

Guide to Service Levels

MEDICAL FIRST RESPONSE

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Introduction

The goal of emergency medical service (EMS) is to provide optimal medical response to patients suffering life-threatening illnesses and injuries in the community. Many EMS systems respond simultaneously with municipal fire departments. This dual-response model can provide faster delivery of life-saving care, reduce ambulance scene times, improve patient outcomes and increase citizen satisfaction and comfort in their community.



Since 1982, many Manitoba municipalities have successfully adopted this dual response model utilizing volunteer-based staffing. Following recent changes to prehospital care standards, many municipalities have expressed concern over the ability to recruit and retain appropriate staffing levels for consistent medical first response. Concerns relate to cost and time commitment required for initial and ongoing training and cost of annual registration with the College of Paramedics of Manitoba (CPMB).

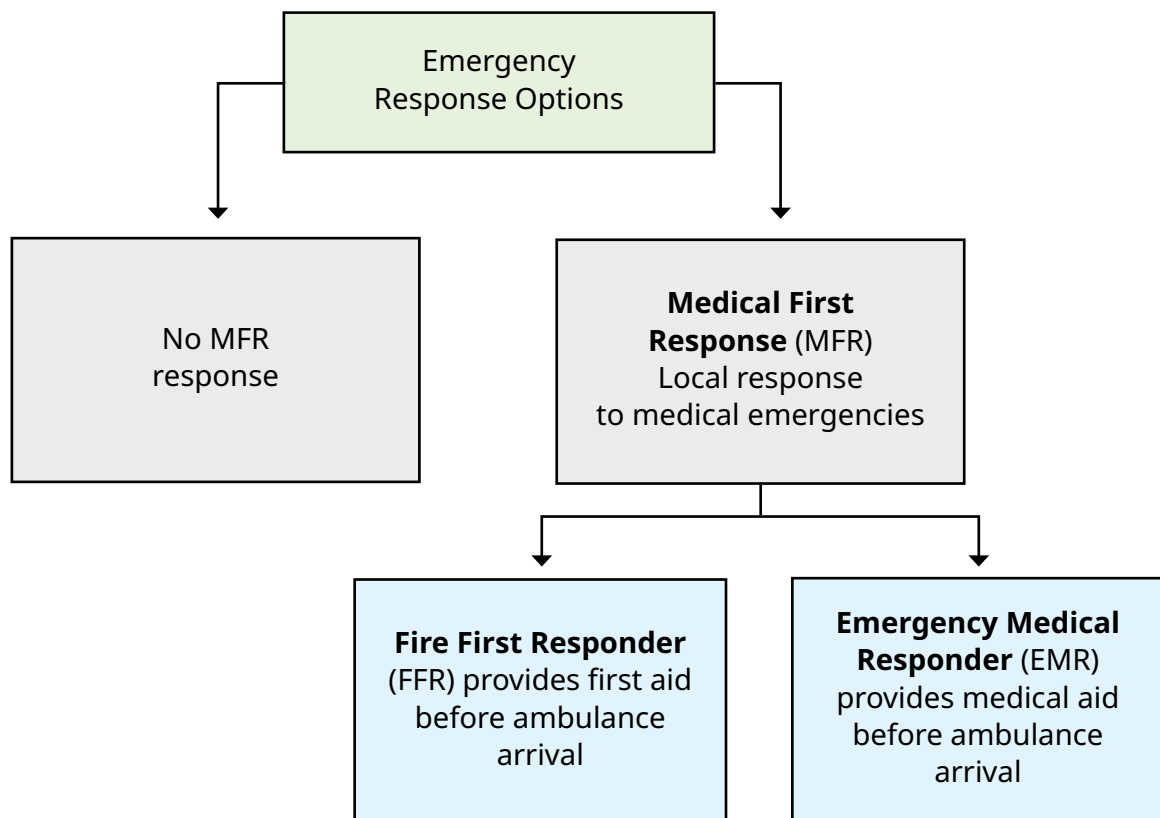
As the legal operator of the community fire department, a local authority could include a municipality, northern affairs community, Indigenous community, or a local government district. This document is intended to provide guidance to a local authority that seeks to augment EMS response in its community and is considering implementing a dual medical response model from an existing community fire department.

This document:

- describes the volunteer-based medical first response system and levels of response available
- guides the local authority through a service area self-assessment and informs the decision-making process for the desired level of service to be provided
- provides a tool to estimate start-up and ongoing costs required to support the service, and
- provides information on licensing and suggestions for evaluating the success of the service once it has been implemented.

What is a Medical First Response?

Medical First Response (MFR) is a licensed land emergency medical response system that can provide time-sensitive, life-saving care within minutes of a call for help. The MFR unit is owned by the local authority and is operated by the community fire department. The local authority is licensed by the Licensing and Compliance Branch (LCB) of Manitoba Health, Seniors and Long-Term Care under the authority of The Emergency Medical Response and Stretcher Transportation Act and Land Emergency Medical Response System Regulation (the Regulation). The MFR apparatus is defined in the Regulation as “a motor vehicle that is designed to provide rapid primary intervention... but which is not designed or used to transport patients”. The MFR unit is not equipped or licensed to transport a patient and therefore must be dispatched with an ambulance. This simultaneous dispatch is facilitated through an agreement between the authority and Shared Health Emergency Response Services (ERS).



The MFR platform uses a vehicle that is designed to transport crew and medical equipment. The medical equipment includes the medications, equipment, apparatus and other items that are reasonably required to enable the provision of emergency medical response service at the appropriate level based on the crew training.

What is a Fire First Responder?

A Fire First Responder (FFR) is a volunteer or employee of the authority operating the licensed MFR system. An FFR must be at least 18 years old and have current first aid and basic life support certification. To be eligible, the advanced-level first aid and basic life support courses must be approved by the Minister of Health, Seniors and Long-Term Care. All applications for approval of training courses must be submitted to LCB, who also maintains a cumulative list of approved courses.

Any FFR that drives the MFR apparatus must also have a Class 4F Manitoba driver's licence and, if the apparatus is equipped with air brakes, an air brake endorsement. Contact Manitoba Public Insurance for more information on these certifications.



The FFR must be an employee or volunteer of the community fire department, but is not considered a regulated health professional and therefore does not require registration with the College of Paramedics of Manitoba (CPMB). FFR personnel must maintain competency through maintaining current certification of approved first aid and approved basic life support courses. The MFR licence requires the system owner to provide a quality assurance program. Through its agreement, Shared Health Emergency Response Services (ERS) may also require a quality assurance program as determined by its medical directors.

What is an Emergency Medical Responder?

An Emergency Medical Responder (EMR) is a volunteer or employee of the authority which operates the licensed MFR service. An EMR has graduated from an EMR course provided through an educational institution certified by CPMB and passed an entry to practice examination administered by the Canadian Organization of Paramedic Regulators.

Any EMR that drives the MFR apparatus must also have a Class 4F Manitoba driver's licence and, if the apparatus is equipped with air brakes, an air brake endorsement. Contact Manitoba Public Insurance for more information.



The EMR is a regulated health professional which must be registered the CPMB. Registration with the CPMB provides the EMR with a certificate of practice which permits the EMR to perform medical assessments and treatments within their scope of practice. The EMR must participate in any quality assurance program provided by the authority in addition to participating in the Continuing Competency process provided by the CPMB. A quality assurance program involves a systematic review of patient care incidents and provide training support to improve patient care performance and effectiveness.

What is the difference between FFR and EMR?

Although both provide the same rapid response to a medical emergency, the capabilities differ in the care provided by the two levels of responder. Due to the higher level of training, the EMR level allows for medical director standing orders that permit the administration of certain medications that an FFR cannot independently provide. Although the FFR cannot administer the same medications as an EMR, the FFR can assist the patient with the same self-administration of prescribed medications or administer other medications on the direction of Medical Transportation Coordination Centre's (MTCC)/911 online medical support.

The scope of work for both levels are defined by the agreement between the local authority/community fire department and Shared Health ERS. This may mean that, while both FFR and EMR capable MFR units respond to situations where there is a threat or potential threat to life or limb, only MFR units may be dispatched to situations in which a stable patient's condition could progress to a serious problem. Neither FFR nor EMR capable MFRs would be dispatched to less urgent patient conditions or to chronic conditions that are non-urgent or without evidence of deterioration.

FFR scope of work

- CPR and use of AED
- airway management with oropharyngeal airway
- ventilate patient with bag-valve mask device
- bleeding control and tourniquet use
- wound care
- independently administer:
 - o naloxone
 - o oxygen
- when directed by medical control, administer:
 - o ASA
 - o epinephrine auto-injector
 - o glucose
- if the patient has a pre-existing prescription, administer:
 - o epinephrine auto-injector
 - o salbutamol
- assist patient with medication prescribed to that patient

EMR scope of work

- CPR and use of AED
- airway management with oropharyngeal and nasopharyngeal airways
- ventilate patient with bag-valve mask device
- bleeding control and tourniquet use
- vital sign assessment
- assess medical history
- wound care including irrigation
- independently administer:
 - o naloxone
 - o oxygen
 - o ASA
 - o epinephrine auto-injector
 - o glucose
 - o acetaminophen
 - o ibuprofen
 - o salbutamol inhaler
- assist patient with medication prescribed to that patient

What conditions can be treated?

Problem	FFR can treat	EMR can treat
cardiac arrest	✓	✓
severe bleeding	✓	✓
obstructed airway	✓	✓
not breathing	✓	✓
narcotic overdose	✓	✓
heart attack	✓ *	✓
hypoglycemia	✓ *	✓
asthma attack	✓ **	✓
anaphylaxis	✓ ***	✓
pain	✗	✓

* if directed to by medical control such as Medical Transport Coordination Centre (MTCC)/911 online medical support

** if patient has salbutamol prescription

*** if patient has epinephrine auto-injector prescription

Who else can respond on an MFR apparatus?

For responder safety, an MFR unit should be staffed with two responders. One responder must be an FFR, a CPMB-registered EMR or a CPMB-registered paramedic. Ideally, the second responder should also be an FFR, an EMR or a paramedic but this is not necessary.

Response strategy

Urgency levels are based on the Medical Priority Dispatch System (MPDS).

Urgency Level	Resources Dispatched
Threat to life or limb	MFR with FFR or EMR, ambulance
Potential threat to life or limb	MFR with FFR or EMR, ambulance
Potential to deteriorate from stable to unstable	MFR with EMR, ambulance

Can an MFR apparatus use both FFR and EMR levels?

The level of care provided by an MFR unit over a shift of work is defined by the agreement with Shared Health ERS to the scope of work of either FFR or EMR, depending on the staffing. In other words, if an EMR is responding on the MFR, then the EMR level of care must be provided. If the MFR is not staffed with an EMR or paramedic, then the FFR level of care is provided. Even if the responding MFR unit includes a paramedic, the scope of work is limited to an EMR, as the unit is only licensed to provide MFR, regardless of the higher level of medical care training the paramedic has. The scope of work must be agreed to in the Service Agreement between the authority and Shared Health ERS.

Would your community benefit with the addition of an MFR?

Having an EMS station in your community should not prevent your consideration of establishing an MFR service. MFRs are designed to augment existing ambulance resources. Municipalities are encouraged to collaborate with Shared Health (emergencyresponseservices@sharedhealthmb.ca) in determining when to establish medical first response..

Will community members volunteer to support the response?

A preliminary step in determining if the community can support an MFR service is to assess for volunteer interest. Ideally, an MFR unit requires at least two responders 24 hours a day, 7 days a week including holidays. Extra volunteers will be needed to provide relief and cover times when a volunteer is unavailable due to illness, injury, vacation, etc. Alternatively, the MFR could also be staffed by those already employed by the municipality or a combination of both.

Administrative support is required to schedule staffing, order supplies, track volunteer time and time on response for compensation, develop budgets, and create reports required for municipal oversight and provincial regulation.

How much does this cost?

Initial capital costs can be prohibitive for a stand-alone emergency response station. This is why MFR services are commonly affiliated with existing fire departments. A base station for an MFR service shares many of the same requirements as that of a fire hall. Additionally, the MFR service must have access to a licensed public safety answering point. A public safety answering point is a communication centre that receives emergency communications and directs communications to emergency service providers. An existing fire department will already have this communication system in place. Most MFR emergency communications are routed through the provincial 911 system to MTCC.

Worksheet A can be used to estimate initial capital costs. Worksheets are for internal use only and do not need to be submitted to LCB but could be used to demonstrate financial sustainability for Shared Health ERS.

The most significant cost difference between FFR and EMR involves training and registration fees. An FFR requires an LCB approved advanced-level first aid certification and basic life support certification. A list of approved courses is available on the LCB website or by contacting LCB at EMSLicensing@gov.mb.ca. First aid course providers, such as Canada Red Cross or St. John Ambulance, can be accessed online or through various private education companies. Course fees and hours of instruction vary and some courses may be hosted in a local community site or use a blend of online and in-person instruction to reduce expense, providing more convenience for volunteers.

Worksheet B provides a tool to estimate personnel costs.

Equipment required for both levels of response is listed in **Appendix A** and **Appendix B**.

What are the ongoing obligations?

Many of the annual ongoing obligations are similar to operation of a fire service. Committing to providing emergency medical response means committing to recruiting and training enough volunteers or employees to ensure response capability.

The licensed operator of a land-based emergency medical response service, which includes MFR, must maintain an annual liability insurance for each response vehicle of \$2,000,000 and commercial liability and omissions insurance in an amount of at least \$5,000,000. Local authorities should review existing policies to ensure proper coverage is in place.

FFR providers are required to maintain their certifications through refresher or recertification courses. These courses are less costly and of shorter duration than the initial course. First aid recertification is required every three years while the basic life support is recertified annually. Shared Health ERS may also require FFRs to maintain additional competencies, which would be defined in the local authority's service agreement. **FFR providers do not pay an annual CPMB registration fee and are not required to purchase personal insurance. There is no charge for an annual Manitoba Land Emergency Medical Response licence.**

EMRs and paramedics are members of a regulated profession. This requires registration with the CPMB which involves annual registration fee and personal insurance.

Other incidental costs include station utilities, consumables used in training and patient care, station maintenance including snow clearing and lawn care, equipment maintenance or replacement, vehicle maintenance and leasing, and cleaning supplies. These costs will vary considerably depending on service location, call volume, staff size, and even weather and road conditions.

Although an emergency response service must be licensed by Manitoba Health, Seniors and Long-Term Care, there are no licensing or registration fees involved. **Worksheet C** will assist in estimating the incidental costs.

Once costs are estimated, funding sources must be considered. This can range from tax revenue to donations from fund-raising projects. Funding may be available from other sources such as government grants. One possible source of government funding for fire departments is the Office of the Fire Commissioner (OFC). Each year, the OFC administers up to \$360,000 to reduce financial barriers to the fire service, create accessible training, and enhance a fire service's ability to train closer to home. Community fire departments may also be eligible for the Manitoba Growth, Renewal and Opportunities Grant Program which can fund up to 50% of total eligible costs for capital projects such as fire stations and fire apparatus including MFR vehicles. For more information, please visit https://firecomm.gov.mb.ca/support_ma_building_fund.html or contact the Office of the Fire Commissioner at firecomm@gov.mb.ca.

How do you establish MFR for your community?

First, the local authority must confirm community support for a MFR service and then determine which level of care will be provided. This will determine the skills and training necessary for its personnel. The service level is established as a formal policy for the local authority (whether by bylaw, policy, etc.) and needs to be fully reflected in the community fire department's operating guidelines.

In order for a land emergency medical response systems to become licensed, Shared Health ERS must confirm that there is a need for services in the area the community fire department operates. Approval of a new MFR service, or changes to an existing MFR service, will be reviewed based on evidence-based dispatch and response data from MTCC, as well as evidence of financial sustainability.

Local authorities proposing MFR services must submit a draft proposal to Shared Health ERS for review which includes:

- Executive summary of proposed MFR services delivered by either EMRs or FFRs
- Strategic explanation for the addition of MFR services
- Explanation of how addition of an MFR service strategically aligns with priorities of the community, Shared Health and government
- Economic case and options
- Financial analysis with anticipated costs and benefits
- Proposed funding source.

Proposals or inquiries can be sent to emergencyresponseservices@sharedhealthmb.ca.

Once Shared Health has approved your proposal, authorities must begin acquiring funding and infrastructure, developing policy and procedure and training responders. The authority must also notify Manitoba Emergency Measures Organization (EMO) to coordinate communications through the existing public safety answering point (911). If the new MFR service is part of an existing fire department, the authority must also notify the OFC.

All land emergency medical response systems are required by regulation to be licensed by LCB prior to delivering services. While a local authority can initiate an application to licensure at any time, LCB cannot issue a licence without written approval from Shared Health. LCB also requires information on:

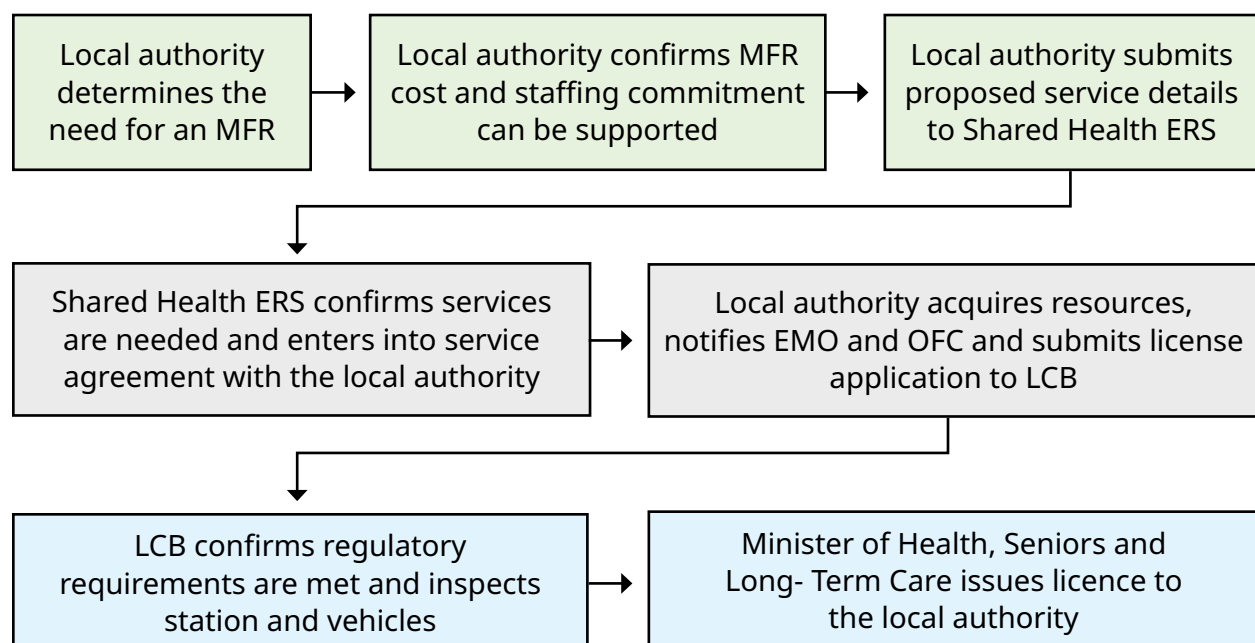
- the service organization
- evidence of liability insurance for each responding vehicle
- the local authority's commercial liability and errors and omissions insurance
- written agreement between the local authority/community fire department and Shared Health ERS
- evidence of safety and registration for each responding vehicle
- the level of service intended to be provided (i.e., EMRs or FFRs)
- evidence of established policies to ensure patient and responder safety
- confirmation that proper training and equipment have been acquired to provide the proposed level of service.

The application package can be requested by contacting LCB at EMSLicensing@gov.mb.ca.

Required application information is listed in **Appendix C**.

LCB will review the application package for completeness and coordinate an inspection with the community fire department. The in-person inspection of vehicle(s) and infrastructure is the final step to licensure. To assist with preparation, an inspection form will be provided before the inspection. A representative from Shared Health ERS may also attend the inspection to provide support.

Licensing Process



How can you tell if it's working?

The Emergency Medical Response and Stretcher Transportation Act provides for routine inspection of emergency medical response vehicles and infrastructure to ensure appropriate standards and policies are in place and patient safety is not at risk. If an issue is identified, LCB will provide guidance to resolve any non-compliance issues.

Emergency medical response services are required by regulation to keep records of response times and emergency interventions. These records are used for the documentation of patient contacts and quality assurance programs to track service performance. Staff satisfaction along with ease of recruitment and staff retention are also good general indicators of success. Of course, one of the best ways to gauge the success of a community service is to solicit the opinion of the community.

For more information, please contact EMSlicensing@gov.mb.ca.

WORKSHEET A – Site – Apparatus Bay and Crew Quarters

Recommended Site Characteristics

Apparatus Bay	<ul style="list-style-type: none"> • large enough to fit vehicle with cabinet and vehicle doors open • waterproof walls • environmentally controlled space if medications are stored on vehicle • adequate drainage • water source to clean vehicle • carbon monoxide sensor
Storage Area	<ul style="list-style-type: none"> • enough space to store supplies • secured and environmentally controlled if medication storage is involved • cabinets secured to walls • supplies protected from exhaust, water, and rodent damage • locked storage area for extra medication and expired medication storage • fire extinguisher
Disinfection Area	<ul style="list-style-type: none"> • non-porous surfaces • water source • cleaning basin and drainage • chemical storage space for cleaners • biohazard-approved storage containers
Office Area	<ul style="list-style-type: none"> • Personal Health Information Act (PHIA)-compliant secured storage for patient care reports • toilet and sink • Workplace Safety and Health (WSH) notice board • enough space to provide meetings and/or first aid training (may be located offsite)
Parking Area	<ul style="list-style-type: none"> • enough space for responders to park personal vehicles without obstructing apparatus bay door(s) • lighting • drainage

Note that this list is intended to provoke consideration of various aspects site characteristics and may not be complete.

Site-Related Expenses

ITEM	MONTHLY EXPENSE	ANNUAL EXPENSE
Mortgage / Rent		
Electricity		
Water (if applicable)		
Septic (if applicable)		
Building Maintenance		
Vehicle Loan/Lease		
Vehicle Maintenance		
Heating (if not electric)		
Property Tax (if appropriate)		
Insurance		
Total Site-Related Expenses		

Note that this list is intended to provoke consideration of various aspects site-related expenses and may not be complete.

WORKSHEET B – Personnel Expenses

First Responder

ITEM	NUMBER OF VOLUNTEERS	COST PER VOLUNTEER	COST PER INCIDENT	WEEKLY TOTAL	MONTHLY TOTAL	ANNUAL TOTAL
Uniforms						
Outer wear (toques, etc.)						
Continuing Education						
Advanced First aid Recertification						
CPR Recertification						
Stand-by hourly wage (volunteer)						
Response hourly wage (volunteer)						
Hourly wage (paid staff)						
Total FR Expenses						

Note that this list is intended to provoke consideration of various aspects
or FFR expenses and may not be complete.

Emergency Medical Responder

ITEM	NUMBER OF VOLUNTEERS	COST PER VOLUNTEER	COST PER INCIDENT	WEEKLY TOTAL	MONTHLY TOTAL	ANNUAL TOTAL
Uniforms						
Outer wear (toques, boots, etc.)						
Personal medical equipment (flashlight, etc.)						
Continuing Competency						
CPR Recertification						
College of Paramedics of Manitoba Registration						
Liability Insurance						
Stand-by hourly wage (volunteer)						
Response hourly wage (volunteer)						
Hourly wage (paid staff)						
Total EMR Expenses						

Note that this list is intended to provoke consideration of various aspects of EMR expenses and may not be complete

Incidental Expenses

ITEM	MONTHLY EXPENSE	ANNUAL EXPENSE
Vehicle Licence		
Land Emergency Medical Response Service Licence		
Emergency Vehicle Liability Insurance		
Liability and Omissions Insurance		
Vehicle Fuel		
Consumable Medical Supplies		
Cleaning and Disinfecting Solutions		
Station Consumables		
Other		
Other		
Total Incidental Expenses		

Note that this list is intended to provoke consideration of various aspects of incidental expenses and may not be complete.

Revenue

SOURCES	MONTHLY INCOME	ANNUAL REVENUE
Property Tax		
Fundraising		
Donations		
Federal grants		
Provincial grants		
Other		
Total Revenue		

Note: this list is intended to illustrate the revenue-estimating process and may not be complete.

Expenses

ITEM	ANNUAL COST
Site-Related	
First Responder	
Emergency Medical Responder	
Incidental	
Total Expenses	

Note: this list is intended to illustrate the expense-estimating process and may not be complete.

APPENDIX A – Fire First Responder Equipment

Item Name (minimum quantity per MFR vehicle)

Medications:

Insta Glucose tube (2)
Epi Pen 0.3mg (2)
Epi Pen 0.15mg (2)
naloxone kit (1)
acetylsalicylic acid chewable 80mg (4)
salbutamol inhaler with aerochamber (2)
oxygen D cylinders (2)

Consumables:

disposable razors (2)	saline solution, 500ml (1)
sharps container (1)	adult defibrillator pad (2)
obstetrical kit (1)	suction cannister (1)
burn kit (1)	epistaxis clip (1)
assorted cervical collars (1)	tourniquets (2)
assorted oropharyngeal airways (1)	pelvic binder (2)
assorted bag-valve mask devices (1)	triage tag (20)
non-rebreather masks, adult (2)	nail polish remover (1)
non-rebreather masks, pediatric (1)	hot pack (2)
nasal cannula (2)	cold pack (2)
triangular bandage (4)	pen light, including batteries (2)
abdominal pad (8)	hand sanitizer (1)
gauze bandage roll (4)	convenience bags for body waste (2)
adhesive bandage box (1)	garbage bags (2)
absorbent pad (2)	pens (2)
4 X 4 gauze dressing (10)	

Equipment:

- flashlight, including batteries (1)
- window punch (1)
- seat belt cutter (1)
- pocket mask (1)
- equipment and supply bags (1)
- reusable splint set (1)
- manual suction device (1)
- shears (2)
- AED (1)
- spare AED battery (1)
- CANUTEC Emergency Response Guide (1)

Personal Protective Equipment:

- face shield (1 per provider)
- eye shield (1 per provider)
- N95 mask (1 per provider)
- disposable gown (1 per provider)
- procedure mask (5 per provider)
- assorted sizes of examination gloves (1 per provider per call)

Other:

- blankets (4)
- towels (4)
- patient care reports (10)

Note that this list is subject to change.

APPENDIX B – Emergency Medical Responder Equipment

Item Name (minimum quantity per MFR vehicle)

Medications:

Insta Glucose tube (2)
Epi Pen 0.3mg (2)
Epi Pen 0.15mg (2)
naloxone vial 2mg (2)
glucagon kit (1)
acetylsalicylic acid chewable 80mg (4)
salbutamol inhaler with aerochamber (2)
oxygen D cylinders (2)
ibuprofen (to be specified)
acetaminophen (to be specified)

Diagnostic Tools:

glucometer and testing strips (1)
high/low testing glucometer testing solution (1)
tympanic thermometer and probe covers (1)
pulse oximeter with adult and pediatric probes (1)
BP cuff set (1)
stethoscope (1 per provider)
AED
spare AED battery

Consumables:

disposable razors (2)
sharps container (1)
obstetrical kit (1)
burn kit (1)
assorted cervical collars (1)
assorted oropharyngeal airways (1)
assorted nasopharyngeal airways (1)
assorted bag-valve mask devices (1)
non-rebreather masks, adult (2)
non-rebreather masks, pediatric (1)
nasal cannula (2)
triangular bandage (4)
abdominal pad (8)
gauze bandage roll (4)
adhesive bandage box (1)
absorbent pad (2)
4 X 4 gauze dressing (10)
saline solution, 500ml (1)
adult defibrillator pad (2)
suction cannister (1)
epistaxis clip (1)
intranasal atomizer (2)
tourniquets (2)
pelvic binder (2)
triage tag (20)
nail polish remover (1)
hot pack (2)
cold pack (2)
pen light, including batteries (2)
hand sanitizer (1)
convenience bags for body waste (2)

Equipment:

- equipment and supply bags (1)
- reusable splint set (1)
- manual suction device (1)
- shears (2)

Personal Protective Equipment:

- face shield (1 per provider)
- eye shield (1 per provider)
- N95 mask (1 per provider)
- disposable gown (1 per provider)
- procedure mask (5 per provider)
- assorted sizes of examination gloves (1 per provider per call)

Other:

- blankets (4)
- towels(4)
- patient care reports (10)

Note that this list is subject to change.

APPENDIX C – Land Emergency Medical Response Service Licence Requirements

	Names and addresses of the Directors and Officers of the Corporation (if incorporated)
	Names and addresses of partners (if partnership)
	Organizational chart of operational positions and reporting lines in the system
	Liability insurance policy for each MFR vehicle and the authority
	Municipal and mailing addresses of locations from which MFRs will operate
	Agreements with Shared Health pertaining to operations, medical direction, dispatch, education, and quality assurance, vehicle, equipment, and other relevant agreements
	Description of quality assurance process for medical care providers
	Certificate of inspection and safety inspection for MFR vehicle(s)
	Completed policy check list
	Completed staffing report form provided by LCB
	Completed station report form provided by LCB

