Stretcher Transportation Services

Decision Guide for Choosing Appropriate Patient Transportation

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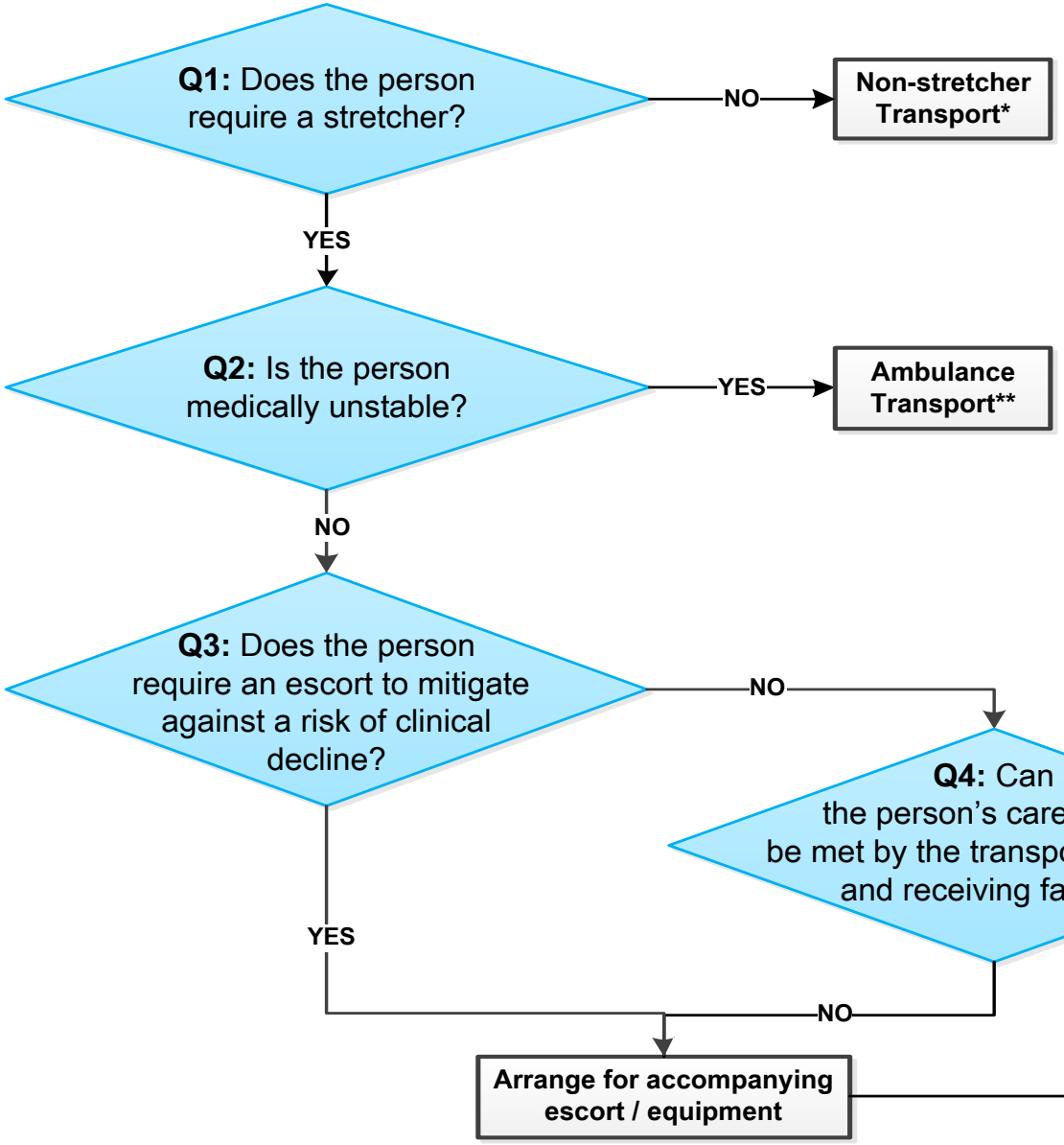
Implementation Branch
Health System Performance and Accountability Division
Ministry of Health and Long-Term Care

Ontario

Introduction

- The objective of the MOHLTC Decision Guide is to provide a framework for the application of current and emerging best practices for appropriately selecting between modes of transportation.
- The MOHLTC Decision Guide is intended as a provincial reference resource for hospitals to use and adapt to their particular needs, resources, and patients when making arrangements for non-urgent patient transportation by an ambulance or non-ambulance Stretcher Transportation Services (STS) provider.
- The MOHLTC Decision Guide:
  - Provides a synthesis of existing tools and guides.
  - Includes a decision-making algorithm and supplementary guidance for consideration at each step in the algorithm.
  - Is not a substitute for clinical decision making by the health care professionals responsible for individual patients.
- Note that the focus of the MOHLTC Decision Guide is on non-ambulance transportation by stretcher. LHINs and hospitals are encouraged to develop locally tailored guidelines addressing non-stretcher modes of transportation for ambulatory and wheelchair-dependent passengers.
- Hospitals are encouraged to use the most appropriate cost effective mode of transport.
- Sources for current content are marked by footnotes, and footnoted sources are listed in Attachment 3.

Algorithm for Choosing Appropriate Patient Transportation



*NOTE - Non-stretcher transport is outside the scope of the MOHLTC Decision Guide. An escort and/or equipment may be required by persons using non-stretcher transport. Non-stretcher options include taxi, wheelchair taxi, and private automobile.

**NOTE – The *Ambulance Act* states "ambulance" means a conveyance used or intended to be used for the transportation of persons who,

(a) have suffered a trauma or an acute onset of illness either of which could endanger their life, limb or function, or

(b) have been judged by a physician or a health care provider designated by a physician to be in an unstable medical condition **and** to require, while being transported, the care of a physician, nurse, other health care provider, emergency medical attendant or paramedic, **and** the use of a stretcher

Q1: Does the person require a stretcher?

Situation: A person requires transport.

Task: The care team should determine whether the person requires a stretcher.

The following table lists examples of indicators of whether a stretcher is required. (Note: these lists are not exhaustive):

Indicators that stretcher is required	Indicators that stretcher IS NOT required
• The person may be medically unstable or at high risk of becoming medically unstable, such that a health care provider may require that the person be on a stretcher in order to provide medical interventions (See next slide).[11] • The person's clinical condition requires them to be recumbent while being transported.[10,11] • The person may be a danger to themselves, escorts or vehicle attendants because of cognitive or mental health issues and may be required to be restrained while on a stretcher.[11] (Note – As noted on page 5, chemical or physical restraint is an indicator suggesting medical instability and the person may not be appropriate for STS) • Person needs transport from bed-to-bed (may include transfer assistance to an exam table).[11] • The person requires a stretcher to transfer to/from the vehicle.[1,2,3] • Other indicators	• The person is fully mobile (even if the person has an assistive device)[1,2,3] • The person has a fitness level to match the level of exertion required for the journey.[11] • The person is not restrained[11] • Other indicators

Action:

- If the person requires a stretcher, proceed to Q2.
- If the person does not require a stretcher, arrange for a non-stretcher transport provider (e.g. taxi, wheelchair accessible van, private vehicle).
    - NOTE: Non-stretcher transport is outside the scope of the MOHLTC Decision Guide. An escort and/or equipment may be required by persons using non-stretcher transport.

Q2: Is the person medically unstable?

Situation: A person requires a stretcher for transport.

Task: The care team, including the most responsible physician or physician-designated health care provider, should determine whether the person who requires transport is medically unstable and requires, while being transported, the care of a physician, nurse, other health care provider, or paramedic.

The following table lists examples of indicators of medical stability. (NOTE – the list is not exhaustive). The table is continued on the next page.

Indicators that suggest the person IS medically stable	Indicators that suggest the person IS NOT medically stable
• Stable vitals signs[1,2,3] • Stable airway[1] • No expected threat to life or function[1] • Minimal monitoring required[1] • Low risk of changing status[1] • IV locked or no IV[1,2,7] • Other indicators	• Life, limb, or function are endangered[1,2] ○ Attachment 1 provides examples of medical conditions that are considered life or limb threatening • Unstable vitals[2] • One or more body systems are abnormal & rapidly deteriorating in association with an acute illness or injury[1] • Patients whose vital signs or stability is immediately dependent upon proper drug therapy[6] • Uncontrollable blood sugars[9] • Multiple trauma[1] • Chemically or physically restrained[3] • Require continuous cardiac monitoring and/or the potential for cardiac resuscitation capability[6] • Mentally unstable[11]

Q2: Is the person medically unstable? (continued)

- The table below is a continuation of the table from the previous page.

Indicators that suggest the person IS medically stable	Indicators that suggest the person IS NOT medically stable

	• Patient requires intense monitoring & medical interventions, constant life support to correct & stabilize the patient's condition[1,4,5,6]
	  ○ Acutely abnormal or deteriorating neurological status[1]
	  ○ Severe, acute respiratory distress[1]
	  ○ Hypertensive emergencies, severe hypotension or shock[1,6]
	  ○ Unstable angina[2]
	  ○ Continuous IV with vasoactive medications[2]
	  ○ Intubated/ventilated person in respiratory distress[1,2]
	• Other indicators

- If the medical stability of the person is in question, he or she should be sent by ambulance.

Action:

- If the person IS medically stable, proceed to Q3.
- If the person IS NOT medically stable and requires, while being transported, the care of a physician, nurse, other health care provider, or paramedic, arrange for transport by ambulance.

Q3: Does the person require an escort to mitigate against a risk of clinical decline?

Situation: A person requiring stretcher transport has been determined to be medically stable but may require assistance and/or monitoring by an escort during transport to mitigate against a risk of clinical decline.

Task: The care team, including the most responsible physician or designated health care provider, should :

a) Assess the person's nature and magnitude of risk for clinical decline during transport; and

b) For persons at high risk, consider whether the person should be deemed to be medically unstable and transported by ambulance;

c) For persons at low to moderate risk, identify the person's clinical care needs with respect to mitigating that risk, determine whether the stretcher transport provider can meet those needs, and, if not, determine which clinical escort and equipment the hospital can provide or arrange for to best meet those needs; and,

d) For persons at negligible to low risk, proceed to Q4 to assess whether there are any other care needs that require an escort or equipment.

- Remember that:
  - The person's risk for clinical decline during transport must be determined for both the outgoing and return legs of the journey. Take into consideration the travel time of each leg.
  - Patients who are coded by the ambulance dispatcher as Code 1 or 2 (non-urgent) may be deferred by EMS to allow the ambulance provider to respond to code 3 and 4 (urgent) calls. Deferral can lead to delays in treatment, and the risks in connection with the potential for deferral should be considered during the determination of whether a patient's risk can be most appropriately managed by arranging for an ambulance or for STS with a hospital escort and/or equipment.
  - Your local stretcher transport provider(s) have specific services and skills.
  - Stretcher transport providers are expected to call 911 if the clinical condition of their passenger worsens.

Q3: Does the person require an escort to mitigate against a risk of clinical decline? (continued)

The following table lists examples of indicators of risk of clinical decline during transport (NOTE – the list is not exhaustive).

Indicators that the person is at LOW risk for clinical decline during transport	Indicators that the person is at MODERATE risk for clinical decline during transport
• Hemodynamically stable[9] • Stable vital signs and airway[1] • No expected threat to life or function[1] • Minimal monitoring required[1] • Expected that no interventions will be required during transport[1] • IV locked or no IV[1,7] • Other indicators	• Acute deterioration not anticipated, however continuous supervision required[1,2,9] • Abnormal or fluctuating but not acutely deteriorating neurological status[1,2,9] • Cardiovascular abnormalities but presently stable with potential for deterioration[1] • Respiratory compromise with adequate airway & no immediate threat to life[1] • Interventions may be necessary during transport (i.e. intravenous medications, other medication administration)[1,2,9] • Invasive tubes[2] • 3 lead EKG monitoring[7,9] • Basic cardiac medications e.g. heparin, nitro[7,9] • Recent seizure activity[9] • Other indicators

To mitigate against the potential risk of clinical deterioration, an escort may be required to:

- Monitor, manage, discontinue IV
- Administer, adjust medication
- Monitor health status and respond to changes
- Respond to airway changes, suction
- Protect person from injury

Note – A person under Form 1 of the *Mental Health Act* requires an appropriately trained health care provider escort with or without a security escort.

Q3: Does the person require an escort to mitigate against a risk of clinical decline? (continued)

Action:

- If the person is at MODERATE risk for clinical decline during transport:
  - Identify the person's clinical care needs with respect to mitigating that risk;
  - Determine whether the stretcher transport provider can meet those clinical care needs and if not, determine which clinical escort and equipment can best provide those clinical care needs; and,
    - See Attachment 2 for scopes of practice for some common health care provider escorts.
    - Consider also the escort's training and experience of providing care during inter-facility transfers.
    - Ensure the escort can competently intervene and use any equipment the hospital will provide.
  - The care team must be aware of the skills and services of their local stretcher transport provider, the equipment provided by them in the vehicles and any relevant hospital and stretcher transport policies and procedures. The tables below are intentionally left blank to allow hospitals to identify the pertinent information for their staff.
  - Make appropriate arrangements for transport with the stretcher transport provider with a clinical escort and equipment.
- If the person is at LOW risk for clinical decline during transport, proceed to Q4 to determine whether the hospital should provide an escort and equipment to meet any other care needs the person may have during the journey.

Services and skills of my local stretcher transport provider(s) and Equipment provided by them in the vehicles
• <to be customized by each hospital>
• …..
• …..
• Etc.

Relevant Hospital and local stretcher transport provider(s) policies and procedures
• <to be customized by each hospital>
• E.g. Passengers with a Do Not Resuscitate Order (DNR) and DNR Confirmation Form
• E.g. Staff and equipment repatriation.
• …..
• Etc.

Q4: Can the person's care needs be met by the stretcher transport provider and receiving facility?

Situation: A medically stable person requiring transport is at LOW risk of clinical decline during transport, but still may require assistance during transport and at the receiving facility.

Task: The care team should identify the person's remaining care needs and determine whether they can be met by the stretcher transport provider and receiving facility, or if the hospital should arrange to send an escort and equipment with the stretcher transport provider.

- Remember that:
  - The team should identify the person's needs both during transport (i.e. while travelling in the vehicle to and from the receiving facility) and at the receiving facility.
  - Family members may have the required skills and experience to accompany the person.

- Care needs MAY include (NOTE - this list is not exhaustive):
  - **Personal support:** feeding, assistance for toileting, mobility to maneuver
  - **Clinical care:** management of fluids (e.g. IV maintenance), medication administration and/or management (e.g. person can self administer vs. person requires assistance), requires monitoring post procedure
  - **Safety need:** safety and security concerns due to the person's cognitive impairment and/or mental health issues. Person may be medically stable with:
    - Currently violent or showing signs of increased agitation[2]
    - Recent history of violent/aggressive behaviour[2,9]
    - Recent need for security intervention[2]
    - Requires restraint (chemical or physical)[2]

- Determine whether the stretcher transport provider can provide all needed care during transport (i.e. that the stretcher transport provider attendants are qualified to provide all needed care and have all required skills and equipment)
- Determine whether the receiving facility can provide all needed care while the person is at the receiving facility (e.g. that it will provide PSW support).
- For passengers with mental health issues, take into consideration potential gender conflict issues between the passenger and the stretcher transport provider attendants
- Note – A person under Form 1 of the *Mental Health Act* requires an appropriately trained health care provider escort with or without a security escort.

Q4: Can the person's care needs be met by the stretcher transport provider and receiving facility? (continued)

Action:

- If the care team determines that the person requires an escort and equipment:
    1. Choose the escort and equipment required to the person's care needs during transport and at the receiving facility
        - See Attachment 2 for scopes of practice for some common health care provider escorts.
        - Consider also the escort's training and experience of providing care during inter-facility transfers.
        - Ensure the escort can competently intervene and use any equipment the hospital will provide.
    2. Arrange transport with stretcher transport provider.

Attachment 1 – Q2: Examples of Life or Limb Conditions

Examples of Life or Limb Conditions

The Life or Limb Policy Diagnoses List[8] is not a comprehensive list of all medical conditions that are considered life or limb threatening

CARDIOLOGY/CARDIAC SURGERY/VASCULAR SURGERY

- Abdominal Aortic Dissection/Rupture
- Acute Limb Ischemia
- Ascending Aortic Dissection/Rupture
- Cardiogenic Shock or Acute Valvular Problems, Mechanical Complications of Myocardial Infarction and Intra-Aortic Balloon Pump
- Cardiology for Pacemakers (Temporary and Permanent)
- Endocarditis Requiring Urgent Cardiac Intervention
- Pericardial Tamponade with Cardiovascular Compromise
- Post Heart Transplantation with Suspected Rejection
- Refractory Cardiac Arrythmias (Including Repetitive Firing of Implanted Cardiac Defibrillator) or Symptomatic Heart Block
- Thoracic Aortic Dissection/Rupture
- Unstable Acute Coronary Syndrome Requiring Urgent Angiography and/or Intervention (Primary/Rescue Percutaneous Coronary Imaging or Surgery)
- Unstable Complex Congenital Heart Disease
- Vascular Trauma (e.g., Mangled Extremity, Blunt Thoracic Aortic Injury)

ENDOCRINOLOGY

- Adrenal Crisis
- Diabetic Ketoacidosis
- Hyperglycemic Coma
- Hypoglycemic Coma
- Myxedema Coma
- Pituitary Apoplexy

GASTROENTEROLOGY

- Esophageal Perforation
- Fulminant Hepatic Failure
- Gastrointestinal Bleed with Refractory Shock
- Toxic Mega Colon with Shock

GENERAL SURGERY

- Gastrointestinal Bleed with Refractory Shock
- Ischemic Bowel
- Multiorgan Failure with Refractory Shock
- Severe Pancreatitis with or without Shock
- Perforated Viscus/Septic Shock
- Toxic Colitis with Shock
- Wound Dehiscence/Evisceration

HEMATOLOGY

- Acute Leukemia
- Disseminated Intravascular Coagulation with Thrombosis or Bleeding
- Graft vs. Host Disease
- Severe Hemophilia with Associated Bleeding
- Urgent Leukapharesis
- Urgent Red Cell Exchange (Sickle Cell Crisis, Malaria)

NEPHROLOGY

- Acute Emergency Dialysis
- Urgent Plasma Exchange (Thrombotic Thrombocytopenic Purpura, Hemolytic-Uremic Syndrome)

NEUROSURGERY/NEUROLOGY

- Acute Spinal Cord Compression
- Acute Stroke Requiring Thrombolysis
- Cervical Spine Fracture
- Guillain Barre / Myasthenic Crisis
- Head Trauma Requiring Neurosurgical Intervention or Monitoring
- Intracerebral Hemorrhage Subarachnoid Hemorrhage
- Meningitis with Altered Level of Consciousness
- Status Epilepticus
- Stroke – non Tissue Plasminogen Activator Posterior Fossa/Brainstem

OBSTETRICS/GYNAECOLOGY

- Acute Vaginal Bleeding with Shock
- Anticipated Severe Shoulder Dystocia
- Amniotic Fluid Embolism
- Early Pregnancy, Severe Vaginal Bleeding and Hemorrhage
- Early Pregnancy, Suspect Ectopic with Shock, Intra-Abdominal Hemorrhage
- Fetal Distress
- Intraperitoneal Hemorrhage
- Maternal Cardiac Arrythmias in Labour
- Multiple Gestation Requiring Emergency Obstetric/Paediatric Management
- Obstructed Labour
- Pelvic Inflammatory Disease with Shock and/or Disseminated Intravascular Coagulation
- Post-Operative Intra-Abdominal Hemorrhage and Shock
- Pre-Term Labour
- Pre-Term Premature Rupture of Membranes
- Severe Gestational, Postpartum or Antepartum Hypertension
- Ovarian Torsion
- Uterine Rupture
- Umbilical Cord Prolapse

Attachment 1 – Q2: Examples of Life or Limb Conditions (continued)

Examples of Life or Limb Conditions (continued)

Life or Limb Policy Diagnoses List[8]

OPHTHALMOLOGY

- Acute Orbital Hypertension/Glaucoma
- Endopthalmitis
- Severe Orbital Cellulitis
- Ruptured Globe
- Vision Threatening Conditions – Orbital Abscess, Orbital Hematoma, Optic Nerve Compression

ORTHOPEDICS

- Compartment Syndrome
- Compound, Major Pelvic/Acetabular or Multiple Large Bone Fractures
- Femoral Neck in Patients Younger than 65 Years of Age
- Fractures/Dislocation with Vascular Injury
- Irreducible Major Joint Dislocation (Non-Prosthetic Joint)

OTOLARYNGOLOGY

- Acute Airway Obstruction
- Epiglottitis
- Esophageal Foreign Bodies
- Major Bleeding: Neck Hematoma, Massive Hemoptysis/Hematesis
- Mastoditis or Sinusitis with Central Nervous System Complications
- Necrotizing Infections
- Severe Neck Trauma/ Laryngeal Fracture

PLASTICS

- Amputation of Extremity for Re-Implantation / Revascularization
- Compound Fractures of the Hand
- Major Burns
- Necrotizing Soft Tissue Infections

RESPIROLOGY

- Unstable Pulmonary Embolism Causing Shock and/or Respiratory Failure
- Right Heart Failure with Shock
- Respiratory Failure with Need of Invasive or Non-Invasive Mechanical Ventilation
- Severe Cystic Fibrosis

SPINE

- Acute Deteriorating Cauda Equine Syndrome
- Acute Deteriorating Spinal Cord Function
- Spinal Cord Injury
- Unstable Spinal Injury

THORACIC SURGERY

- Intrathoracic Airway Obstruction
- Issues Related to Lung Transplant
- Massive Hemoptysis
- Massive Hemothorax
- Ruptured Bronchus or Trachea
- Ruptured Esophagus
- Strangulated Diaphragmatic Hernia

UROLOGY

- Acute Priapism
- Necrotizing Scrotal Infection/Fornier's Gangrene
- Obstructive Uropathy
- Renal Infection with Vascular Impairment
- Renal Trauma with Hemodynamic Instability
- Testicular Torsion

Attachment 2 – Escort Scope of Practice Overview

Registered Nurse

- Regulated health profession

From critical care areas: e.g. ICU, Cardiac Care
- Ability to manage unpredictable patients – have appropriate training e.g. ACLS
- Cardiac monitoring, various infusions and fluid balance monitoring
- Airway assessment and support
- Utilize medical directives while on transfer (such as defibrillation and transcutaneous pacing)

From non-critical care areas:
- Provide care to patients that they would usually be assigned and the associated treatments as ordered by the MRPs

Registered Practical Nurse

- Regulated health profession

Standard practice:
- Provide care to patients that they would usually be assigned and the associated treatments as ordered by the MRP
- The Three-Factor Framework (Client , Nurse, and Environment) should be used to make a decision about which nursing category (RN or RPN) to match with the patient needs (College of Nurses Ontario)
  - RPN are needed in more stable environments for less complex, more predictable patients with a low risk for negative outcomes

Respiratory Therapist

- Regulated health profession

Standard practice:
- Provide oxygen therapy, cardio-respiratory equipment monitoring, assessment and treatment of cardio-respiratory and associated disorders to maintain or restore ventilation
- Suction beyond the point in the nasal passages where they normally narrow or beyond the larynx
- Administer a prescribed substance by inhalation

With a medical directive/order:
- Perform a prescribed procedure below the dermis
- Intubation beyond the point in the nasal passages where they normally narrow or beyond the larynx
- Administer a substance by injection or inhalation

Stretcher Transportation Service Attendant

- Non-regulated

- Minimum level of skills may vary among providers

May have training in:
- Standard first aid
- Emergency first responder
- Basic life support
- Oxygen administration
- Mobility assistance – transfers, ambulation, positioning
- Activities of daily living

Attachment 2 – Escort Scope of Practice Overview (continued)

Health Care Aid / Personal Support Worker

- Non-regulated

May have training in:
- Standard first aid
- Basic life support
- Mobility assistance – transfers, ambulation, positioning
- Activities of daily living
- Basic hygiene

Lay Person – e.g. Family, Taxi Driver, Volunteer

- Non-regulated

May be able to provide:
- Mobility assistance – transfers, ambulation, positioning
- Activities of daily living

May have training in:
- Standard first aid
- Basic life support

Security Guard

- Regulated
- Must have a valid Ontario security guard licence

At minimum, will have undergone basic training in being a security guard (40 hours)
- Basic security procedures
- Emergency level first aid
- Sensitivity training
- Health and safety

Hospital security guards may have training in:
- Dealing with elderly
- Dealing with disturbed, disruptive or potentially aggressive persons

Attachment 3 – References

1. Hamilton Health Sciences Centre, Decision Guide for Ambulance and Non-Ambulance Patient Transport (NAPT) Service – Adult Patient, 2011
2. St. Joseph's Health Centre Decision Guide for Ambulance and Non-Ambulance Medical Transfer Service, 2006
3. Champlain LHIN Non-urgent Patient Transportation Project (adopted from London Health Sciences Centre)
4. London Health Sciences Centre, Patient Transport (PT) Decision Guide – V. 3.3Hospital initiated patient transfers , May 9, 2013
5. Sudbury-Manitoulin Pilot, Patient Transport Decision Matrix
6. Stable for Transport Guidelines, Criteria Manual Chapter 5.4, California Department of Health Care Services, Government of California
7. Guide for Interfacility Patient Transfer, National Highway Traffic Safety Administration
8. Life or Limb Policy – Implementation Guide, Critical Care Services Ontario
9. Leamington Hospital, Appendix D, in-patient transport protocol
10. Nottingham University Trust, NHS, Patient Transport Policy and Procedures, 2010
11. MOHLTC Stakeholder discussions, 2014