Medicine. This web based software supports the management of many base hospital continuing quality improvement endeavours including data mining, peer review and compliance auditing, secure communication with stakeholders, investigation and self-reporting, efficient workflow and document management, statistical reporting and data visualization.

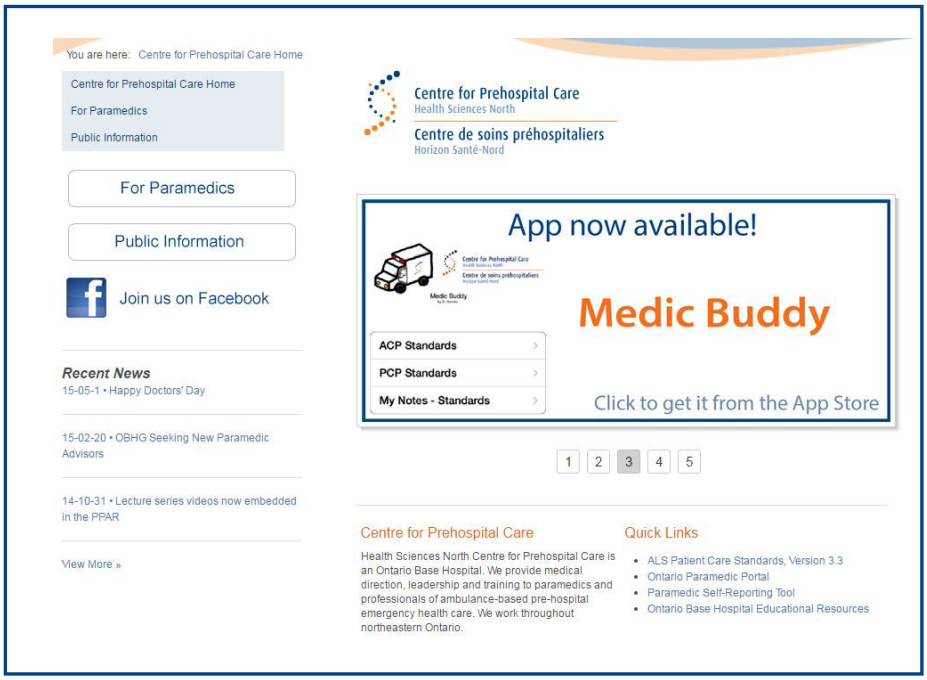
Planning is underway to migrate IQ EMS to a centralized data centre to facilitate the centralized solution. This software will be modified to support multiple base hospitals and will be documented appropriately.

A Privacy Impact Assessment and technical documentation have been completed.

February 2016

HSN CPC Introduces Redesigned Website

The program's website, located on the Health Sciences North platform, is a public repository for communications, policies and procedures, medication references, forms, provincial medical directives, a library of training materials and archived presentations, upcoming events, current research activities, published research of interest and important links. Most recently, we added the Paramedic Self Reporting Tool for paramedics across the northeast, as well as a link to the Medic Buddy app.

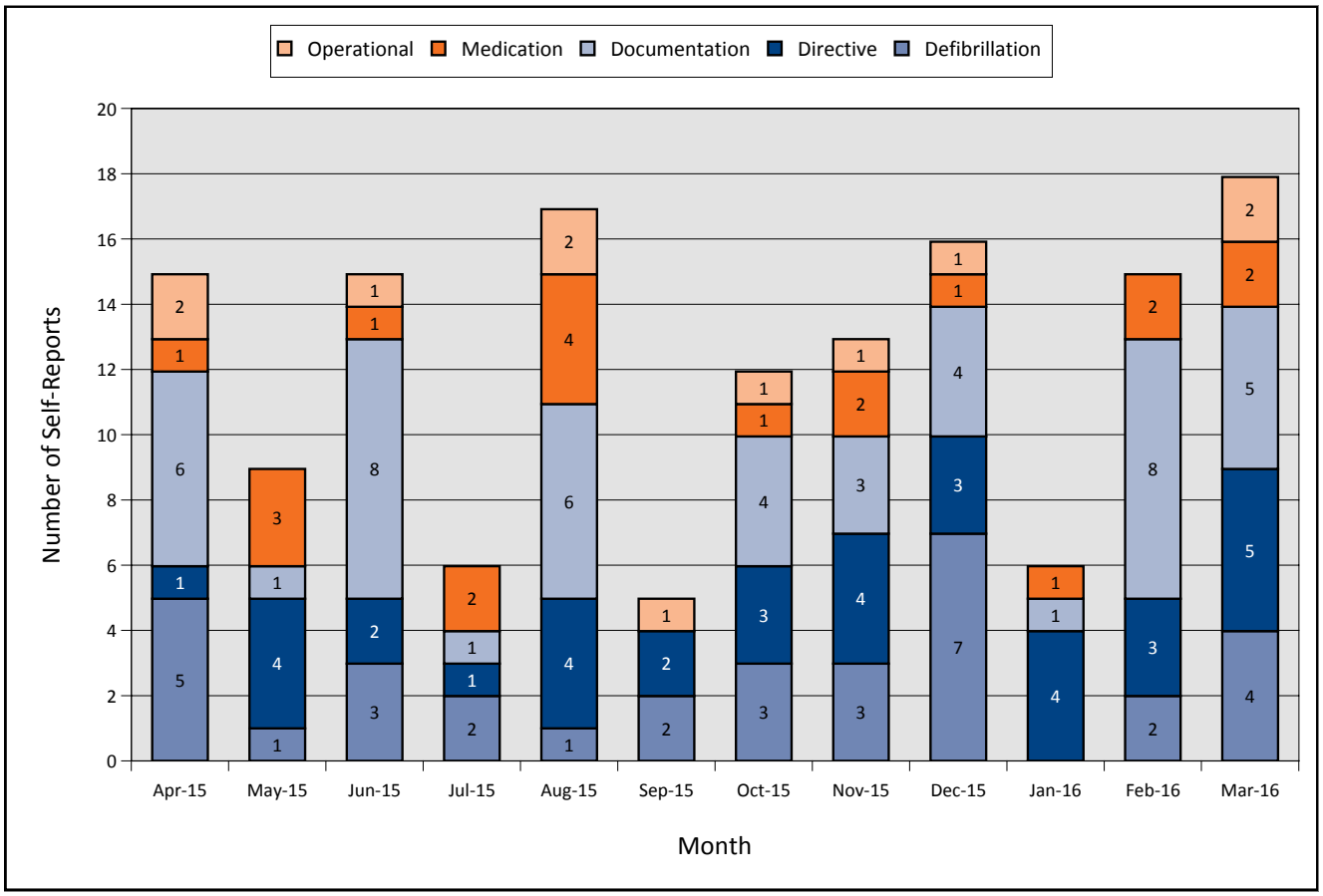


Web-Based Self-Reporting Continues to Rise

Self-reporting of adverse events has been occurring for many years in the pre-hospital environment but it was always somewhat informal and without a well-articulated process. The HSN CPC strongly believes that self-reporting of adverse events is not only professional but developmental. The simple fact of recognition means that some form of self-remediation has taken place. From a program prospective, we look for trending issues and develop regional education based on actual needs. Located on the HSN CPC website, the Paramedic Self-Reporting tool was launched in April 2014. There were 147 self-reports generated and reviewed in fiscal 2015/2016, which is an increase of 66 (81%) over 2014/2015.

This report currently resides on the HSN Centre for Prehospital Care Program website and is updated on a monthly basis.

Self-Reports by Month/Identified Issue
April 1, 2015 to March 31, 2016
n = 147



Self-reports may include, but are not limited to, medical directive variances, documentation omissions or any challenges a paramedic may encounter during a call. The Self-Report form does not replace the option of contacting a Paramedic Practice Coordinator (PPC) for discussion, however serves as a standardized method of reporting.

HIGHLIGHTS

STEMI Alert

The Heart and Stroke Foundation of Canada estimates 70,000 heart attacks occur in Canada every year which equates to one every seven (7) minutes. STEMI (ST Segment-Elevation Myocardial Infarction) is representative of the most severe type of heart attack involving a sudden blockage of one of the coronary arteries. The HSN Cardiodiagnostics and Emergency Department (ED), in collaboration with the HSN CPC and the City of Greater Sudbury Paramedic Service, developed a protocol whereby when a STEMI is recognized in the pre-hospital setting, a "STEMI ALERT" is immediately declared by attending paramedics. This declaration triggers the pre-notification of the receiving department, either the ED or the Cardiac Catheterization Laboratory (Cath Lab), activating a series of intra-departmental processes where resources are rapidly deployed and focused on preparing for definitive interventions. This protocol drastically reduces the diagnosis to intervention times by allowing the receiving departments to prepare for the patient's arrival and streamline the continuum of care.

The standard of care for patients receiving an urgent primary Percutaneous Coronary Intervention (PCI) in the Cath Lab is a door to balloon time of ninety (90) minutes. The door to balloon time is measured from the moment a STEMI positive patient enters a health care facility to the time the balloon in the Cath Lab is inflated.

Distance Education

We continue to provide education to over 680 paramedics across one of the largest geographical regions in Ontario. To meet the challenges, HSN CPC continues to trial different methods of education delivery such as Adobe Connect, Personal Videoconferencing (PC VC), YouTube and the Ontario Paramedic Portal. The newer methods of delivery allow HSN CPC to enhance the learning opportunities and facilitate the delivery of education allowing ease of access by paramedics. OTN videoconferencing continues to allow the connectivity by the Northeast Region Paramedics to the Base Hospital for real time educational, certification and administrative purposes. We currently have 14 archived presentations that paramedics can view 24/7/365.

HSN CPC continues to work on solutions to further reduce barriers of time and distance for paramedics to participate in a higher level of learning from anyplace anytime.

Social Media

facebook.com/hsncpc

At HSN CPC, we monitor our social media stats to ensure continuous engagement from our paramedics and community. On average our page likes have increased by 18% from the first period to the second period of 2015-16 (Figure 1). The majority of our audience is between 35 and 44 years old and 45% of our followers are women and 54% are men. We have some audience from outside Northeastern Ontario as well as outside of Canada (Figure 3)

We continue to monitor and develop our Facebook site to ensure the highest engagement of our posts.

Trending

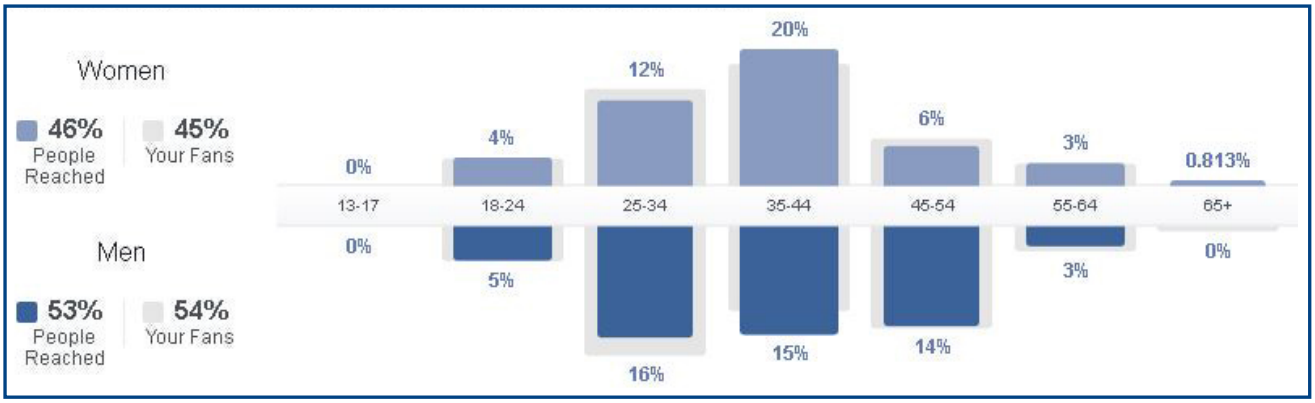
FIGURE 1

FIGURE 2

HIGHLIGHTS

Demographics

FIGURE 3



COUNTRY	PEOPLE REACHED
CANADA	232
PHILIPPINES	6
USA	4
UNITED ARAB EMIRATES	1
SAUDI ARABIA	1
TURKEY	1
PAKISTAN	1

LANGUAGE	PEOPLE REACHED
ENGLISH (US)	224
ENGLISH (UK)	16
FRENCH (CANADA)	5
TURKISH	1

CITY	PEOPLE REACHED
SUDBURY, ON	49
SAULT STE. MARIE, ON	19
NORTH BAY, ON	12
GARSON, ON	12
CAPREOL, ON	11
TIMMINS, ON	10
AZILDA, ON	7
NEW LISKEARD, ON	7
PARRY SOUND, ON	6
CHELMSFORD, ON	5
LIVELY, ON	5
THUNDER BAY, ON	4
EARLTON, ON	3
MISSISSAUGA, ON	3
COPPER CLIFF, ON	3
KIRKLAND LAKE, ON	3
NAUGHTON, ON	3

RESEARCH

May 28, 2015

Resuscitation Outcome Consortium

The primary aim of the Continuous Chest Compressions trial was to compare survival at hospital discharge after continuous chest compressions (CCC) versus standard American Heart Association recommended cardiopulmonary resuscitation with interrupted chest compressions (ICC) in patients with out-of-hospital cardiac arrest. On May 28, 2015, Dr. Prpic sent a memo that the Continuous Chest Compression (CCC) Trial had reached its target enrollment and ended in the Sudbury area. Greater Sudbury Paramedics were advised to discontinue all CCC study directions and revert back to the current AHA guidelines standard of care for cardiac arrest patients. The recommendation was to perform CPR at a 30:2 compression to breath ratio.

The study was published online November 09, 2015 in the New England Journal of Medicine and found that cardiopulmonary resuscitation (CPR) administered by emergency medical services (EMS) providers following sudden cardiac arrest that combines chest compressions with interruptions for ventilation resulted in longer survival times and shorter hospital stays than CPR that uses continuous chest compressions. Although compressions with pauses for ventilation lead to more hospital-free days within 30 days of the cardiac arrest, both methods achieved similar overall survival to hospital discharge. The study is the largest of its kind to date to evaluate CPR practices among firefighters and paramedics and suggests the importance of ventilation in CPR by EMS providers and was presented at the American Heart Association 2015 Scientific Sessions in Orlando. A total of 8.9 percent (about 1,126 patients) from the continuous compressions group survived to reach hospital discharge, while 9.7 percent (about 1,073 patients) of the standard CPR group reached hospital discharge. This is the first randomized trial to show a significant difference in outcomes after hospital admission among patients treated for out-of-hospital cardiac arrest.

Epistry (Ongoing - Continual Uptake)

This is an epidemiologic databank intended to help understand the burden of out-of-hospital cardiac arrest and life-threatening traumatic injury and to shed light on whether and how EMS process and geographic, socioeconomic and periodic variation may be associated with differences in outcome. The Epistry is designed to collate high-quality comprehensive Emergency Medical System (EMS) based data using uniform standardized criteria for consecutive cases of cardiac arrest and traumatic injury within the Resuscitation Outcomes Consortium (ROC). Epistry data collection commenced December 1, 2005. An approximate 20,000 episodes were enrolled in Epistry in the first year. The aims of Epistry include:

1. Establishing a comprehensive ongoing data infrastructure to facilitate the design, implementation, and interpretation of ROC interventional trials.
2. Defining the incidence and outcome of out-of-hospital cardiac arrest and traumatic injury.
3. Describing the relationships between resuscitation performance and EMS structure, adjusting for episode-specific factors.
4. Evaluating the relationships between outcome and patient, EMS, regional, and periodic factors.

Accuracy of InoviSe STEMI Interpretation SofTware (ASSIST)

This study is looking at the use of the new ECG interpretation software Inovise 12L Interpretive Algorithm. Manufacturer testing for Inovise 12L using the Zoll X portable monitor was conducted in large and rural hospitals, however, this environment for testing is often controlled with little to no vibration movement to create artifact. In addition to its in-hospital application, these monitors and software are being used in the pre-hospital setting. This diverse patient care environment (inside a running vehicle, rolling on a stretcher, etc.) has the potential to complicate the ability for the automated interpretation feature to accurately identify STEMI positive ECGs. The aim of the study is to evaluate the accuracy of the Inovise 12L interpretive algorithm software for STEMI compared to blinded physician interpretation and to in-hospital diagnosis. Over 1000 cases have been included in the study thus far.

Retrospective Analysis of Prehospital Medical Redirect Stroke Care Outcomes in Northeastern Ontario (rEDirect)

This retrospective study looks at the efficacy and safety of a redirect protocol for stroke patients. Currently, in northeastern Ontario, a regional stroke protocol agreement is in place that allows for the medical redirect (bypass) of stroke patients who meet the inclusion criteria for thrombolysis, to the closest designated stroke centre. The aim of this study is to evaluate the impact and effectiveness of the Revised Stroke Protocol within Northeastern Ontario in both pre-hospital and hospital settings. This is a retrospective review of Ambulance Call Reports and hospital medical records of patients > 16 years with a suspected and documented stroke or TIA in Northeastern Ontario. 722 cases were included in the study.

Trauma Time Out

This is a qualitative study design based on opportunistic selection of participants' first-hand experience and willingness to participate in the study. The study is looking at the efficacy of a new handoff procedure between paramedics and emergency department clinical staff. We hypothesised that Trauma Time Outs (the interval of time when the handoff occurs) will improve communication between pre-hospital and hospital clinicians.

Clinical handovers play a vital role in the delivery of patient care; however information communicated by paramedics to emergency department clinicians has been found to be inconsistent and incomplete. As a result, the Trauma Program, in collaboration with the Centre for Prehospital Care and Emergency Department, introduced the concept of Trauma Time Outs which is a structured methodology for transferring information and care between clinicians.

Implementation of a Self Report Program in an EMS System

This research poster was delivered to HSN as part of the Canadian Patient Safety Week initiative. The development of a "Self Report Program in an EMS System" was designed to encourage front line paramedics to report patient safety events in a timely manner to allow CPC staff to quickly respond to those events and to implement more timely risk reduction strategies. The methodology looked at the amount of time it takes CPC staff to review any potential incidents through routine auditing process compared to the amount of time it takes when incidents are self-reported. It was introduced to paramedics through in-class education sessions to provide them with the expectations in the use of the tool.

The implementation of a self reporting process for paramedics to report deviations from standard of care has reduced the time it takes to identify patient safety issues from an average of 23 days to 3 days. This reflects a strong, statistically significant reduction.

IMPLEMENTATION OF A SELF-REPORT PROGRAM IN AN EMS SYSTEM

Nicole Sykes, Sylvie Michaud, Monique Lapointe

Centre for Prehos l l Care
Health S l

BACKGROUND

In Northeastern Ontario, monitoring the appropriateness and quality of advanced patient care has been assigned to Health Sciences North Centre for Prehospital Care (HSN CPC) via a Performance Agreement with the Ministry of Health and Long Term Care. Historically, most patient safety events were detected through a retrospective audit process of the Ambulance Call Reports (ACR). There are identified gaps in the current auditing process linked to ACR sampling and turnaround times from call date to review date. The sampling of ACRs is based on a sampling error of +/- either 2.5% or 5% (CI95%), depending on call type, resulting in the potential for missed errors or variances. The review time is a system issue whereby ACRs are not always available to the program for review in a timely fashion, occasionally for extended periods of time.

AIM

We developed a program designed to encourage front line paramedics to report patient safety events in a timely manner, to allow us to respond quickly to patient safety events and to implement more timely risk reduction strategies.

The 'Self-Report Program' was introduced to paramedics through in class education sessions to provide them with the expectations in the use of the tool. The program was also introduced to the EMS employers during regional meetings.

MEASURES

PRE SELF-REPORTS

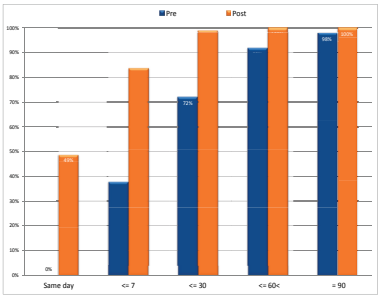
From April 1, 2013 to March 31, 2014, 415 ACRs had an identified variance from standard of care. The average time from the date of patient care to the audit date was approximately **23 days** (min 0 - max 256, 90th percentile – 57.6 days)

RESULTS

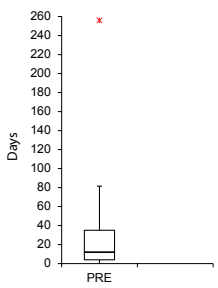
POST IMPLEMENTATION OF THE SELF-REPORT PROGRAM

From April 1, 2014-March 31, 2015, 81 self-reports were submitted. Average time from patient care to self-report was approximately 3 days (min 0 – max 34, 90th percentile – 11 days). These calls were reviewed the same day 49% of the time (Pre ~0%). 84% of self-reports were reviewed in < 1 week (Pre – 38%). Applying the t-test to the pre and post implementation data yields a p-value of ~0.

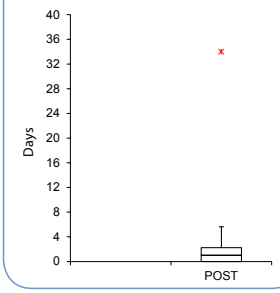
Comparison of Distribution of Review Time



Review Time in Days - Pre



Review Time in Days - Post



LESSONS LEARNED

Paramedic self-reporting of deviations from standard of care results in the ability to assess potential patient safety issues in an average of 3 days versus 23 days when not self-reported. Limitations in the data result from the voluntary nature of the program.

Left to Right: Sylvie Michaud, Nicole Sykes, Monique Lapointe

Reflecting on Providing Safe Patient Care during Canadian Patient Safety Week

Celebrating Canadian Patient Safety Week (CPSW) at HSN is an annual tradition allowing all members of the health care team to gain a better understanding of their role in providing safe patient care. Members of the CPSW Working Group and the Quality and Patient Safety Team planned daily events during the week of October 26th to ensure that the message behind CPSW, which is the importance of improving communications, and how this can have a positive impact on patient safety, was delivered and staff remained engaged.

The highlight of the week was the Patient Safety Café that provided the forum to listen to patient stories via a video, and learning about what patient safety means to our patients and the quality of communication they experienced at HSN. Attendees got to enjoy some treats and participate in the MythFracture game for an opportunity to debunk some common misconceptions regarding patient safety. Patient Advisors were also on hand to educate staff on the importance of using NOD (Name, Occupation, Duty) as a means to enhance communication and keeping patients safe.

The week concluded with the inaugural Patient and Staff Safety Poster Competition. The winner of the competition was the Patient Experience Team, Melissa Romanko, Amber Gazdic and Rosie Graffi, with their poster board, “Sharing Patient Stories at HSN – Promoting a culture of continuous improvement and patient-centred care”. The $250 prize was presented to the team on behalf of the CEO Patient and Family Advisory Council. The panel of judges included Amanda Conrad, Tyler Kirwan and Charles Ketter, a Patient Advisor serving on the CEO PFAC.

Patient and Staff Safety Poster Competition participants

Myth Fracture hosts Nik and Sarah.

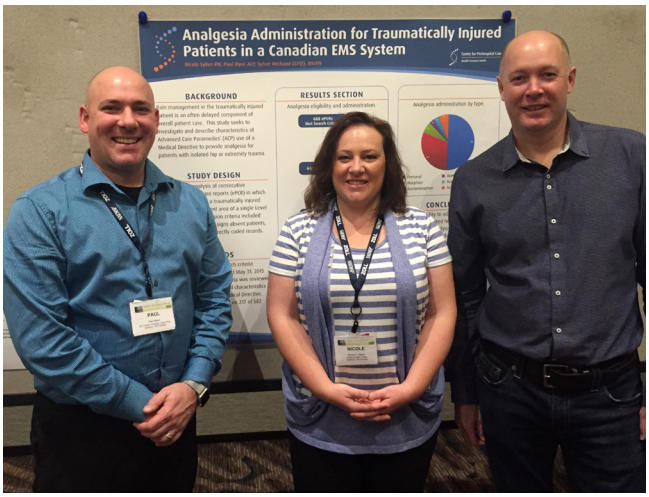
CEO Patient and Family Advisory Council members, Susie (left) and Sandra, educate staff about NOD

January 11, 2016

Analgesia Administration for Traumatically Injured Patients in a Canadian EMS System

This study was presented at the National Association of EMS Physicians (NAEMSP) Annual Meeting January 2016 in San Diego, USA. It investigated and described characteristics of Advanced Care Paramedics' use of a Medical Directive to provide analgesia for patients with isolated hip or extremity trauma in the catchment area of a single Level 2 Trauma Centre.

The study of the preliminary data analysis revealed that, despite the ability to administer analgesia to patients, the Advanced Care Paramedics in this EMS system are administering analgesia to less than a quarter of eligible patients. This data may prove useful to EMS educators when providing education to practitioners on pain and pain management.



Analgesia Administration for Traumatically Injured Patients in a Canadian EMS System

Nicole Sykes RN, Paul Myre ACP, Sylvie Michaud CCP(f), BScPH

Centre for Prehos Care
Health S

BACKGROUND

Pain management in the traumatically injured patient is an often delayed component of overall patient care. This study seeks to investigate and describe characteristics of Advanced Care Paramedics' (ACP) use of a Medical Directive to provide analgesia for patients with isolated hip or extremity trauma.

STUDY DESIGN

Retrospective analysis of consecutive electronic patient care reports (ePCR) in which an ACP responded to a traumatically injured patient in the catchment area of a single Level 2 Trauma Centre. Exclusion criteria included patients <18 years, vital signs absent patients, and incomplete or incorrectly coded records.

METHODS

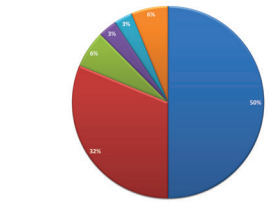
The ePCRs meeting the research criteria between December 1, 2014 and May 31, 2015 were collected. Prehospital data was reviewed to determine eligibility for and characteristics of implementation of the Medical Directive. Analysis to date has occurred on 217 of 582 eligible patients.

RESULTS SECTION

Analgesia eligibility and administration.

688 ePCRs Met Search Criteria
44 Patients > 1 Record
644 Total Patients
62 Excluded
582 Study Population
217 Analyzed
365 Not Analyzed
130 (60%) Qualified for Analgesia
32 (24.6%) Received Analgesia
Mean Age 59, Range 19-90
98 (75.4%) No Analgesia Given
Mean Age 65, Range 19-94

Analgesia administration by type.



- Fentanyl
- Acetaminophen/Fentanyl
- Morphine
- Acetaminophen/Morphine
- Acetaminophen
- Acetaminophen/Ibuprophen

CONCLUSION

Despite the ability to administer analgesia to patients with isolated hip or extremity trauma, preliminary data analysis shows that ACPs in this EMS system are administering analgesia to less than a quarter of eligible patients. Further analysis may provide insight into non-modifiable characteristics impacting this rate (i.e. allergies). Further studies are required to understand the impact of paramedic characteristics on analgesia administration.

LIMITATIONS

- Limitations inherent to retrospective chart reviews.
- Further analysis is ongoing that may change these results.

MEDICAL DELEGATION

Q1 The Host Hospital shall ensure that Emergency Medical Attendants and Paramedics are qualified to perform the Controlled Acts and/or other medical procedures as recommended by the Provincial Medical Advisory Committee (PMAC) and the Director. Describe the process.

The HSN CPC is mandated by the Ambulance Act (Ontario Reg. 257/00) to ensure that paramedics are competent to practice. The method by which paramedics are certified is strongly influenced by the Delegation of Controlled Acts policy developed by the College of Physicians and Surgeons of Ontario. In short, it is the responsibility of the Regional Base Hospital Programs to provide an ongoing process by which the "Providers" are continuously informed of best practice guidelines and new trends and are competent to practice in the prehospital environment. As no single process can accomplish these goals, the HSN CPC combined various methodologies and techniques to be utilized as part of a comprehensive continuing education program. The goal of the CME program is to prepare paramedics to respond appropriately to a wide range of patient situations both routinely and infrequently encountered in the field. Paramedics who do not meet these requirements are subject to a performance review by the Medical Director or delegate and may have their certification temporarily suspended until such a time that all mandatory CME credit hours are accumulated.

EMS Services present paramedics who have, at minimum, an offer of employment at the requested paramedic level to the Base Hospital for certification. Primary Care Paramedics (PCP) complete an orientation process to ensure that they are properly prepared for the testing process. They demonstrate competency through a process of scenarios and written questions mapped to their respective scope of practice. During the certification event, they are required to demonstrate competency through a series of scenarios, skills stations and oral questions. In addition to the requirements of a PCP, all Advanced Care Paramedic (ACP) candidates are required to have written the MOH ACP exam prior to attending.

Q2 The Host Hospital shall ensure that the Base Hospital Program establishes and maintains a procedure whereby Paramedics already certified under the authority of another Base Hospital Program Medical Director are recognized by the Base Hospital Program.

2.1 Describe the procedure used to ensure paramedics already certified under the authority of another Base Hospital Program Medical Director are recognized by the Base Hospital Program.

Cross Certification applies to paramedics already certified by an Ontario Base Hospital who are seeking certification from another Base Hospital. In order to be eligible for cross certification, once the paramedic is deemed eligible as per regulations of the Ambulance Act, the Paramedic must complete the Certification Request Form which includes:

1. Certification from previous Ontario Base Hospitals.
2. A declaration of any deactivation and/or decertification.
3. Current certification status from previous Base Hospitals under which the paramedic is certified.
4. Permission for the prospective Base Hospital to obtain information from other Base Hospitals regarding paramedic performance and skills.

Following these steps the Paramedic must successfully complete a Base Hospital orientation and/or evaluation process for any or all Auxiliary Medical Directives required which may include an interview/clinical evaluation with the medical director or delegate. It may also include an evaluation using written, scenario based, and oral examinations.

Upon the HSN CPC review of documentation received and orientation, the medical director may recommend educational certification pending completion of further clinical or field education.

After completion of these steps, the Base Hospital Medical Director will certify the paramedic.

2.2 Total number of paramedics that work for more than one employer.

As of March 31, 2016, HSN Centre for Prehospital Care had 67 paramedics who worked for more than one employer.

Q3 Provide a list of affiliated Ambulance Services with whom the Base Hospital has signed agreements.

Algoma District Paramedic Services
City of Greater Sudbury Paramedic Services
Cochrane District Social Services Administration Board
- Cochrane District EMS
- Notre Dame Hospital Ambulance Service
- Sensenbrenner Hospital Ambulance Service

City of Sault Ste. Marie Fire Services – EMS Division
District of Nipissing Social Services Administration Board
- North Bay EMS
- Mattawa EMS
- Temagami EMS

Manitoulin-Sudbury DSB Paramedic Services
Parry Sound District Emergency Medical Service
Temiskaming District EMS
Weeneebayko Area Health Authority Paramedic Service

3.1/3.2 Total number of PCPs for this reporting year; Total number of ACPs for this reporting year.

Total Number of Paramedics: 697

Total number of ACP: 69; Total number of PCP: 628

REPORTING PERIOD	TOTAL ACPS	TOTAL PCPS	TOTAL
April 1, 2015 to March 31, 2016	69	628	697

+3.5% since 2015

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	61	61
COCHRANE DISTRICT EMS	–	65	65
GREATER SUDBURY PS	58	82	140
MANITOULIN-SUDBURY DSB PS	–	115	115
MATTAWA	–	9	9
NORTH BAY	11	55	66
NOTRE DAME HOSPITAL AS	–	8	8
PARRY SOUND EMS	–	68	68
SAULT STE. MARIE FS	–	51	51
SENSENBRENNER HOSPITAL AS	–	17	17
TEMAGAMI	–	7	7
TEMISKAMING DISTRICT EMS	–	43	43
WAHA PS	–	47	47

3.3 A list of the delegated Controlled Acts

SCOPE OF PRACTICE FOR PARAMEDICS (* = SELECT AREAS OF THE REGION)

MEDICATIONS CARRIED	PRIMARY CARE	ADVANCED CARE
Adenosine		✓
Amiodarone (North Bay ACP)		✓
ASA	✓	✓
Atropine		✓
Calcium Gluconate		✓
50% Dextrose in water	*	✓
Dimenhydrinate (Gravol)	✓	✓
Diphenhydramine (Benadryl)	✓	✓
Dopamine		✓
Epinephrine 1:1,000	✓	✓
Epinephrine 1:10,000		✓
Glucagon	✓	✓
Lidocaine (Sudbury ACP)		✓
Midazolam		✓
Morphine		✓
Naloxone	✓	✓
Nitroglycerin	✓	✓
Oxygen	✓	✓
Salbutamol (MDI and Nebulization)	✓	✓
Sodium Bicarbonate		✓
Xylometaxoline HCL (Otrivin)		✓

3.3 A list of the delegated Controlled Acts *continued*

SCOPE OF PRACTICE FOR PARAMEDICS (* = SELECT AREAS OF THE REGION)

AIRWAY/VENTILATORY COMPROMISE SKILLS	PRIMARY CARE	ADVANCED CARE
CPAP	✓	✓
Endotracheal Intubation (Oral/Nasal)		✓
Endotracheal Suctioning		✓
King LT Insertion	✓	✓
Magill Forceps Utilization		✓
Needle Thoracostomy		✓
Oral/Nasal Airway	✓	✓
Oximetry	✓	✓
Positive Pressure Ventilation with BVM	✓	✓
Suctioning Mouth and Nose	✓	✓
CARDIOVASCULAR COMPROMISE	PRIMARY CARE	ADVANCED CARE
12 Lead Acquisition	✓	✓
12 Lead Interpretation		✓
ECG Interpretation (PCP-five basic rhythms only)	*	✓
Pacing		✓
Fluid Bolus Initiation	*	✓
Intravenous Cannulation	*	✓
Intraosseous Access		✓
Manual Defibrillation	✓	✓
Synchronized Cardioversion		✓
OBSTETRICAL/NEONATAL TRANSFER	PRIMARY CARE	ADVANCED CARE
Assess and Recognize Obstetrical Emergencies	✓	✓
Delivery of the Neonate	✓	✓
DRUG ADMINISTRATION	PRIMARY CARE	ADVANCED CARE
Administer Drugs via SL; SC; PC; IM; MDI and Nebulized Routes	✓	✓
Administer Drugs via ETT; IO		✓
Administer Drugs via IV	*	✓
PICC Line Access		✓

CATEGORY: Program Specific Page **2** of **4**
TITLE: **MEDICAL DIRECTIVES AND SKILLS REGISTRY FOR PRIMARY AND ADVANCED CARE PARAMEDICS**

PRIMARY CARE PROGRAM	Greater Sudbury Paramedic Service	Manitoulin Sudbury EMS	Sault Ste Marie EMS	Algoma EMS	Nipissing DSSAB[1]	West P.S. Health Centre A.S.	District of Timiskaming EMS	Cochrane District EMS[2]	James Bay Ambulance Service
Medical Cardiac Arrest (Defibrillation, Termination of Resuscitation)	X	X	X	X	X	X	X	X	X
Trauma Cardiac Arrest (Defibrillation, Termination of Resuscitation)	X	X	X	X	X	X	X	X	X
Hypothermia Cardiac Arrest (Defib)	X	X	X	X	X	X	X	X	X
Foreign Body Airway Obstruction Cardiac Arrest (Defibrillation)	X	X	X	X	X	X	X	X	X
Neonatal Resuscitation	X	X	X	X	X	X	X	X	X
Return of Spontaneous Circulation	X	X	X	X	X	X	X	X	X
Cardiac Ischemia (ASA, Nitroglycerin SL)	X	X	X	X	X	X	X	X	X
Acute Cardiogenic Pulmonary Edema (Nitroglycerin SL)	X	X	X	X	X	X	X	X	X
Hypoglycemia (Dextrose IV, Glucagon IM)	X	X	X	X	X	X	X	X	X
Bronchoconstriction (Salbutamol MDI/neb, Epinephrine 1:1000 IM)	X	X	X	X	X	X	X	X	X
Moderate to Severe Allergic Reaction (Epinephrine IM, Diphenhydramine IV/IM)	X	X	X	X	X	X	X	X	X
Croup (Epinephrine 1:1000 nebulized)	X	X	X	X	X	X	X	X	X
12 Lead ECG Acquisition	X	X	X	X	X	X	X		X
Adult Analgesia (Ibuprophen, Acetaminophen, Ketorolac)	X	X	X	X	X	X	X	X	X
Opioid Toxicity (Naloxone SC/IM/IV)	X	X	X	X	X	X	X	X	X
Auxiliary Intravenous & Fluid Therapy (0.9% NaCl)			X		X	X	X	X	
PCP Manual Defibrillation	X	X	X	X	X	X	X	X	X
Auxiliary Continuous Positive Airway Pressure	X	X	X	X	X	X		X	
Auxiliary Supraglottic Airway (King LT)	X	X	X	X	X	X	X	X	X
Auxiliary Nausea and Vomiting (Dimenhydrinate IV/IM)	X	X	X	X	X	X	X	X	X
Auxiliary Chemical Exposure Medical Directive (CYANOKIT)								X	
Auxiliary Home Dialysis Emergency Disconnect									
Auxiliary Special Events Medical Directives			X	X					
Auxiliary Electronic Control Device Probe Removal									

[1] Nipissing DSSAB includes Mattawa and Temagami Ambulance Services
[2] Cochrane District EMS includes Sensenbrenner and Notre Dame Ambulance Services

ADVANCED CARE PROGRAM	Greater Sudbury Paramedic Service	North Bay & District Ambulance Service
Medical Cardiac Arrest (Epinephrine 1:10,000 IV/IO/ETT, Lidocaine/Amiodarone IV/IO)[3]	X	X
Trauma Cardiac Arrest	X	X
Hypothermia Cardiac Arrest	X	X
Foreign Body Airway Obstruction Cardiac Arrest (Laryngoscopy and Magill forceps)	X	X
Neonatal Resuscitation (Epinephrine 1:10,000 IV/IO/ETT)	X	X
Return of Spontaneous Circulation (Dopamine IV)	X	X
Cardiac Ischemia (ASA, Nitroglycerin SL, Morphine IV)	X	X
12 Lead Acquisition & Interpretation	X	X
Acute Cardiogenic Pulmonary Edema (Nitroglycerine SL)	X	X
Cardiogenic Shock (Dopamine IV)	X	X
Symptomatic Bradycardia (Atropine IV, Transcutaneous Pacing, Dopamine IV)	X	X
Tachydysrhythmias (Valsalva Maneuver, Adenosine IV, Lidocaine/Amiodarone IV, Synchronized Cardioversion)	X	X
Intravenous & Fluid Therapy (0.9% NaCl IV/IO)	X	X
Pediatric Intraosseous	X	X
Hypoglycemia (Dextrose IV, Glucagon IM)	X	X
Seizure (Midazolam IV/IM)	X	X
Opioid Toxicity (Naloxone SC/IM/IV)	X	X
Endotracheal Intubation – oral, nasal (Xylometazoline, Lidocaine spray)	X	X
Bronchoconstriction (Salbutamol MDI/neb, Epinephrine 1:1000 IM)	X	X
Moderate to Severe Allergic Reaction (Epinephrine 1:1000 IM, Diphenhydramine IV/IM)	X	X
Croup (Epinephrine 1:1000 neb)	X	X
Tension Pneumothorax – (Needle Thoracostomy)	X	X
Hyperkalemia (Calcium Gluconate and Salbutamol)	X	X
Adult Analgesia (Ibuprophen, Acetaminophen- PO Ketorolac IM/IV and Morphine IV)	X	X
Pediatric Analgesia (Morphine IV/SC)	X	X
Auxiliary Adult Intraosseous (IO)	X	X
Auxiliary Central Venous Access Device (CVAD access)	X	X
Auxiliary Continuous Positive Airway Pressure	X	X
Auxiliary Supraglottic Airway	X	X
Auxiliary Nausea and Vomiting (Dimenhydrinate IM/IV)	X	X
Auxiliary Combative Patient (Midazolam IM/IV)	X	X
Auxiliary Procedural Sedation (Midazolam IV)	X	X
Auxiliary Home Dialysis Emergency Disconnect	X	X
Auxiliary Special Events Medical Directives		
Auxiliary Electronic Control Device Probe Removal		

[3] Greater Sudbury Paramedic Service – Lidocaine
North Bay and District Ambulance Service - Amiodarone

Timeline for Medical Directive/Skill Implementation

Year	Month	Service	Modifications
2015	December	Algoma PS	Addition of 12 Lead ECG Acquisition
2015	June	Greater Sudbury & North Bay	Addition of ACP Hyperkalemia Medical Directive (Calcium Gluconate and Salbutamol)
2015	June	ALL	Addition of PCP Opioid Toxicity Medical Directive (Naloxone)
2015	June	ALL	Addition Adult Analgesia Medical Directive
2014	November	ALL	Addition PCP Manual Defibrillation
2014	August	Greater Sudbury & North Bay	Addition of ACP Auxiliary Home Dialysis Emergency Disconnect
2014	July	ALL	Addition of Auxiliary Analgesia Medical Directive
2014	June	Manitoulin Sudbury	Addition of 12 Lead ECG Acquisition
2014	April	Cochrane	Addition of Auxiliary Chemical Exposure Medical Directive – Administration of Antidotes for Cyanide Exposures (CYANOKIT)
2014	May	Sault Ste Marie	Addition of Special Events Medical Directives
2014	February	North Bay	Removal of Nasal Tracheal Intubation
2013	December	Greater Sudbury	Addition of Pediatric Pain Medical Directive
2013	December	North Bay	Addition of Pediatric Pain Medical Directive
2013	July	North Bay	Addition of Auxiliary Central Venous Access Device (CVAD access)
2013	April	Timiskaming	Addition of 12 Lead ECG Acquisition
2013	April	James Bay	Addition of 12 Lead ECG Acquisition
2013	March	Sensenbrenner	Addition of Autonomous PCP IV
2013	March	Notre Dame	Addition of Autonomous PCP IV
2013	March	Cochrane	Addition of Autonomous PCP IV
2012	November	North Bay	Addition of Adult Intraosseous (IO)
2012	June	Manitoulin Sudbury	Addition of CPAP
2012	June	Cochrane	Addition of CPAP
2012	June	Notre Dame	Addition of CPAP
2012	June	Sensenbrenner	Addition of CPAP
2012	May	North Bay	Addition of 12 Lead ECG Acquisition
2012	May	Temagami	Addition of 12 Lead ECG Acquisition
2012	May	Mattawa	Addition of 12 Lead ECG Acquisition
2011	November	All	Transition to ALS PCS Version 3.0
2011	June	Parry Sound	Addition of 12 Lead ECG Acquisition
2011	May	Temagami	Addition of CPAP
2011	April	Algoma	Addition of CPAP
2011	May	ALL	Removal of Auxiliary Taser Probe Removal
2010	January	Greater Sudbury	Addition of 12 Lead ECG Interpretation to Scope of Practice for Sudbury ACP
2010	March	North Bay	Addition of 12 Lead ECG Interpretation to Scope of Practice for North Bay ACP
2010	April	Greater Sudbury	Addition of 12 Lead ECG Acquisition to Scope of Practice for Sudbury PCP
2010	April	Greater Sudbury	Addition of CPAP
2010	April	North Bay	Addition CPAP
2010	April	Parry Sound	Addition CPAP
2010	July	Sault Ste Marie	Pediatric Attenuator Cables
2010	August	North Bay	Removal of Lasix
2009	December	North Bay	Removal of Flumazenil
2009	September	James Bay	Pediatric Attenuator Cables
2009	August	Parry Sound	Removal of PCP Rectal Valium
2009	April	All	Addition of King LT

3.4 A list of the Controlled Acts that have been removed this reporting year.

- Administration on Sublimaze (Fentanyl Citrate) IV/IO/IM/SC for pain or procedural sedation
- Nasal Tracheal Intubation (North Bay EMS only)

Q4 Does the Host Hospital adhere to the Provincial Medical Directives recommended by the PMAC and approved by the Director?

HSN Centre for Prehospital Care adheres to the latest version of the ALS PCS Version 3.1 as well as the latest Version 3.3 which came into effect on February 1, 2016.

Q5 The Host Hospital shall adhere to Provincial Certification, Recertification, Change in Certification and Remediation policies, as recommended by PMAC within recommended timelines.

5.1 Have the provincial Certification, Recertification, Change in Certification and Remediation policies, as recommended by PMAC within recommended timelines been adhered to?

HSN CPC adheres to the Provincial Maintenance of Certification Policy, Appendix 6 in the Advanced Life Support Patient Care Standards, Version 3.1. as well as the latest Version 3.3 which came into effect on February 1, 2016.

5.2 Total number of initial PCP and ACP certification awarded in the reporting year.

PERIOD	TOTAL ACPS	TOTAL PCPS	TOTAL
April 1, 2015 to March 31 2016	5	79	84

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	2	2
COCHRANE DISTRICT EMS	–	7	7
GREATER SUDBURY PS	5	8	13
MANITOULIN-SUDBURY DSB PS	–	9	9
MATTAWA	–	2	2
NORTH BAY	–	4	4
NOTRE DAME	–	1	1
PARRY SOUND EMS	–	1	1
SAULT STE. MARIE FS	–	9	9
SENSENBRENNER	–	2	2

TEMAGAMI	–	1	1
TEMISKAMING DISTRICT EMS	–	5	5
WAHA PS	–	28	28

5.3 Total number of PCP and ACP reactivations in the reporting year.

REPORTING PERIOD	TOTAL ACPS	TOTAL PCPS	TOTAL
April 1, 2015 to March 31 2016	9	32	41

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	5	5
COCHRANE DISTRICT EMS	–	2	2
GREATER SUDBURY PS	7	1	8
MANITOULIN-SUDBURY DSB PS	–	4	4
MATTAWA	–	–	0
NORTH BAY	2	3	5
NOTRE DAME	–	2	2
PARRY SOUND EMS	–	4	4
SAULT STE. MARIE FS	–	8	8
SENSENBRENNER	–	1	1
TEMAGAMI	–	–	0
TEMISKAMING DISTRICT EMS	–	2	2
WAHA PS	–	–	0

5.4 Total number of PCP and ACP deactivations in the reporting year.

REPORTING PERIOD	TOTAL ACPS	TOTAL PCPS	TOTAL
April 1, 2015 to March 31, 2016	18	87	105

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	6	6
COCHRANE DISTRICT EMS	–	5	5
GREATER SUDBURY PS	18	10	28
MANITOULIN-SUDBURY DSB PS	–	11	11
MATTAWA EMS	–	–	0
NORTH BAY EMS	–	9	9
NOTRE DAME	–	2	2
PARRY SOUND EMS	–	8	8
SAULT STE. MARIE FS	–	3	3
SENSENBRENNER	–	–	0
TEMAGAMI	–	2	2

TEMISKAMING DISTRICT EMS	–	5	5
WAHA PS	–	26	26

Q6.1 Does the Medical Director practice emergency medicine full-time or part-time in the hospital emergency unit?

The medical director currently works in the HSN Emergency Department and exceeds the minimum requirement of 250 clinical hours.

6.2 Does the Medical Director hold recognized medical specialty credential(s) in emergency medicine?

The Medical Director is credentialed in Emergency Medicine as CCFP (EM).

Q7.1 Do all Base Hospital physicians have knowledge of paramedic practice and provincial medical directives?

HSN CPC has centralized all BHP patching to the Health Sciences North Emergency Department. Base Hospital Physicians are all Emergency Department Physicians and final year Residents credentialed through Health Sciences North.

The Emergency Department Physicians receive an orientation program which includes an overview of their roles and responsibilities as base hospital physicians and an introduction to the ALS Patient Care Standards. Dr. Prpic, Medical Director, regularly reviews the directives and/or amendments with the emergency physicians and shares CQI findings. The latest revision to the orientation manual was in August 2015.

Emergency Department meetings have a standing Prehospital Care Section where changes in practice/directives can be addressed.

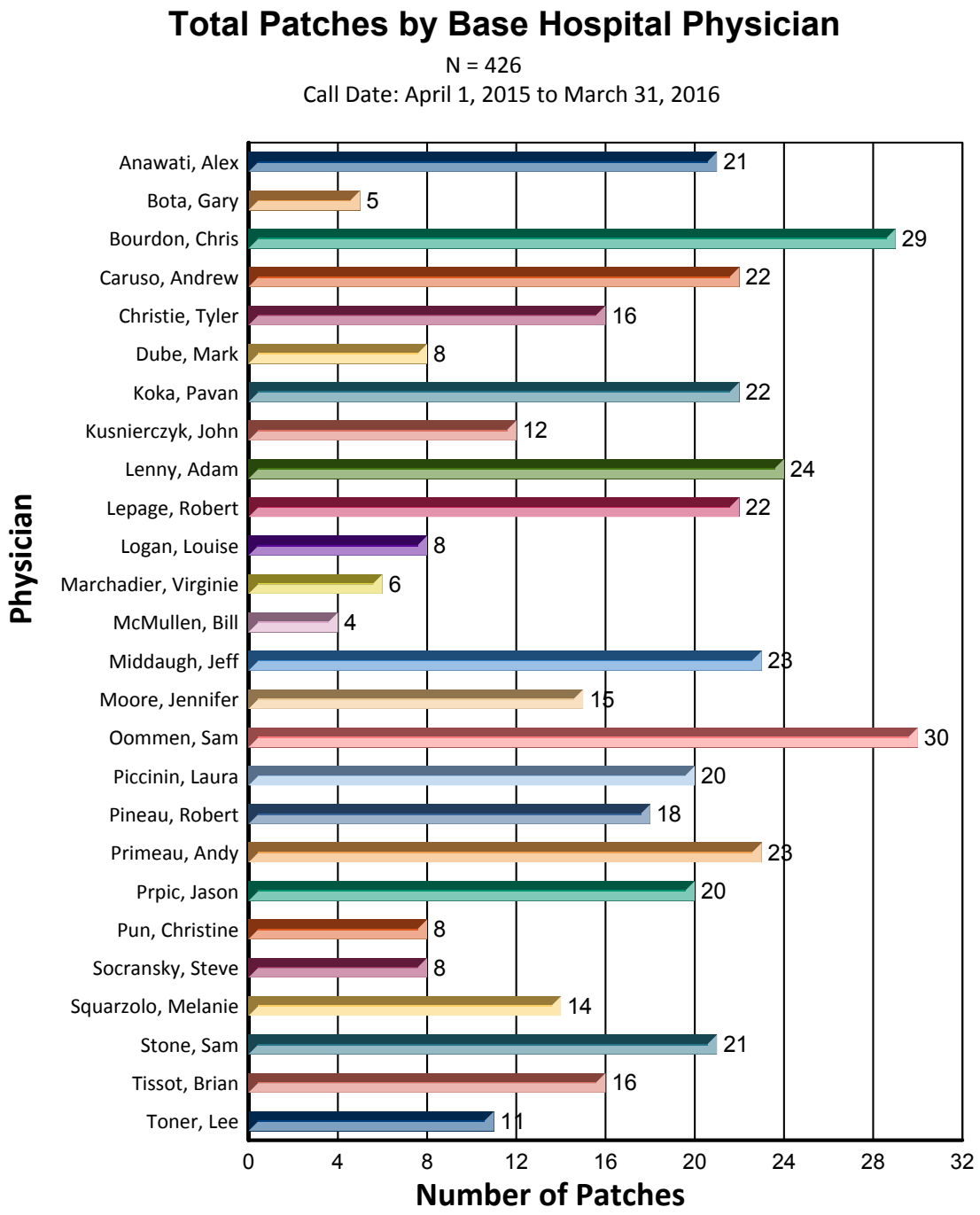
7.2 Total number of emergency physicians engaged as a Base Hospital Physician (list names).

- 26 emergency physicians were engaged as Base Hospital Physicians

BASE HOSPITAL PHYSICIANS	
Dr. Alex Anawati	Dr. Jeff Middaugh
Dr. Gary Bota	Dr. Jennifer Moore
Dr. Christopher Bourdon	Dr. Sam Oommen
Dr. Andrew Caruso	Dr. Laura Piccinin
Dr. Tyler Christie	Dr. Robert Pineau
Dr. Mark Dube	Dr. Andy Primeau
Dr. Pavan Koka	Dr. Jason Prpic
Dr. John Kusnierczyk	Dr. Christine Pun
Dr. Adam Lenny	Dr. Steve Socransky

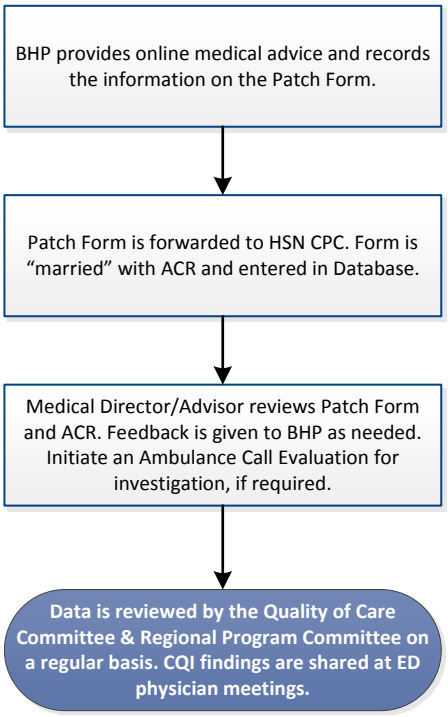
Dr. Robert Lepage	Dr. Melanie Squarzolo
Dr. Louise Logan	Dr. Sam Stone
Dr. Virginie Marchadier	Dr. Brian Tissot
Dr. Bill McMullen	Dr. Lee Toner

Q8.1 Total number of Base Hospital physician and paramedic online interactions that have been reviewed for medical quality.



Total of 426 online interactions occurred between April 1, 2015 and March 31 2016, and 100% were reviewed for medical quality.

8.2 Describe the medical quality review process.



MEDICAL OVERSIGHT

Q9 List the dates of Provincial Medical Advisory Committee (PMAC) meetings attended by a member of the Base Hospital Program.

- May 11, 2015
- September 28, 2015
- December 7, 2015
- February 24, 2016

Q10 Are Base Hospital Physicians available for on-line medical direction and control on a 24 hr/7 days a week basis?

Yes.

Q11 The Host Hospital shall ensure that the Base Hospital Program enters into and keeps in effect an agreement with each certified land ambulance service provider listed in Appendix D, with respect to the qualification, ongoing medical oversight, and re-qualification of Paramedics to deliver controlled medical acts under the authority of the Base Hospital Program Medical Director.

HSN CPC has an agreement with each land ambulance service in the Northeast.

Q12 The Host Hospital shall ensure that the Base Hospital Program monitors the delivery of patient care in accordance with the Advanced Life Support Patient Care Standards. Describe the actions taken to monitor the delivery of patient care in accordance with the Advanced Life Support Patient Care Standards.

Continuous Quality Improvement (CQI) is a complex responsibility that requires the collective effort of varied focus areas. Within the HSN CPC, CQI is attained through an integrated system of performance measurement, performance improvement and continuing medical education within a broad based system of quality management and medical leadership.

Performance Measurement is accomplished by collecting and randomly reviewing ambulance call reports (ACRs) for the appropriateness and

quality of advanced patient care. Skills and specific patient conditions are categorized as high or low risk procedures by HSN CPC Quality of Care Committee (QCC). Tables 1 & 2 from Appendix N of the HSN CPC Performance Agreement (PA) are then applied to determine the total number of calls to be reviewed through the Ambulance Call Evaluation (ACE) process.

Quality Improvement is an inclusive, multidisciplinary process that focuses on identification of system wide opportunities for improvement. Our efforts focus on identification of the root causes of problems through Event Analyses, Self-Reports, and Clinical Audit Reports to reduce or eliminate these causes and develop steps to correct inadequate or faulty processes. The need and importance of a wide overlap between performance measurement, performance improvement and Continuing Medical Education (Figure 4) is vital to ensure ongoing quality patient care as demonstrated in the well-known and widely used Plan-Do-Study-Act cycle (Figure 5).

FIGURE 4

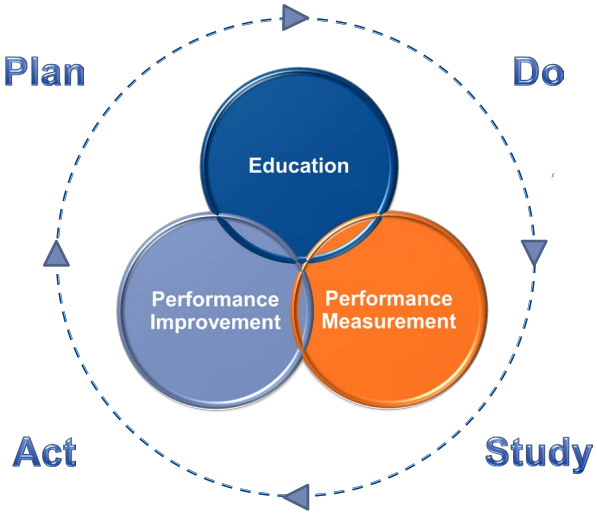


FIGURE 5

Q13 The Host Hospital shall ensure that the Base Hospital Program monitors the delivery of patient care in accordance with the Basic Life Support Patient Care Standards, if such monitoring is contained in the agreement with the Upper Tier Municipality and Designated Delivery Agent for land Ambulance Services as set out in Appendix D.

HSN Centre for Prehospital Care has an agreement with Manitoulin-Sudbury DSB that requires monitoring of the delivery of patient care in accordance with the Basic Life Support Patient Care. A novel model for sampling calls of significant interest was collaboratively developed to perform this work. All other audit activities centre around the ALS PCS. Where a BLS issue is noted during the regular ALS auditing processes, service operators are notified for their follow up.

Q14/14.1 The Host Hospital shall ensure that timely advice is provided to each Upper Tier Municipality and Designated Delivery Agent for Land Ambulance Services as set out in Appendix D regarding medical issues in prehospital care. Provide the total number of prehospital medical care issues raised by the UTM or DDA that required advice from the Base Hospital. Total number of prehospital medical care issues raised by the UTM or DDA that required advice from the Base Hospital.

The HSN CPC does not log the number of times Paramedic Practice Coordinators, Program Leadership and/or Medical Directors provide routine feedback. When an inquiry required investigation involving patient care, an event analysis was completed by the Performance Improvement Lead and the information was shared electronically with the service (via iMedic or email). 16 requests were received from the UTM/DDAs in the fiscal 2015/16 year. Final outcomes were copied to the Field Office. In addition, at the quarterly HSN Program Committee meetings, each UTM or DDA representative has the ability to add items to the agenda.

14.2 List the top 5 subject areas that advice was requested from UTMs and DDAs (i.e. medical equipment, medical acts, policies, etc).

1. Medical Directives and Auxiliary Skills
2. ePCR audits
3. BLS advice
4. Patient Care Equipment
5. Policy and Procedures

Q15 The Host Hospital shall ensure participation in provincial, regional and community planning that affects prehospital care such as emergency planning, where the Host Hospital has the authority to do so. The total number and dates of provincial, regional, and community planning meetings, indicate the meeting hosts are listed below.

REGIONAL	PROVINCIAL	COMMUNITY	NATIONAL
36	60	9	3

REGIONAL	PROVINCIAL	COMMUNITY	NATIONAL
HSN CPC Council (Sudbury/ Videoconference) - Monthly	Base Hospital Managers/Directors Business Meeting - Monthly	Audit Brainstorming with Manitoulin-Sudbury District Services Board (Espanola)	NAEMSP Planning Committee (Teleconference)
HSN CPC Quality of Care Committee (Sudbury/ Videoconference) - Monthly	Ontario Base Hospital Medical Advisory Group (MAC) (Toronto) - Quarterly	Cambrian College PAC (Sudbury)	NAEMSP Paramedic Competency Profile (Adobe Connect/Teleconference)
Patient Safety and Quality Network Meeting (Sudbury) - Monthly	OBHG Executive Committee (Toronto) - Quarterly	QA Discussion - Mental Health Diversion Program (Sudbury)	NAEMSP Annual Meeting - Research Poster Presentation (San Diego, USA)
HSN CPC NEO Regional Data Advisory Group (Teleconference) - Quarterly	OBHG Education Sub-Committee - Quarterly	MOHLTC EHSB Field Office Meeting (Sudbury)	
LHIN 13 Trauma Advisory Committee (HSN - Sudbury) - Quarterly	OBHG Data Quality Management (DQM) - Quarterly	Mental Health and Substance Abuse Relief - RLHC Crisis (Sudbury)	
Sudbury CACC Advisory Committee (MOHLTC Office - Sudbury)	OBHG Standardization Working Group (SWAG) (Toronto) - Quarterly	Sudbury Paramedic Service Quality of Care Committee (Teleconference) - Quarterly	
HSN CPC Program Committee (Sudbury/Teleconference) - Quarterly	Ontario Trauma Advisory Committee (OTAC) Quarterly Meeting (Toronto) - Quarterly	Manitoulin-Sudbury DSSB Meeting (HSN CPC)	
Nipissing EMS Annual Symposium (North Bay) - Annual	Ontario Trauma Care Network (OTCN) (Teleconference) - Monthly	Kearney Fire and Emergency Services Meeting (Sudbury)	
	Research Design Meeting Group - Initial Certification Project (Sudbury/ Videoconference)		
	OBHG Strategic Planning Steering Group		
	Sunnybrook/HSN Joint Medical Council Meeting (Toronto) - Bi-Annual		
	MOHLTC Meeting – Org Chart Discussion (Sudbury)		
	OBHG Initial Certification Working Group (Toronto)		
	OBHG Annual Conference (Thunder Bay)		
	OPFFA (Ontario Professional Fire Fighters' Association) Meeting (Toronto)		

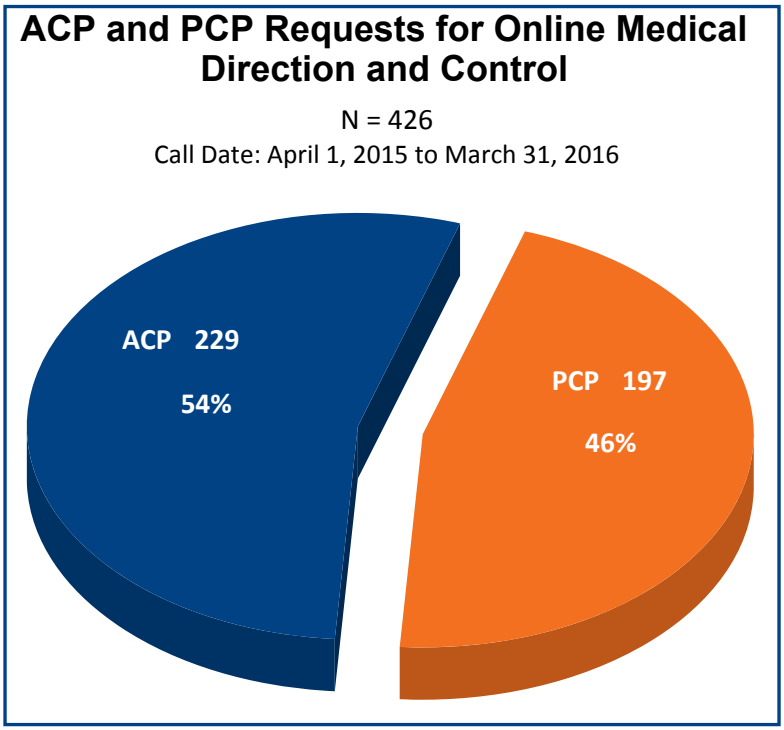
Q16 The Host Hospital shall make every reasonable effort to ensure that each request for medical advice, direction, or assistance received from an Emergency Medical Attendant, Paramedic or communications officer is provided expeditiously and that performance standards set out in this Agreement are met.

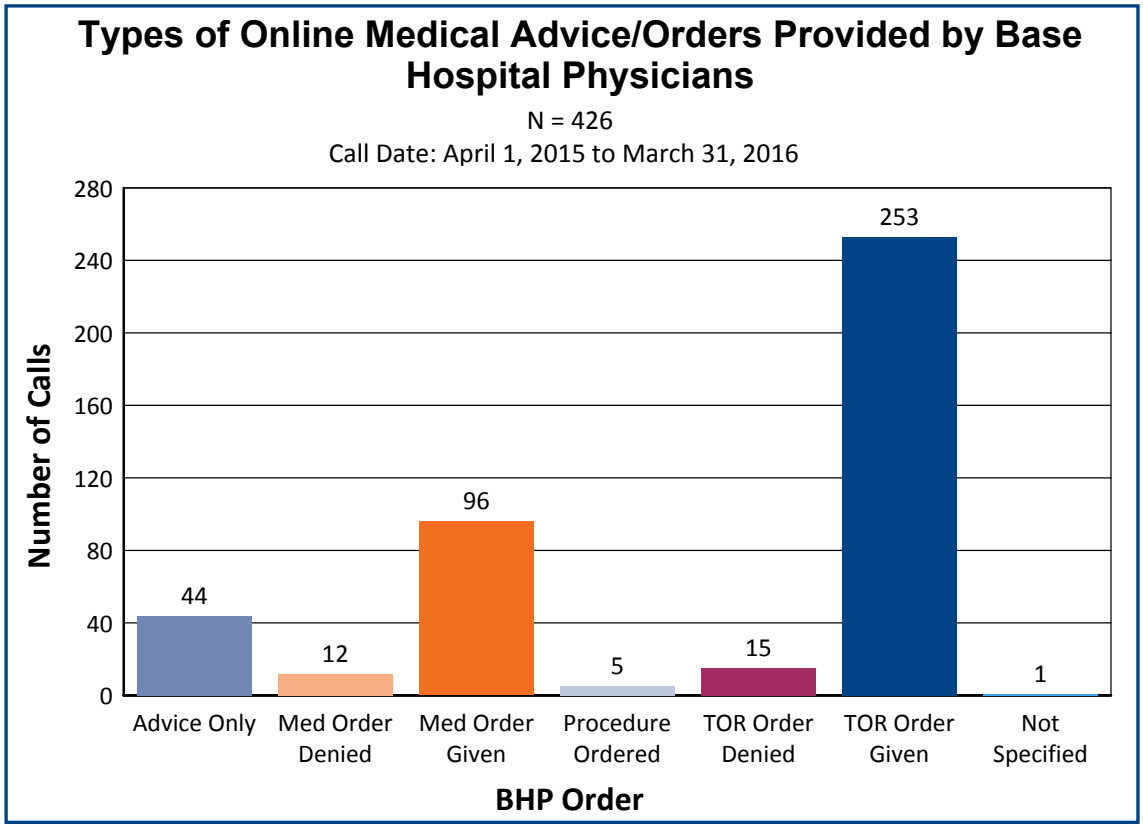
16.1 How are request for medical advice, direction or assistance from an emergency medical attendant, paramedic or communications officer provided?

The following are the primary methods of communication:

- 24/7 Online Medical Direction and Control through the Base Hospital Physicians.
- iMedic/Zoll which is used to discuss audit findings and patient care dialogues.
- Email which is used for the communication of general information and notifications.
- Live chats during webcasts are a means for paramedics to ask questions and interact with their medical directors.

16.2 Total number of formal requests for medical advice direction or assistance from an Emergency Medical Attendant, Paramedic or communications officer provided.





Q17 Where a Host Hospital has not been available to expeditiously provide medical advice (eg. Radio patch), direction, or assistance to an Emergency Medical Attendant, Paramedic, or communications officer, the Host Hospital shall document the circumstances of the event in an incident report that will be provided to the Senior Field Manager within 48 hours of the event.
The total number and nature of incident reports provided to the senior Field Manager related to medical advice delays.

There were 11 incidents where an ACR or a self-report indicated a possible problem with the patching process and/or obtaining contact with a Base Hospital Physician. Following the review of those incidents, only 2 were found to have actual problems but all were reported to the senior field manager, Dr. J. Prpic, Regional Medical Director, S. Michaud, Quality Improvement Lead and copied to N. Sykes, Regional Program Manager.

Patch related issues are reviewed regularly and immediately reported upon discovery. All reported patch problems are sent to the QI Lead for further analysis to determine the need for system improvements.

Q18.1 Describe the process used to assist operators with request for assistance and information regarding direct patient care components and elements of local policy and procedures.

Once a request for assistance and/or information has been received in writing by the program, it is triaged by the receiver to determine if its nature is Medical, Educational, CQI, Research, Operational or Other.

- Medical advice and/or inquiries are reviewed by the applicable Medical Advisor or the Regional Medical Director and, when required, forwarded to the Quality of Care Committee (QCC) to be reviewed by the Medical Program as a whole. Minutes of this committee are available to all staff and a report from this committee is provided at Regional Program Committee meetings.
- Educational advice and/or inquiries are assigned to the Regional Education Coordinator for review and, when required, brought to monthly Council or QCC meetings. A Medical Advisor or the Regional Medical Director may be consulted, as needed.
- Quality Improvement advice and/or inquiries are forwarded to the Quality Improvement Lead for review. A Medical Advisor or the Regional Medical Director may be consulted, as needed.
- Assistance or information related to reportable program metrics are forwarded to the Performance Measurement Lead for review.
- Operational advice and/or inquiries are forwarded to the applicable Paramedic Practice Coordinator and, when required, forwarded to the monthly Council meetings for review.
- Research inquiries are forwarded to the Performance Improvement Lead or Regional Manager and when required, the Regional Medical Director is consulted.

18.2 List the top 5 subject areas that information was requested from operators (i.e. medical equipment, medical acts, policies, etc).

1. ePCR Audit requests / ACE reviews
2. Certification / recertification requests
3. ALS PCS Auxiliary Medical Directives
4. Investigation and Remediation
5. Continuing Medical Education

EDUCATION

Q19 The Host Hospital will provide a process to confirm and/or ensure the education and standard of practical skills necessary for certification and delegation of specific controlled acts approved by the Provincial Medical Advisory Committee (PMAC) to Emergency Medical Attendants and Paramedics.

HSN Centre for Prehospital Care develops a yearly CME program that covers the paramedic scope of practice as per the ALS PCS. The goal of the CME program is to prepare paramedics to respond appropriately to a wide range of patient situations both routinely and infrequently encountered in the field.

The MOHLTC-EHSB has mandated that PCPs must receive a minimum of 8 hours of CME and that ACPs must receive a minimum of 24 hours of CME annually. To meet the needs of the service operators, paramedics and the Regional Base Hospital Programs, these hours have been converted to credit hours. In order for Northeast Paramedics to remain in good standing and maintain certification, ACPs must accumulate 24 credit hours while PCPs must accumulate 8 credit hours by the first week in December of each calendar year. Paramedics who do not meet these requirements are subject to a performance review by the Medical Director or delegate and may have their certification temporarily suspended until such a time that all mandatory CME credit hours are accumulated.

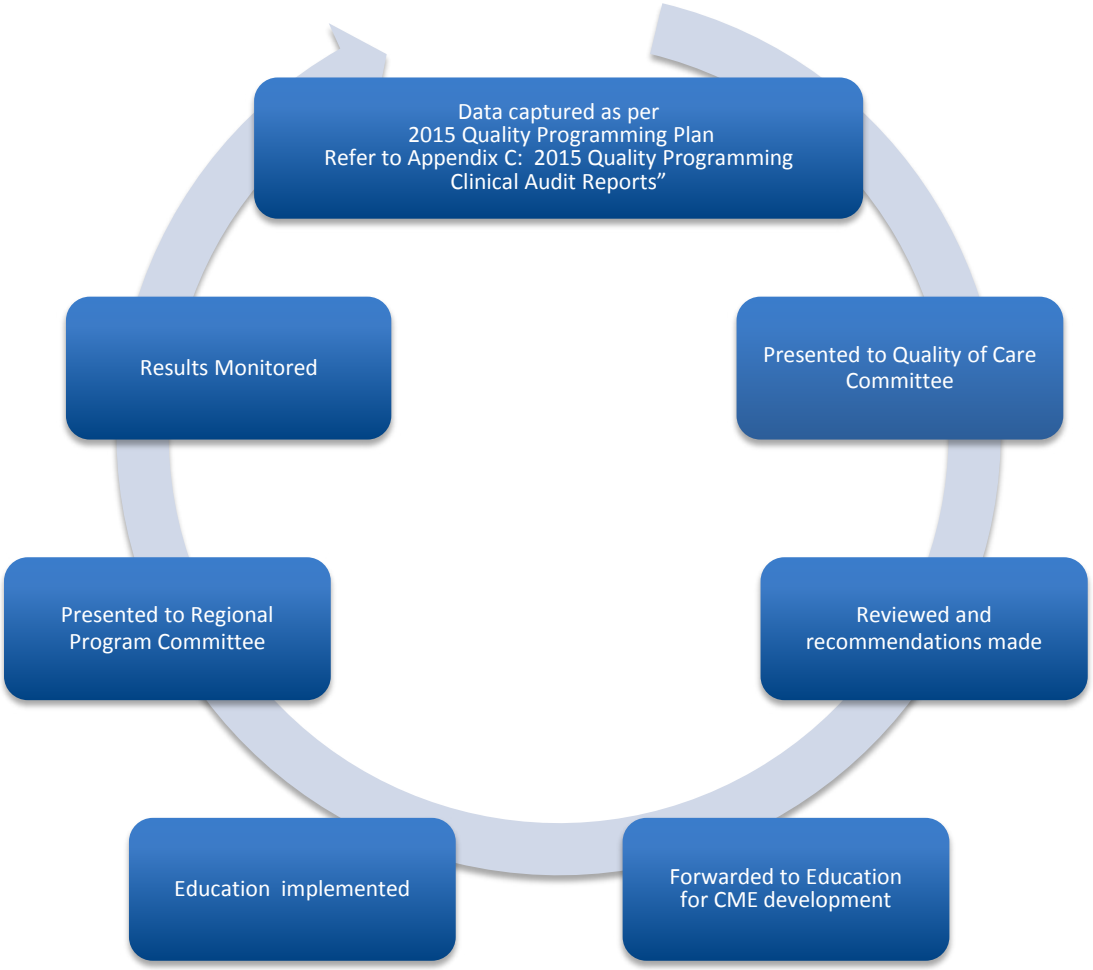
19.1 List the topic, date and length of each continuing medical education program offered to and held for medical, nursing and other allied health staff of the Host Hospital and receiving hospitals in the Ministry-approved geographic coverage area.

DATE	TOPIC/PRESENTER	HOURS
April 2, 2015	Seizures / Dr. Jason Prpic	2
April 28, 2015	CPR / Monique Lapointe	4
May 13, 2015	Toxidromes / Dr. Chris Loreto	2
May 26, 2015	CPR / Nicole Sykes	4
July 6 & 7, 2015	First Aid & CPR (C) Course / Eric Levasseur	8
Sept 22, 2015	CPR / Eric Levasseur	4
Sept 30, 2015	Traumatic Brain Injuries / Dr. Derek Garniss	2
Oct 26, 2015	Trauma / Dr. Jason Prpic	2
Nov 24, 2015	CPR / Monique Lapointe	4
Nov 24, 2015	C-Spine Assessments and Precautions / Dr. Chris Loreto	2
Feb 2, 2016	CPR / Eric Levasseur	4
March 23, 2016	Manual Defibrillation / Dr. Chris Loreto	2

Q20 The Host Hospital shall ensure that prehospital patient care education is provided in accordance with education standards approved by the Minister as may be implemented and amended from time to time. Provide the topics and time allotted for each educational session delivered this year to paramedics.

DATE	TOPIC/INSTRUCTOR	HOURS
April 2, 2015	Seizures / Dr. Jason Prpic	2
April to June 2015	Spring Paramedic Practice Rounds: ALS PCS Revisions (Entire Region)	4
May 13, 2015	Toxidromes / Dr. Chris Loreto	2
June to Sept 2015	Summer CME Series M & M Rounes with Dr. Prpic (ACP only)	6
Sept 30, 2015	Traumatic Brain Injuries / Dr. Derek Garniss	2
Oct 26, 2015	Trauma / Dr. Jason Prpic	2
Nov 24, 2015	C-Spine Assessments and Precautions / Dr. Chris Loreto	2
Dec 2015	12 Lead ECG Acquisition (Algoma EMS only)	4
Jan to March 2016	Autonomous PCP IV (Greater Sudbury Paramedic Service only)	10
March 23, 2016	Manual Defibrillation / Dr. Chris Loreto	2

Q21 The Host Hospital shall ensure the development and implementation of an educational plan for the Region linked to Continuous Quality Improvement initiatives.



Q22 The Host Hospital shall ensure the provision of the mandated hours of education per year for both PCPs and ACPs.

22.1 Total number of hours of CME delivered per PCP.

In this fiscal year, 8 hours minimum were delivered per PCP.

22.1 Total number of hours of CME delivered per ACP.

In this fiscal year, 24 hours minimum were delivered per ACP.

CONTINUOUS QUALITY IMPROVEMENT (CQI)

Q23 The Host Hospital shall ensure the implementation of a CQI program for each Paramedic employed or engaged by land ambulance service operators as set out in Appendix D, and ensure the provision of regular commentary to each Paramedic and operator.

23.1 Total number of paramedics that have been provided with commentary by the host hospital and a brief description of their program.

All paramedics certified under the Program receive commentary on a regular basis, generally via the applicable Paramedic Practice Coordinator for their area. Commentary may include electronic distribution of memos, policies and other documents. As part of auditing activities, paramedics are provided commentary on at least 5 of their ACRs involving ALS skills, if available. Additionally, paramedics receive positive commentary via the program's electronic Ambulance Call Evaluation system whenever possible.

23.2 Total number of commentary provided to all paramedics.

During the fiscal year 2015/2016, HSN CPC made available approximately 5334 commentaries to paramedics via the Ambulance Call Evaluation process. This means that commentary was made available to paramedics for 100% of all calls audited.

The program also distributed various correspondence including 31 memos/letters to paramedics via email and the HSN CPC website. In addition, 14 MOH EHSB memos with attachments such as training bulletins and standard documentation were distributed and posted to the website.

23.3 Was a minimum of one chart review commentary provided to each paramedic?

100% of chart review commentaries are available to paramedics 24/7 via an electronic system.

Our electronic system allows paramedics access to 100% of all auditing activities related to themselves. Generally, 5 audits are conducted per paramedic resulting in 5 commentaries available in the system.

Q25 The Host Hospital shall include a report on all CQI activities and findings as part of the annual report submitted to the Ministry.

Refer to Appendix A: Performance Measurement Standard Reports, Section 2 for the overall Audit Activities Summary Report and Section 3 for Patient Care Variance Report.

Q26 The Host Hospital shall collaborate with Emergency Medical Services System Stakeholders to share relevant CQI data, as appropriate. How and when was CQI data shared with Emergency Medical Services System stakeholders?

WHAT	WHO	FREQUENCY	HOW
AMBULANCE CALL EVALUATION (ACE) Notification of any event or circumstance which could have resulted, or did result, in unncesessary harm to a patient. Any ACE that has been weighted, on closure, with an error severity of Major or Critical.	• Paramedics • Service Providers	• Upon discovery • During review • Upon closure	ACE platform
EVENT ANALYSIS Sharing of information and outcomes during and post analysis.	• Service Providers • MOH Field Office	• Upon discovery • During review • Upon closure	Event Analysis Report
SERVICE RELATED AUDIT ACTIVITIES REPORTS Number of audits completed, level of deficiency (minor, major, critical), Call Number and Paramedics' name	• Service Providers	• Monthly • Quarterly	ACE Reports
CLINICAL AUDITS Measures of current practice against a defined (desired) standard with the intent to improve systems vs individual practice.	• Service Providers	• 3 times a year	Clinical Audit Reports
AD HOC CQI FINDINGS	• Service Providers	• HSN CPC Program Committee meetings	
REGIONAL DATA ADVISORY COMMITTEE	• Service Providers • Hospital Representative • CACC Representatives	• Quarterly	Discussions Minutes
ONLINE MEDICAL CONTROL INTERACTIONS REPORTS	• Service Providers	• Quarterly	Report
BHP PATCH PROCESS DOCUMENTATION OMISSIONS	• Paramedics • Service Providers	• Upon discovery	ACE Report
BLS OMISSIONS/COMMISSIONS	• Service Providers	• Upon discovery	ACE Report

Q27 The Host Hospital shall ensure that Host Hospital physicians will be available to provide "online" continuous quality improvement and advice on a continuous basis.

All HSN Emergency Physicians and 3rd year Residents are oriented by the Base Hospital Regional Medical Director prior to providing on-line Medical Control. Ongoing education is delivered during face-to-face departmental meetings and via email updates.

Dedicated patch phones are located in the HSN Emergency Department (ED). All Registered Nurses in the ED have been trained, through the ED Nurse Clinician, to answer the patch telephone and advise paramedics that a BHP will be on the line shortly. The RN answering the telephone is responsible for notifying the BHP of the call and advising the paramedic if there will be any delay. HSN CPC has also provided formal education to the paramedics on patching. Reminder emails are sent on a regular basis to help keep this process consistent.

Q28 The Host Hospital shall ensure the establishment of a mechanism to track customer inquiries and organizational responsiveness to these inquiries and survey land ambulance stakeholder groups on a regular basis, and that all consumer feedback will be reviewed and integrated into quality management planning.

All inquiries related to quality management are addressed in the same manner in which they were received i.e. an email is responded to with an email. Any inquiries/feedbacks relative to the quality management or education activities under the purview of the Base Hospital are incorporated into the Annual CME Plan or the Annual Quality Programming Overview. Each of these plans is provided to relevant stakeholders in draft form and feedback is actively solicited on each plan on an annual basis. All findings related to activities as laid out in the plan are distributed to key stakeholders and available upon request.

Examples of 2016 additions to our Quality Programming Overview included the tracking and reporting of Service Provider requested ambulance call report audits and reporting of paramedic self-reports. The paramedics' self-report overview was provided to stakeholders in draft form with a request for feedback.

Refer to:
Appendix A: Performance Measurement Standard Reports, Sections 3-7
Appendix B: Quality Programming Overview 2015
Appendix C: Quality Programming Overview 2016

Q29 The Host Hospital shall ensure the conduct of clinically-focused audits of controlled acts performed on or indicated for a patient by a Paramedic employed or retained by an operator covered by this Agreement, to monitor paramedic compliance with Provincial Medical Directives, in accordance with the following chart audit process:

29.1 Total number of Ambulance Call Reports (ACRs) requiring auditing.

The total number of medical directive/protocols and cases that required auditing following the sampling of high risk and low risk tables in accordance with our PA was 1250. In addition we were required to perform a minimum of 5 audits per medic. These numbers are not necessarily cumulative.

29.2 Total number of medical directive/protocols and cases that have been audited.

There were 5334 ambulance call reports that were electronically audited. Of these audited calls, 575 (11%) were identified as having a variance and required further action; and 4759 (89%) were closed with no further action.

29.3 Have all paramedics that have performed at least 5 acts within the ALS PCS had a minimum of 5 ACR audited this year?

All Paramedics with at least 5 acts within the ALS PCS had a minimum of 5 ACRs audited this year.

Refer to Appendix A: Performance Measurement Standard Reports, Section 2

29.4 Total number of new paramedics (less than 6 months) and total number who had 80% of their charts audited

The Program monitors a minimum of 80% of ALS Calls performed by newly certified Paramedics. This activity is ongoing and ever changing as new paramedics are brought into the numerous services throughout our area with many differing start dates.

There were 70 new ACP and PCPs in 2016.

29.5 Number of cancelled calls where paramedics made patient contact that were audited.

PRIMARY PROBLEM	SKILL SETS REVIEWED	YEAR	# OF CALLS	ANNUAL AUDITS REQUIRED *	~MONTHLY AUDITS REQUIRED	AUDITS COMPLETED TO DATE	ANNUAL VARIANCE
REFUSALS 72-Refused Service	Any treatment No treatment	2014/15 Total (Year End)	7055	360	30	225	-135
		2015/16 Total (Year End)	7665	365	30	367	2

* Lower Risk Skills - Audit Requirements as per the Performance Agreement Table 1

Refer to Appendix A: Performance Measurement Standard Reports, Section 1

APPENDIX A: PERFORMANCE MEASUREMENT STANDARD REPORTS

Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

Prepared for Annual Report

(Paramedic specific information has been removed)

Centre for Prehospital Care

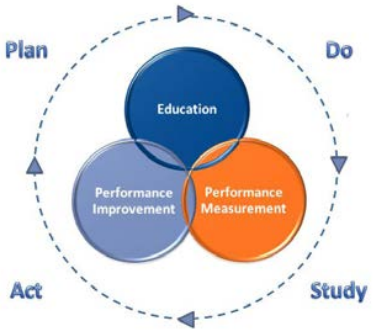
Health Sciences North

www.hsnsudbury.ca/portalen/basehospital

APPENDIX A

Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

TABLE OF CONTENTS



Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 1

HSN CPC AUDIT REQUIREMENTS AND ACTIVITIES

This section provides the measurement of audit activities related to low and high risk calls based on the auditing activities April 1, 2015 – March 31, 2016 and compared with the previous fiscal from April 1, 2014 to March 31, 2015.

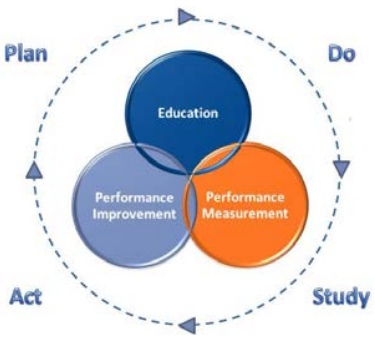
Medical Directives/Protocols and Cases:

- Higher level of auditing based on the call type.
- Use of a proven sampling model that addresses both low and high risk call types.
- Table 1 lists the required number of charts to be audited where medical directives/protocols or specific cases have been performed. This low risk model provides a sampling error of +/- 5% (CI 95%).
- Table 2 lists the required number of charts to be audited where there are higher risks associated with the performance of a skill or the completion of a certain type of call. This high risk model provides a sampling error of +/- 2.5% (CI 95%).

Table 1 – Low Risk	
Calls	Audits
50	44
100	80
200	132
500	217
750	254
1000	278
2000	322
3500	346
5000	357
10000	370
20000	377
30000	379

Table 2 – High Risk	
Calls	Audits
50	48
100	94
200	177
500	377
750	604
1000	806
2000	889
3500	1068
5000	1178
10000	1332
20000	1427
30000	1462

Note: Due to a change in our data collection and review process for Manitoulin-Sudbury their numbers for the 4th quarter are not reflected in this chart/report. It's been calculated that a mix of ~211 ALS related calls this report. Given that 100% of these calls were audited and the numbers are minimal, there is no significant impact on our requirements and/or statistics.



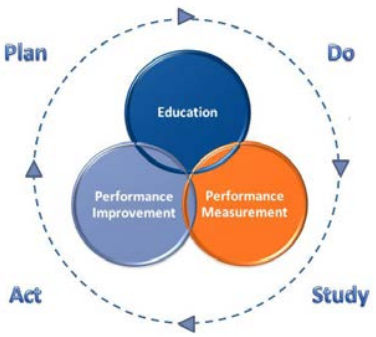
Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

HSN CPC Auditing Requirements and Activities Report
April 1, 2015 to March 31, 2016

Lower Risk Auditing

Primary Problem	Skill Sets Reviewed	# of Calls	Annual Audits Required	~Monthly Audits Required	Audits Completed to Date	Annual Variance
Airway/Ventilatory	**Total - 2014/15 (Year End)**	**2502**	** 330	28	**1022**	**692**
21-Resp. Distress	**Total - 2015/16 (Year End)**	**2568**	** 330	28	**800**	**470**
22-Resp. Disease	Salbutamol					
54-CHF	Nitro					
84-Local Allergic Reaction	Gravol					
	IV					
Chest Pain/Other	**Total - 2014/15 (Year End)**	**3750**	** 350	29	**1377**	**1027**
51-Ischemic CP	**Total - 2015/16 (Year End)**	**3919**	** 350	29	**1151**	**801**
53-Palpitations	ASA					
54-CHF	Nitro					
56-Cardiogenic Shock	12 Lead					
57-MI	IV					
59-Other Cardiac	Gravol					
46-Seizure/Post Ictal						
66-Musk/skel Trauma						
Cardiac Arrest	**Total - 2014/15 (Year End)**	**4586**	** 350	29	**650**	**300**
Trans/Non-Trans	**Total - 2015/16 (Year End)**	**3030**	** 340	28	**607**	**267**
73-Patient Expired	TOR	190			189	
75-Transported by Other	Obviously Dead	678			268	
6-Transport of Dead Pt	Transported by Other Crew	2162			150	
Decreased LOC	**Total - 2014/15 (Year End)**	**359**	** 170	30	**174**	**4**
42-Altered LOC	**Total - 2015/16 (Year End)**	**357**	** 170	30	**135**	**35**
45-Behaviour/Psychiatric	D50W & Transported	147			45	
46-Seizure/Post Ictal	Glucagon & Transported	210			90	
48-Confusion/Disorientation						
49-Unconscious						
83-Diabetic Emergency						
92-General Illness/Weakness						
Refusals	**Total - 2014/15 (Year End)**	**7055**	** 360	30	**225**	**135**
72-Refused Service	**Total - 2015/16 (Year End)**	**7665**	** 365	30	**367**	**2**
	Any treatment					
	No treatment					
Overall Low Risk Calls	**Total - 2014/15 (Year End)**	**18252**	** 375		**3448**	**3073**
	Total - 2015/16 (Year End)	**17539**	** 370		**3060**	**2690**

** = Lower Risk Skills - Audit Requirements as per the Performance Agreement Table 1



Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

HSN CPC Auditing Requirements and Activities Report
April 1, 2015 to March 31, 2016

High Risk Auditing

Primary Problem	Skill Sets Reviewed	# of Calls	Annual Audits Required	~Monthly Audits Required	Audits Completed to Date	Annual Variance
Cardiac Arrest	**Total - 2014/15 (Year End)**	**269**	* 200	17	**263**	**63**
01-Medical	**Total - 2015/16 (Year End)**	**297**	* 220	18	**289**	**69**
02-Traumatic	ETT					
	King LT					
	AED/Defibrillation					
	All Cardiac Arrest Drugs					
	IV (on ROSC)					
	12 Lead (on ROSC)					
Airway/Ventilatory	**Total - 2014/15 (Year End)**	**438**	* 320	27	**432**	**112**
Anaphylaxis	**Total - 2015/16 (Year End)**	**453**	* 325	27	**442**	**117**
21-Resp. Distress	Epi 1:1000 +/- Benadryl	92			87	
22-Resp. Disease	CPAP	176			173	
24-Resp. Arrest	Benadryl only	185			182	
54-CHF						
84-Local Allergic Reaction						
85-Anaphylaxis						
Chest Pain/Other	**Total - 2014/15 (Year End)**	**308**	* 220	18	**308**	**88**
(Controled Drugs)	**Total - 2015/16 (Year End)**	**324**	* 225	19	**317**	**92**
51-Ischemic CP	Fentanyl (Removed in this fiscal)	25			25	
53-Palpitations	Midazolam	55			55	
54-CHF	Morphine	227			220	
56-Cardiogenic Shock	Narcan	17			17	
57-MI						
46-Seizure/Post Ictal						
66-Musk/skel Trauma						
New Skill - ACP/PCP	**New Directive**					
Pain/Analgisic	**Total - 2015/16 (Year End)**	890	* 660	55	666	**6**
	Acetaminophen/Ibuprofen					
	Ketorolac					
New Skills - ACP/PCP	**New Directive**					
	Total - 2015/16 (Year End)	1	* 1	0	1	**0**
	EDD	0			0	
	Calcium Gluconate	1			1	
Decreased LOC	**Total - 2014/15 (Year End)**	**171**	* 125	10	**171**	**46**
S/A + Refusal of Transport	**Total - 2015/16 (Year End)**	**116**	* 110	9	**114**	**4**
	D50W	82			82	
	Glucagon	34			32	
Overall ALS High Risk Calls	**Total - 2014/15 (Year End)**	**1186**	* 865		**1174**	**309**
	Total - 2015/16 (Year End)	**2081**	* 880		**1162**	**282**

* = High Risk Skills - Audit Requirements as per the Performance Agreement Table 2

Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 2

HSN CPC AUDITING REQUIREMENTS - RESULTS

This section is a breakdown of auditing results by service operator and by paramedic and is based on the following paramedic auditing requirements as per the Regional Base Hospital Performance Agreement:

- Annually, each paramedic will have a minimum of 5 audited calls where a controlled act was performed.
- If a paramedic has less than 5 calls where a controlled act was performed, 100% of these calls will be audited.
- Newly certified paramedics will have 80% of calls where a controlled act was performed audited for the first six (6) months. Newly certified paramedics are those who have never been certified by a base hospital.

Audit Activities Summary Report

From: April 1, 2015
To: March 31, 2016

CPC Audit Activities		Total #		# Medics with ALS Calls			
		Audits	Medics	≥ 5	1 - 4	0	< 10
	N =	5334	790	589	146	55	362
	% =			75%	18%	7%	46%
Audit Activities By Service		**Total #**		**# Medics with ALS Calls**			
		Audits	Medics	≥ 5	1 - 4	0	< 10
Algoma	N =	341	73	47	19	7	47
740	% =			64%	26%	10%	64%
Cochrane District	N =	389	73	57	10	6	33
741	% =			78%	14%	8%	45%
Hearst	N =	52	13	7	4	2	8
133	% =			54%	31%	15%	62%
WAHAPS	N =	271	66	34	25	7	54
263	% =			52%	38%	11%	82%
Kapuskasing	N =	82	23	11	8	4	16
275	% =			48%	35%	17%	70%
Manitoulin-Sudbury	N =	638	129	75	42	12	96
782 / 752	% =			58%	33%	9%	74%
Nipissing	N =	654	84	72	9	3	23
469 / 285 / 287	% =			86%	11%	4%	27%
Parry Sound	N =	450	70	63	5	2	28
745	% =			90%	7%	3%	40%
Sault Ste. Marie	N =	570	53	47	2	4	9
262	% =			89%	4%	8%	17%
Sudbury	N =	1638	154	140	7	7	20
747	% =			91%	5%	5%	13%
Timiskaming District	N =	249	52	36	15	1	28
750	% =			69%	29%	2%	54%

Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 3

PATIENT CARE VARIANCES REPORT (ACE OUTCOMES)

This section provides a summary of the types of variances/errors identified during the auditing process and includes a breakdown by service operator and paramedic.

The audit process changed for Manitoulin-Sudbury DSB in the 4th quarter. Nomenclature changed from Errors to Patient Safety Incidents therefore no "errors" were captured in Q4. The new nomenclature will be available in the 2016/17 fiscal reporting for all services.

ACE Outcome Report

From: April 1, 2015
To: March 31, 2016

CPC Audit Outcomes		Total Audits	Audit to File		Variances				Errors			
			No Variance	No Errors	Minor	Major	Critical	Total	Minor	Major	Critical	Total
	N =	5334	4759	5241	162	327	86	575	82	11	0	93
	% =		89%	98%	3%	6%	2%	11%	1.5%	0.2%	0.0%	1.8%
Audit Outcomes by Service		**Total Audits**	**Audit to File**		**Variances**				**Errors**			
			No Variance	**No Errors**	**Minor**	**Major**	**Critical**	**Total**	**Minor**	**Major**	**Critical**	**Total**
Algoma	N =	341	306	340	10	12	13	35	1	0	0	1
740	% =		90%	100%	3%	4%	4%	10%	0%	0%	0%	0%
Cochrane District	N =	389	323	383	24	34	8	66	6	0	0	6
741	% =		83%	98%	6%	9%	2%	17%	2%	0%	0%	2%
Hearst	N =	52	43	50	3	6	0	9	2	0	0	2
133	% =		83%	96%	6%	12%	0%	17%	4%	0%	0%	4%
WAHAPS	N =	271	237	263	13	15	6	34	5	3	0	8
263	% =		87%	97%	5%	6%	2%	13%	2%	1%	0%	3%
Kapuskasing	N =	82	70	80	6	4	2	12	2	0	0	2
275	% =		85%	98%	7%	5%	2%	15%	2%	0%	0%	2%
Manitoulin-Sudbury	N =	638	573	633	18	33	14	65	5	0	0	5
782 / 752	% =		90%	99%	3%	5%	2%	10%	1%	0%	0%	1%
Nipissing	N =	654	555	627	9	81	9	99	23	4	0	27
469 / 285 / 287	% =		85%	96%	1%	12%	1%	15%	4%	1%	0%	4%
Parry Sound	N =	450	392	443	12	42	4	58	5	2	0	7
745	% =		87%	98%	3%	9%	1%	13%	1%	0%	0%	2%
Sault Ste. Marie	N =	570	518	565	17	21	14	52	4	1	0	5
262	% =		91%	99%	3%	4%	2%	9%	1%	0%	0%	1%
Sudbury	N =	1638	1543	1612	14	68	13	95	25	1	0	26
747	% =		94%	98%	1%	4%	1%	6%	2%	0%	0%	2%
Timiskaming District	N =	249	199	245	36	11	3	50	4	0	0	4
750	% =		80%	98%	14%	4%	1%	20%	2%	0%	0%	2%

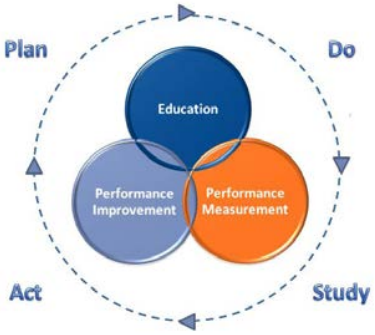
Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 4

ONLINE MEDICAL CONTROL INTERACTION REPORTS

This section provides a summary of "Patch" interactions by service and by interaction type. As of September 24, 2014, 100% of all identified online medical control interactions are audited.

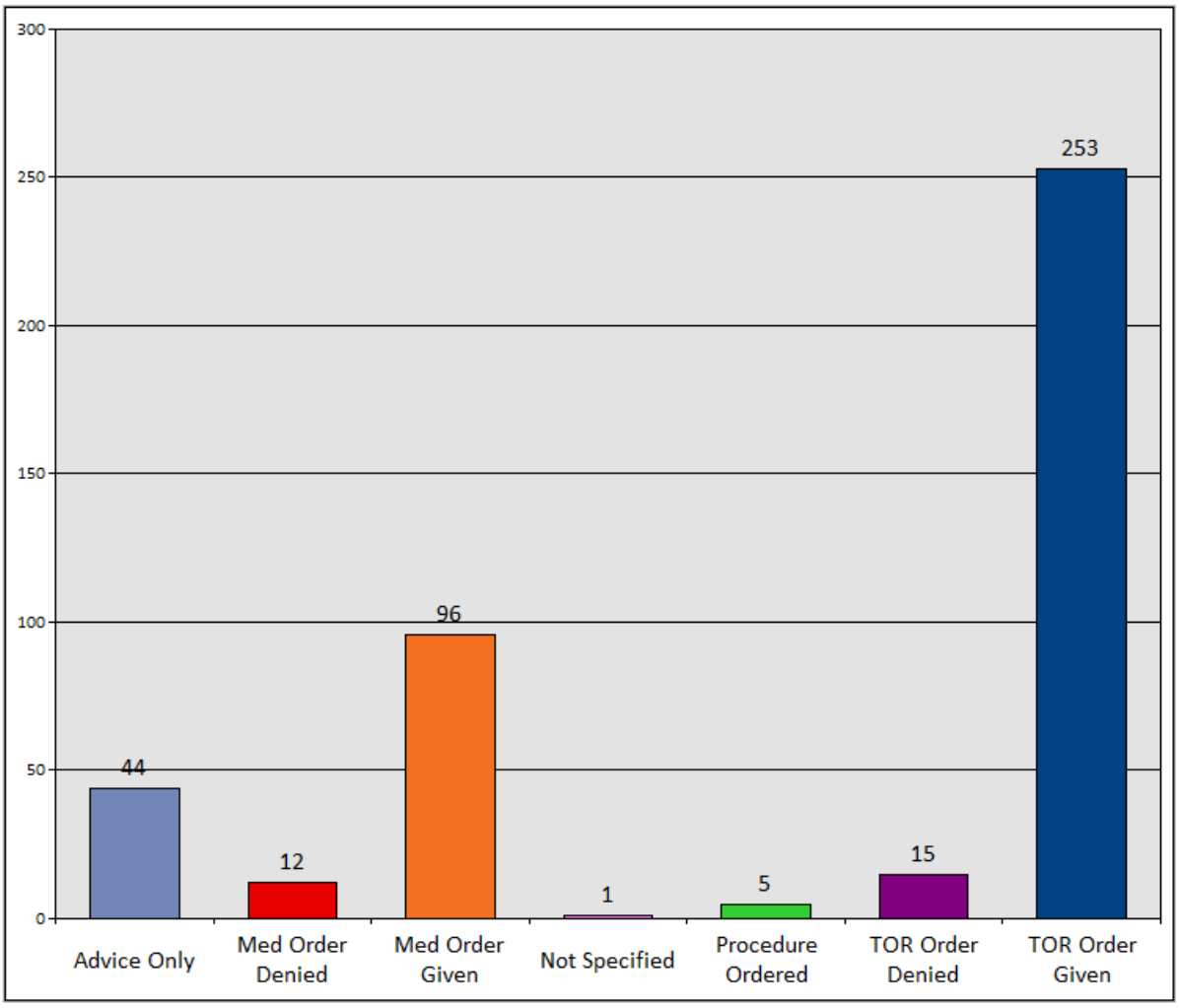
TOTAL CPC AUDITING ACTIVITIES		5334
	# of Audited Calls	% of Total Audits
On-Line Medical Control Interactions	426	8.0%

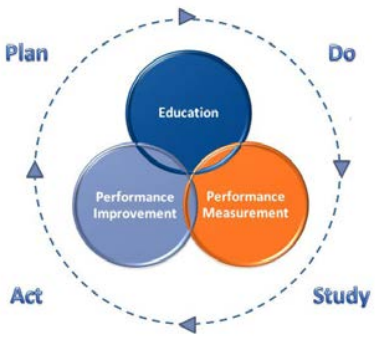


Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

Online Medical Control Interactions by Type

April 1, 2015 to March 31, 2016
N = 426





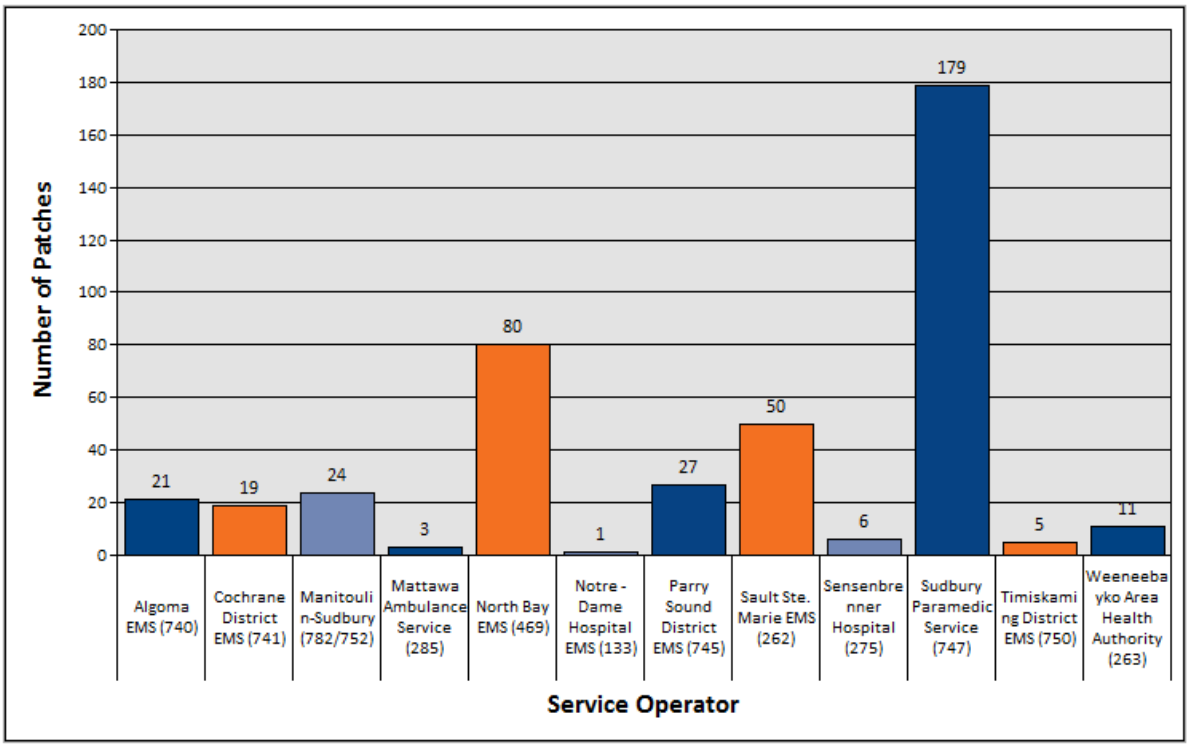
APPENDIX A

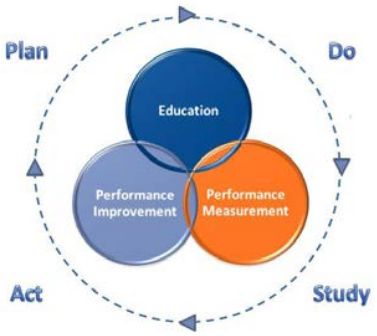
Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

Online Medical Control Interactions by Service Operator

April 1, 2015 to March 31, 2016

N = 426





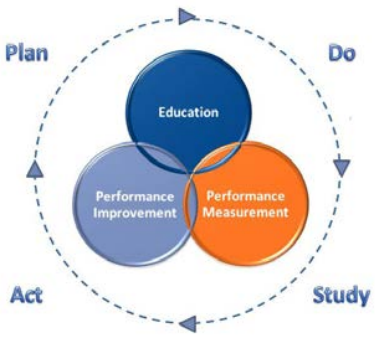
Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 5

SERVICE OPERATOR RELATED AUDIT REPORTS

This section provides a summary of all audits completed upon the request of the service operator.

TOTAL CPC AUDITING ACTIVITIES		5334
	# of Audited Calls	% of Total Audits
Service Operator Requests for Auditing	54	1.01%
Service Operator Contracted Audits	181	3.39%



Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

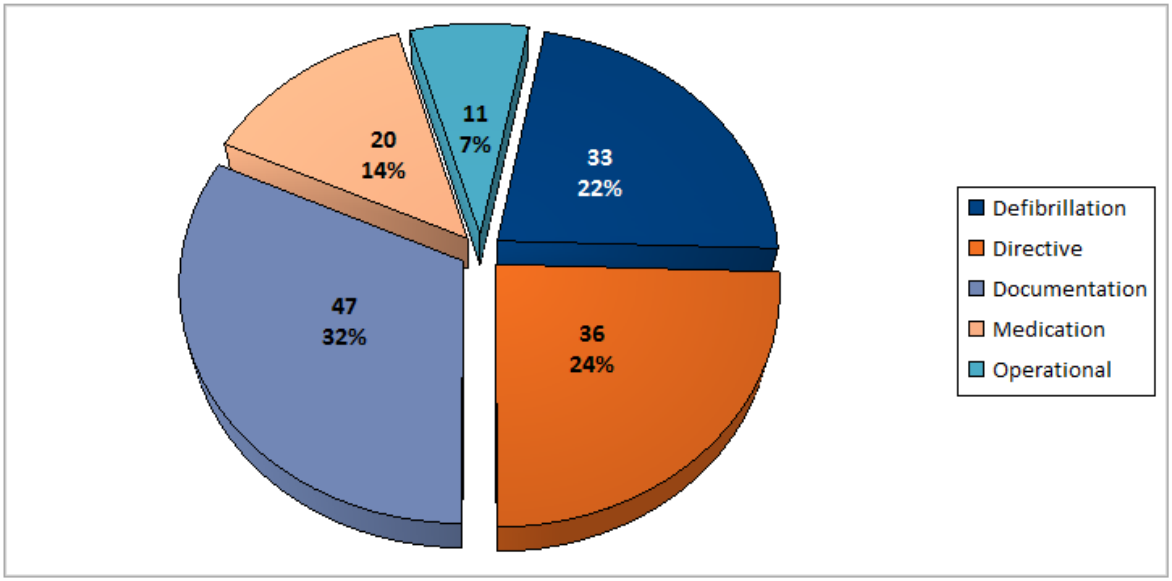
SECTION 6

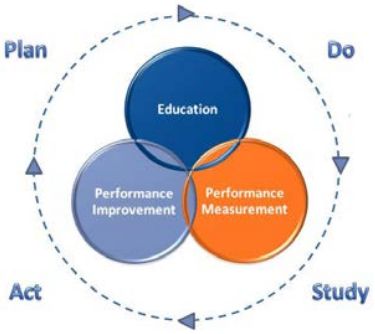
PARAMEDIC SELF-REPORTS

This section is based on paramedic self-reports received during this time period and are related to identified omissions and/or commissions in patient care or documentation.

Recognized as a very important component of paramedic practice, the number of self-reports continue to rise. Further expansion and development of this program continues as we strive to improve patient safety and outcomes.

HSN CPC Paramedic Self-Reports by Reason
Self-Reported April 1, 2015 to March 31, 2016
N = 147



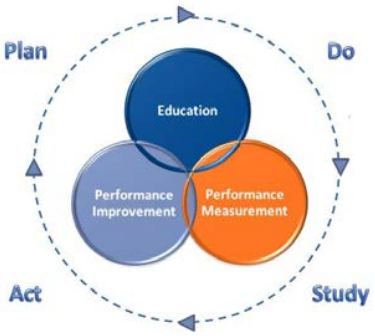


Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

Paramedic Self-Reports by Service and Reason

Self-Reported April 1, 2015 to March 31, 2016

Service	Reason for Self-Report: Defibrillation	Directive	Documentation	Medication	Operational	Totals by Service
Algoma	8	1	3	2	1	15
Cochrane	0	3	4	2	0	9
Hearst	0	2	4	0	4	10
James Bay	2	7	4	4	4	21
Kapuskasing	1	1	2	1	1	6
Manitoulin-Sudbury	1	2	7	1	1	12
North Bay	6	4	6	4	2	24
Parry Sound	8	4	12	4	1	29
Sault Ste. Marie	3	7	4	0	0	14
Sudbury	1	5	2	4	2	14
Temiskaming	3	0	4	2	0	6
Totals by Reason	33	36	47	20	11	147
	22%	24%	32%	14%	7%	



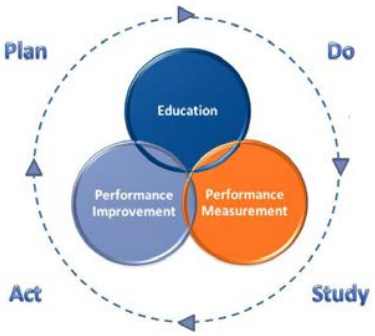
Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 7

BLS ISSUES REPORTED TO SERVICE OPERATORS

This section is based on BLS PCS Issues identified during auditing of ALS calls and reported to the service operator.

TOTAL CPC AUDITING ACTIVITIES		5334
	# of Calls	% of Total Audits
BLS PCS Issues Forwarded to Service Operators	57	1.06%



Performance Measurement Standard Reports
April 1, 2015 – March 31, 2016

SECTION 8

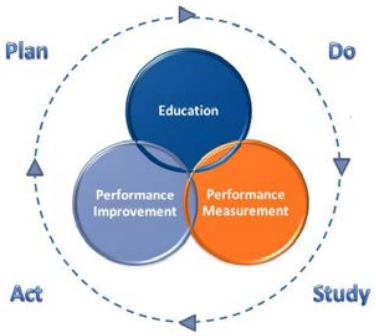
PARAMEDIC SKILLS ACTIVITIES REPORT

Please note the following;

Service Count by ACR – is the total number of calls (by call #) where a particular ALS skill set was used as part of the overall patient care plan.

Paramedic by Name - paramedic skills activities are based on the number of times a paramedic was on a call where an ALS skill was used as part of a patient care plan.

Paramedic Count by Crew – this count is based on the total count of ALS skill activities by the entire responding crew e.g. calls may have anywhere from 1-4 crew members identified on the ACR thereby each identified member would get credit for their active participation in the assessed need and delivery of the identified ALS skill set.



Centre for Prehospital Care
Health Sciences North

ALS Skills Inventory
April 1, 2015 - March 31, 2016

SKILL \ SERVICE CODE		Hearst 133	Sault Ste. Marie 262	WAHAPS 263	Kapuskasing 275	Mattawa 285	Temagami 287	North Bay 469	Algoma 740	Cochrane 741	Parry Sound 745	Sudbury 747	Timiskaming 750	Manitoulin-Sudbury 752/782	Total
CPAP	145	0	33	0	7	2	1	18	3	19	11	80	0	15	**189**
CPAP - Unsucc.	147	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
Oro/Naso Airway	170	0	0	0	0	0	0	0	0	0	0	0	0	65	**65**
King LT-D	172	1	15	3	0	1	1	22	2	6	4	96	7	16	**174**
Unsucc. King LT	173	0	0	0	0	0	0	1	1	0	0	17	2	3	**24**
CPR	200	3	96	9	9	4	2	90	46	60	44	134	35	41	**573**
CPR 30:2	203	0	0	0	0	0	0	0	0	0	0	104	0	0	**104**
CPR 10:1	204	0	0	0	0	0	0	0	0	0	0	19	0	0	**19**
Valsalva Manoeuvre	303	0	0	0	0	0	0	8	0	0	0	16	0	0	**24**
Defib - Manual	306	2	1	2	3	0	0	17	6	11	8	27	11	0	**88**
Defib - SAED	307	0	22	2	2	1	2	23	8	7	7	47	0	18	**139**
SAED - No Shock	308	0	14	3	3	0	1	10	8	23	15	20	31	29	**157**
External Pacing	309	0	0	0	0	0	0	0	0	0	0	3	0	0	**3**
12 Lead ECG/Interpretation	313/318	9	903	247	11	39	23	1001	126	119	373	3634	271	258	**7014**
Needle Thorascomy	320	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**
ETT	326	0	0	0	0	0	0	4	0	0	0	15	0	0	**19**
Unsucc. ETT	327	0	0	0	0	0	0	4	0	0	0	18	0	0	**22**
ETT - Suctioning	328	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
Mcgill Forceps	331	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**
IV - Saline Lock	342	4	311	2	7	1	1	14	0	46	57	1159	11	0	**1613**
IV - Normal Saline	345	2	220	2	18	6	9	456	0	25	89	331	61	0	**1219**
IV Unsuccessful	350	4	295	0	29	12	3	159	0	79	103	463	39	0	**1186**
IV - Fluid Bolus	351	3	113	0	3	3	2	88	0	22	15	206	11	0	**466**
IO Infusion	358	0	0	0	0	0	0	34	0	0	0	104	0	0	**138**
Unsucc. IO	359	0	0	0	0	0	0	2	0	0	0	9	0	0	**11**

APPENDIX A

Centre for Prehospital Care
Health Sciences North

ALS Skills Inventory
April 1, 2015 - March 31, 2016

SKILL \ SERVICE CODE		Hearst 133	Sault Ste. Marie 262	WAHAPS 263	Kapuskasing 275	Mattawa 285	Temagami 287	North Bay 469	Algoma 740	Cochrane 741	Parry Sound 745	Sudbury 747	Timiskaming 750	Manitoulin-Sudbury 752/782	Total
TOR - Medical	410	0	32	0	0	1	0	25	11	9	9	79	2	9	**177**
TOR - Trauma	411	0	1	0	0	0	0	1	0	2	3	7	0	3	**17**
Adenosine	500	0	0	0	0	0	0	4	0	0	0	14	0	0	**18**
Amiodarone	502	0	0	0	0	0	0	6	0	0	0	0	0	0	**6**
ASA	504	21	498	126	34	16	11	398	194	236	229	1177	142	299	**3381**
D50W	530	0	47	0	0	0	0	56	0	17	11	106	5	0	**242**
Gravol	533	3	273	47	29	11	4	169	59	114	83	314	36	125	**1267**
Benadryl	534	1	35	4	3	1	1	11	2	11	24	71	10	19	**193**
Dopamine	536	0	0	0	0	0	0	2	0	0	0	2	0	0	**4**
Epi - 1:1000	540	0	13	7	0	2	0	7	3	5	17	32	3	6	**95**
Epi - 1:10000	541	0	0	0	0	0	0	46	0	0	0	122	0	0	**168**
Fentanyl	550	0	0	0	0	0	0	7	0	0	0	18	0	0	**25**
Glucagon	560	0	29	8	2	1	0	35	37	27	12	81	10	44	**286**
Lidocaine - Bolus	591	0	0	0	0	0	0	1	0	0	0	23	0	0	**24**
Midazolam	603	0	0	0	0	0	0	21	0	0	0	34	0	0	**55**
Morphine	604	0	0	0	0	0	0	77	0	0	0	166	0	0	**243**
Narcan	610	0	1	0	0	0	0	1	0	0	2	13	0	1	**18**
Nitro Spray	615	13	272	59	19	11	5	224	78	152	101	557	78	98	**1667**
Salbutamol	650	25	173	43	17	7	5	163	71	153	81	458	84	123	**1403**
Sodium Bicarbonate	651	0	0	0	0	0	0	3	0	0	0	1	0	0	**4**
Acetaminophen	702	13	112	23	8	2	2	45	52	35	70	137	14	66	**579**
Ibuprofen	703	12	80	20	5	1	1	44	43	25	56	113	7	50	**457**
Ketorolac (Toradol)	704	2	40	5	8	0	3	31	18	19	37	98	14	16	**291**
Total ACRs		**118**	**3629**	**612**	**217**	**122**	**77**	**3330**	**768**	**1222**	**1461**	**10127**	**884**	**1304**	**23871**

APPENDIX B: QUALITY PROGRAMMING OVERVIEW 2015

QUALITY PROGRAMMING OVERVIEW 2015

Centre for Prehospital Care

Health Sciences North

www.hsnsudbury.ca/portalen/basehospital

APPENDIX B

QUALITY PROGRAMMING OVERVIEW 2015

Continuous quality improvement (CQI) is a complex responsibility that requires the collective effort of varied focus areas. Within the Health Sciences North Centre for Prehospital Care (HSN CPC), CQI is attained through an integrated system of performance measurement, performance improvement and continuing medical education within a broad based system of quality management and medical leadership.

Performance measurement is accomplished primarily by collecting and randomly reviewing ambulance call reports (ACRs) where Advanced Life Support (ALS) skill sets were performed and/or not performed when they should have been. Skills and specific patient conditions are categorized as either high or low risk procedures by the Health Sciences North Centre for Prehospital Care (HSN CPC) Quality of Care Committee (QCC). Tables 1 and 2 from Appendix N of the HSN CPC Performance Agreement (PA) are then applied to determine the total number of calls to be reviewed through the ambulance call evaluation (ACE) process.

Performance improvement endeavours are essential in the development of a strong system that allows the HSN CPC to examine how the overall patient care system is working and identifies general areas of weakness or concern to enable wide spread change. The HSN CPC continues to develop benchmarks that we measure against and develop continuing medical education (CME), which is disseminated to our paramedics and services, as a means to improving overall system and practitioner quality.

The need and importance of a wide overlap between performance measurement, performance improvement and continuing medical education (Figure 1) is vital to ensure ongoing quality patient care as demonstrated in the well-known and widely used Plan-Do-Study-Act cycle (Figure 2).

Fig. 1

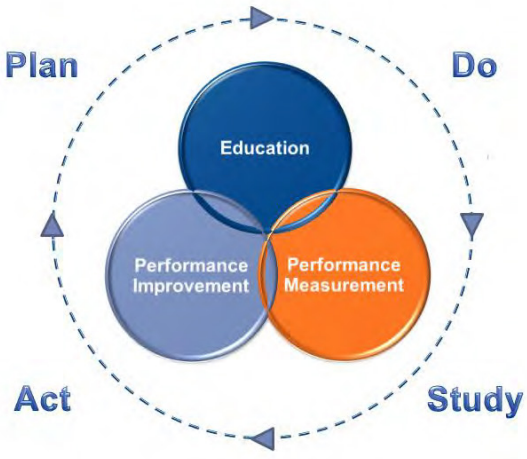


Fig. 2

QUALITY PROGRAMMING OVERVIEW 2015

A. PERFORMANCE MEASUREMENT

CHART AUDIT PROCESSES

The cases that must be audited fall into 3 categories.

1. **Medical Directives/Protocols & Cases**
   a) Higher level auditing based on the call type.
   b) Uses a sampling model that addresses both Lower and High Risk call types.
   c) The lower risk (as determined by the HSN CPC Quality of Care Committee) model provides a sampling error of +/- 5% (CI 95%). Refer to PA, Appendix N, Page 80, Table 1.
   d) In cases of higher risk (as determined by the HSN CPC Quality of Care Committee) where a smaller sampling error is desired, a model that provides a sampling error of +/- 2.5% (CI 95%) is used. Refer to PA, Appendix N, Page 81, Table 2.
2. **Paramedics**
   a) Each Paramedic will have a minimum of 5 charts audited where a controlled act was performed.
   b) If a Paramedic has done < 5 calls where a controlled act was performed, 100% of the calls with controlled acts performed will be audited.
   c) Newly certified Paramedics (defined as paramedics not having previous Base Hospital certification) will have 80% of their charts audited, for the first six (6) months, where a controlled act was performed.
3. **Cancelled Calls**
   a) A selection of cancelled calls where Paramedics made patient contact, with or without controlled acts performed, will be audited.
   b) Table 1 with the sampling error of +/- 5% (CI 95%) is used for those without controlled acts performed.
   c) Table 2 with the sampling error of +/- 2.5% (CI 95%) is used for those where a controlled act was performed and appropriate refusal occurred.

STANDARD REPORTS

Numerous reports are generated to ensure compliance with the PA Chart Audit Process as well as with the ALS/BLS Patient Care Standards. These reports will be shared with the Service Operators and the Ministry of Health and Long-Term Care (MOHLTC) as outlined below. Following receipt, we invite service operators to contact the Performance Measurement Lead to discuss all or any aspects of their service findings within the reports.

QUALITY PROGRAMMING OVERVIEW 2015

1. **HSN CPC Auditing Requirements/Results**
   a) This is a living process that provides up-to-date auditing requirements and activities on a service-by-service and paramedic-by-paramedic basis.
   b) The Paramedics are all placed in their most appropriate service [1] and the applicable Paramedic Practice Coordinator (PPC) will generate a database search[2] on the call activities for those particular Paramedics.
   c) The PPC will update the live document as to the current call activities and ensure appropriate auditing activities[3] are completed.
   d) This live document will then be forwarded to the Performance Measurement Lead who will compile all the data into a service wide report to be shared within as a compliance check.

Report Distribution:

- Service Operator: Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
  NOTE: HSN CPC reports are based on fiscal April 1, 2014 to March 31, 2015 as per Ministry requirements therefore providing calendar year reports, as per service operator requests, may result in incomplete data for the calendar year reports.
- MOHLTC: Annually by June 30.

2. **Audit Requirements and Activities Report**
   a) All call types are categorized and the potential skill sets used for each category are listed.
   b) These are then reviewed by the Quality of Care Committee (QCC) and assigned levels of risk.
   c) A database search is developed, based on call type and skill sets and generated on a weekly basis to identify the call activities throughout each respective area and the appropriate auditing activity is then completed.
   d) This is also a live document and the estimate of call activities and auditing requirements are based on the previous year's activity.
   e) This document is regularly updated and evaluations/comparisons of previous year versus current year call activities are done to ensure compliance with the PA.

Report Distribution:

- Service Operator: Semi-annually for data up to and including September 30 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC: Annually by June 30.

[1] Either the service where they primarily work or the most calls are generated.
[2] Refer to the example database search (included with the Audit Requirements and Activities Report) that is used to discover the particular calls done.
[3] These auditing activities are strictly based on #2 (Paramedic) of the chart audit process and are randomly selected. They do not take into consideration any of the Higher or Lower Risk factors related to higher level auditing.

QUALITY PROGRAMMING OVERVIEW 2015

3. Patient Care Variances Report

a) All ambulance call evaluations (ACE) with an identified documentation and/or patient care variance[4] will be weighted and tracked for a potential patient care error.
b) All variances and error severities will have an identified indicator[4].
c) Repetitive errors and/or repetitive practitioners will be reported to the Performance Improvement Lead and Regional Education Coordinator for appropriate action.

Report Distribution:

- Service Operator: Monthly for each calendar month throughout the year. These reports will consist of specific data related only to the identified month and every attempt will be made to have them distributed on the on or before the first Wednesday of the month following the reporting period.
- Service Operator: Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC: Annually by June 30.

4. On-Line Medical Control Interaction Reports

a) 'Patch' interactions broken down by service.
b) 'Patch' interactions broken down by interaction type.
c) Identified potential/actual failures.

Report Distribution:

- Internally: As required.
- Service Operator: As requested.
- MOHLTC: Patch failures reported upon discovery.
- MOHLTC: Annually by June 30.

5. Service Provider Driven Audit Reports

a) Identify all ACEs that are completed on request by the Service Providers.

Report Distribution:

- Service Operator: Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.

[4] Minor, major or critical as outlined in the ALS PCS, Provincial Maintenance of Certification Policy, Appendix 6, Page 6-5.

QUALITY PROGRAMMING OVERVIEW 2015

6. Paramedic Self Reports

a) Identify number of paramedic self-reports regionally.

Report Distribution:

- Service Operator: Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.

B. PERFORMANCE IMPROVEMENT

PROCESSES AND REPORTING

1. Investigations

a) The Performance Improvement Lead will lead and coordinate all patient care related investigations for the HSN CPC.

b) Appropriate and timely notifications/reports will be shared with all necessary stakeholders.

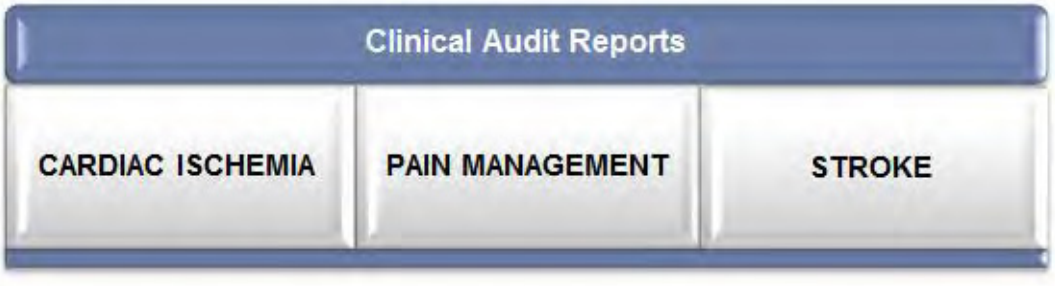
c) The Performance Improvement Lead will organize any and all follow-up with both the Performance Measurement Lead and Regional Education Coordinator to ensure outcome recommendations are adhered to.

Report Distribution:

- All necessary parties: As required
- Service Operator: Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC: Annually by June 30.

2. Clinical Audit Reports

Large scale patient care activities audit reports will be undertaken three times per year to evaluate actual performance against predicted benchmarks.



Report Distribution:

- Service Operator, Regional and Provincial by April 30, August 31, and December 31.
- MOHLTC: Annually by June 30.

QUALITY PROGRAMMING OVERVIEW 2015

3. Focused Reports

a) Ad hoc reports responsive to needs as they arise.
b) Content may be driven from the Quality of Care Committee, HSN CPC Program Committee or Program Council.
c) Repetitive errors reported by the Performance Measurement Lead will drive to a system audit on specific skills and/or patient care activities.
d) Implementation of a new or changed directive will lead to a system audit of pre implementation outcomes versus post. This will typically include three months of data on either side of the change.
e) Results of these audits may be used to drive future year, large scale clinical audits depending on results.
f) A comprehensive paramedic call review to determine patient care variances (PCV) looking at both commissions and omissions of care will be completed in conjunction with the Regional Education Coordinator to determine the educational needs of the next CME cycle.

Report Distribution:

- Internally: As required
- Service Operator, Regional and Provincial: As applicable and as completed.
- MOHLTC: Annually by June 30.

QUALITY PROGRAMMING OVERVIEW 2015

C. SUMMARY OF REPORT DISTRIBUTION

Service Operator

Quarterly

- HSN CPC Auditing Requirements/Results
- Patient Care Variances
- Investigations
- Clinical Audit Reports (3 dates per above)

Semi-annual

- Audit Requirements and Activities Report

As required

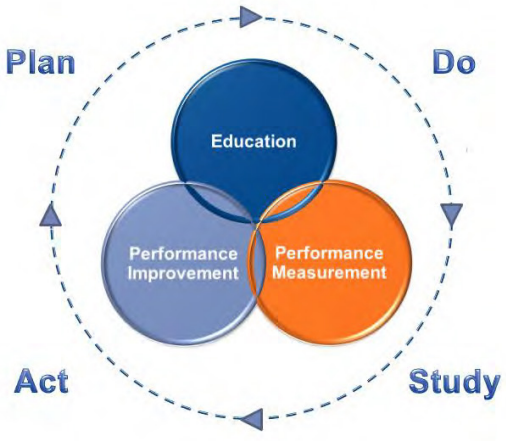
- Investigations
- Focused Audits
- On-Line Medical Control Interactions

MOHLTC

Annually and/or as Required

- HSN CPC Auditing Requirements/Results
- Audit Requirements and Activities Report
- Patient Care Variances
- Investigations
- Clinical Audit Reports
- Focused Audits
- On-Line Medical Control Interactions

All reports produced in accordance with Quality Programming will contain a watermark of the HSN CPC Quality model as illustrated here.



APPENDIX C: QUALITY PROGRAMMING OVERVIEW 2016

QUALITY PROGRAMMING OVERVIEW 2016

Centre for Prehospital Care

Health Sciences North

www.hsnsudbury.ca/portalen/basehospital

APPENDIX C

QUALITY PROGRAMMING OVERVIEW 2016

Continuous quality improvement (CQI) is a complex responsibility that requires the collective effort of varied focus areas. Within the Health Sciences North Centre for Prehospital Care (HSN CPC), CQI is attained through an integrated system of performance measurement, performance improvement and continuing medical education within a broad based system of quality management and medical leadership.

Performance measurement is accomplished primarily by collecting and randomly reviewing ambulance call reports (ACRs) where Advanced Life Support (ALS) skill sets were performed and/or not performed when they should have been. Skills and specific patient conditions are categorized as either high or low risk procedures by the Health Sciences North Centre for Prehospital Care (HSN CPC) Quality of Care Committee (QCC). Tables 1 and 2 from Appendix N of the HSN CPC Performance Agreement (PA) are then applied to determine the total number of calls to be reviewed through the ambulance call evaluation (ACE) process.

Performance improvement endeavours are essential in the development of a strong system that allows the HSN CPC to examine how the overall patient care system is working and identifies general areas of weakness or concern to enable wide spread change. The HSN CPC continues to develop benchmarks that we measure against and develop continuing medical education (CME), which is disseminated to our paramedics and services, as a means to improving overall system and practitioner quality.

The need and importance of a wide overlap between performance measurement, performance improvement and continuing medical education (Figure 1) is vital to ensure ongoing quality patient care as demonstrated in the well-known and widely used Plan-Do-Study-Act cycle (Figure 2).

Fig. 1

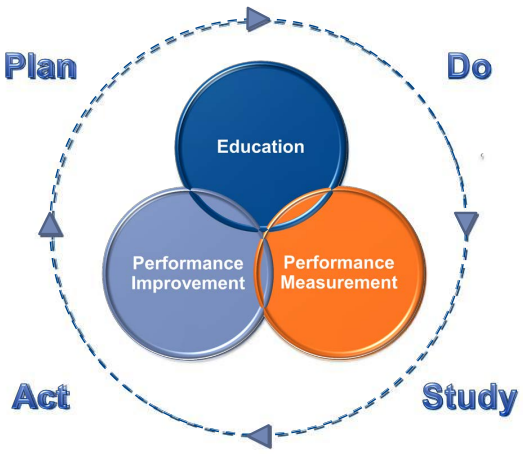


Fig. 2

QUALITY PROGRAMMING OVERVIEW 2016

A. PERFORMANCE MEASUREMENT

CHART AUDIT PROCESSES

The cases that must be audited fall into 3 categories.

1. **Medical Directives/Protocols & Cases**
   a) Higher level auditing based on the call type.
   b) Uses a sampling model that addresses both Lower and High Risk call types.
   c) The lower risk (as determined by the HSN CPC Quality of Care Committee) model provides a sampling error of +/- 5% (CI 95%). Refer to PA, Appendix N, Page 80, Table 1.
   d) In cases of higher risk (as determined by the HSN CPC Quality of Care Committee) where a smaller sampling error is desired, a model that provides a sampling error of +/- 2.5% (CI 95%) is used. Refer to PA, Appendix N, Page 81, Table 2.
2. **Paramedics**
   a) Each Paramedic will have a minimum of 5 charts audited where a controlled act was performed.
   b) If a Paramedic has done < 5 calls where a controlled act was performed, 100% of the calls with controlled acts performed will be audited.
   c) Newly certified Paramedics (defined as paramedics not having previous Base Hospital certification) will have 80% of their charts audited, for the first six (6) months, where a controlled act was performed.
3. **Cancelled Calls**
   a) A selection of cancelled calls where Paramedics made patient contact, with or without controlled acts performed, will be audited.
   b) Table 1 with the sampling error of +/- 5% (CI 95%) is used for those without controlled acts performed.
   c) Table 2 with the sampling error of +/- 2.5% (CI 95%) is used for those where a controlled act was performed and appropriate refusal occurred.

STANDARD REPORTS

Numerous reports are generated to ensure compliance with the PA Chart Audit Process as well as with the ALS/BLS Patient Care Standards. These reports will be shared with the Service Operators and the Ministry of Health and Long-Term Care (MOHLTC) as outlined below. Following receipt, we invite service operators to contact the Performance Measurement Lead to discuss all or any aspects of their service findings within the reports.

1. **HSN CPC Audit Requirements and Activities Report**
   a) All call types are categorized and the potential skill sets used for each category are listed.

QUALITY PROGRAMMING OVERVIEW 2016

b) These are then reviewed by the Quality of Care Committee (QCC) and assigned levels of risk.
c) A database search is developed, based on call type and skill sets and generated on a weekly basis to identify the call activities throughout each respective area and the appropriate auditing activity is then completed.
d) This is also a live document and the estimate of call activities and auditing requirements are based on the previous year's activity.
e) This document is regularly updated and evaluations/comparisons of previous year versus current year call activities are done to ensure compliance with the PA.

Report Distribution:

- Service Operator
  - Semi-annually for data up to and including September 30 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

2. HSN CPC Auditing Requirements - Results

a) This is a living process that provides up-to-date auditing requirements and activities on a service-by-service and paramedic-by-paramedic basis.
b) The PPC will update the live document as to the current call activities and ensure appropriate auditing activities are completed.
c) This live document will then be forwarded to the Performance Measurement Lead who will compile all the data into a service wide report to be shared within as a compliance check.

Report Distribution:

- Service Operator:
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.

  NOTE: HSN CPC reports are based on fiscal April 1, 2015 to March 31, 2016 as per Ministry requirements therefore providing calendar year reports, as per service operator requests, may result in incomplete data for the calendar year reports.
- MOHLTC:
  - Annually by June 30.

QUALITY PROGRAMMING OVERVIEW 2016

3. **Patient Care Variances Report (ACE Outcomes)**
   a) All ambulance call evaluations (ACE) with an identified documentation and/or patient care variance will be weighted and tracked.
   b) All variances and error severities will have an identified indicator.
   c) Repetitive errors and/or repetitive practitioners will be reported to the Performance Improvement Lead and Regional Education Coordinator for appropriate action.

Report Distribution:
- Service Operator:
  - Monthly for each calendar month throughout the year. These reports will consist of specific data related only to the identified month and every attempt will be made to have them distributed by the first Wednesday of the month following the reporting period.
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

4. **Online Medical Control Interaction Reports**
   a) 'Patch' interactions broken down by service.
   b) 'Patch' interactions broken down by interaction type.
   c) Identified potential/actual failures.

Report Distribution:
- Internally:
  - As required.
- Service Operator:
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Patch failures reported upon discovery.
  - Annually by June 30.

QUALITY PROGRAMMING OVERVIEW 2016

5. Service Operator Driven Audit Reports

a) Identify all ACEs that are completed on request by the Service Operator.

Report Distribution:

- Service Operator:
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

6. Paramedic Self Reports

a) Identify number of paramedic self-reports regionally.

Report Distribution:

- Service Operator:
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

7. BLS Issues Reported to Service Operators

a) Where BLS PCS issues are discovered during the normal auditing process.

Report Distribution:

- Service Operator:
  - As discovered
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

QUALITY PROGRAMMING OVERVIEW 2016

8. Paramedic Skills Activities Report

a) Skills activities are based on the number of times a paramedic was on a call where an ALS skill was used as part of a patient care plan.

Report Distribution:

- Service Operator:
  - Semi-annually for data up to and including September 30 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

B. PERFORMANCE IMPROVEMENT

PROCESSES AND REPORTING

1. Investigations

a) The Performance Improvement Lead will lead and coordinate all patient care related investigations for the HSN CPC.

b) Appropriate and timely notifications/reports will be shared with all necessary stakeholders.

c) The Performance Improvement Lead will organize any and all follow-up with both the Performance Measurement Lead and Regional Education Coordinator to ensure outcome recommendations are adhered to.

Report Distribution:

- All necessary parties as required
- Service Operator:
  - Quarterly for data up to and including June 30, September 30, December 31 and March 31. Reports will be distributed within the ensuing six weeks.
- MOHLTC:
  - Annually by June 30.

QUALITY PROGRAMMING OVERVIEW 2016

2. Clinical Audit Reports

Large scale patient care activities audit reports will be undertaken three times per year to evaluate actual performance against predicted benchmarks.

Report Distribution:

- Service Operator, Regional and Provincial:
  - By April 30, August 31, and December 31.
- MOHLTC:
  - Annually by June 30.

3. Focused Reports

a) Ad hoc reports responsive to needs as they arise.
b) Content may be driven from the Quality of Care Committee, HSN CPC Program Committee or Program Council.
c) Repetitive errors reported by the Performance Measurement Lead will drive to a system audit on specific skills and/or patient care activities.
d) Implementation of a new or changed directive will lead to a system audit of pre implementation outcomes versus post. This will typically include three months of data on either side of the change.
e) Results of these audits may be used to drive future year, large scale clinical audits depending on results.
f) A comprehensive paramedic call review to determine patient care variances (PCV) looking at both commissions and omissions of care will be completed in conjunction with the Regional Education Coordinator to determine the educational needs of the next CME cycle.

Report Distribution:

- Internally
  - As required
- Service Operator, Regional and Provincial:
  - As applicable and as completed.
- MOHLTC:
  - Annually by June 30

QUALITY PROGRAMMING OVERVIEW 2016

C. SUMMARY OF REPORT DISTRIBUTION

Service Operator

Quarterly
- HSN CPC Auditing Requirements/Results
- Patient Care Variances
- Investigations
- Clinical Audit Reports (3 dates per above)

Semi-annual
- Audit Requirements and Activities Report

As required
- Investigations
- Focused Audits
- On-Line Medical Control Interactions

MOHLTC

Annually and/or as Required
- HSN CPC Auditing Requirements/Results
- Audit Requirements and Activities Report
- Patient Care Variances
- Investigations
- Clinical Audit Reports
- Focused Audits
- On-Line Medical Control Interactions

All reports produced in accordance with Quality Programming will contain a watermark of the HSN CPC Quality model as illustrated here.