2019-2020 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 2019-2020.

This report follows the template provided by the Emergency Health Regulatory and Accountability Branch, and demonstrates how our organization addresses the key performance indicators listed in the Performance Agreement.

We have completed another productive and successful year. Some key achievements during this fiscal year include:

- We certified **70** new paramedics
- We provided advice and online medical direction during **462** patch calls
- We electronically audited **33, 521** ambulance calls
- We facilitated **158** mandatory and elective educational sessions for paramedics

We acknowledge the exceptional 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 PURPOSE, COMMITMENTS AND VALUES

Our Purpose

To provide high quality health services, support learning and generate research that improves health outcomes for the people of Northeastern Ontario.

Our Commitments

We will carry out our patient care, teaching and research responsibilities with integrity, ensuring patients and families remain the focus of all we do.

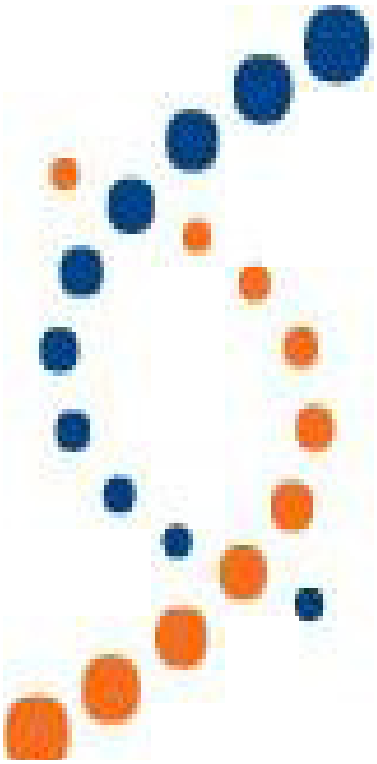
We will partner with humility, valuing each person's and each community's strengths and ideas to bring the best care, education and research solutions forward.

We will provide a physically, psychologically and culturally safe environment that promotes a positive care, working and learning experience

Our Values

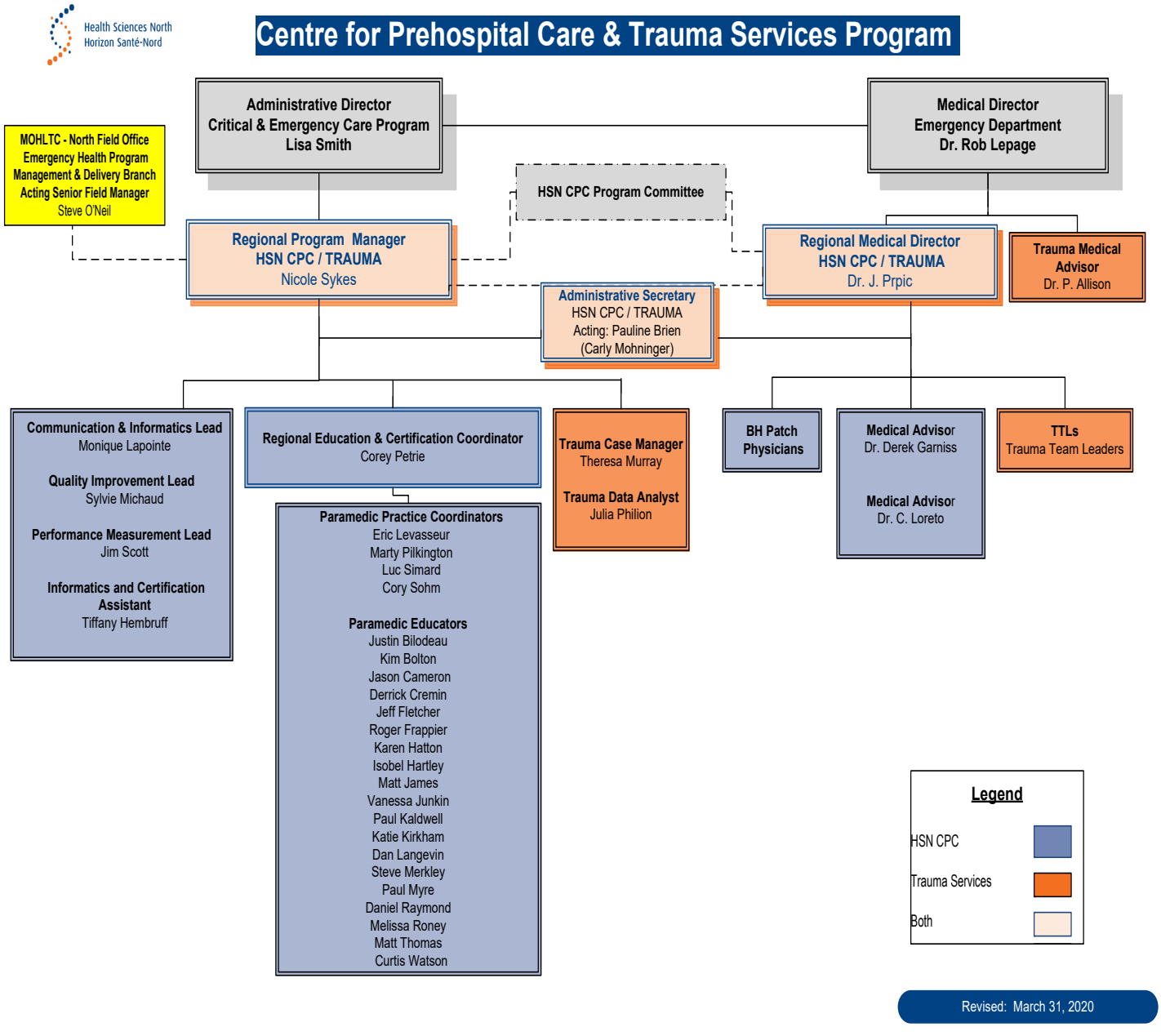
We believe in and will model:

Respect	Showing positive regard for each person's strengths, qualities and values
Quality	Providing patient and family-focused services that are safe, reliable, accessible (timely), efficient, effective and equitable
Transparency	Sharing information that is timely and truthful, working within the limits of law and policy
Accountability	Taking personal responsibility for our actions, behaviours and decisions
Compassion	Responding to the needs of others, showing kindness and empathy



ORGANIZATION CHART

As of March 31, 2020



MEET THE TEAM

Nicole Sykes,
Regional Manager

Eric Levasseur,
Paramedic Practice
Coordinator

Corey Petrie,
Regional Education
and Certification
Coordinator

Sylvie Michaud,
Quality Improvement
Lead

Dr. J. Prpic, Regional
Medical Director

Luc Simard,
Paramedic Practice
Coordinator

Centre for Prehospital Care

Health Sciences North

Monique Lapointe,
Communication &
Informatics Lead

Tiffany Hembruff,
Informatics and
Certification
Assistant

Jim Scott,
Performance
Measurement Lead

Marty Pilkington,
Paramedic Practice
Coordinator

Cory Sohm,
Paramedic Practice
Coordinator

Carly Mohninger,
Administrative
Secretary (mat leave)

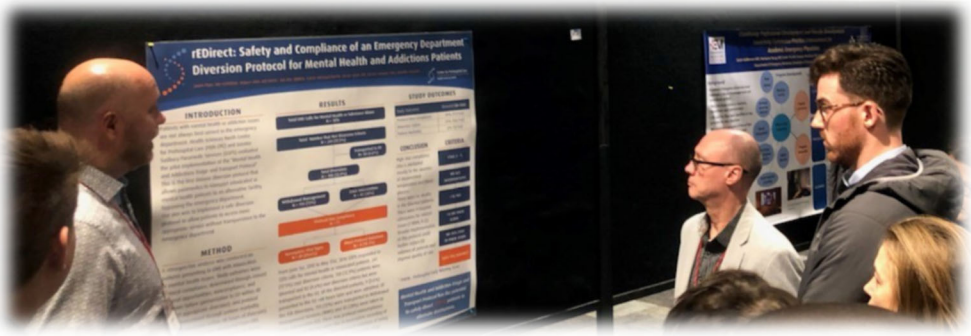
HIGHLIGHTS

2019-20 YEAR IN REVIEW

April—June 2019
Paramedic Spring Rounds

April 6-9, 2019
New Hire Certifications

May 22-24 2019
Dr. Jason Prpic Presents rEDirect Study Research Poster at CAEP(p. 25)



May 27-31, 2019:
Paramedic Week (p. 23)

Left: Frank May and Luke Legault
Right: Parry Sound District EMS Service

May 29, 2019
Corey Petrie attends Awards Ceremony in Timmins

June 12, 2019
SIM Day
Dr. Loreto presents Spinal & Limb Trauma

June 19-21, 2019
New Hire Certifications

June 25, 2019
SIM Day in Sudbury

Cory Sohm attends NAEMSP in June 2019 (pictured left)

2019-20 YEAR IN REVIEW

July 2-4, 2019 ACP Summer CME

July 12, 2019 GSPS gets a sweet treat from KICX 103.9 radio station (left)

August 21, 2019 Skills Day for New Hires

August 22, 2019 New Hire Certifications

September 6, 2019 SIM Day: Facial & Electrical Injuries

September 10, 2019 Fall Rounds Faculty Training (Pictured Right)

September 12, 2019 Community Learning Session re: Paramedic & Base Hospital Services held for learners from the Northern Ontario School of Medicine (left)

September to November 2019: Paramedic Fall CME

2019-20 YEAR IN REVIEW

October 23-24, 2019
New Hire & Academic Certifications

October 29, 2019 & January 23, 2020 - IQEMS Collaborative Meetings (see page 13)

October 29, 2019
ALS PCS v. 4.6 released

December 9, 2019
Skills Video Recording (left) in collaboration with Sunnybrook Regional Base Hospital (see page 12 for more information)

December 11-13, 2019
Collaborative meeting to prepare for the launch of PPO 2020 (see page 14 for more info)

December 2019
Academic Certifications held at College Boreal

January 9, 2020
Academic Certifications

January 9-11, 2020
NAEMSP Conference in San Diego, CA

January 23, 2020
Dr. Prpic presents The Paramedic's Role in Research & Professional Development

February 2020
The new PPO is launched & Virtual live demos are provided to Service Operators

February 2020
SIM Day Opioids & Airways (right)

March 2020: World Health Organization announces Global Pandemic and special direction and changes seen to Operations in light of COVID-19 (see page 18 for more information)

Collaboration

Working with our colleagues from the Ontario Base Hospital Group (OBHG), the program continues to have a strategic focus on enhancing the quality of programming delivered, avoiding duplication in the system, and the sharing of knowledge amongst programs. The goal is to standardize and find efficiencies in processes wherever possible. The Health Sciences North Centre for Prehospital Care (HSN CPC) team is involved in both formal and informal activities designed to accomplish these goals. These examples illustrate the significant degree to which the program supports a culture of collaboration when considering any new initiatives.

Work on a formal Collaboration Agreement, designed to provide a framework for implementing and overseeing the various collaboration initiatives occurring between multiple Base Hospitals, has been ongoing in 2019-20. Significant work on the architecture of the agreement continued during this reporting period. The culmination of this work will result in the first formal governance structure among the 8 Regional Base Hospital programs to enable and oversee several collaboration initiatives.

New Primary Care Paramedic (PCP) and Advanced Care Paramedic (ACP) scenarios have been created for use with initial certification events through a Provincial Working Group in collaboration with other Base Hospitals. This group has produced 17 PCP scenarios and 8 ACP scenarios for a total of 25 new scenarios in the 2019-20 fiscal year. Towards the end of March 2020, the COVID-19 global pandemic brought this group together remotely to create a new temporary virtual PCP certification process.

Collaborative sharing of educational materials between Base Hospital programs has resulted in the creation and revisions of 41 skill sheets with the production of video to demonstrate these skills. All educational skill sheets have been finalized and the videos are currently being edited prior to dissemination. The COVID-19 global pandemic has delayed the final shooting of 6 videos. Ad hoc sharing of information and educational resources among Base Hospital Programs continues and has become a common occurence. Also formed in early 2020 was a working group dedicated to creating a multi-year educational curriculum. Unfortunately at the time of this report, this work has been put temporarily on hold pending the duration of the pandemic.

Continued progress has been made on the alignment of key procedural documents intended to support standardized implementation of the Certification Standard.

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 continue to work 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). This web based software supports the management of many Base Hospital's Continuing Quality Improvement endeavors including data mining, peer review and compliance auditing, secure communication with stakeholders, investigation and self-reporting, efficient work flow and document management, statistical reporting and data visualization. The IQEMS suite has been modified to support the additional base hospitals participating in this large-scale project.

The development of IQEMS as a collaborative and integrated quality solution continued through 2019-20, guided by the Strategic Workplan through remote work and in-person meetings to further improve the system, develop additional capabilities such as: enhanced search function and bi-directional feedback.

Through the work of the Operational Working Group and the Technical Working Group, the first collaborative iteration of IQEMS clinical filters and the associated audit forms went live in June 2019.

Paramedic Portal of Ontario (PPO)

Health Sciences North Centre for Prehospital Care, Southwest Ontario Regional Base Hospital Program, Ornge Base Hospital and Sunnybrook Regional Base Hospital, continue to collaboratively pursue standardization of paramedic certification management as well as education related delivery or Learning Management System (LMS) processes through its established Paramedic Portal of Ontario (PPO).

The inaugural PPO platform was initially developed by the Southwest Ontario Regional Base Hospital Program, and launched to our four base hospitals in 2015. Since then, many hours, by many individuals, have been invested to improve the platform.

The next major software leap with the PPO was launched February 18, 2020. This new version integrates the certification and education modules and has a modernized new look and feel. It also provides a secure communication with stakeholders, improve workflows, and offer a document repository.

Some highlights include

- online service and student registration
- certification by service and by level
- reason(s) for Deactivation / Decertification by service

These vastly improved components contribute to efficient online certification record maintenance for the Paramedic, the Paramedic Service provider and the Base Hospital.

Quality Programming

CorHealth Ontario - Prehospital STEMI Data

ST-segment elevation myocardial infarction (STEMI) is a form of heart attack that can cause death if not treated quickly. Approximately one-third of acute coronary syndromes are classified as STEMI. Data from the Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD) suggest that the incidence of STEMI in Ontario is approximately 68 of every 100,000 adult residents, a total of about 7,000 STEMIs per year. Working with key stakeholders, including Base Hospital Programs and Paramedic Services, CorHealth is responsible for the Ontario Cardiac and Vascular Registries. The data collected include specific clinical parameters required to evaluate key components of care and determine risk-adjusted outcomes. In order to facilitate the inclusion of prehospital data, the Base Hospital coordinates their efforts with the Paramedic Services to ensure important key information is forwarded.
(source: https://www.corhealthontario.ca/)

Opioid-related harms in Canada – Provincial Reporting

The Government of Canada works closely with the provinces and territories to collect and share data on apparent opioid-related deaths. Accurate information about the crisis is needed to help guide efforts to reduce opioid-related harms, including deaths. Emergency Medical Services data in this report is collected by the Ontario Base Hospital Group, updated four times a year and have been shared through the Special Advisory Committee on the Epidemic of Opioid Overdoses.
Source: https://www.canada.ca

Ambulance Call Report – "Phantom Codes"

The Ontario Base Hospital Medical Advisory Committee asked the Data Quality Management sub-committee to compile a provincial list of ACR software issues. The goal was to review the inconsistencies in coding of patient problems and paramedic interventions and the impact on reporting and analysis of patient safety. The Committee reviewed 106 codes that were not on the official MoH ACR website. All findings were reviewed and corrected either by archiving unofficial codes or completing an ACR code request to the MoH.

Termination of Resuscitation – Audit Review

This Clinical Audit reviewed all termination of resuscitation for a one-year period. We found that 89% of the orders were applied as recommended in the Advanced Life Support Patient Care Standards, however documentation is still a challenge. These include inconsistent times in the documentation of TOR and BHP Patch.

Intravenous Cannulation in the Hypoglycemia Population – Audit Review

Little is known about the comfort of the paramedics surrounding peripheral intravenous (IV) cannulation after the introduction of the Autonomous Intravenous (AIV) Program in 2014. The aim of this study was to assess if AIV Certified Paramedics are attempting IV cannulation in a specific population (the hypoglycemic patients) and who would benefit from intravenous medications (specifically dextrose). We found that paramedics attempted IV access in 83% (n=417) of the cases. Of the 17% (n=69) that met the criteria but did not have any IV attempts, 25% (n=17) cited poor vasculature, 13% (n=9) patient refused, 10% (n=7) were combative and 49% (n=34) had no rational documented. Our program continues to monitor clinical practice via auditing and provides feedback to paramedics.

By The Numbers

2019 CME-PCP	Spring # of Sessions	Spring # of Paramedics	Fall # of Sessions	Fall # of Paramedics
CDEMS	8	89	8	90
WAHAPS	5	50	5	51
TDEMS	4	41	5	44
NDPS	9	90	8	81
PSDEMS	5	68	6	72
GSPS	16	131	16	122
MSDPS	10	118	10	118
SSMEMS	6	66	6	65
ADPS	9	64	8	64
Totals	72	717	72	707

2019 CME-ACP	Summer CME # of Sessions	Summer CME # of Paramedics
NDPS	1	9
GSPS	2	19
Totals	3	28

2019 Lectures	Live Attendance/Webcast	Viewed Archived
2018 Summer CME	25	0
Prehospital Childbirth	38	46
12 Lead ECG Basic	30	93
12/15 Lead ECG Advanced	22	46
Spinal/Limb Trauma	5	0
Facial/Electrical Injuries	9	0
Totals	129	185

2019 Other Education	# of Sessions	# of Paramedics	Total # of Attendees
Pediatrics Sim Day	3 sites	17	17
Spinal Limb Trauma Sim Day	2 sites	5	5
Electrical/Facial Injuries Sim Day	4 sites	9	9
IV Initiation	5	44	44
Emergency Child Birth	4	60	60

Remote Virtual Certification Process As a Result of COVID-19

The World Health Organization declared a pandemic on March 11th, 2020. Response to COVID-19 escalated March 16th, 2020 with the Ontario Premier declaring a state of emergency related to the global pandemic. The Canadian health system needed to adapt to the changing demand for health services and implement immediate safeguards to ensure provider and public safety. Luc Simard, Paramedic Practice Coordinator and Corey Petrie, Regional Manager of Education and Certification participated as members of a newly formed OBHG COVID-19 PCP Certification Group which created a COVID-19 Ontario Base Hospital Business Continuity Plan which was submitted to the Ministry of Health on March 13, 2020. The provincial working group developed an alternate PCP certification process that aligned with the business continuity principles:

- Protect the public;
- Minimize OBHG business disruptions with a scalable response;
- Provide a flexible, nimble, Performance Agreement based response to Paramedic Services' and stakeholders' needs;
- Use technology to avoid face-to-face gatherings;
- Provide necessary services and support to Paramedic Services who will need all available paramedics to respond to the COVID-19 plan which includes: an amended Certification process to allow Paramedic Services to hire staff if required;
- Availability of paramedics to complete online/technology-based activities;
- Availability of base hospital staff and resources;
- Apply infection prevention and control measures;
- Coordinate a return to normal operations as soon as possible post pandemic.

Ontario Base Hospital Group Annual General Meeting

Planning for the next Ontario Base Hospital Group Annual General Meeting (AGM) began in 2019-20. HSN CPC is leading the planning for the next AGM, which has been postponed to 2021 as a result of the COVID-19 pandemic, and will tentatively be hosted at the Delta Waterfront Hotel and Convention Centre in Sault Ste. Marie,

Centre for Prehospital Care Website

The program's website located on the Health Sciences North platform, is a public repository for communication, policies and procedures, medication reference, forms, provincial medical directives, training materials and archived presentations, upcoming events, current research activities, published research of interest and important links.

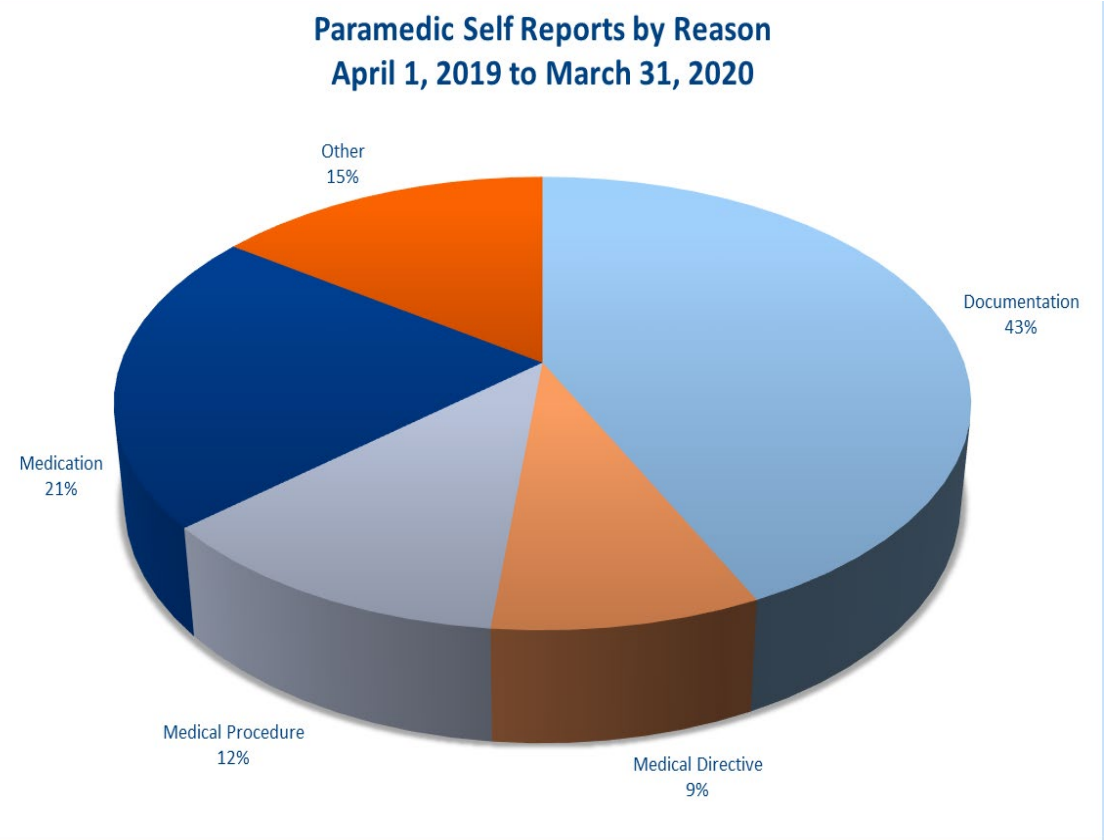
Visit Us at: https://www.hsnsudbury.ca/portalen/basehospital/

Web-Based Self-Reporting Continues

The HSN CPC strongly believes that self-reporting of adverse events is not only professional but developmental and has become part of our paramedics' standard of practice. The simple fact of recognizing an event 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. The link to access the self reporting tool via IQEMS is located on the HSN CPC website. The Paramedic Self-Reporting tool was launched in April 2014 and the activities continue to impress. There were **304** self-reports generated and reviewed in 2019-20 fiscal year.

Aggregate reports are routinely shared with Service Operators.

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.



Distance Education

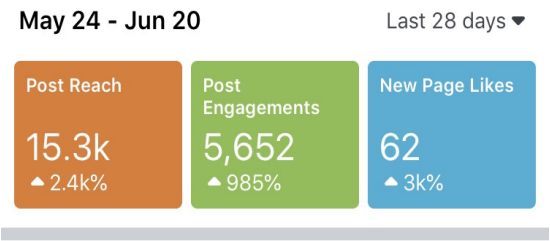
We continue to provide education to approximately 773 paramedics across one of the largest geographical regions in Ontario. To meet the challenge, HSN CPC continues to experiment with different methods of education delivery such as Adobe Connect, Personal Videoconferencing (PCVC), Social Media and the Paramedic Portal of Ontario. The newer methods of delivery allow HSN CPC to enhance learning opportunities and facilitate the delivery of education allowing ease of access by paramedics. Educational pre-learning is now available for all new certification candidates online via the Paramedic Portal of Ontario. This gives the candidates an opportunity to arrive at a scheduled educational and/or evaluation session with the didactic portion of the material completed. It also gives the HSN CPC Education and Certification Coordinator the ability to track the progress of the candidates in real time.

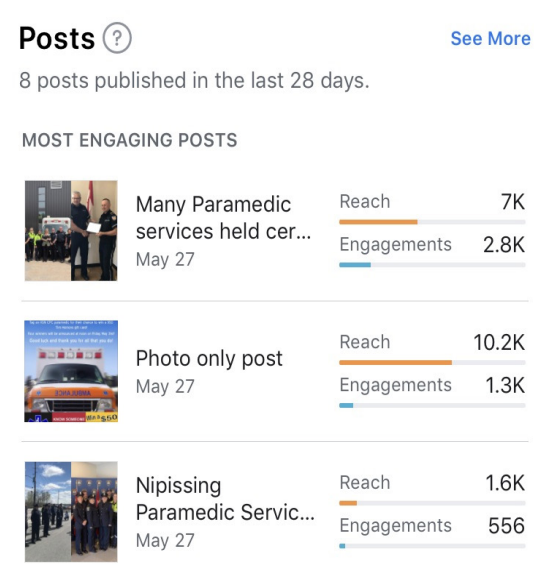
OTN videoconferencing continues to allow the connectivity by the Northeast Region Paramedics to the Base Hospital for real time educational, certification and administrative purposes, while the Paramedic Portal of Ontario currently houses all our archived continuing education lectures. We currently have 48 archived presentation that Paramedics can view from anywhere and anytime with an internet connection. We also liaise with our provincial colleagues to provide educational opportunities in alternate areas of the province. This can be beneficial for Northeast Paramedics who reside in an area outside our region.

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 regardless of their location.

Social Media

Highest Post Reach, Post Engagement and New Page Likes of 2019-20





facebook.com/hsncpc

2019 PARAMEDIC WEEK

The HSN Centre for Prehospital care held a draw for Paramedic Services Week on their CPC Facebook page to recognize and thank medics within their region.

103 people shared the post

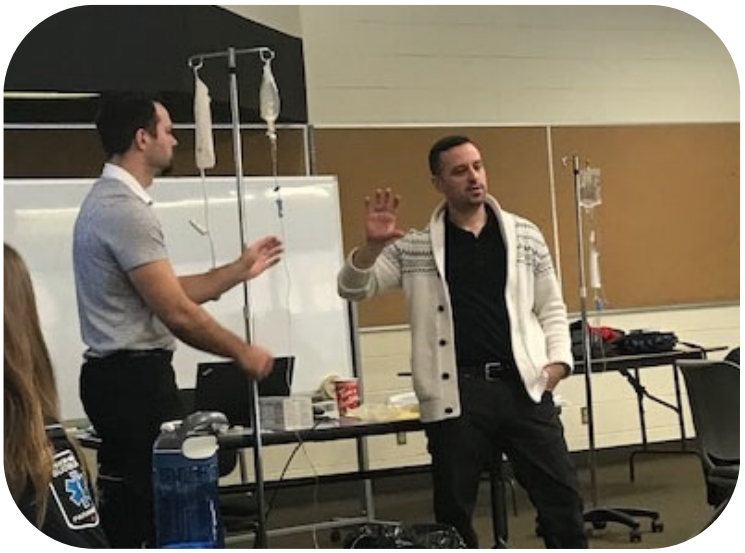
10,145 people were reached on Facebook

5 gift cards were awarded to medics from various services

THE WINNERS ARE...

Ashley Kristine (MSPS)
Mary Nakoge (WAHAPS)
Stephen Kirk (NBPS)
Elise Marguerites (TDPS)
Joel Roy (GSPS)


NORTHERN COLLEGE
ONTARIO




WIKWEMIKONG
AMBULANCE STATION

RESEARCH

rEDirect: Safety and Compliance of an Emergency Department Diversion Protocol for Mental Health and Addictions Patients

Jason Pryle MD CCFP(EM), Robert Ohle MD FRCPC, MA MSc MBBCh, Sylvie Mildvard RScPH, Nicole Sykes RN, Verdah Bismah BMSc, Jennifer Forsyth

Centre for Prehospital Care
Health Sciences North

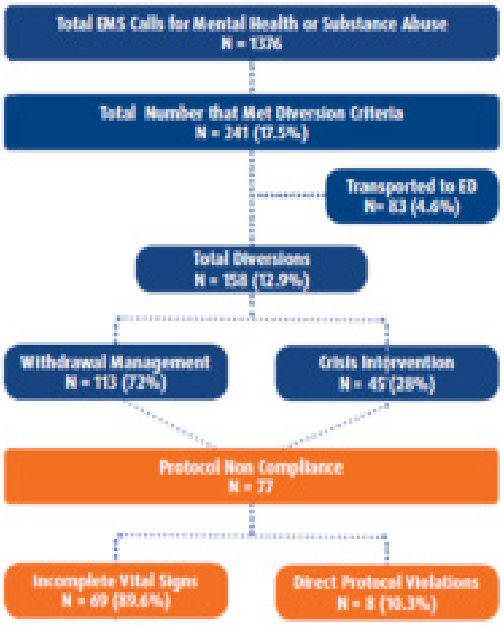
INTRODUCTION

Patients with mental health or addiction issues are not always best served in the emergency department. Health Sciences North Centre for Prehospital Care (HSN CPC) and Greater Sudbury Paramedic Services (GSPS) evaluated the pilot implementation of the "Mental Health and Addictions Triage and Transport Protocol". This is the first Ontario diversion protocol that allows paramedics to transport intoxicated or mental health patients to an alternative facility, bypassing the emergency department.
Our aim was to implement a safe diversion protocol to allow patients to access more appropriate service without transportation to the emergency department.

METHOD

A retrospective analysis was conducted on patients presenting to EMS with intoxication or mental health issues. Study outcomes were protocol compliance, determined through missed protocol opportunities, noncompliance, and diversion failure (presentation to ED within 48 hours of appropriate diversion); and protocol safety, determined through patient morbidity (hospital admission within 48 hours of diversion) and mortality. Data was abstracted from EMS reports, hospital records, and discharge forms from alternative facilities. Data was analyzed qualitatively and quantitatively.

RESULTS



From June 1st, 2015 to May 31st, 2016 GSPS responded to 1376 calls for mental health or intoxicated patients. 241 (17.5%) met diversion criteria, 158 (12.9%) patients were diverted and 83 (4.6%) met diversion criteria but were transported to the ED. Of the diverted patients, 9 (5.6%) presented to the ED <48 hours later and were admitted. Of the 158 diversions, 113 (72%) were transported to Withdrawal Management Services (WMS) and 45 (28%) were taken to Crisis Intervention (CI). There was protocol noncompliance in 77 cases, 69 (89.6%) were due to incomplete recording of vital signs; 8 (10.3%) were direct protocol violations of being transferred with vital signs outside the acceptable range.

STUDY OUTCOMES

Study Outcomes	Diverted (N=158)
Protocol Non-Compliance	49% (77/158)
Diversion Failure	25% (40/158)
Patient Morbidity	6% (9/158)

CONCLUSION

High non-compliance rate is attributed mostly to the absence of documented temperature and blood glucose.
There were no deaths in the diverted patients. There were 9 hospital admissions for related issues (1 WMS, 8 CI). Broader implementation of this protocol could further reduce ED volumes of patients and improve quality of care.

CRITERIA

CTAS 3 - 5

NO ALS INTERVENTIONS

>18 YRS

<4 ON PHEW SCORE *

NO RED ZONE IN PHEW SCORE

SAFE FOR REDIRECT

* PHEW: Prehospital Early Warning Score

Mental Health and Addiction Triage and Transport Protocol has the potential to safely divert 1 in 6 patients to alternate destinations.

Effect of Rapid Shock Implementation on Perishock Pause in Out of Hospital Cardiac Arrest

In 2016, Zoll Medical Corporation received Health Canada approval for a new and improved Rapid Shock software that is able to analyse cardiac rhythms in as little as 3 seconds in automated mode. Because of this new technology, the program approached Zoll Medical with a proposal to analyse the new software under a quality assurance research project. Our study objective is to determine the effect of Rapid Shock implementation on CPR fraction and perishock pause. The study is currently in the Implementation Phase. This is an observational retrospective review of patients who received at least one shock using the Rapid Shock software. No hospital data will be abstracted. This group will be compared to a pre-implementation group of patients who received at least one shock using the standard software. The study will involve six Paramedic Services in the northeast region including:

1. Algoma District Paramedic Services
2. Greater Sudbury Paramedic Services
3. Manitoulin-Sudbury Paramedic Services
4. Nipissing Paramedic Services (Including Mattawa and Temagami)
5. Parry Sound Paramedic Services
6. Sault Ste Marie Paramedic Services

Patellar Reduction in the Prehospital Setting (PRPS)

Patellar dislocation reduction is a simple procedure that can easily be performed by both Primary and Advanced Care Paramedics. Based on the epidemiology of patellar dislocation and the relative safety profile, we anticipate patients who undergo the procedure in the prehospital setting, will receive prompt pain relief without the need for large doses of pain medication, allowing expedited transport. For these reasons, the Emergency Health Services Branch of the Ministry of Health Long Term Care approved this research pilot study. Should our data show improved patient care, the procedure will be incorporated provincially. The study is currently enrolling patients and will take approximately 2 years to complete.

Epistry Epidemiologic Registry
Cardiac Arrest Registry

CanROC
Canadian Resuscitation Outcomes Consortium
Consortium Canadien de Recherche en Réanimation

The Cardiac Arrest Registry captures data for every out-of-hospital cardiac arrest patient within the CanROC catchment area. The Cardiac Arrest Registry collects data on cardiac arrest events, including patient demographics, bystander interventions (such as CPR or defibrillator use), emergency response times, treatments provided by emergency medical responders (including drug therapy and CPR quality), and patient outcomes. By analyzing this data CanROC is able to look for trends, best practices, and guide future protocol development, all of which can help increase survival. Additionally, participating services have access to this data to determine areas that can be improved locally to help give patients the best chance at surviving cardiac arrest. Data collection is currently ongoing at three Canadian sites representing a population of approximately 15 million people in the provinces of Ontario and British Columbia.

Canadian Sudden Cardiac Arrest Network (C-SCAN)

The overall aim of the Canadian Sudden Cardiac Arrest Network (C-SCAN) is to measure the disease burden of sudden cardiac arrest (SCA) and enable the prediction and prevention of these events by identifying key symptoms, risk factors, and triggers. Data from emergency medical services (EMS) ambulance call reports is combined with data from administrative databases such as the National Ambulatory Care Reporting System Metadata (NACRS) and the Discharge Abstract Database Metadata (DAD), as well as data from coroners' reports, and survivor interviews. The specific objectives include:

1. Identify and classify all cases of SCA across Canada in 10 provinces
2. Measure the incidence of reported causes of SCA, categorized by sex, gender and age
3. Identify key triggers and symptoms related to SCA, categorized by sex, gender, and age
4. Determine if/what elements of a patient's past medical history are predictive of future SCA

For more information, see https://c-scan.org/

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 combines various methodologies and techniques to be utilized as part of a comprehensive continuing medical education program (CME). 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 the requirements as laid out in the Certification Standard may be subject to a skills review by the Medical Director or delegate. In rare cases, a Paramedic may have their certification temporarily suspended until such a time that all mandatory CME credit hours are accumulated. Paramedic Services present paramedics who have, at a 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 evaluation 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 Ministry of Health Advanced Care Paramedic (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. Once the paramedic is deemed eligible for cross-certification, the Paramedic must complete the Certification Request Form which includes:

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

Following this, 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; but this is reserved only for skills the paramedic was not certified in with their previous Base Hospital.

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, 2020, HSN Centre for Prehospital Care had 34 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 Paramedic Services
- District of Sault Ste. Marie Paramedic Services
- District of Nipissing Paramedic Services
- Manitoulin-Sudbury DSB Paramedic Services
- Parry Sound District Emergency Medical Services
- Timiskaming District Emergency Medical Services
- Weeneebayko Area Health Authority Paramedic Services

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

REPORTING PERIOD	TOTAL ACP	TOTAL PCP	TOTAL # OF PARAMEDICS
April 1, 2019 to March 31, 2020	79	694	773

*excludes multi-service medics

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	83	83
COCHRANE DISTRICT PS	–	102	102
GREATER SUDBURY PS	75	97	172
MANITOULIN-SUDBURY DSB PS	–	141	141
NIPISSING PS	15	110	125
PARRY SOUND DISTRICT EMS	–	82	82
DISTRICT SSM PS	–	77	77
TIMISKAMING DISTRICT EMS	–	57	57
WAHA PS	–	87	87

* These numbers by Service include multi-service medics, therefor one paramedic may be reflected in the numbers twice.

3.3 A list of the delegated Controlled Acts

Note: Not all components of the scope of practice are Controlled Acts

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

MEDICATIONS CARRIED	PRIMARY CARE	ADVANCED CARE
Acetaminophen	✓	✓
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		✓
Fentanyl		✓
Glucagon	✓	✓
Ibuprophen	✓	✓
Ketorolac	✓	✓
Ketamine		✓
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**
V4R/15 Lead ECG Acquisition and Interpretation	✓	✓
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		✓
Emergency Home Dialysis Disconnect	✓	✓
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; PO; IM; IN, MDI and Nebulized Routes	✓	✓
Administer Drugs via ETT; IO		✓
Administer Drugs via IV	*	✓
CVAD Access		✓

PRIMARY CARE PROGRAM	Greater Sudbury Paramedic Service	Manitoulin-Sudbury DSB Paramedic Services	Sault Ste Marie EMS	Algoma District Paramedic Services	Nipissing Paramedic Services[1]	Parry Sound District EMS	Timiskaming District EMS	Cochrane District Paramedic Services[2]	WAHA Paramedic 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 & Interpretation	X	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	X	
PCP Manual Defibrillation	X	X	X	X	X	X	X	X	X
Home Dialysis Emergency Disconnect	X	X	X	X	X	X	X	X	X
Emergency Childbirth	X	X	X	X	X	X	X	X	X
Suspected Adrenal Crisis	X	X	X	X	X	X	X	X	X
Patellar Dislocation Research Protocol									
Zoll Rapid Shock Research Protocol	X	X	X	X	X	X			
Endotracheal Tube and Tracheal Suctioning	X	X	X	X	X	X	X	X	X
Auxiliary Emergency Tracheostomy Tube Reinsertion Medical Directive	X	X	X	X	X	X	X	X	X
Auxiliary Cardiogenic shock	X	X	X	X	X	X	X	X	X
Auxiliary Continuous Positive Airway Pressure	X	X	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						X	X	
Auxiliary Special Events Medical Directives			X		X	X			
Auxiliary Electronic Control Device Probe Removal									

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

ADVANCED CARE PROGRAM	Greater Sudbury Paramedic Service	Nipissing Paramedic Services
Medical Cardiac Arrest (Epinephrine 1:10,000 IV/IO/ETT, Lidocaine/Amiodarone IV/IO)[1]	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 ECG 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
Tachydysrhythmics (Valsalva Maneuver, Adenosine IV, Lidocaine/Amiodarone IV, Synchronized Cardioversion)	X	X
Intravenous & Fluid Therapy (0.9% NaCl IV/IO)	X	X
Pediatric Intraosseous (IO) Infusion	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/SC and Fentanyl IV/IN)	X	X
Home Dialysis Emergency Disconnect	X	X
Emergency Childbirth	X	X
Suspected Adrenal Crisis	X	X
Endotracheal Tube and Tracheal Suctioning	X	X
Patellar Dislocation Research Protocol		
Zoll Rapid Shock Research Protocol	X	X
Auxiliary Adult Intraosseous (IO) Infusion	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 Combative Patient (Ketamine IM)	X	X
Auxiliary Procedural Sedation (Midazolam IV)	X	X
Auxiliary Home Dialysis Emergency Disconnect	X	X
Auxiliary Special Events Medical Directives		X
Auxiliary Electronic Control Device Probe Removal		
Auxiliary Emergency Tracheostomy Tube Reinsertion Medical Directive	X	X
Auxiliary Chemical Exposure Medical Directive (CYANOKIT)	X	

[1] Greater Sudbury Paramedic Service – Lidocaine
Nipissing Paramedic Services - Amiodarone

Year	Month	Service	Modifications
2019	January	Manitoulin-Sudbury	Addition of Zoll Rapid Shock Research Protocol
2018	December	SSM, Algoma, Greater Sudbury, Nipissing, Parry Sound	Addition of Zoll Rapid Shock Research Protocol
2018	December	Greater Sudbury	Addition of Auxiliary Chemical Exposure Medical Directive – Administration of Antidotes for Cyanide Exposures (CYANOKIT)
2018	December	Nipissing & Greater Sudbury	Addition of ACP Auxiliary Medication Ketamine for Combative Patient Medical Directive
2018	December	All except Manitoulin-Sudbury	Addition of ACP/PCP Auxiliary Analgesia Medical Directive
2018	June	All	Addition of ACP/PCP Auxiliary Emergency Tracheostomy Tube Reinsertion Medical Directive
2018	June	Manitoulin-Sudbury	Addition of PCP Auxiliary Analgesia Medical Directive
2017	December	ALL	Emergency Child Birth
2017	July	ALL	Addition of Endotracheal Tube Suctioning
2017	July	ALL	Addition of Suspected Adrenal Crisis
2017	July	ALL	Home Dialysis move to core directives
2016	November	Temiskaming	Addition of Auxiliary Chemical Exposure Medical Directive – Administration of Antidotes for Cyanide Exposures (CYANOKIT)
2016	October	Temiskaming, Algoma, WAHA, Parry Sound, & Cochrane	Addition of PCP Auxiliary Home Dialysis Emergency Disconnect
2016	May	SSM	Addition of PCP Auxiliary Home Dialysis Emergency Disconnect
2016	April	ALL	Addition of PCP 12 Lead ECG Interpretation
2016	April	Greater Sudbury & Sault Ste. Marie	Addition of PCP Auxiliary Home Dialysis Emergency Disconnect
2016	January	Greater Sudbury	Addition of Autonomous PCP IV
2015	December	Manitoulin-Sudbury	Addition of PCP Auxiliary Home Dialysis Emergency Disconnect
2015	December	Algoma	Addition of 12 Lead ECG Acquisition
2015	June	Greater Sudbury & Nipissing	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 PCPs
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.

There have been no Controlled Acts removed from April 1, 2019- March 31, 2020.

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 4.6.1 which came into effect on October 23, 2019.

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 4.6.1.

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

PERIOD	TOTAL ACP	TOTAL PCP	TOTAL
April 1, 2019 to March 31, 2020	4	66	70

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	6	6
COCHRANE DISTRICT PS	–	6	6
GREATER SUDBURY PS	2	12	14
MANITOULIN-SUDBURY DSB PS	-	5	5
NIPISSING PS	2	7	9
PARRY SOUND DISTRICT EMS	–	6	6
DISTRICT OF SAULT STE. MARIE PS	–	5	5
TIMISKAMING DISTRICT EMS	–	6	6
WAHA PS	–	13	13

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

REPORTING PERIOD	TOTAL ACP	TOTAL PCP	TOTAL
April 1, 2019 to March 31, 2020	5	40	45

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	5	5
COCHRANE DISTRICT PS	–	1	1
GREATER SUDBURY PS	5	6	11
MANITOULIN-SUDBURY DSB PS	–	10	10
NIPISSING PS	-	6	6
PARRY SOUND DISTRICT EMS	–	7	7
DISTRICT OF SAULT STE. MARIE PS	–	5	5
TIMISKAMING DISTRICT EMS	–	-	-
WAHA PS	-	-	-

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

REPORTING PERIOD	TOTAL ACP	TOTAL PCP	TOTAL
April 1, 2019 to March 31, 2020	5	22	27

SERVICE	ACP	PCP	TOTAL
ALGOMA DISTRICT PS	–	2	2
COCHRANE DISTRICT PS	–	2	2
GREATER SUDBURY PS	4	7	11
MANITOULIN-SUDBURY DSB PS	–	3	3
NIPISSING PS	1	3	4
PARRY SOUND DISTRICT EMS	–	2	2
DISTRICT OF SAULT STE. MARIE PS	–	2	2
TIMISKAMING DISTRICT EMS	–	1	1
WAHA PS	–	-	-

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 Base Hospital (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. The Medical Director regularly reviews the directives and/or amendments with the emergency physicians and shares CQI findings.

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

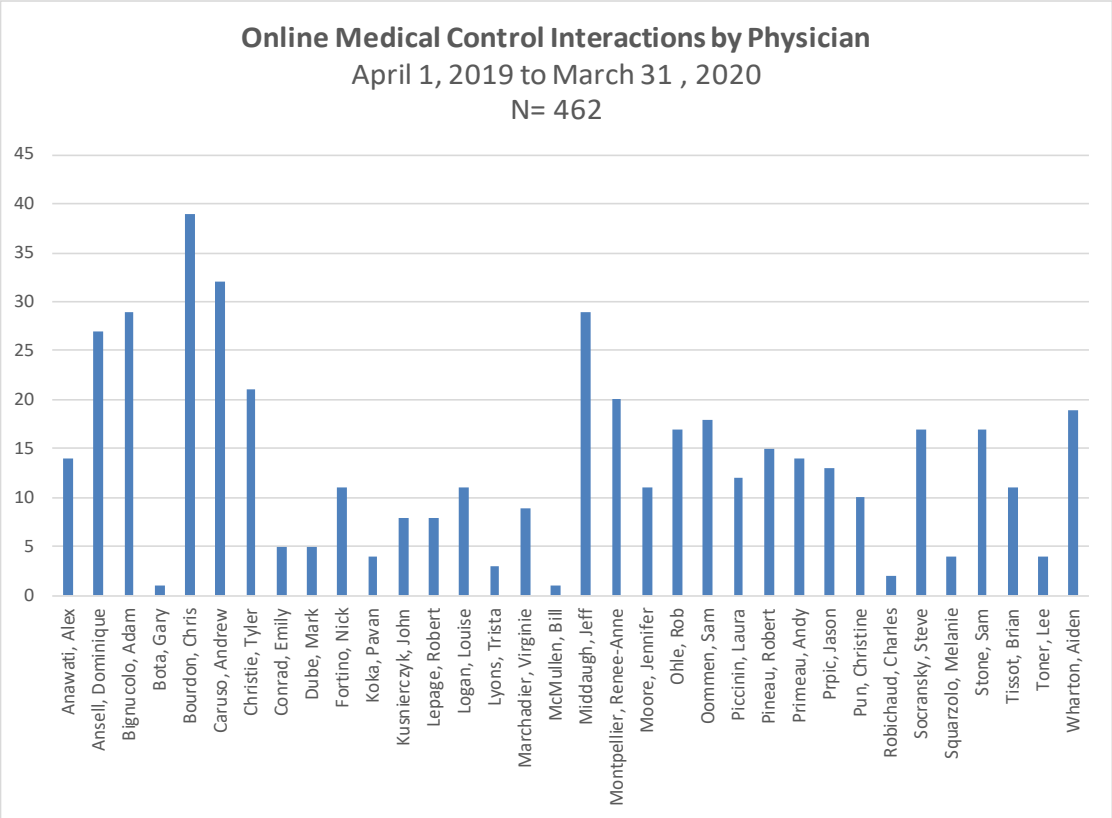
7.2 Total number of emergency physicians engaged as a Base Hospital Physician (list names).

34 Emergency Physicians were engaged as Base Hospital Physicians

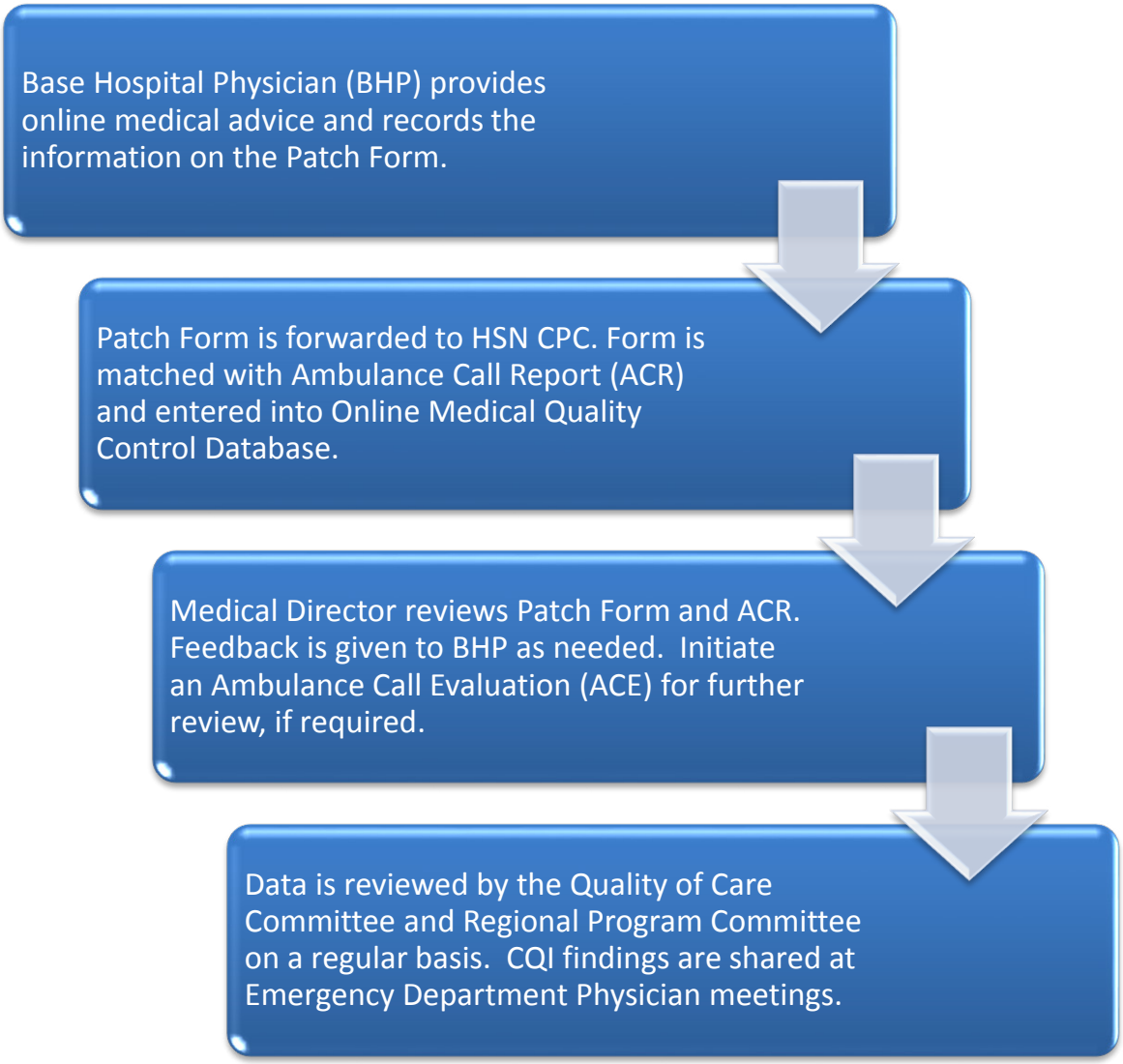
BASE HOSPITAL PHYSICIANS	
Dr. Alex Anawati	Dr. Jeff Middaugh
Dr. Dominique Ansell	Dr. Renee-Anne Montpellier
Dr. Adam Bignucolo	Dr. Jennifer Moore
Dr. Gary Bota	Dr. Robert Ohle
Dr. Christopher Bourdon	Dr. Sam Oommen
Dr. Andrew Caruso	Dr. Laura Piccinin
Dr. Tyler Christie	Dr. Robert Pineau
Dr. Emily Conrad	Dr. Andy Primeau
Dr. Mark Dube	Dr. Jason Prpic
Dr. Nicholas Fortino	Dr. Christine Pun
Dr. Pavan Koka	Dr. Steve Socransky
Dr. John Kusnierczyk	Dr. Melanie Squarzolo
Dr. Robert Lepage	Dr. Charles Robichaud
Dr. Louise Logan	Dr. Sam Stone
Dr. Trista Lyon	Dr. Brian Tissot
Dr. Virginie Marchadier	Dr. Lee Toner
Dr. Bill McMullen	Dr.Aidan Wharton

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

Total of 462 online interactions occurred between April 1, 2019 and March 31 2020, 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 15, 2019
- September 18, 2019
- December 4, 2019
- February 12, 2020

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. These agreements include details related to qualification, ongoing medical oversight and requalification of paramedics to deliver controlled medical acts under the authority of the Base Hospital.

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 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).

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

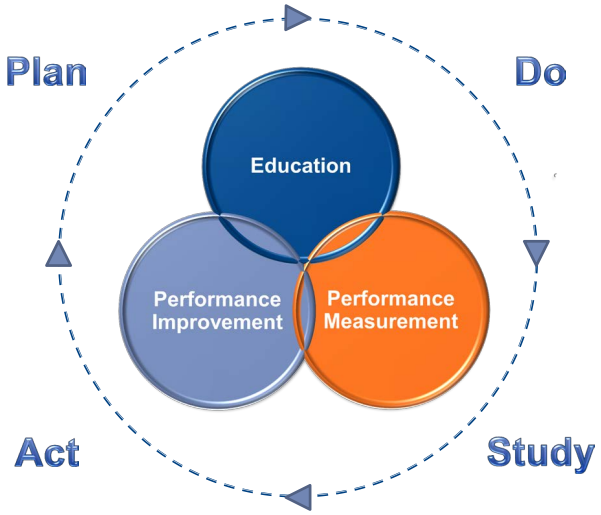


FIGURE 5

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 Algoma District Paramedic Service 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 The Host Hospital shall ensure that timely advice is provided to each Upper Tier Municipality (UTM) and Designated Delivery Agent (DDA) for Land Ambulance Services as set out in Appendix D regarding medical issues in prehospital care

Advice may be provided formally through either the HSN CPC Quality of Care Committee proceedings that are reported back to Paramedic Services or through the HSN CPC Program Committee. Discussions and resulting action items are tracked through the meeting minutes. Ad hoc advice is provided frequently via conversation, email and non-standing meetings.

14.1 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

When an official request is made by a Paramedic Service or the Ministry of Health and Long Term Care (MOHLTC) to review a specific occurence, all information related to the call is tracked in the IQEMS database. It is forwarded to a Paramedic Practice Coordinator for review and may be analyzed by the QI Lead and the applicable Medical Director/Advisor. All reviews are completed via either the standard call review process or via a formal Event Analysis report in accordance with program policies.

For further information on the outcomes of program audit activites or event analyses, see Appendix D.

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 Companion Documents
2. Auxillary Skills
3. ePCR/IQEMS audits
4. BLS Advice/BLS 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
HSN CPC Council (Sudbury/ Videoconference) - Monthly	Base Hospital Managers/Directors Business Meeting - Monthly	Sudbury CACC Advisory Committee	Trauma Association of Canada- Performance Improvement Subcommittee- Biannual
HSN CPC Quality of Care Committee (Sudbury/ Videoconference) - Monthly	Ontario Base Hospital Medical Advisory Group (MAC) (Toronto) - Quarterly	Sudbury Paramedic Service Quality of Care Committee - Quarterly	National Association of EMS Physicians - Canadian Relations Sub-Committee - Annual/Adhoc
Cambrian College Paramedic and Advanced Care Flight Paramedic Programs Advisory Committee- Biannual	Trauma Registry Advsory Committee- Quarterly	HSN Emergency Preparedness Committee- Bi-monthly	
HSN CPC NEO Regional Data Advisory Group (Teleconference) - 3 times/year	OBHG Education Sub-Committee - Quarterly	Parry Sound Ambulance Communications Services Advisory Committee- 3 times/ year	
Regional Trauma Network Committee(HSN - Sudbury) - Bi-Annual	OBHG Data Quality Management (DQM) - Quarterly	HSN Annual General Meeting	
HSN CPC Program Committee (Sudbury/Teleconference) - Quarterly	OBHG Collaboration Working Group (Toronto) - Quarterly & Ad hoc	Critical and Emergency Care Program Council- Monthly	
Acute Stroke Protocol Improvement Team - Adhoc	Ontario Trauma Advisory Committee (OTAC) Quarterly Meeting (Toronto) - Quarterly		
STEMI Bypass Steering Committee - Adhoc	Ontario Trauma Coordinators Network (OTCN) (Teleconference) - Monthly		
HSN EVT Program Development - Adhoc	Ontario Trauma Advisory Committee- Medical Directors Working Group - Adhoc		
	OBHG Annual General Meeting		
	Sunnybrook/HSN Joint Medical Council Meeting (Toronto & Sudbury) - Bi-Annual		
	CCSO Town Hall Meeting - Annual		
	IQEMS Technical Working Group - Bi-weekly		
	IQEMS Operational Working Group- Bi-weekly		
	PPO Technical Working Group - Bi-weekly		
	PPO Operational Working Group - Weekly		

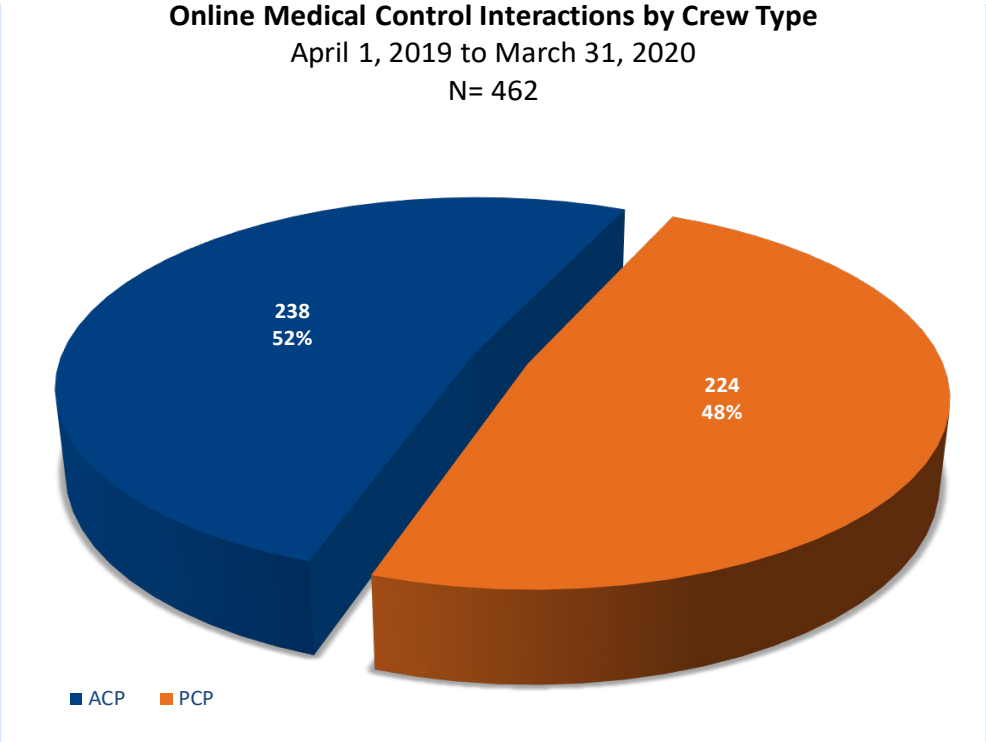
Q16 The Host Hospital shall make every reasonable effort to ensure that each request for medical advice, direction, or assistance received from an Emergency Medical Attendant, paramedic or communications officer is provided expeditiously and that performance standards are set out in this Agreement are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

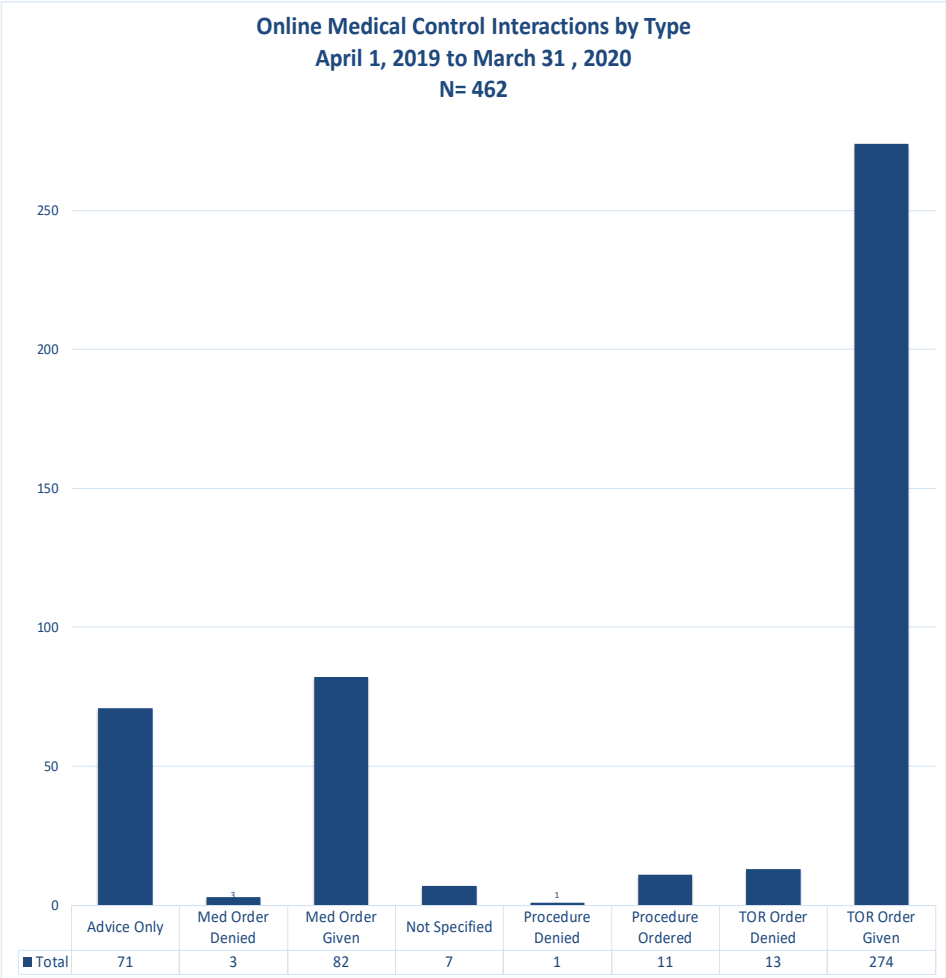
16.1 How are requests for medical advice, direction or assistance from an emergency medical attendant, paramedic or communications office provided?

The following are primary methods of communication:

- 24/7 Online Medical Control through the Base Hospital Physicians
- IQEMS, 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
- Twice annual (at minimum) in person sessions with Paramedic Practice Coordinators in an interactive education setting
- Adhoc, all program staff provide support and advice to paramedics on a daily basis.

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.

All patch failures identified during the audit review process or escalated to the QI Lead are further analyzed to determine root cause and to recommend system improvements.

During the 2019-20 fiscal year there were 2 Base Hospital Physician (BHP) Patch Failures. Overall Paramedics were able to reach a BHP 99%. Of the 2 failed patches, 1 was not reported to the Ministry of Health as directed in the Performance Agreement. The Base Hospital is currently developing a new process for auditing patch failures on a weekly basis.

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 & Certification 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 Communication and Informatics Lead or 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 CQI 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. Initial certification / Return to work requests
2. ePCR/IQEMS Audits
3. Event Analysis
4. Medical equipment purchase advice
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 CPC 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 Ministry of Health and Long Term Care Emergency Health Regulatory and Accountability Branch (MOHLTC-EHRAB) has mandated that PCPs receive a minimum of 8 hours of CME and that ACPs receive a minimum of 24 hours of CME annually. To meet the needs of the service operators, the 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. Paramedics must have the required number of credits based on their scope of practice logged within the Paramedic Portal of Ontario no later than the second Wednesday in December.

Failure to meet these requirements will result in a Paramedic review by the Medical Director or designate and may result in the temporary deactivation of the Paramedic's certification.. 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.

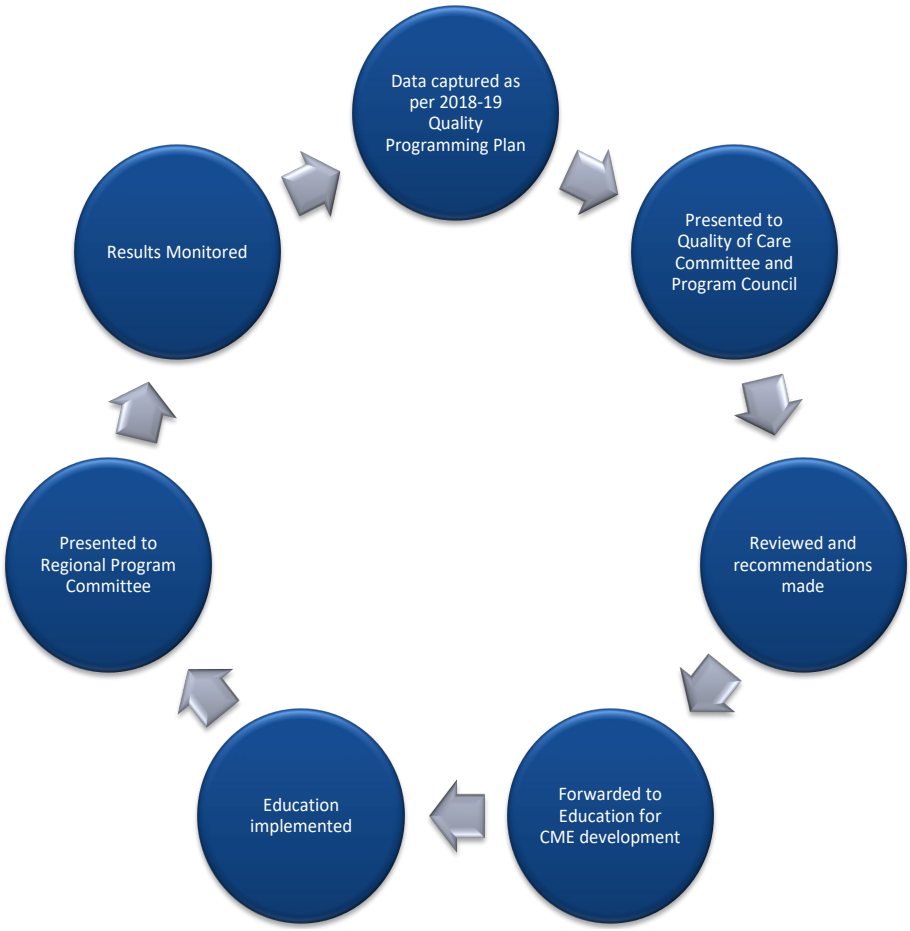
DATE	TOPIC/INSTRUCTOR	HOURS
April 18, 2019	ECG Part I/ Darlene Hutton	2
April 18, 2019	ECG Part II/ Darlene Hutton	2
June 12, 2019	Sim Days: Spinal Limb Trauma/Analgesia	4
September 6, 2019	Electrical Facial Injuries and Treatment/ Dr. Derek Garniss	4
October 2, 2019	12 Lead & Capnography: Beyond the Basics/ TIm Phelan	8
January 29, 2020	The Paramedic's Role in Research and Professional Development	2
February 20, 2020	Sim Days: Opiod & Airways	2-4

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.

In addition to those noted above, the following sessions were provided specifically for the paramedics.

DATE	TOPIC/INSTRUCTOR	HOURS
April- June 2019	Spring Paramedic Practice Rounds	4
July- September 2019	Summer CME Series with Dr. Jason Prpic (ACP only)	6
September- November 2019	Fall Paramedic Rounds	4

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.

22.2 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 all of their ACRs with a possible variance from the standard. Additionally, paramedics receive positive commentary via IQEMS.

23.2 Total number of commentary provided to all paramedics.

During the fiscal year 2019-20, HSN CPC made available approximately 1494 commentaries to paramedics via the Ambulance Call Evaluation process. The Program also distributed various correspondence including 9 memos/letters to paramedics via email and the HSN CPC website.

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

Paramedics will receive access to their commentary via IQEMS utilizing the credentials provided in their notification email, 100% of paramedics who completed a call with an identified potential variance received feedback.

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, for the Audit Activities Summary Report and for the 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 REPORT AUDIT Notification of any event or circumstance which appears as a variance from the standard.	Paramedics Service Providers	Upon review and closure	IQEMS
EVENT ANALYSIS Sharing of information and outcomes during and post analysis.	Service Providers MOH Field Office	Upon discovery and closure	Event Analysis Report
AUDIT ACTIVITIES REPORT Number of audits completed by Paramedics	Service Providers	Quarterly	IQEMS
AUDIT VARIANCE DETAIL AND SUMMARY REPORTS Breakdown of variance rates and outcomes by Service	Service Providers	Quarterly	IQEMS
PARAMEDIC SELF REPORTS This report identifies the number of self-reports submitted by Paramedics. The summary categorizes self-reports by Service	Service Providers	Quarterly	IQEMS
BLS OMISSIONS/COMMISSIONS BLS issues discovered during an ALS audit are reported to the Service Operator during the auditing process.	Service Providers	Upon discovery	IQEMS
PARAMEDIC SKILLS INVENTORY Number of calls where a particular ALS skill was used as part of the overall patient care plan	Service Providers	Bi-annual	iMedic
CLINICAL AUDIT REPORTS Measures of current practice against a defined (desired) standard with the intent to improve systems vs individual practice.	Service Providers	2-3 times per year	Clinical Audit Reports
AD HOC FINDINGS	Service Providers	HSN CPC Program Committee	Discussion Minutes
REGIONAL DATA ADVISORY COMMITTEE	Service Providers Hospital Representatives CACC Representatives	Quarterly	Discussion Minutes
ONLINE MEDICAL CONTROL INTERACTIONS REPORTS	Service Providers	Quarterly	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 and/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.

Refer to:

Appendix A: Performance Measurement Standard Reports
Appendix B: Event Analysis 2019-20
Appendix C: Quality Programming Overview 2019

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.

Utilization of IQEMS enables auditing of 100% of selected call types, exceeding the minimum requirements. In 2019-20, 33,521 calls were audited compared to 30,363 audited calls in 2018-19, and 25,978 audited calls in 2017-2018.

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

There were 33,521 ambulance call reports that were electronically audited. Of these audited calls, 9003 (27%) were identified as having a variance and required further action; and 24,518 (73%) 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

Newly certified Paramedics (defined as paramedics not having previous Base Hospital certification): The Performance Agreement states 80% of charts where a controlled act or advanced medical procedure must be audited however IQEMS allows for 100% of paramedic charts to be audited.

There were 70 new ACP and PCPs in 2019-2020.

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

Of the cancelled calls electronically sorted and audited in IQEMS, 1826 were manually reviewed by an auditor.

AUDIT TYPE	NO VARIANCE FOUND	OPERATIONAL ISSUE	NO FOLLOW UP REQUIRED	PARAMEDIC FEEDBACK RECEIVED/ REMEDIATED	TOPIC REVIEW AT RECENT/ UPCOMING CME	OTHER *	TOTAL AUDITS
Cancelled Calls	**50**	**51**	**1353**	**242**	**109**	**16**	**1826**

* Note: Other includes: Awaiting Feedback, Paramedic Acted Appropriately, Return to Practice, Self-Remediation, Stakeholder Review Requested, and Unresolved.

APPENDIX A: PERFORMANCE MEASUREMENT STANDARD REPORT

Performance Measurement Standard Reports
April 1, 2019 – March 31, 2020

Centre for Prehospital Care

Health Sciences North

Performance Measurement Standard Reports
April 1, 2019 – March 31, 2020

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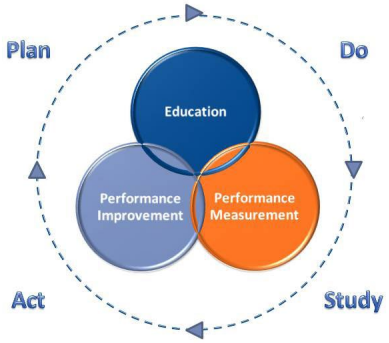


Performance Measurement Standard Reports
April 1, 2019 – March 31, 2020

SECTION 1

HSN CPC AUDIT ACTIVITIES REPORT

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

April 1, 2019 to March 31, 2020

CPC Audit Activities		Total #		# Medics with ALS Calls			
		Audits	Medics	< 10	≥ 10	1 - 9	0
	N =	33521	788	51	737	40	11
	% =			6%	94%	5%	1%
Audit Activities By Service		**Total #**			**# Medics with ALS Calls**		
		Audits	**Medics**	**< 10**	**≥ 10**	**1 - 9**	**0**
Algoma District Paramedic	N =	4259	73	8	65	7	1
Services (740)	% =	13%		11%	89%	10%	1%
Cochrane District Paramedic	N =	3740	94	1	93	1	0
Services (741)	% =	11%		1%	99%	1%	0%
Manitoulin-Sudbury DSB	N =	2584	132	7	125	5	2
Paramedic Services (752)	% =	8%		5%	95%	4%	2%
Nipissing Paramedic Services	N =	3734	92	6	86	6	0
(285/287/469)	% =	11%		7%	93%	7%	0%
Parry Sound District EMS	N =	2163	74	4	70	4	0
745	% =	6%		5%	95%	5%	0%
District of Sault Ste. Marie	N =	5640	68	4	64	1	3
Paramedic Service (751)	% =	17%		6%	94%	1%	4%
Greater Sudbury Paramedic	N =	9424	147	10	137	7	3
Service (747)	% =	28%		7%	93%	5%	2%
Timiskaming District EMS (750)	N =	1092	50	5	45	4	1
	% =	3%		10%	90%	8%	2%
Weeneebayko Area Health	N =	885	58	6	52	5	1
Authority Paramedic Service (263)	% =	3%		10%	90%	9%	2%

* Total Audits include total calls electronically sorted and audited

Performance Measurement Standard Reports: April 1, 2019 – March 31, 2020

SECTION 2

AUDIT VARIANCE SUMMARY

This section provides a summary of all the audit variances and the Base Hospital (BH) outcomes identified during the auditing process and includes a breakdown by service operator.

Audit Variance Summary Report

April 1, 2019 to March 31, 2020

		Total Audits *	Variances**					BH Outcomes***					
			Minor	Major	Critical	Other	Total	Open	No Follow-Up Required / No Variance Found	Paramedic Acted Appropriately	Paramedic Feedback Received/ Remediated	Paramedic Interviewed/ Remediated	Topic Review at Recent / Upcoming CME
Algoma District Paramedic Services (740)	N =	4259	193	436	33	374	1036	89	386	0	283	0	97
	% of Total Audits =	12.7%	4.5%	10.2%	0.8%	8.8%	24.3%	17.2%	37.7%	0.0%	27.0%	0.0%	63.0%
Cochrane District Paramedic Services (741)	N =	3740	91	167	36	145	439	22	118	3	149	0	0
	% of Total Audits =	11.2%	2.4%	4.5%	1.0%	3.9%	11.7%	4.3%	11.5%	0.0%	14.2%	0.0%	0.0%
Manitoulin-Sudbury DSB Paramedic Services (752)	N =	2584	59	117	41	96	313	57	56	0	82	0	4
	% of Total Audits =	7.7%	2.3%	4.5%	1.6%	3.7%	12.1%	11.0%	5.5%	0.0%	7.8%	0.0%	2.6%
Nipissing Paramedic Services (285/287/469)	N =	3734	78	95	34	132	339	16	100	0	110	0	3
	% of Total Audits =	11.1%	2.1%	2.5%	0.9%	3.5%	9.1%	3.1%	9.8%	0.0%	10.5%	0.0%	1.9%
Parry Sound District EMS (745)	N =	2163	45	57	11	73	186	11	7	0	53	0	4
	% of Total Audits =	6.5%	2.1%	2.6%	0.5%	3.4%	8.6%	2.1%	0.7%	0.0%	5.1%	0.0%	2.6%
District of SSM Paramedic Service (751)	N =	5640	76	138	40	130	384	63	91	0	105	0	46
	% of Total Audits =	16.8%	1.3%	2.4%	0.7%	2.3%	6.8%	12.2%	8.9%	0.0%	10.0%	0.0%	29.9%
Greater Sudbury Paramedic Service (747)	N =	9424	200	431	133	379	1143	248	222	0	162	0	0
	% of Total Audits =	28.1%	2.1%	4.6%	1.4%	4.0%	12.1%	48.0%	21.7%	0.0%	15.5%	0.0%	0.0%
Timiskaming District EMS (750)	N =	1092	28	74	15	44	161	6	29	0	63	0	0
	% of Total Audits =	3.3%	2.6%	6.8%	1.4%	4.0%	14.7%	1.2%	2.8%	0.0%	6.0%	0.0%	0.0%
WAHA Paramedic Service (263)	N =	885	25	49	11	19	104	5	15	0	41	0	0
	% of Total Audits =	2.6%	2.8%	5.5%	1.2%	2.1%	11.8%	1.0%	1.5%	0.0%	3.9%	0.0%	0.0%
Total	N =	**33521**	795	1564	354	1392	**4105**	517	1024	3	1048	0	154
	% of Total Audits =		2.4%	4.7%	1.1%	4.2%	12.2%	1.5%	3.1%	0.0%	3.1%	0.0%	0.5%

* Total Audits include total calls electronically sorted and audited

**Variances includes all identified variances for all calls manually reviewed by an auditor

*** Includes outcome for all calls manually reviewed by an auditor

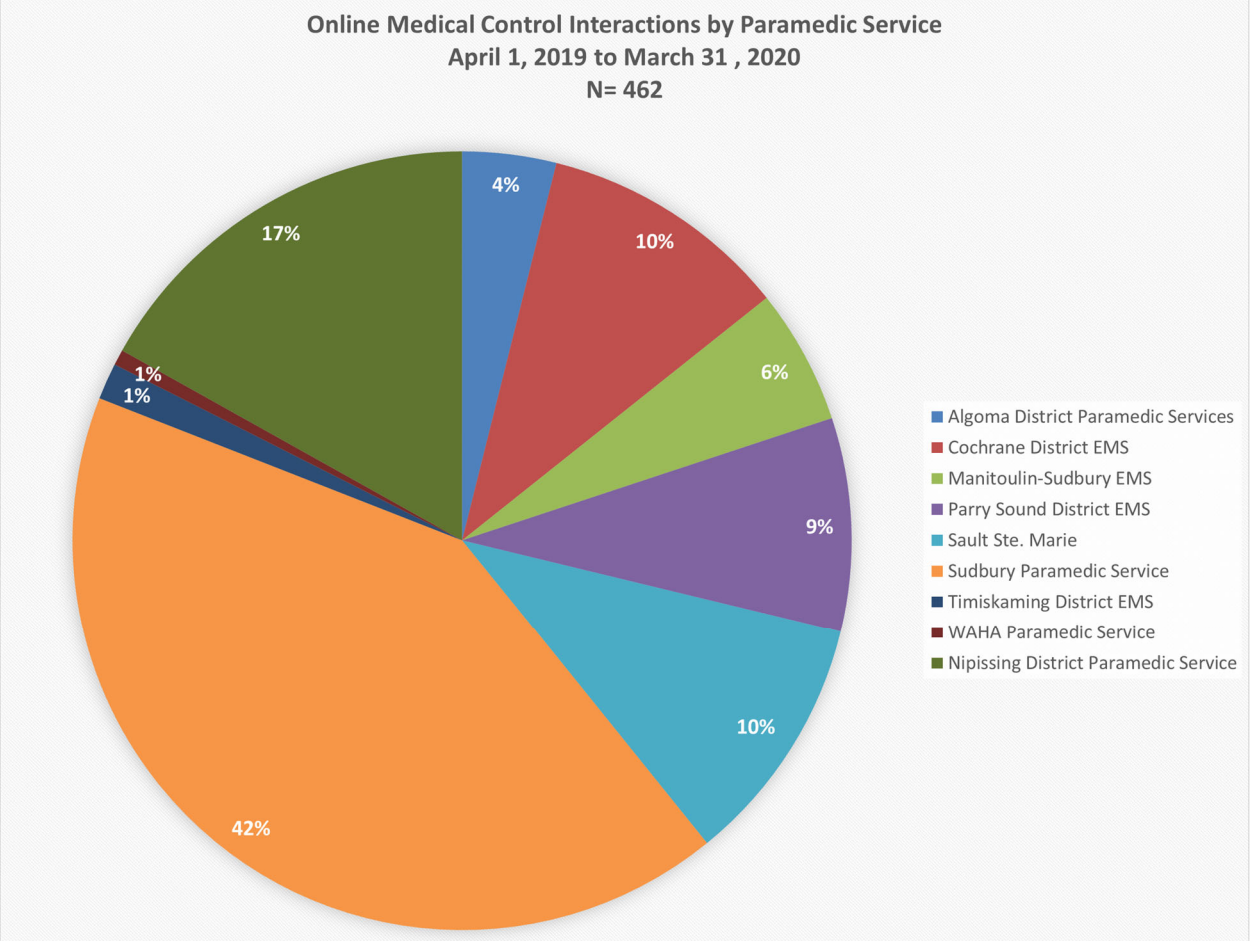
****Algoma District Paramedic Services include BLS audits

Performance Measurement Standard Reports: April 1, 2019 – March 31, 2020

SECTION 3

ONLINE MEDICAL CONTROL INTERACTION REPORTS

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



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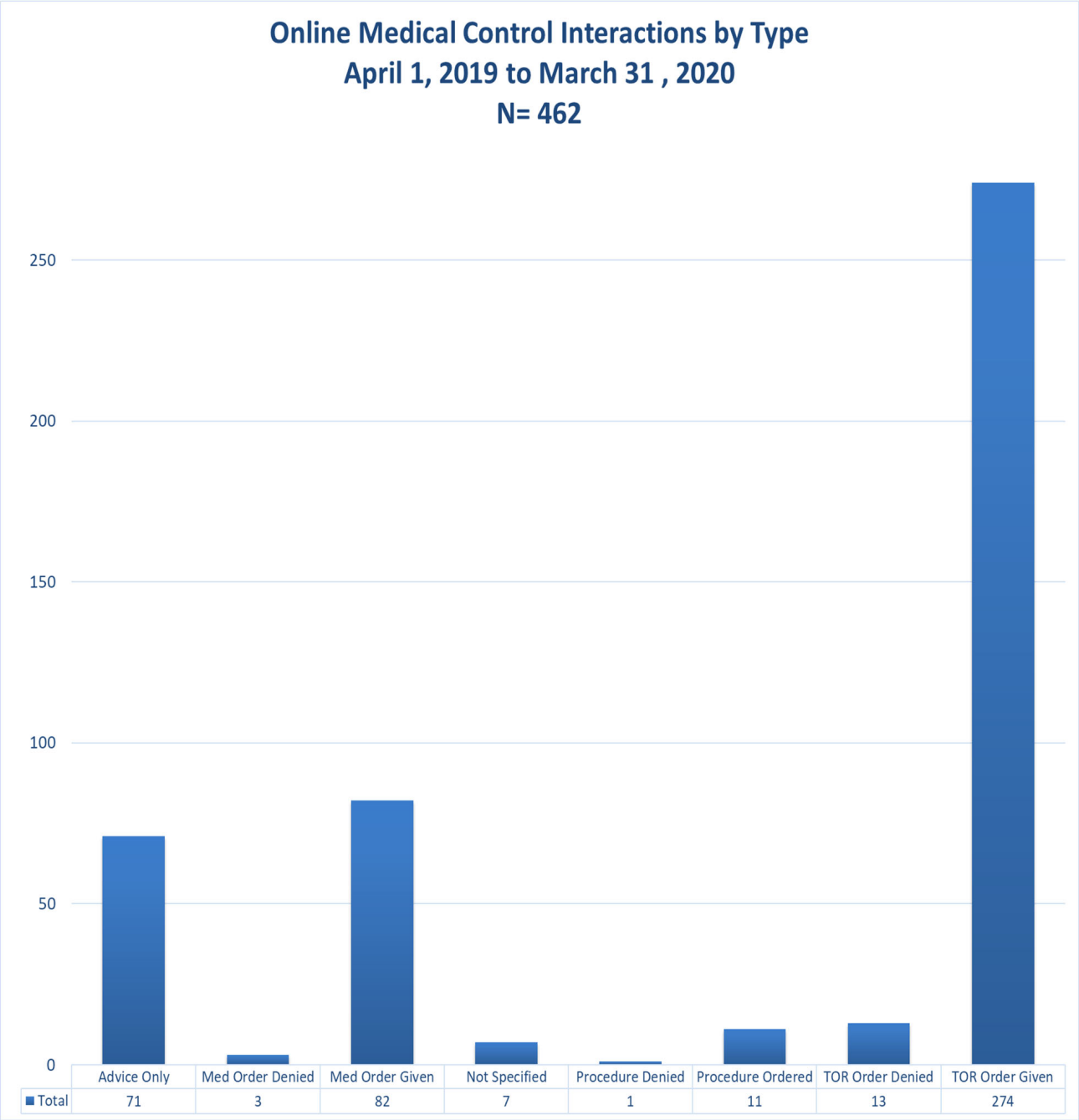


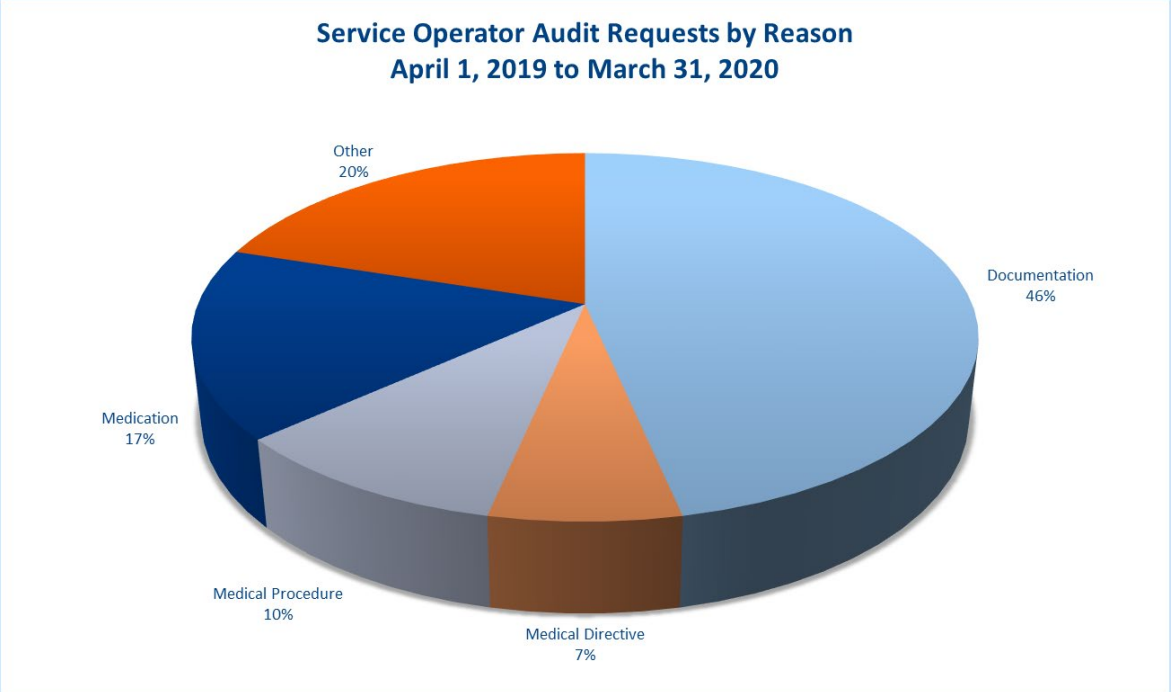
Performance Measurement Standard Reports
April 1, 2019 – March 31, 2020

SECTION 4

SERVICE OPERATOR RELATED AUDIT REPORTS

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

Service Operator Audit Requests by Service and Reason April 1, 2019 to March 31, 2020						
Service	**Documentation**	**Medical Directive**	**Medical Procedure**	**Medication**	**Other**	**Grand Total**
Algoma District Paramedic Services	1					1
Cochrane District EMS	1	4	3	3	2	13
Manitoulin Sudbury DSB					1	1
Sault Ste. Marie EMS	4	1		3	1	9
Sudbury Paramedic Service	18	14	9	2	17	60
Grand Total	**24**	**19**	**12**	**8**	**21**	**84**



Quarterly Service Operator Audit Requests	Total Requests
April 1, 2019 to June 30, 2019 (Q1)	15
July 1, 2019 to September 30, 2019 (Q2)	17
October 1, 2019 to December 31, 2019 (Q3)	22
January 1, 2020 to March 31, 2020 (Q4)	30
TOTAL	**84**

Performance Measurement Standard Reports
April 1, 2019 – March 31, 2020

SECTION 5

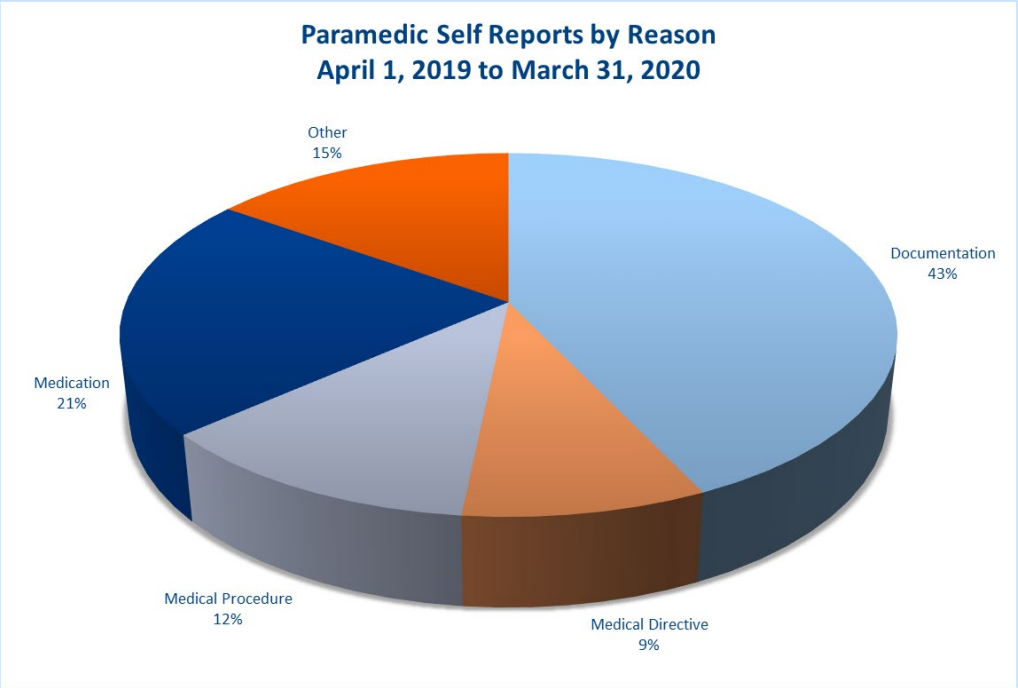
PARAMEDIC SELF-REPORTS

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.

This is recognized as a very important component of paramedic practice. Further expansion and development of this program continues as we strive to improve patient safety and outcomes.

Paramedic Self Reports by Service and Reason
April 1, 2019 to March 31, 2020

Service	Assessment (BLS)	Documentation	Medical Directive	Medical Procedure	Medication	Other	Refusal	Grand Total
Algoma District Paramedic Services	2	4	1	6	2	5		20
Cochrane District EMS		10	3	5	10	2		30
Manitoulin-Sudbury DSB		14	7	5	12	10		48
Nipissing Paramedic Service		16	5	5	6	5		37
Parry Sound District EMS		7		1	4	6		18
Sault Ste. Marie EMS		11	4	4	4	8		31
Timiskaming District EMS		1						
Sudbury Paramedic Service		33	10	17	12	24	1	97
WAHA Paramedic Service		5	3	3	11			22
Grand Total	**2**	**101**	**33**	**46**	**61**	**60**	**1**	304



Quarterly Paramedic Self-Reports	Total Self-Reports
April 1, 2019 to June 30, 2019 (Q1)	50
July 1, 2019 to September 30, 2019 (Q2)	61
October 1, 2019 to December 31, 2019 (Q3)	100
January 1, 2020 to March 31, 2020 (Q4)	93
TOTAL	**304**

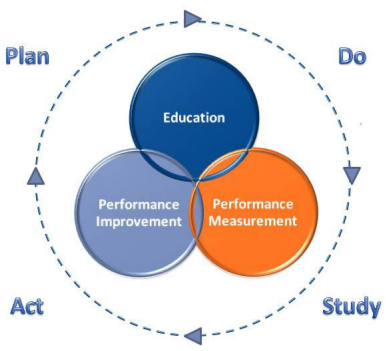
Performance Measurement Standard Reports
April 1, 2019 – March 31, 2020

SECTION 6

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.

Note: Subsequent to the transition to IQEMS, we are no longer able to provide the total number of BLS issues reported quarterly by service. This will be developed in a future phase of IQEMS.



APPENDIX B: EVENT ANALYSIS 2019-2020

Incident Analysis is a structured process for identifying what happened, how and why it happened, what can be done to reduce the risk of recurrence and make care safer, and whas was learned. (http://www.patientsafetyinstitute.ca). Ambulance Call Evaluations that require a more in-depth review are escalated to the Quality Improvement Lead for further analysis. **During the 2019-20 Fiscal Year, 54 Event Analysis were completed.**

Analgesia	**6**
Feedback Received/Remediated	2
Paramedic Telephone Review Completed/Remediated	1
Self Report/Remediated	1
Self Reported/Remediated	2
BLS	**1**
No further action required	1
Cancelled Call	**4**
Feedback Received/Remediated	1
Operational Issue	3
Cardiac Arrest	**30**
Equipment Issue Reviewed/Resolved	12
Feedback Received/Remediated	7
Manager Case Review Required	1
Paramedic Acted Appropriately	1
Paramedic Interview Completed/Remediation	1
Patch Issue Resolved	5
Remediation Plan Completed	2
Reviewed - No Action Required	1
Hypoglycemia	**1**
Paramedic Interview Completed/Remediated	1
Investigations	**1**
Stakeholder Review Requested/Completed	1
Ischemic Chest Pain	**1**
Remediation Plan Completed	1
Nausea & Vomiting	**2**
Feedback Received/Remediated	1
Remediation Plan Completed	1
Opioid Toxicity	**1**
Self Report/Remediated	1
Other	**2**
Administrative Deactivation	1
Operational Issue	1
SOB (Asthma, Croup & Needle Thoracostomy)	**2**
Paramedic Interview Completed/Remediated	1
Remediation Plan Completed	1
Symptomatic Bradycardia	**2**
Feedback Received/Remediated	1
Remediation Plan Completed	1
Tachydysrhythmia	**1**
Feedback Received/Remediated	1
Grand Total	**54**

APPENDIX C: QUALITY PROGRAMMING OVERVIEW 2019

QUALITY PROGRAMMING OVERVIEW 2019

Centre for Prehospital Care

Health Sciences North

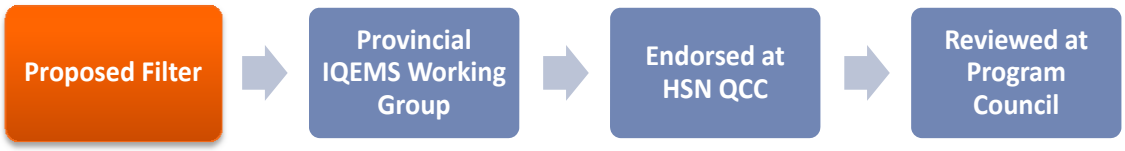
www.hsnsudbury.ca/portalen/basehospital

QUALITY PROGRAMMING OVERVIEW 2019

INTRODUCTION

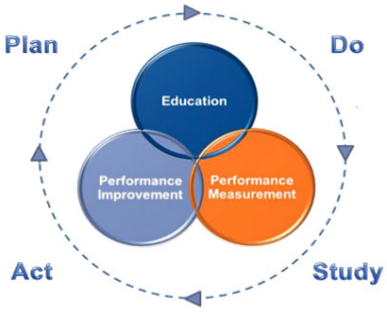
Quality is a multifaceted responsibility that requires the collective effort of varied focus areas. Within the Health Sciences North Centre for Prehospital Care (HSN CPC), this is attained through an integrated system of clinical measurements, quality improvement and continuing medical education within a broad based system of quality management and medical leadership. The need and importance of a wide overlap between these programs (Figure 1) is vital to ensure ongoing quality patient care as demonstrated in the Plan-Do-Study-Act cycle (Figure 2).

Performance Measurement is accomplished by utilizing the Integrated Quality Evaluation Management System (IQEMS). This clinical auditing system is fully web-based, and audits 100% of the data through the clinical filter identification system. Electronic Ambulance Call Reports (eACRs) received from the Service Operators are electronically sorted and filtered through computerized algorithms that are based on Medical Directives and/or Standards. The filters identified through the clinical filter identification system are developed and approved by the Provincial IQEMS Operational Working Group in consultation with Medical Directors then endorsed through HSN CPC Quality of Care Committee and reviewed at Program Council.



Continuous Quality Improvement (CQI) activities include continuously examining performance in the system to see where the personnel, system, and processes can continue to improve. Various databases currently exist which contain data relevant to CQI activities. These data systems are used to evaluate performance in the following ways:

- Prospectively identify areas of potential improvement
- Answer questions about patient related items within the EMS System
- Monitor changes once improvement plans are implemented
- Provide accurate information enabling data driven decisions
- Support research that will improve the system and potentially broaden EMS knowledge



QUALITY PROGRAMMING OVERVIEW 2019

Since transitioning to the Intelligent Quality Evaluation and Management Suite (IQEMS) in 2017, the following sections have been updated based on the new chart audit processes and reporting functionalities.

A. PERFORMANCE MEASUREMENT

CLINICAL AUDIT SYSTEM

The Clinical Audit process ensures:

1. Paramedics have 100% of their charts audited where a controlled act or advanced medical procedure was performed.
2. Newly certified Paramedics (defined as paramedics not having previous Base Hospital certification): The performance agreements states 80% of charts where a controlled act or advanced medical procedure must be audited however IQEMS allows for 100% of paramedic charts to be audited.
3. All cancelled calls that fail an IQEMS filter, where paramedics made patient contact, with or without controlled acts performed, are audited.

STANDARD REPORTS

Reports are generated to ensure compliance with the Performance Agreement and the ALS/BLS Patient Care Standards. These reports are shared with the Service Operators and the Ministry of Health and Long-Term Care (MOHLTC) as outlined below. Following receipt, the Service Operators are invited to discuss any findings within the reports.

A. MONTHLY REPORTS

Audit Variance Detail Report

This report is a summary of the audits where a variance was identified. It is grouped by variance type and variance description by service. Drafts of the newly developed report are presented for input and finalization to allow for implementation retroactively to January 2019.

B. QUARTERLY REPORTS

HSN CPC Audit Activities Report

The report is an individualized overview of ALS calls that were filtered through the IQEMS computerized algorithm. It is summarized by Paramedic and includes the number of ALS calls, audits and variances.

Audit Variance Summary

This report provides a breakdown of variance rates and outcomes by Service Operator.

QUALITY PROGRAMMING OVERVIEW 2019

Online Medical Control Interactions

This report is a summary of the interactions between the Paramedic and Base Hospital Physician. It is categorized by Service Operator, reason for patch and identified variances.

Online Medical Control - Patch Failures

These reports will be available in a future phase of IQEMS.

Service Operator Driven Audit Reports

This report identifies the number of audits requested by a Service Operator. A draft process is presented for input and potential implementation effective April 1, 2019.

Paramedic Self Reports

This report identifies the number of self-reports submitted by Paramedics. The summary categorizes self-reports by Service.

BLS Issues Reported to Service Operators

BLS issues discovered during an ALS audit are reported to the Service Operator during the auditing process. **Subsequent to the transition to IQEMS, we are no longer able to provide the total number of BLS issues reported quarterly by service. This is currently being working on by the IQEMS Operational Working Group.

C. BIANNUAL REPORTS

Paramedic Skills Inventory

This report is the total number of calls (by call #) where a particular ALS skill was used as part of the overall patient care plan. 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. For further clarity, the counts are based on the total number of ALS skills performed 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.

Reports are distributed as follows unless otherwise noted in this document

REPORTING PERIOD	DISTRIBUTION TIMELINE
*Delays in reporting timelines may occur during development of reporting capabilities within IQEMS. Service Operators are encouraged to request specific items of need when delays have occurred	
Service Operator	
Monthly Reports	2 weeks following reporting period
Quarterly Reports	6 weeks following reporting period
Biannual	6 weeks following reporting period
MoHLTC	
April 1 – March 31	Annually by June 30

QUALITY PROGRAMMING OVERVIEW 2019

CLINICAL PERFORMANCE MEASURES

Clinical Performance Measures are defined measurements that are part of a process. They are evidence-based measures that optimally guide the improvement of the quality of patient care and practice. These indicators are evaluated on a regular basis by running standardized data queries and subsequently reviewing outlier data to provide accurate treatment rates for specific clinically relevant indicators. These indicators are reviewed and endorsed by the Quality of Care Committee. Current indicators include:

- Rate of ASA administration in patients who present with ischemic chest
- Rate of Glucagon/Dextrose administration in patients who present in hypoglycemia
- Rate of epinephrine/Benadryl administration in patients who present in Anaphylaxis
- ECG Acquisition (>10 minutes) for patients receiving PCI. This is a northeast LHIN metric (CorHealth).

REPORTING PERIOD	DISTRIBUTION TIMELINE
Service Operator*	
April 1- March 31	2 weeks following reporting by CorHealth
MoHLTC	
April 1 – March 31	Annually by June 30

* Service operators receive service specific reports that compare rates to that of the region. Regional reports are presented at Program Committee following distribution of the annual, service specific report.

QUALITY PROGRAMMING OVERVIEW 2019

B. CONTINOUS QUALITY IMPROVEMENT

QUALITY IMPROVEMENT ACTIVITIES

Continuous Quality Improvement (CQI) provides a method for understanding the system processes and allows for their revision using data obtained from those same processes. HSN CPC uses a number of approaches and models of problem solving and analysis to ensure and demonstrate the required standards are being met through valid measurement tools.

1. Clinical Audit Reports

A clinical audit is a cyclical process where an element of clinical practice is measured against a standard. The results are then analysed and an improvement plan is implemented. Once implemented, the clinical practice is measured again to identify improvements, if any.

The Quality of Care Committee will lead the planning of the audit and determine the population as it directly relates to existing protocols (i.e. chest pain, stroke, multi-system trauma, etc) and/or Standards. A random statistical sample will be calculated and reviewed. The cases will be compared to the associated treatment protocol algorithm and scored based on documentation and adherence to protocols. Based on the findings, improvement opportunities will be developed, disseminated and monitored.

FREQUENCY	
Service Operators	
3 reports per year	3 times annually
MOHLTC	
April 1 – March 31	June 30

QUALITY PROGRAMMING OVERVIEW 2019

2. Focused Reports

Focused reports are ad hoc reports responsive to needs as they arise. Content may be driven from the HSN CPC Quality of Care Committee, HSN CPC Program Committee, HSN CPC Program Council, or Ontario Base Hospital Data Quality Committee. Examples include repetitive errors reported by performance measurements, implementation of a new or changed directive, request for data from the MoH, etc.

The process to request a Research / Quality Project is identified in Appendix A.

REPORTING PERIOD	DISTRIBUTION DATE
Service Operator	
April 1- March 31	As required
MOHLTC	
April 1 – March 31	June 30

3. Event Analysis

Analysing incidents, through an established framework, can serve as a catalyst for enhancing the safety and quality of patient care.

Recommendations and corrective actions will be formalised and have an evaluation plan to determine if the recommendations are implemented and what impact they had on the system.

REPORTING	DISTRIBUTION DATE
Service Operator / MOH	
Preliminary Findings	14 days post event analysis
Final Report	30 days post event analysis
Annual Synopsis (April 1 – March 31)	June 30