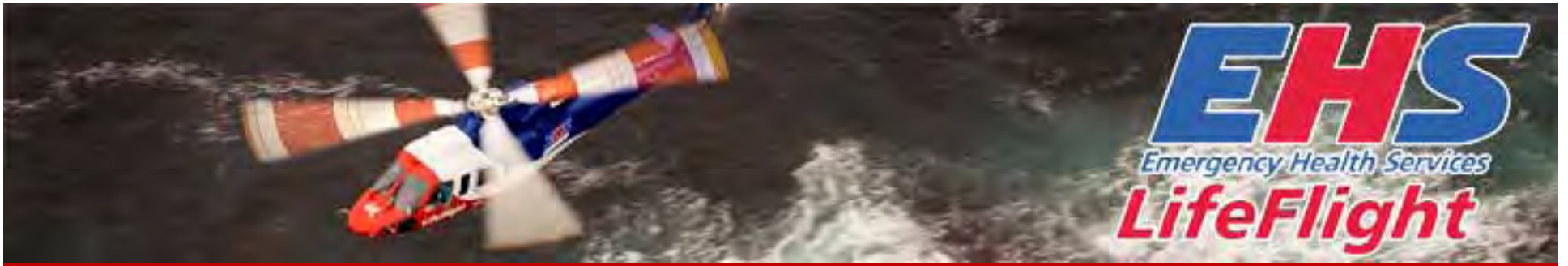




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Pre-Course Orientation for EHS LifeFlight





INTRODUCTION





Pre-Course Orientation Objectives

- Orientate to EHS LifeFlight and how the service fits within Emergency Health Services.
- Describe the benefits of air medical transport (AMT).
- Outline each component within the EHS LifeFlight AMT system.
- Provide information about the EHS LifeFlight helicopter and fixed wing.
- Describe launch criteria / response / landing options and flight following.
- Orientate to scene and remote scene responses and the types of helipads.
- Provide information on what to expect during your upcoming on-site training course.



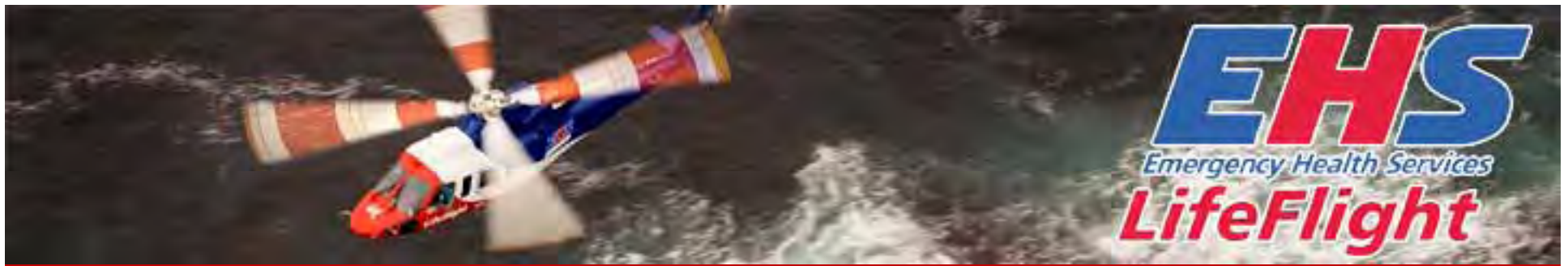
EHS LIFEFLIGHT PROGRAM STRUCTURE





Our Focus

Safety and Teamwork



The chart on the next page describes the relationship that EHS LifeFlight has to other elements of Nova Scotia health care, including the Nova Scotia Department of Health and Wellness and Emergency Health Services.



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Helicopter Contract



Fixed Wing Contract



Partnership Agreement



Affiliate Agreement

Medical Control Contracts



Operations Management



Government Regulator



Atlantic Simulation and Training Centre

Nova Scotia Trauma Program



Why do we need air medical transport in Nova Scotia?

- The medical community recognizes air medical transport as a vital component of delivering quality emergency medical care.
- EHS LifeFlight supports communities with critical care for ill and injured patients, usually requiring treatment from specialists located at the QEII, IWK or regional hospitals.

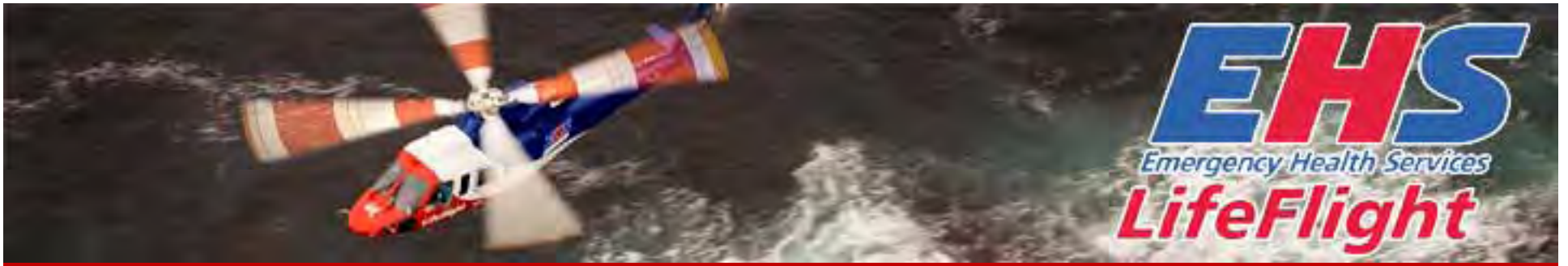


- Air medical transport brings the specialty team directly to the patient, dramatically increasing the speed at which the patient begins receiving critical care.
- Additionally, air medical transport supports both hospital and ground ambulance paramedic teams which helps to keep these valuable resources in Nova Scotia communities.



Our Mission Statement

EHS LifeFlight provides critical care to ill and injured patients and immediate access to expert consultation and safe, timely air medical service.



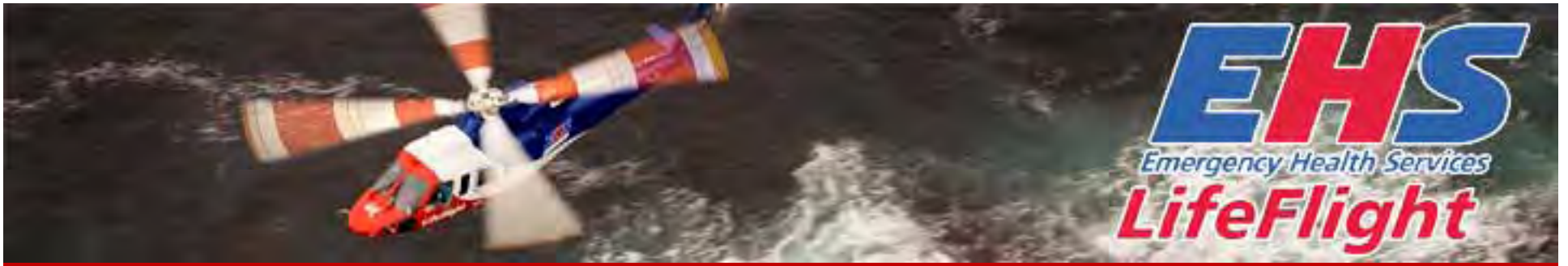
TEAM COMPONENTS





Team Components

- Critical Care Paramedics
- Nurses
- Respiratory Therapists
- Operations Supervisor
- Senior Operations Flight Crew (SOFC)
- Clinical Leaders (adult and children's services)
- Manager of Professional Development, Quality & Risk
- Program Manager
- Program Administrator
- Administrative Assistant
- Pilots: Helicopter and Fixed Wing
- Aircraft Engineers: Helicopter and Fixed Wing
- Air Medical Communication Officer
- Medical Control Physicians
- Medical Directors (adult and children's services)



INFRASTRUCTURE COMPONENTS





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Infrastructure Components

- 1 base (Halifax Stanfield International Airport)
- 1 satellite base (IWK)
- 1 S-76 helicopter
- 1 King Air 200 fixed wing
- Province-wide system of hospital helipads, community helipads and airports

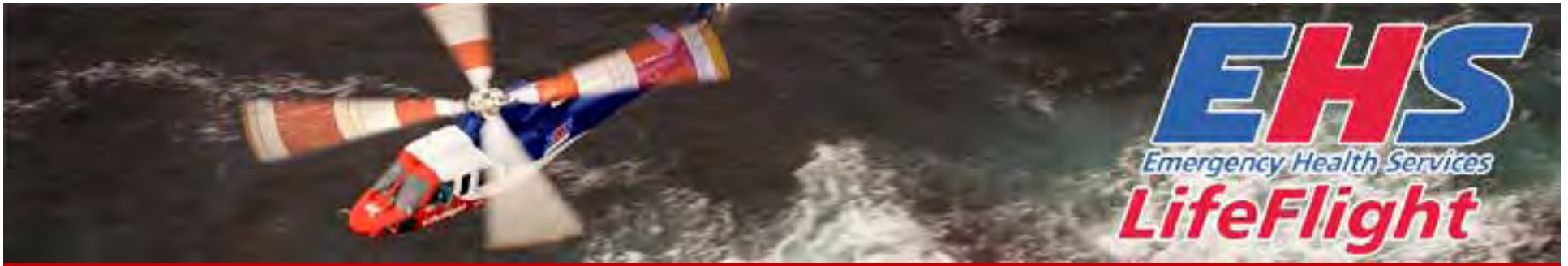




EHS LifeFlight Helicopter Fast Facts



- Model: Sikorsky 76A twin turbine
- Cruising speed: 135 Knots (250 km/hr)
- Rate of climb: 2,000 feet per minute
- Maximum lift: 10,500 pounds



What's different in a helicopter?

- Cabin Space
 - 4.5 ft high, 5.5 ft wide, 7 ft long
 - 1 -2 stretchers, 4 crew seats and medical equipment bags
- Noise
 - AMC helmets, patient-headsets, earplugs
- Weight
 - Influence of warm temperatures
- Equipment
 - All equipment is assessed for Size, weight, altitude, temperature , vibration, etc.





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AMT Communications / Dispatch

- The EHS Medical Communications Centre is located in Burnside.
- There is a dedicated AMT Communications Officer 24 / 7 / 365.
- Coordinates all aspects of an EHS LifeFlight Mission request.





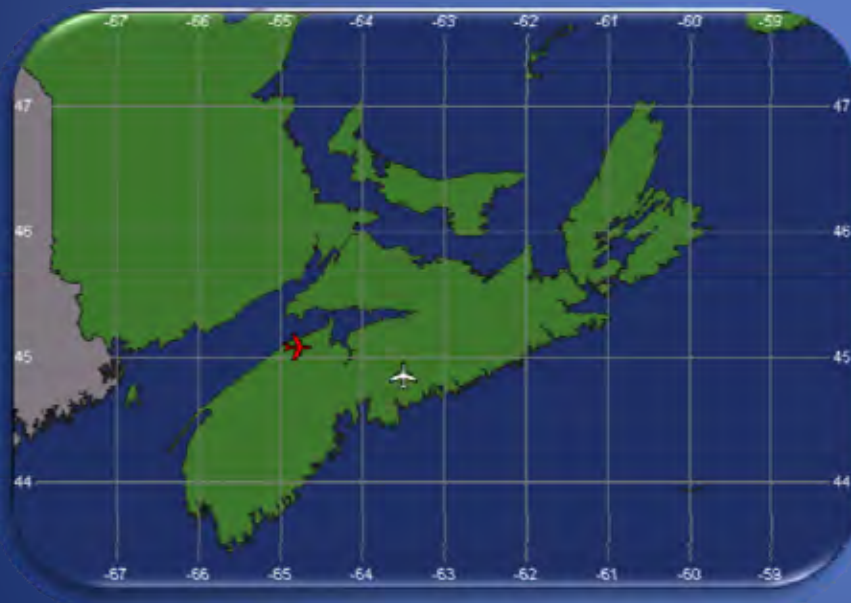
EHS Medical Communications Centre Capabilities



- Receives both emergency and non-emergency calls for medical assistance.
- Paramedic-trained communications officers.
- Digital mapping and dynamic system status planning.
- Flight following, etc.



Flight Following



- No matter what aircraft EHS LifeFlight flies in, the EHS Medical Communications Centre can track in several different ways.
- This is all done for safety purposes.
- A public version of this can be found on the EHS LifeFlight website.



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Options

- Air Options
 - EHS LifeFlight Helicopter (Halifax)
 - EHS LifeFlight fixed wing (Halifax)
 - New Brunswick Air Care (Moncton)
 - Air Search and Rescue (Greenwood)
- Ground Options
 - Ground transport by EHS LifeFlight crew.
 - Ground transport by EHS paramedic crew.



The AMT Communications Officer, MCP, EHS LifeFlight Duty Manager and sending site work together to provide the best transport solution given the limits set by the patient's clinical condition and the EHS system status.



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Helicopter Medical Interior

- The helicopter can be configured for one or two patients.
- Critical care equipment is required for all transports
- Dual O2 and suction
- The AMT stretcher is not the same as ground and has a different locking system.

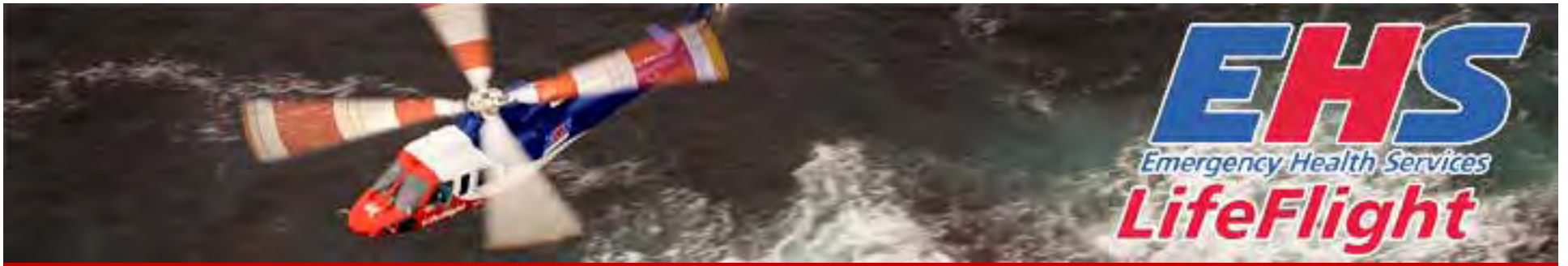




Avionics and Communications



- This picture is of the inside of the EHS LifeFlight helicopter cockpit.
- All avionics and systems are backed-up.
- The level of instrumentation on board surpasses many AMT operations in North America.



MEDICAL OVERSIGHT





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Medical Directors

- Dr. George Kovacs (adult services)
- Dr. Chris Soder (children's services)
 - Overall responsibility for quality medical care of the program
 - Development of treatment protocols
 - Participation in research, education, medical administration and strategic management of the program
 - Quality of MCP's

Medical Control Physicians

1. Emergency Physicians
 2. Pediatric Intensivists
 3. Neonatologists
 4. Maternal Fetal Medicine Specialists
- On-call 24 / 7 / 365
 - Online support for air medical crew, sending physicians and pre-hospital providers



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Medical Elements

- Critical care scope of practice
- Protocols, procedures
- Online and offline medical control
- Hospital interface / communication
- Education and training
- Quality assurance
- Research and program evaluation





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Air Medical Crew Configuration



- On base 24-hours:
 - Adult Flight CCP
 - Adult Flight RN
- On call 24-hours at IWK:
 - Obstetric RN
 - Neonatal / Pediatric RN
 - Neonatal / Pediatric RRT
- On-line Physicians

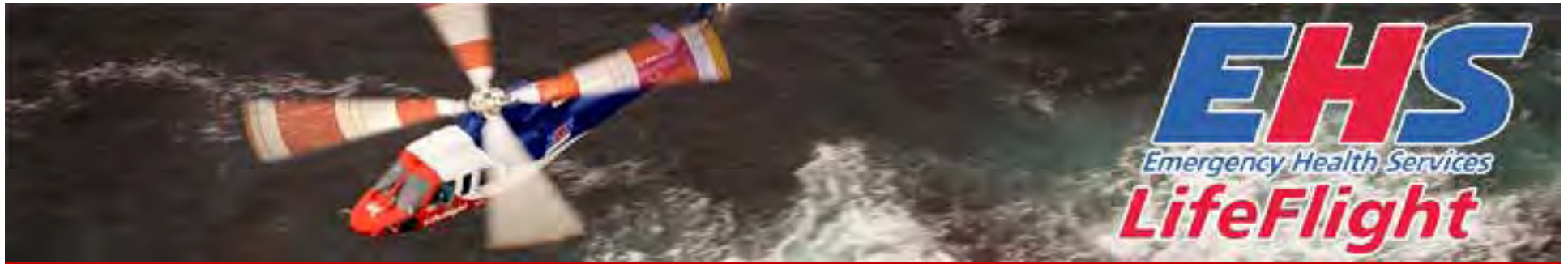


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Air Medical Crew Training

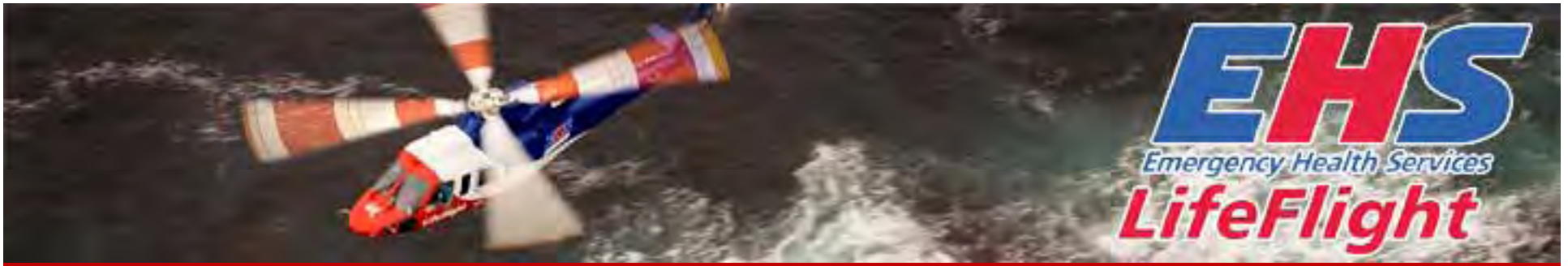
- Hospital Partnerships
- Transport Course
- OR / ED / ICU / Case Room Training / etc.
- Simulator: RSI Training
- Air Crew Safety and Aviation Training:
 - Underwater Egress
 - Winter Survival
 - Fire Suppression
 - Scene and Survival Training,
 - etc.





Adult, Neonatal, Pediatric and Obstetrics Protocols

- Direct medical control.
- Delegated medical functions (acts).
- Some procedures covered include:
 - IV medications
 - Blood product transfusion
 - RSI and advanced airway management
 - Central line insertion - femoral, UA and UV lines
 - Chest tubes, NG tubes and urinary catheters



Equipment



- Advanced Airway Adjuncts
- Ventilators
- Invasive Monitoring
- Infusion Pumps
- Incubators
- Fetal Monitors
- Nitric Oxide, etc.



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Interfacility Transfer of Care

- At the sending facility there is a transfer of care between the hospital and EHS LifeFlight teams.
- Patient Care transferred to EHS LifeFlight MCP





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RESPONSE





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EHS LifeFlight Coverage Area

All Maritime Provinces



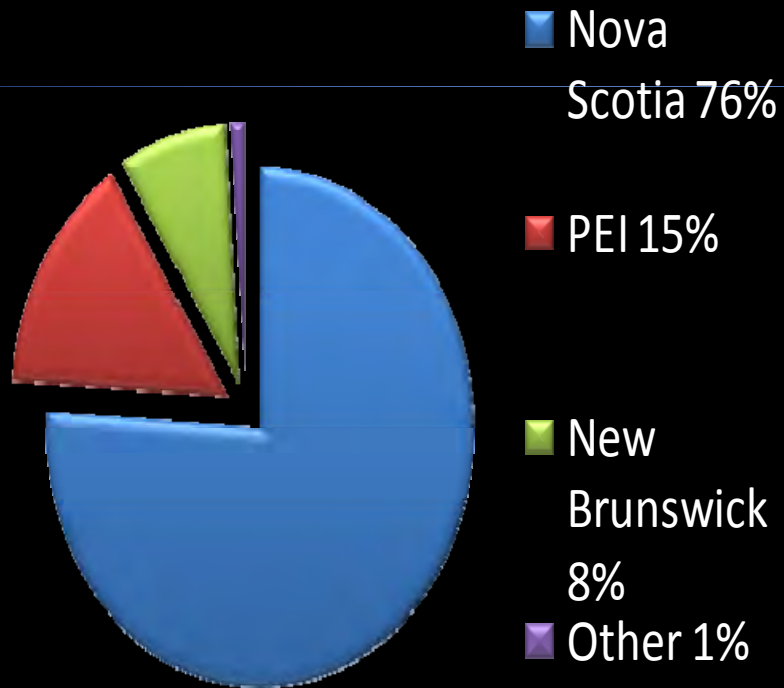
New Brunswick:
Interfacility Back-Up

PEI: Interfacility

Nova Scotia: Interfacility and Scene

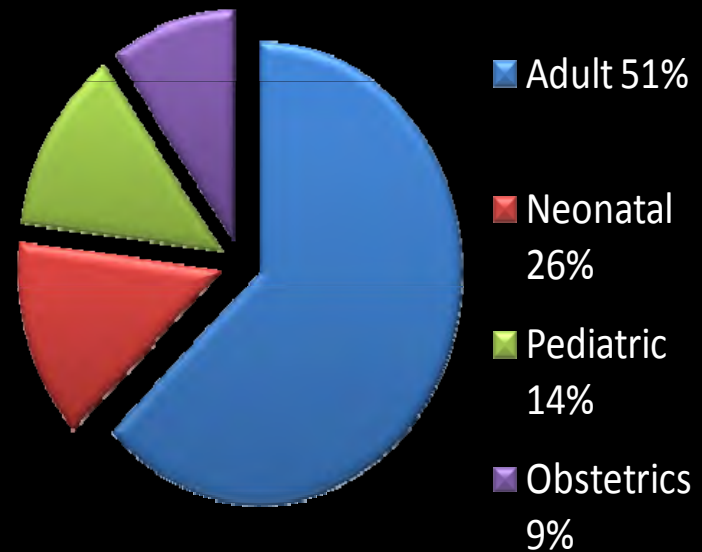


Where do we fly?



Annual Mission Profile

April 1 2009 –
March 31, 2010



Helicopter Launch Time

- 10-minutes to wheels-up for 16-hours/day.
0700-2300
- 60-minutes to wheels-up
2300-0700
- Above response times apply to all calls.
- Neonatal / Pediatric RN, Obstetrics RN and RRT (based at the IWK) are picked up at the hospital heliport, Point Pleasant Park Helipad or the Halifax International Airport.





EHS LifeFlight Helicopter Flying Times

Nova Scotia



- Transport of the patient to the closest hospital with the ability of handling a patient's treatment from start to finish (Definitive Care).



Landing Options

- Daylight hours:
 - Scene
 - Hospital helipads
 - Community helipads
 - Airports
- Nighttime hours
 - No scene





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Approved Pre-Designated Landing Zones





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Helipad Information

Hospitals:

Hollow circle ○

Day / Night Approved

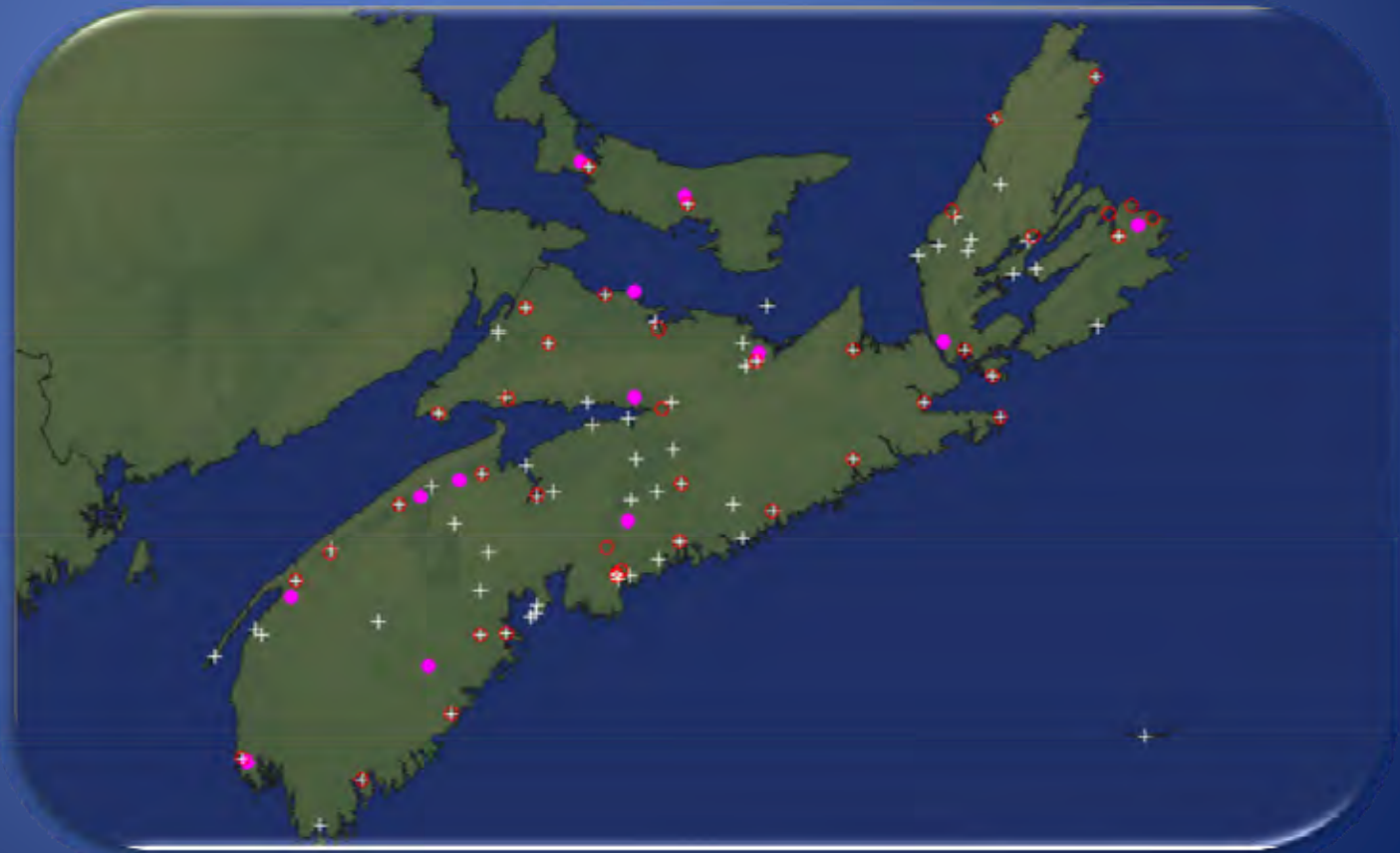
Helicopter Pad:

White cross (+)

King Air 200

LZ Airport:

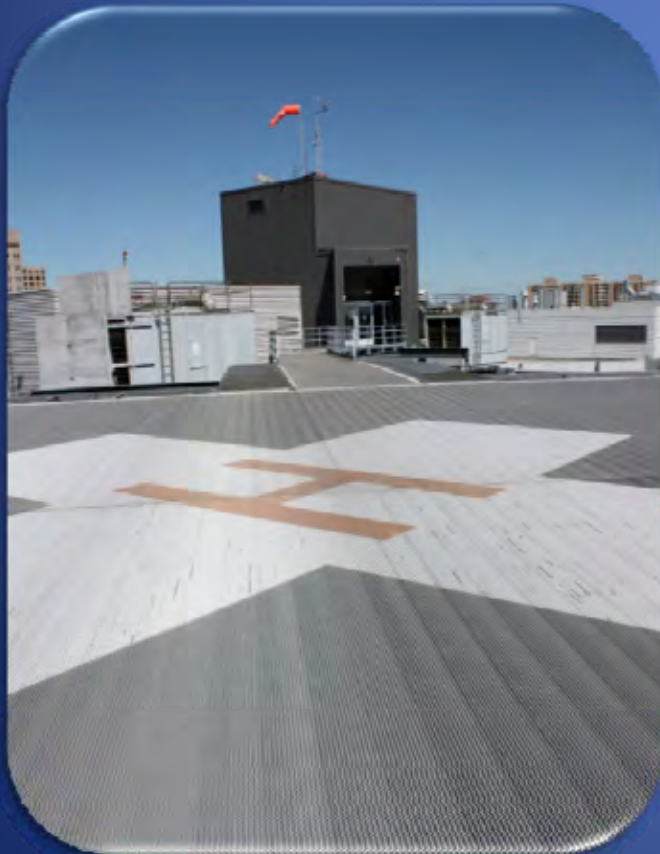
Pink circle ●



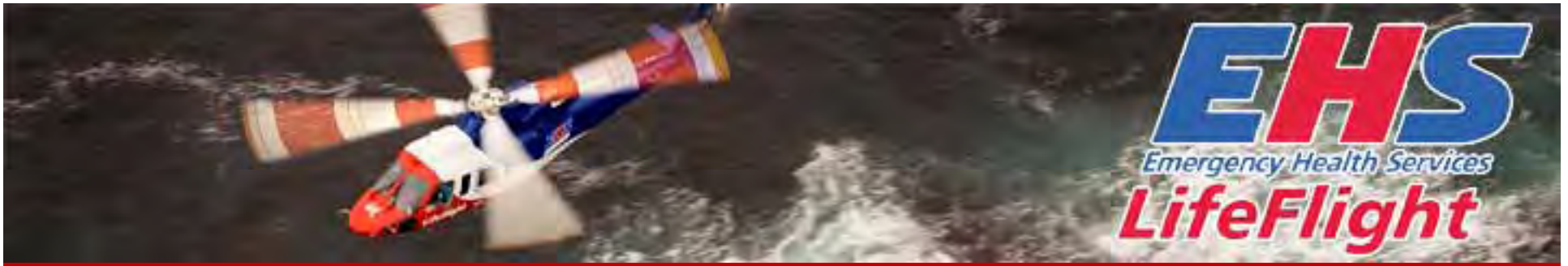


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Benefits of Helipads



- Shortened patient transfer times.
- Especially true if both sending and receiving hospitals have helipads.
- Most hospitals in Nova Scotia have helipads.



What happens in bad weather?



- Severe and changing weather does affect flight safety.
- EHS LifeFlight pilots always make the final decision to fly a mission based on safety.
- Other options for transporting the air medical crew to patients include using the fixed wing airplane or ground ambulance.
- Option to meet patient enroute .



Scene Stand-by Criteria

- Any Ground EMS agency (Fire Fighters, Police, Paramedics, etc.) may put EHS LifeFlight on “stand-by” while assessing the patient.
 - Life or limb time-dependent injury.
 - Critical care or ALS required beyond ground pre-hospital capabilities.
 - Critical care personnel and equipment may be needed to enhance care.
 - Weather or road conditions may delay patient access to hospital.
 - Extrication and ground transport time of greater than 30-minutes.



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Standby Information Required by the EHS Medical Communications Centre

- Location of Scene:
 - GPS (Lat / Lon)
 - Closest Civic Address
 - Highway Numbers
 - Closest Town / Distances (N,S,E,W)
- HAZMAT Identification
- Number and weight of patients requiring AMT.



GPS Training Online:

<http://www.naturalresources.umd.edu/EducationalGPS.html>



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Paramedic Response <20 Minutes



- Ground Paramedics follow a trauma launch process for major trauma (Specific Criteria).
- Day or night launch.
- EHS LifeFlight goes airborne towards scene.
- Ground paramedics call conference with EHS LifeFlight Medical Control Physician (MCP) and provide a patient update.
- EHS LifeFlight MCP has final say and specifies patient rendezvous location (Daylight versus night options) and provides medical oversight



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Paramedic Response >20 Minutes

- On scene caller will be call conference with the EHS LifeFlight MCP.
- Medical / Trauma / Cardiac Patients
- MCP approval required prior to launch.
- MCP provides online medical directives.
- Please notify if Hoisting may be required.



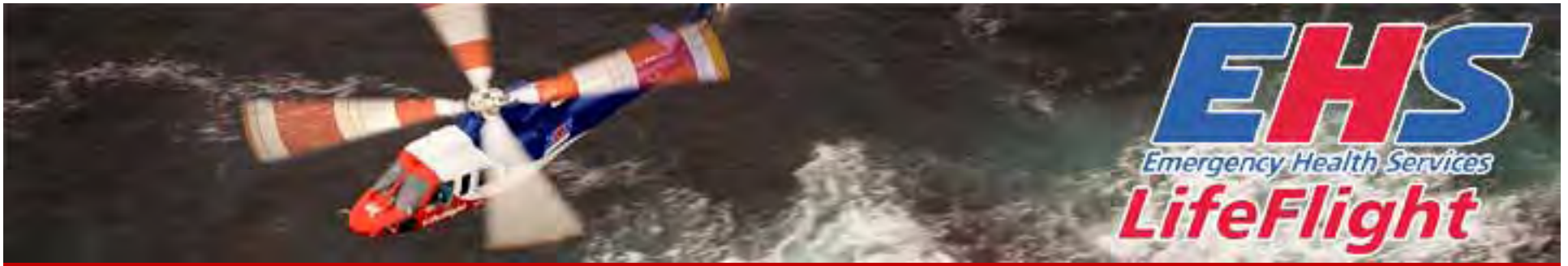


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Scene Response Program

- 100% of Nova Scotia
- Over 8,000 emergency service personnel have been trained province-wide including:
 - Paramedics
 - Firefighters
 - Police etc.





Scene Launch Criteria

- Launch EHS LifeFlight if the patient is a victim of penetrating and / or blunt trauma.
- Takes into consideration the following criteria:
 - Anatomic
 - Physiologic
 - Logistical
 - Mechanism
 - Paramedic Judgement





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Is there a fee for EHS LifeFlight?



- There is no fee for service for Nova Scotia residents, sending hospitals or agencies using EHS LifeFlight as a critical care transport service.
- A service fee will be charged to non-Nova Scotian and non-Canadian residents.
- Other provinces that contract this service may charge a fee to their residents.



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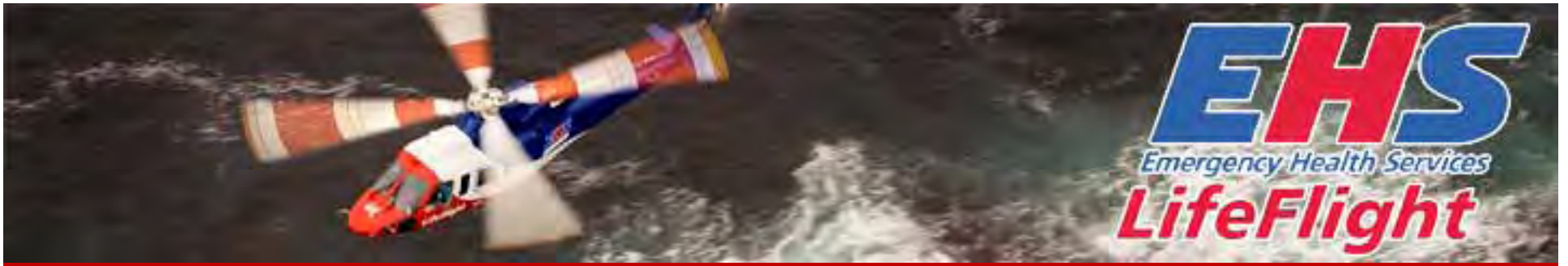
Outline for the Scene Safety Course

- Daylight Scene LZ Selection
- Daylight Scene LZ Set-up
- Daylight Scene LZ Control
- HAZMAT Scene LZ Procedures
- Nighttime Operations
- Safety Rules Around the Helicopter
- Fire Suppression and Crew Evacuation
- Patient Preparations
- Mission Reviews
- Reference Materials Review
- Scenarios



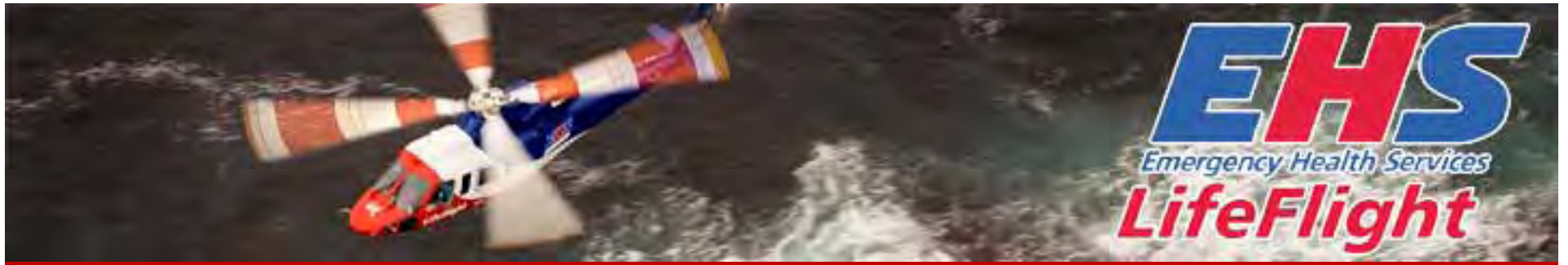
Outline for the Helipad Safety Course

- Helipad Operations Overview
- LifeFlight Mission Plans
- Security Procedures
- Pre-Landing Checks
- Night Operations
- Pilot Report
- Communications
- Helipad LZO Procedures
- Safety Around the Helicopter
- Post Take-Off Checks
- Fire Suppression & Crew Evacuation
- Maintenance & Other Procedures
- Helipad Inspection



See you at the course!





Thank you!

EHS LifeFlight and Trauma Hotline

1-800-743-1334

www.ehslifeflight.ca

Visit our Base at the Airport

Call 873-3657 to book a tour!