



TRAUMA. STOPS. HERE.

WELCOME TO
EHS NOVA SCOTIA
TRAUMA PROGRAM



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Linda Warden, CAP-OM
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THE NOVA SCOTIA TRAUMA PROGRAM

MANAGER'S MESSAGE



SUSAN HARNISH, BCom

Welcome to the new Nova Scotia Trauma Program (NSTP) Annual Report! This is the twelfth year for the NSTP Annual Report; however, this year we have changed the format and are excited to share this new report with you. The Annual Report includes highlights of our accomplishments, interesting data from the NSTP Registry, updates on trauma education opportunities, information on NSTP research projects, as well as future plans.

The data provided in this report have been made available to the NSTP through the participation and cooperation of Nova Scotia's District and Tertiary Trauma Centres, the Nova Scotia Medical Examiner Service, Department of Health and Wellness' Business Intelligence and Analytics, and Emergency Health Services sections, as well as those individuals who assist in data collection at regional trauma centres. We thank them for their continued participation and assistance. As well, we would like to thank all those individuals who work each day to care for the province's trauma patients and who are key in the initial collection of data in patient care records.

The final result of this report is a product of the hard work of many individuals; however, deserving of special mention are the Nova Scotia Trauma Program staff: Beth Sealy, Trauma Registry Coordinator; Kathy Hartlen, Education Coordinator; Virginia Manuel, Informatics Paramedic; Darlene Cathcart, Informatics Nurse; Mete Erdogan, Research Associate; and Linda Warden, Administrative Assistant.

While much work still needs to be done as we strive to improve trauma care and injury prevention in the framework of a provincial trauma system, it is important to pause to reflect on the valuable work and accomplishments achieved to date. We hope you find the NSTP Annual Report both interesting and insightful.

A handwritten signature in blue ink, appearing to read 'S. Harnish'.

On April 1, 2015, the Health Authorities in Nova Scotia were amalgamated into one to become the Nova Scotia Health Authority (NSHA). Some of the content in this report refers to the Central Zone of the NSHA, which was previously known as the Capital District Health Authority (CDHA).

PROVINCIAL TRAUMA

MEDICAL DIRECTOR'S MESSAGE



ROBERT GREEN, BSc, MD, DABEM, FRCPC, FRCP (Edin)

Trauma continues to be a major health issue for Nova Scotians. It is estimated that trauma is the number one cause of mortality for patients less than 44 years of age, and accounts for over 30% of all life years lost, well above both cardiac disease and cancer. Unfortunately we have seen an escalation in traumatic injury in our province, with a 16% increase in overall traumatic injuries over the last 10 years. Concerning is the dramatic rise in major trauma, up over 30% during this period.

At the Nova Scotia Trauma Program, we strive to provide timely and expert care to all Nova Scotians. However, as we outline in our annual report, outcomes substantially vary when the geographic location of injury is considered. There is work required to ensure that survival from traumatic injury is improved whether injury occurs in a rural community or within urban centers. In Nova Scotia, the cause of trauma varies depending on age. Although motor vehicle crashes are the most common cause of major trauma in the younger patient population, falls account for the vast majority of major trauma in our elderly population. And, perhaps not surprising, we note that alcohol continues to be a major factor in our trauma population in Nova Scotia.

Despite these issues, the Nova Scotia Trauma Program is pleased with our recent achievements. We have partnered with our colleagues in New Brunswick and Prince Edward Island to form the Maritime Trauma Collaborative. This collaborative brings key leadership people together to improve the management of

trauma on a Maritime perspective. We have also co-hosted the Maritime Trauma and Emergency Medicine Conference in Moncton, New Brunswick in 2014 which attracted international speakers and participants from throughout Nova Scotia and other Maritime provinces. The Nova Scotia Trauma Program also has amplified our educational initiatives and we are proud of our ability to provide up to date trauma education for clinicians in Nova Scotia.

Despite these successes, we are working towards an improved trauma system in Nova Scotia. Our overall objective is to improve patient outcomes and by working towards a provincial trauma system accreditation, we will achieve this. In addition, we are engaged with leadership within the NSHA, Central Zone to develop a dedicated inpatient trauma unit to complement our excellent trauma referral system.

These are exciting times indeed. Only by working together can we reach our goal of minimizing traumatic injuries.

A stylized, handwritten signature in black ink, consisting of a large, looped 'S' followed by several horizontal strokes.

NSHA,
CENTRAL
ZONE
TRAUMA
MEDICAL
DIRECTOR'S
MESSAGE



SAM MINOR, MD, FRCSC, FACS

The QEII Trauma Program is responsible for the initial resuscitation, evaluation and triage of trauma patients arriving at the Halifax Infirmary Hospital. As the only level one trauma center in Nova Scotia, we coordinate closely with the Provincial Program and provide a leadership role in trauma education. Our multidisciplinary Trauma Team consists of nurses, residents and physicians from general surgery, emergency medicine, orthopedic surgery, anesthesia, neurosurgery, plastic surgery and diagnostic imaging. Our goal is to provide the highest quality of care to the traumatized patients of Atlantic Canada.

This year our major goal has been to boost our educational program through endeavors such as the multidisciplinary trauma skills lab and Trauma Olympics simulation competition. We have plans to incorporate resident Trauma Team Leader (rTTL) evaluations into individual program In-Training Evaluation Reports (ITERs) and provide simulation opportunities for Trauma Team Leader staff physicians. We are in the process of developing tools to measure the performance of our Trauma Team through initiatives such as in situ simulation. Our Trauma Team forms have been streamlined to reduce redundancy, improve compliance and accuracy.

We have also made strides this year towards the development of an inpatient trauma service that will provide a continuum of care from the trauma bay to the ward. A consolidated inpatient service will allow for the specialization of multidisciplinary services, improve communication between consulting services and improve compliance with quality initiatives such as the tertiary survey.

With so many new initiatives and an influx of enthusiasm from our members, it is an exciting time to be part of the QEII Trauma Program!

A handwritten signature in black ink, appearing to read "Sam Minor".

IWK
TRAUMA
CARE
MEDICAL
DIRECTOR'S
MESSAGE



NATALIE YANCHER, MD, MSc, FRCSC

Nothing devastates a family and a community more than a senseless “accident” resulting in a disabling or fatal injury to a child. On an economic level, the cost is enormous; on a personal level, the cost is immeasurable. Despite this, trauma remains the single, most preventable disease of children and youth in our society.

Without good knowledge of what aspects of this disease to treat – its epidemiology, risk factors, natural histories and outcomes – we cannot apply true evidence-based prevention and treatment strategies to it in order to advocate for appropriate public policy to address preventable injuries, identify areas of high priority in order to target resources in as cost-effective a manner as possible, or celebrate our successes in injury prevention when rates are seen to decrease. This report, as a population-based picture of major injuries to Nova Scotians, provides the much-needed information required to achieve many of these goals.

Injury surveillance, such as the data captured in the Nova Scotia Trauma Registry, continues to be a priority in order to evaluate the efficacy of injury prevention and treatment efforts and further reduce the burden of injury amongst all Nova Scotians. Serious cases, most of which are hospitalized, are captured in the NSTR; however, many cases that do not require hospitalization but still utilize resources represent an even broader cost to our health care system and social productivity, and have yet to be captured with the appropriate data. We should strive to improve our surveillance strategies to capture this unknown but large burden on our province.

As Medical Director of IWK Trauma Care, I would like to thank the Nova Scotia Trauma Program staff for their hard work on this document and on the continuing growth of the Nova Scotia Trauma Registry. The dedication to this initiative will continue to be essential in enhancing the health and well-being of our Nova Scotia youth.

A handwritten signature in black ink, appearing to read "Natalie Yancher".

MISSION

The Nova Scotia Trauma Program facilitates the provision of optimal trauma care through leadership in patient care, education, research, injury prevention and the continuous development and improvement of our trauma system.

HISTORY OF THE NSTP

In 1997, a Provincial Trauma Program Development Team was established by Emergency Health Services (EHS), a division of the Department of Health, to provide expert advice for the establishment of a Provincial Trauma Program. This group, comprising trauma stakeholders (consumers, care providers, and administrators), identified a number of key strategies and areas of focus for trauma program development. Based on these recommendations, EHS launched the Nova Scotia Trauma Program in 1997. The Trauma Program is located within the NSHA, Central Zone under the strategic direction of the Department of Health and Wellness, Emergency Health Services.

HIGHLIGHTS AND ACCOMPLISHMENTS

Rural Trauma Team Development Course (RTTDC)

The Rural Trauma Team Development Course provides the needed link for team building and improvements in Trauma Team care. The design of this inter-professional course allows members to examine the strengths and weaknesses at their facility while providing feedback for system improvements to the Provincial Trauma Program. To improve on these linkages, recent collaboration with EHS LifeFlight has provided access to higher fidelity simulation resources and facilitation by the Trauma Team Leaders and LifeFlight transport teams.

Maritime Trauma & Emergency Medicine Conference 2014

The Maritime Trauma and Emergency Medicine Conference is a joint effort between New Brunswick and Nova Scotia. The 2014 conference was a huge success with over 200 participants. The conference offered simulation sessions as well as presentations with speakers from as far away as the USA and the United Kingdom.

Maritime Trauma Collaborative

The Maritime Trauma Collaborative is a newly formed committee with a mandate to optimize trauma services and outcomes through collaboration in areas of mutual interest among the provinces of Prince Edward Island, New Brunswick and Nova Scotia. The Collaborative is a wonderful opportunity to learn from and improve upon trauma systems in the Maritime provinces.

Trauma Olympics

Education continues to be a priority, and the NSTP holds bimonthly multidisciplinary trauma rounds at the QEII Health Sciences Centre. In November 2014, a simulation Olympics was held where resident teams performed a resuscitation in front of a live audience. In addition, judges provided real-time feedback and determined the winning team. The event was a resounding success, with the Team Orthopedics deemed the top performer. We expect that this will be an annual event, as other specialties are eager to dethrone the champion.





NSTP Office

The NSTP office has had a facelift! The previous space has been transformed into an open concept design with streamlined furniture and a clean, colorful new flooring. Equipment and technology have been added to enable presentation functionality and on-line conferencing capability.

In addition to the renovations, we have created a dynamic trauma mural on the wall outside the trauma office. The trauma wall provides an opportunity to share what the Trauma Program is all about, educational opportunities that are available, research projects in the works, as well as a landmark to let people know where some of the great work of the Trauma Program is being done! If you find yourself on the first floor of the Centennial Building, VG Site, QEII Health Sciences Centre, drop in and say hello!

Social Network

In 2014, the NSTP increased its online presence through various social networking websites. New research publications are uploaded and shared through ResearchGate, while information regarding all aspects of the NSTP and related news is communicated via Twitter with separate accounts for the Medical Director (@TraumaNSMedical), educational activities (@EducateTNS) and trauma research (@ResearchTNS). These networks are continually growing and have greatly improved the ability of the NSTP to connect with colleagues in various fields and the public at large. The Nova Scotia Trauma Program can also be found on Facebook.

New Technology for Education

Online webinars have provided easier, timely access to clinical trauma education. The topics can be viewed real time with interactivity from any internet-based device, or recordings can be viewed at a later date. Rounds are now also presented as webinars, making it possible for provincial and tertiary trauma care providers to collaborate on a regular basis. Both Rounds and webinars are now approved through the Continuing Medical Education (CME) office at Dalhousie University. Our audience participation for these events just keeps growing!

Nova Scotia Health Authority (NSHA), Central Zone Trauma Medical Director

This year, the NSTP and NSHA, Central Zone hired a Trauma Medical Director, Dr. Samuel Minor. Dr. Minor graduated from University of Toronto's medical school in 2000. At Queen's University, he completed a residency in general surgery and fellowship training in critical care medicine. He has been at the QEII Health Sciences Centre since 2006, where he is cross appointed to the Departments of Surgery and Critical Care Medicine. He is an Associate Professor at Dalhousie University and has been a Trauma Team Leader since 2006. Dr. Minor works together with Dr. Robert Green, Provincial Trauma Medical Director, to provide leadership in the planning, delivery and evaluation of high quality trauma services across the NSHA, Central Zone. Included in Dr. Minor's responsibilities is to help facilitate the creation of an inpatient trauma unit at the QEII Health Sciences Centre.

Resident Trauma Team Leaders (rTTL)

Training the next generation of experts in trauma resuscitation is important, and this year we have introduced a formal "resident Trauma Team Leader" role for all Trauma Team activations at the QEII. The rTTL works side by side with the Trauma Team Leader on all aspects of trauma care. At this time, residents from general surgery and emergency medicine share this responsibility.

Full-time Research Associate

Research is a crucial part of patient care, specifically trauma care. Patient care can only improve with research guiding best practices, and the NSTP strives to become a national leader in trauma-related research. We are fortunate to have received generous support from Dr. Tom Marrie, Dean of Dalhousie Medical School, to help support research. We are very pleased that Dr. Mete Erdogan has joined our team as a full-time Research Associate for the NSTP.

NSTP Provincial Medical Director Receives Recognition

Dr. Robert Green was granted a Fellowship by the Royal College of Physicians of Edinburgh at a ceremony held in Scotland in June 2014. This internationally recognized award for career achievement confers peer recognition of training and clinical standing. Congratulations, Dr. Green!

HIGHLIGHTS & ACCOMPLISHMENTS (CONT'D)

Research

Published manuscripts:

- A case of commotion cordis treated with therapeutic hypothermia (Journal of Emergency Medicine)
- The use of etomidate as an induction agent in trauma patients (Canadian Journal of Anesthesia)
- Legal consequences for alcohol-impaired drivers injured in motor vehicle collisions: a systematic review (Accident Analysis & Prevention)

Manuscripts accepted for publication:

- Impact of the age of stored blood on trauma patient mortality: a systematic review (Canadian Journal of Surgery)
- A retrospective evaluation of pediatric major trauma related to sport and recreational activities in Nova Scotia (Canadian Journal of Emergency Medicine)

Manuscripts currently under review:

- Adverse events and outcomes of procedural sedation and analgesia in major trauma patients (Journal of Emergencies, Trauma, and Shock)

Manuscripts in preparation for submission:

- A characterization of major adult sport-related trauma in Nova Scotia, 2000-2013
- Use of intraosseous devices in trauma: a survey of trauma practitioners in Canada, Australia, and New Zealand

Trauma research studies in progress or upcoming:

- An investigation of the health and economic outcomes of alcohol-related traumatic brain injury in Nova Scotia
- Transfusion strategies in traumatic brain injury
- Hemodynamic consequences of etomidate use in trauma patients
- Major trauma recidivism: study and systematic review
- Factors associated with poor trauma outcomes in Nova Scotia
- Using computer tomography perfusion for prognostication in traumatic brain injury

Conferences:

NSTP members attended and presented trauma research at numerous local and national conferences, including:

- Maritime Trauma and Emergency Medicine Conference (April 3-5, 2014, Moncton NB)
- Trauma Association of Canada Annual Conference (April 10-11, 2014, Montreal QC)
- Emergency Medicine Research Day (May 14, 2014, Halifax NS)
- Canadian Association of Emergency Physicians Annual Conference (May 31-June 4, 2014, Ottawa ON)
- Emergency Medical Services Research Day (October 21, 2014, Halifax NS)





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THE TRAUMA REGISTRY DATA
HAVE BEEN UTILIZED FOR AWARD
WINNING RESEARCH, PUBLICATIONS,
PRESENTATIONS AT NATIONAL AND
INTERNATIONAL CONFERENCES,
PUBLIC POLICY ADVOCACY,
PROGRAM PERFORMANCE
INDICATORS AND EVALUATION.

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TRAUMA REGISTRY

The Nova Scotia Trauma Registry (NSTR) is an invaluable resource enabling the Nova Scotia Trauma Program and others to conduct quality assurance, engage in injury surveillance, perform research and develop injury prevention and control strategies. In addition, trauma registries allow administrators and clinicians alike to engage in evidence-based decision making, policy development and program planning.

Our database is the only population-based trauma registry in Canada, capturing data on major traumas from hospitals across the entire province. The information is collected from the QEII Health Sciences Centre, the IWK Health Centre, the eight district hospitals and the Nova Scotia Medical Examiner Service. The registry has been province-wide since April 2000 and now houses over 12,000 records of the most severely injured patients, with the capacity to collect over 2200 data elements per record. The NSTP received over 30 requests for information from the NSTR in 2014.

In 2014, it became necessary for the NSTP to re-examine the process for requesting and obtaining data from the NSTR in order to comply with the recently enacted provincial Personal Health Information Act (PHIA) legislation. We have been working together with our colleagues at the NS Department of Health and Wellness to restructure the NSTR data request process.

The trauma registry data have been utilized for award winning research, publications, presentations at national and international conferences, public policy advocacy, program performance indicators and evaluation. Master and PhD candidates have also used the data in their thesis projects.

Information can be made available to clinicians, researchers, and to injury prevention organizations and programs by completing a data request form and complying with the associated privacy and release of information policies. NSTR information request forms may be obtained by contacting us via email: nstrauma@nshealth.ca



THIS DATABASE IS THE ONLY
POPULATION-BASED TRAUMA
REGISTRY IN CANADA,
CAPTURING DATA ON MAJOR
TRAUMAS FROM HOSPITALS
ACROSS THE ENTIRE PROVINCE.



Beth Sealy, BA, CHIM
*Coordinator,
NS Trauma Registry*

Virginia Manuel,
*CHIM, ICP
Informatics
Paramedic*



Darlene Cathcart, RN
*Informatics
Nurse*

Kathy Hartlen, RN
*Education
Coordinator*



DATA COLLECTION SITES

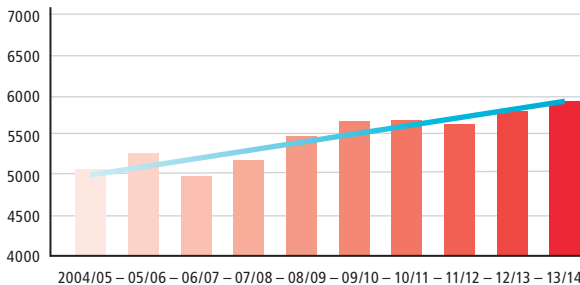
- A. Yarmouth Regional Hospital
- B. South Shore Regional Hospital
- C. Valley Regional Hospital
- D. Cumberland Regional Health Care Centre
- E. QEII Health Sciences Centre
- F. NS Medical Examiner Service
- G. IWK Health Centre
- H. Colchester East Hants Health Centre
- I. Aberdeen Hospital
- J. St. Martha's Regional Hospital
- K. Cape Breton Health Care Complex



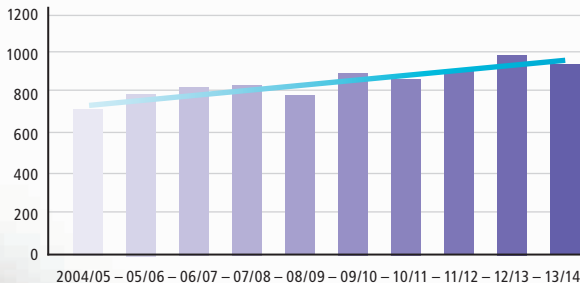
INCREASING BURDEN OF INJURY

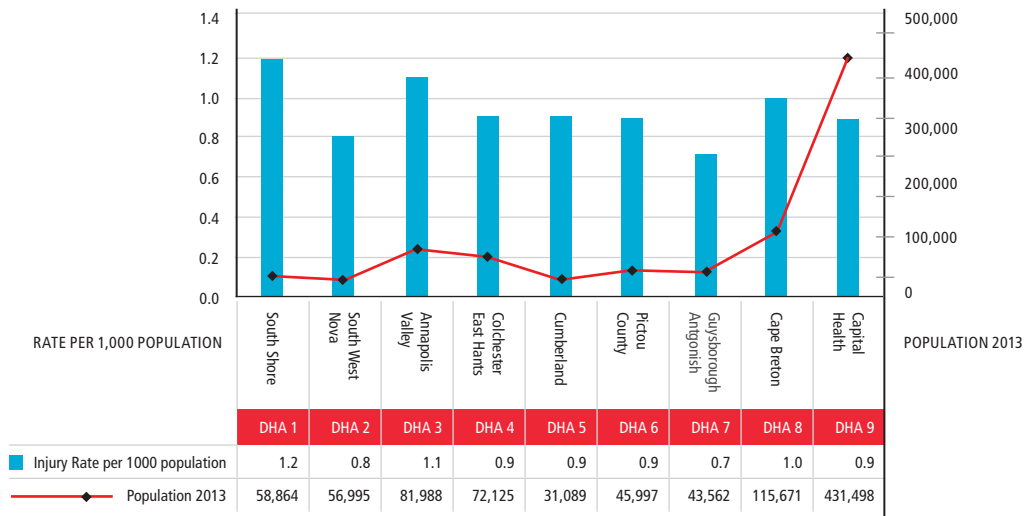
The volume of patients being admitted to hospitals for any injury in Nova Scotia has increased by 16% over the past 10 years, with major trauma increasing 30% over the past 10 years.

All Patients Admitted to Hospital for Any Injury



Major Trauma Cases Only



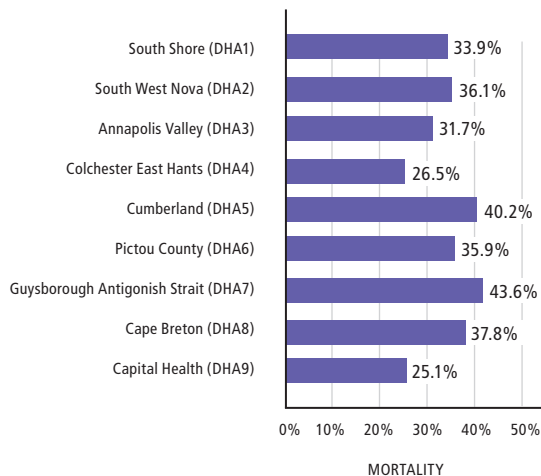


Injury Rates per District Health Authority of Patient Residence 2013/14

The overall major traumatic injury rate in Nova Scotia is 1.0 per 1,000 population.

30% of Nova Scotia residents who experience major trauma do not survive.

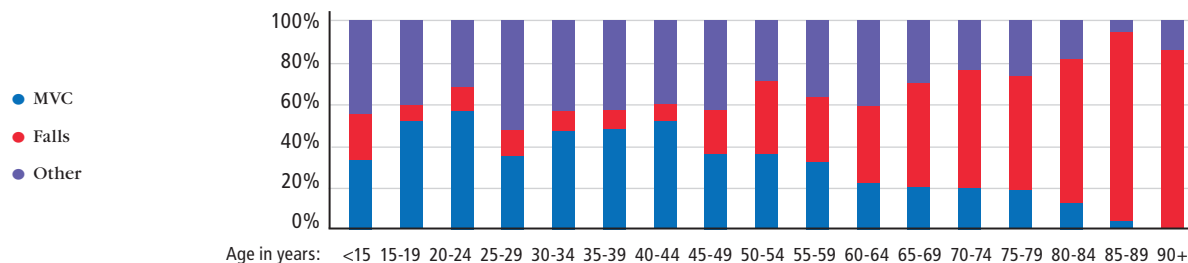
Percentage of Major Trauma Deaths by District Health Authority: 5 Years (2009/10 – 2013/14)



(MAJOR TRAUMA) OUTCOMES SUBSTANTIALLY VARY WHEN THE GEOGRAPHIC LOCATION OF INJURY IS CONSIDERED.

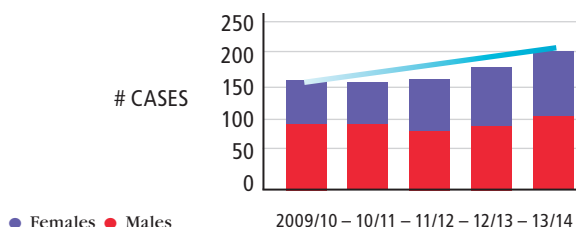
Major Trauma in Nova Scotia: Most Common Mechanism of Injury by Age Group (2013/14)

Motor vehicle crashes are most common in the younger age groups, while falls are most prominent in seniors.



Falls in Seniors (Age 65+ years)

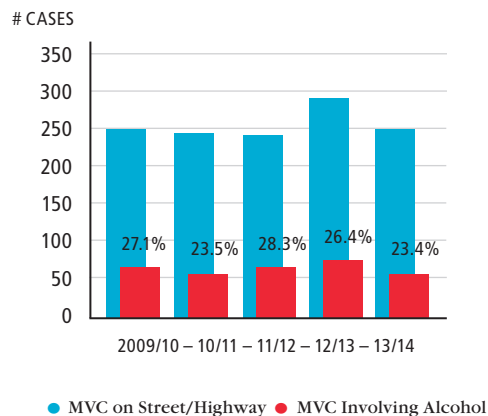
Major trauma resulting from falls in the senior population continue to increase.



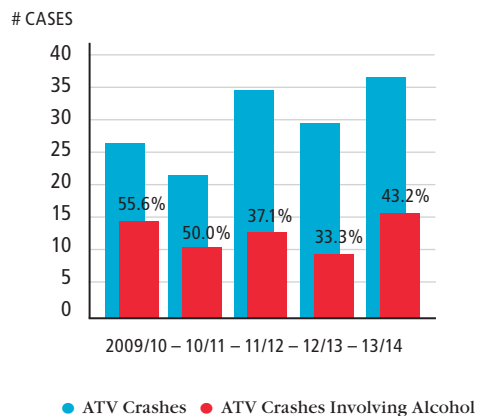
Motor Vehicle Crashes

Alcohol is involved in approximately 25% of motor vehicle crashes resulting in major trauma. Alcohol is involved in over 40% of ATV crashes.

Motor Vehicle Crashes Involving Alcohol

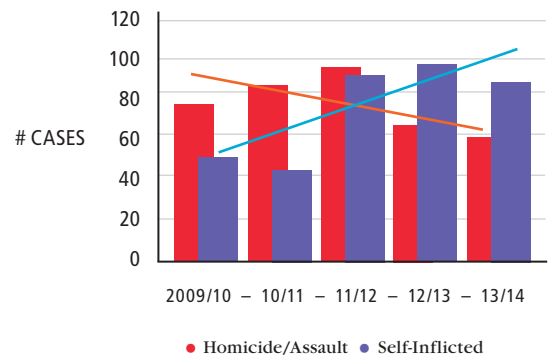


ATV Crashes Involving Alcohol



Homicide & Assault and Self-Inflicted Injury

Over the past five years, major trauma due to homicide & assault has decreased, yet self-inflicted injury has increased.



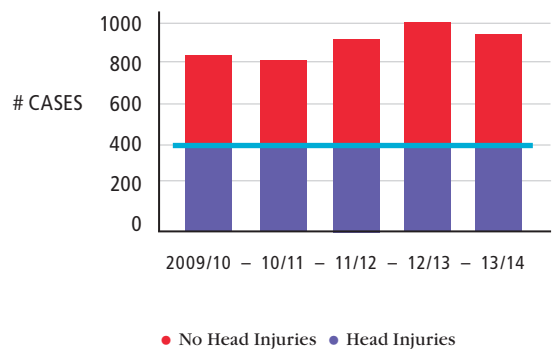
Pedestrian Injury by Age Group 2013-14

The majority of patients seriously injured as pedestrians are under the age of 35 years old.



Major Trauma – Head Injuries*

Over 40% of all patients with major trauma have a serious head injury, which has not decreased over the last five years.



* Head Injury (AIS'90 >=3)

EDUCATION

The Nova Scotia Trauma Program plays a key role in delivering learning opportunities to health care providers across the province. Educational activities have been designed to increase trauma knowledge and skills for inter-professional groups that include physicians, nurses, paramedics and respiratory therapists. This year, we added Twitter to our communications (@EducateTNS), changed our Telehealth sessions to webinars and started using webinars to broadcast the QEII Clinical Trauma Rounds. We have established a Trauma Education Committee to ensure inclusion from all areas of trauma care. Our Rounds and webinars are now CME approved through the Dalhousie University CME office. This year, the following educational opportunities were coordinated:

Advanced Trauma Life Support (ATLS)

This course is a combination of lectures and interactive skills stations, which provide a systematic approach to trauma care. The course teaches clinicians how to assess a patient's condition, resuscitate, stabilize, determine and arrange inter-facility transfers in our trauma system.

We have held a total of eight courses with approximately 145 physicians receiving ATLS certification. Paramedics, nurses and respiratory therapists from LifeFlight and the QEII Trauma Team continue to attend.

Advanced Trauma Life Support Instructors Course

This course is designed to teach newly identified physician candidates to become ATLS instructors. Under the guidance of an educator, course participants acquire an understanding of educational principles and how to properly facilitate an ATLS course. The course emphasizes interactive and small group learning as well as how to give constructive feedback.

One course was held with nine physicians attending.

Rural Trauma Team Development Course (RTTDC)

The RTTDC continues to gain popularity. This course is offered in a one day format and emphasizes a team approach to the initial evaluation and resuscitation of the trauma patient at a rural facility. "Hands on" practical skills stations for key trauma skills were added to the itinerary this year. We hope to increase the number of courses offered next year as the success of this program has increased the number of requests.

Seven courses were held from Yarmouth to Cape Breton and provided trauma education to 88 inter-professional learners.

Trauma Education Webinars

We have improved the delivery of our online trauma education with the use of webinars. This method is more adaptable to the busy schedules of health care workers. Webinars are recorded and can be viewed online at a later date.

This year, we held five sessions attended by 186 learners. The topics covered were: "Trauma Thoracotomy", "Pediatric Trauma", "Chest Trauma – Chest Tube Care and Trouble Shooting Pleur Evac", "Pelvic Fractures" and "Initial Approach to Trauma Packaging & Transport".

Inter-Professional Clinical Trauma Rounds

The Inter-Professional Clinical Trauma Rounds have become very interactive with the inclusion of simulation, live voting and polls! On a provincial scale, learners can log into the webinar and be part of the action. Five sessions were held with 400 participants. The presentations included were: "Rapid Fire Session", "State of the Union", "Trauma Olympics", "Paper Smorgasbord", and "One Patient's Journey Through the Trauma System."



THE NOVA SCOTIA TRAUMA PROGRAM PLAYS A KEY ROLE IN DELIVERING LEARNING OPPORTUNITIES TO HEALTH CARE PROVIDERS ACROSS THE PROVINCE.



Kathy Hartlen, RN
*Education
Coordinator*

Pediatric Education

The annual “Trauma Education Orientation” for nursing staff in the IWK Emergency Department (ED) was held again this year during a day-long session. This included both lecture style and simulation training with IWK Trauma Team Leaders. While this yearly session is intended for nurses new to the IWK ED, there are nurses who have attended repeatedly over the years with support from the Emergency Department Management.

Multidisciplinary Trauma Rounds were held five times with increased attendance from a variety of disciplines. Presenters included Trauma Team Leaders and the IWK Trauma Coordinator in conjunction with a panel of Emergency Department nurses.

This year also saw the evolution of the IWK Trauma Program Simulation Curriculum, developed to help master and maintain the critical clinical and crisis resource management skills needed to manage some of the most critically injured children in the Maritime Provinces. The goal of this curriculum is to have all Trauma Team Leaders participate in a simulated trauma session at least once annually. The first of these sessions was held this year, with multiple Trauma Team Leaders and Emergency Department nurses participating.



EDUCATIONAL ACTIVITIES
HAVE BEEN DESIGNED
TO INCREASE TRAUMA
KNOWLEDGE AND SKILLS FOR
INTER-PROFESSIONAL GROUPS
THAT INCLUDE PHYSICIANS,
NURSES, PARAMEDICS AND
RESPIRATORY THERAPISTS.



Janet Lake, RN, BN
*Trauma Coordinator,
IWK Trauma Care
Program*





THE VALUE OF
COLLABORATION IN RESEARCH
CANNOT BE UNDERSTATED,
AND MANY NSTP RESEARCH
ACTIVITIES ARE PERFORMED IN
CONCERT WITH COLLEAGUES
AT THE LOCAL, NATIONAL, AND
INTERNATIONAL LEVELS.



RESEARCH

The NSTP is committed to improving trauma care in Nova Scotia and facilitating the continuous development and optimization of the provincial trauma system. Conducting research to evaluate trauma system performance and trauma patient outcomes is an essential part of this ongoing process. In order to help ensure that optimal trauma care is provided in Nova Scotia, the NSTP has been busy developing a rigorous research program over the past decade.

At the core of our research activities is the Nova Scotia Trauma Registry (NSTR). Information from the NSTR is used for a broad range of research purposes both internally and externally by investigators and administrators alike, with the overall goal of improving trauma patient outcomes.

NSTP research activities include studies designed to understand the incidence and characteristics of different major traumas seen in Nova Scotia (e.g., motor vehicle collisions, sport-related injuries), to assess the performance of various aspects of the trauma system (e.g., time to tertiary care and Trauma Team activation), and to identify factors associated with poor trauma patient outcomes (e.g., adverse events during procedural sedation, factors of emergency department care). We also perform research studies that do not involve use of NSTR data, including retrospective and prospective cohort studies, surveys, and systematic reviews of published literature.

The value of collaboration in research cannot be understated, and many NSTP research activities are performed in concert with colleagues at the local, national, and international levels. We are exploring possibilities for combining data sources and collaborating on research projects with other organizations. The Trauma Nova Scotia Clinical Evaluation Group was created to function as an interdisciplinary collaborative network of individuals devoted to evaluating clinical care, patient outcomes, and trauma system performance with the common goal of improving outcomes for patients. We have taken advantage of local and national opportunities to attend workshops on research methodology, including a Nova Scotia Cochrane Resource Centre Systematic Review Workshop.

The NSTP substantially increased its research capacity in 2014 and is continuing to strengthen its research infrastructure with important investments in education, networking, and technical resources. With these advances, the NSTP is well poised to continue generating high quality trauma research that can be used to inform appropriate policy development through knowledge translation, and to evaluate and improve the trauma system in the best interests of patient care.



Mete Erdogan, PhD, MHI
Research Associate



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IN NOVA SCOTIA, OUR EMERGENCY HEALTH SERVICES SYSTEM RAPIDLY RESPONDS, STABILIZES AND TRANSPORTS MAJOR TRAUMA PATIENTS IN A COORDINATED FASHION.

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TRAUMA TEAM ACTIVATION

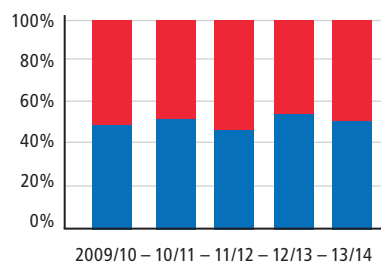
In Nova Scotia, our Emergency Health Services system rapidly responds, stabilizes and transports major trauma patients in a coordinated fashion. Various hospitals play key roles in stabilizing the most critically injured patients prior to moving them to the QEII Health Sciences Centre for assessment and resuscitation by a dedicated Trauma Team. The Trauma Team at the QEII consists of 14 dedicated Trauma Team Leaders from various specialties. Physicians from Emergency Medicine, Anaesthesia, Neurosurgery, Orthopedics and General Surgery work closely with residents to diagnose and treat major injuries. In the past year, the Trauma Team at the QEII HSC was activated for 313 patients.

A parallel process for pediatric trauma is also in place at the IWK Health Centre with emergency physicians, pediatric intensivists, orthopedic surgeons and general surgeons coordinating the trauma resuscitations for our pediatric population. In the past year, the Trauma Team at the IWK was activated for 46 pediatric patients.

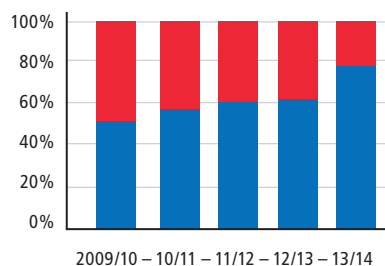
Overall, major trauma is increasing in Nova Scotia. Despite advances in care, the mortality rate of our major trauma population was 29% in 2013/14, with 14% admitted directly to the Intensive Care Unit (ICU) and 18 percent having an operative procedure within the first 24 hours.

We strive to provide excellent care to all Nova Scotians, and are constantly evaluating areas to improve. We are currently investigating ways to streamline communications, transport, Trauma Team activations, and the development of a dedicated inpatient trauma service at the QEII.

**Major Trauma Cases
QEII Health Sciences Centre**



**Major Trauma Cases
IWK Health Centre**



● TT Activation
● No TT Activation



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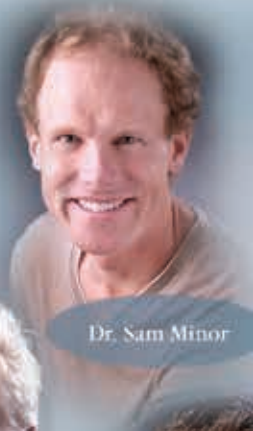
TRAUMA TEAM LEADERS



Dr. Janet MacIntyre



Dr. Rob Green



Dr. Sam Minor



Dr. Kirk Magee



Dr. Sean Christie



Dr. Andrew Travers



Dr. Shawn Hicks



Dr. Mike Biddulph



Dr. David Petrie



Dr. John Ross



Dr. George Kovacs



Dr. Lucy Helyer



Dr. Sam Campbell



Dr. Chad Coles



FUTURE PLANS AND EVENTS

Trauma-Related Conferences in 2015

- Trauma Association of Canada Annual Scientific Meeting and Conference 2015, Calgary, Alberta, April 10–11. Nine abstracts were accepted for presentation.
- Canadian Association of Emergency Physicians (CAEP) Conference 2015, Edmonton, Alberta, May 31–June 3. Nine abstracts were accepted for presentation.
- Atlantic Collaborative on Injury Prevention (ACIP), Halifax, Nova Scotia, June 8–9, 2015. Three abstracts were accepted for presentation.
- London Trauma Conference, London, England in December 2015.

TAC 2016

The 2016 Trauma Association of Canada's Annual Scientific Meeting and Conference will be held in Halifax from May 5–7. The NSTP Provincial Medical Director and the NSTP Administrative Director will be co-chairing this conference. So, come to Halifax and enjoy the historic sites, museums, fine restaurants, and entertainment the city has to offer! More details to follow. Please save the dates!

NSTP Newsletter

Future plans for the NSTP include a Trauma newsletter. Updates on current trauma events will be provided on a regular basis. Stay tuned!

Trauma Team Assessment Forms Re-Design

The Trauma Assessment Records used by each service for Trauma Team activations are being re-designed with an objective to streamline documentation and eliminate duplication. Look forward to these new and improved documents coming to the patient record soon!

Research in Medicine (RIM) Students

The NSTP will welcome two first-year Dalhousie Medical students who will participate in trauma research as part of the RIM Program. These projects will commence during the summer of 2015.



ONLY BY WORKING
TOGETHER CAN WE
REACH OUR GOAL
OF MINIMIZING
TRAUMATIC INJURIES.



