LEBANESE RED CROSS

Emergency Medical Services

Management of Patient Transportation

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Strategy 2014-2018

ACCESS to **EFFECTIVE** pre-hospital care

NORTH **LEBANON**

8 STATIONS

BEKAA

7 STATIONS

BEIRUT

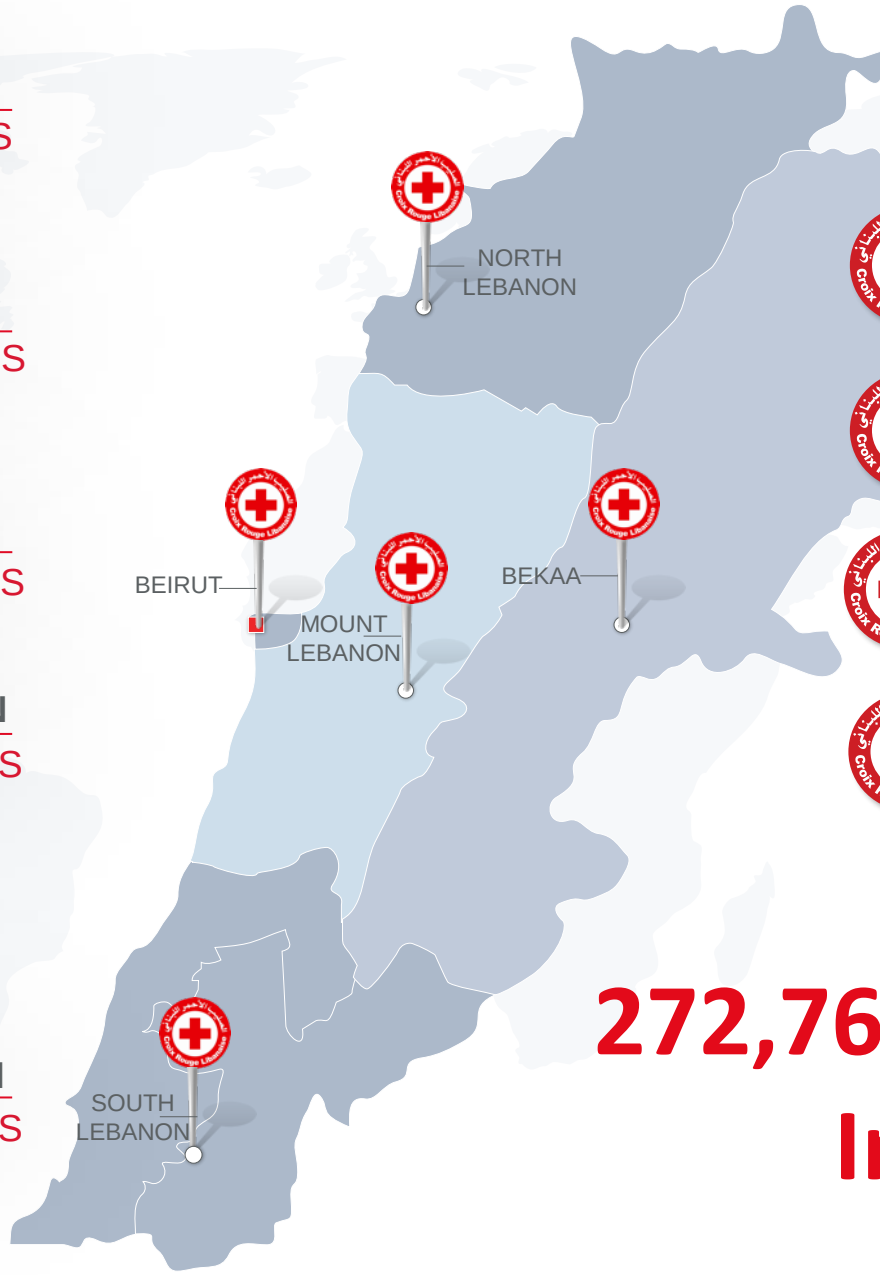
4 STATIONS

MOUNT **LEBANON**

16 STATIONS

SOUTH **LEBANON**

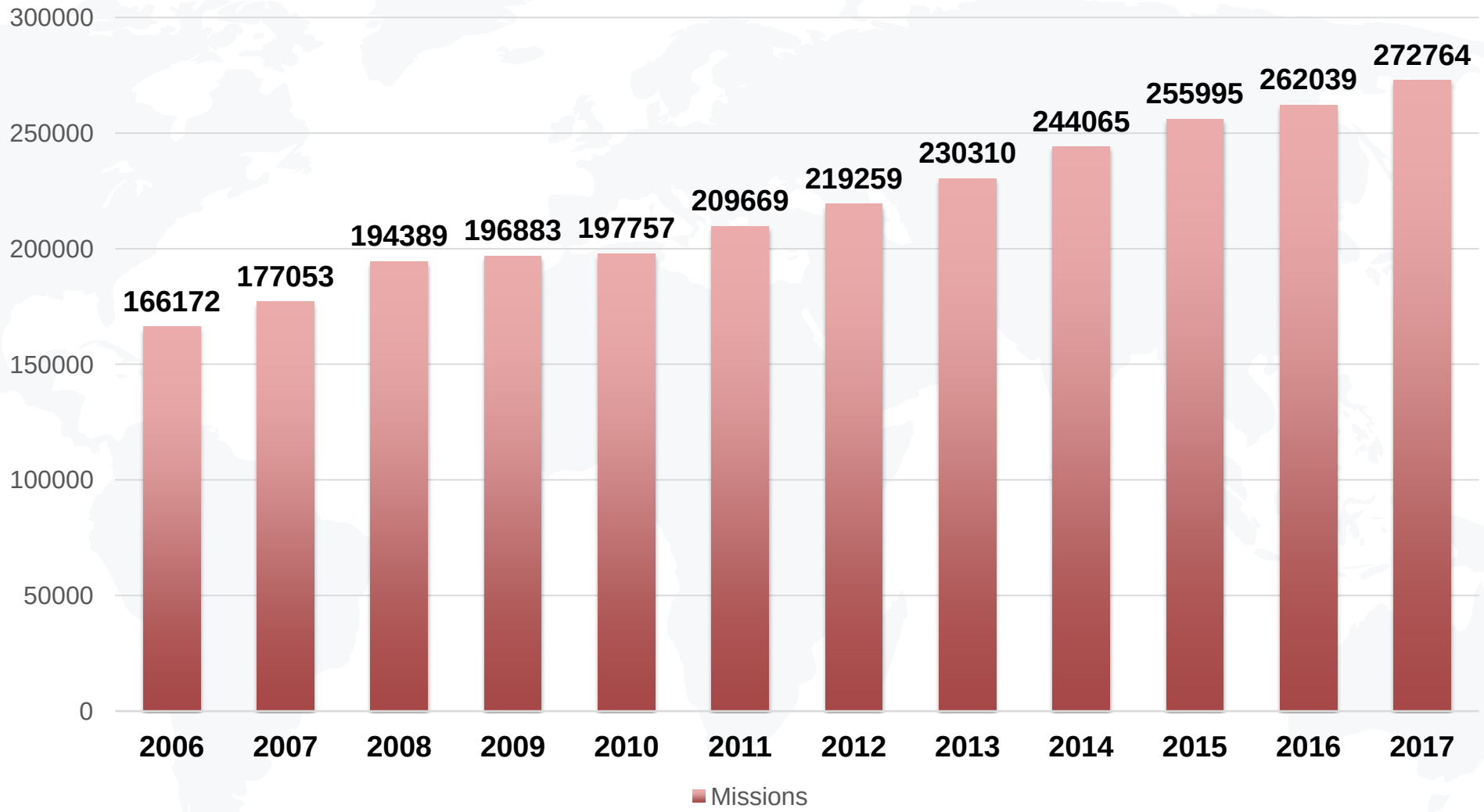
11 STATIONS



- “140” Dispatch
- 46 stations
- 300 ambulances
- 3200 EMTs

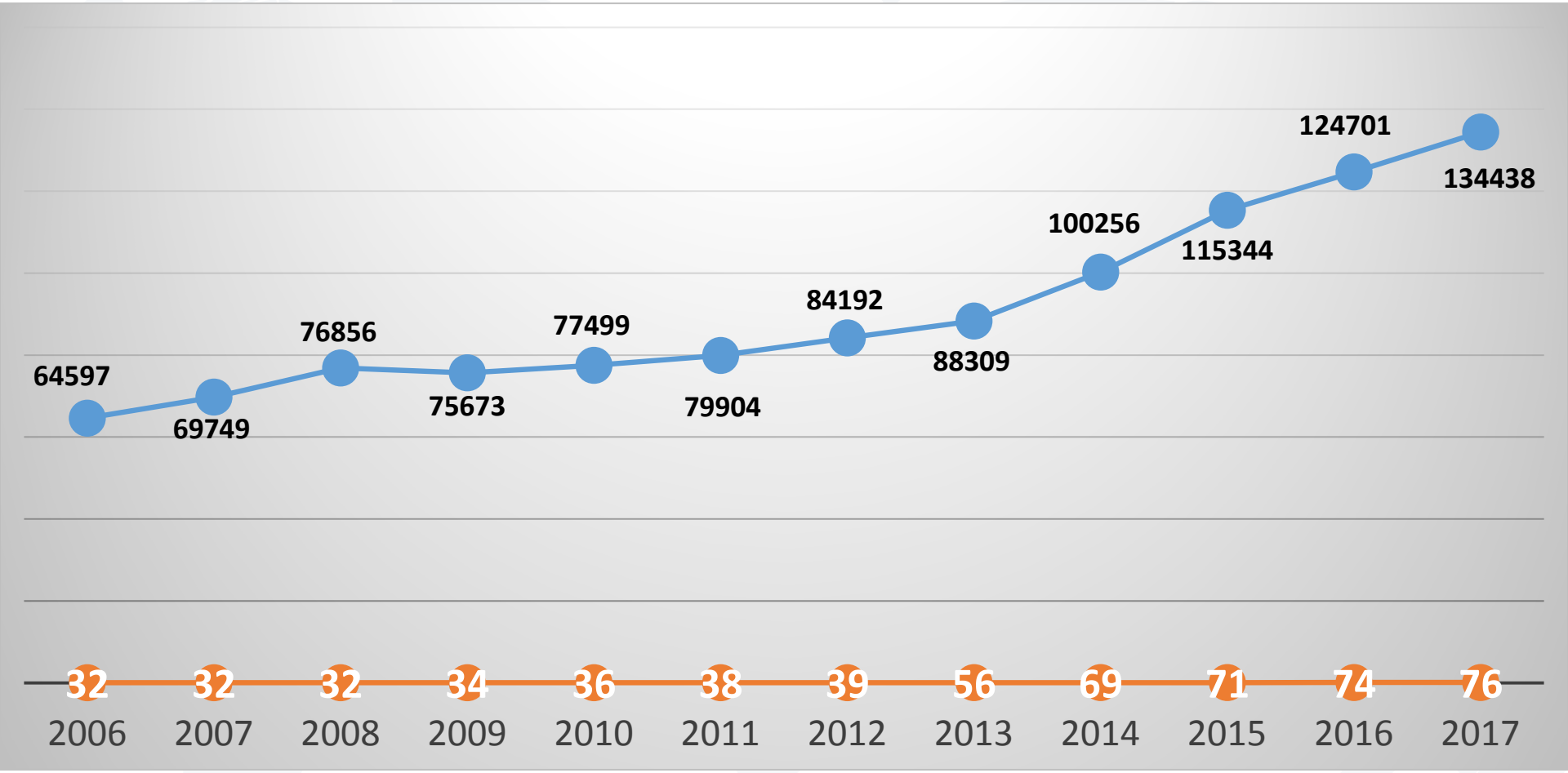
272,764 MISSIONS In 2017

LRC – EMS Missions Since 2006



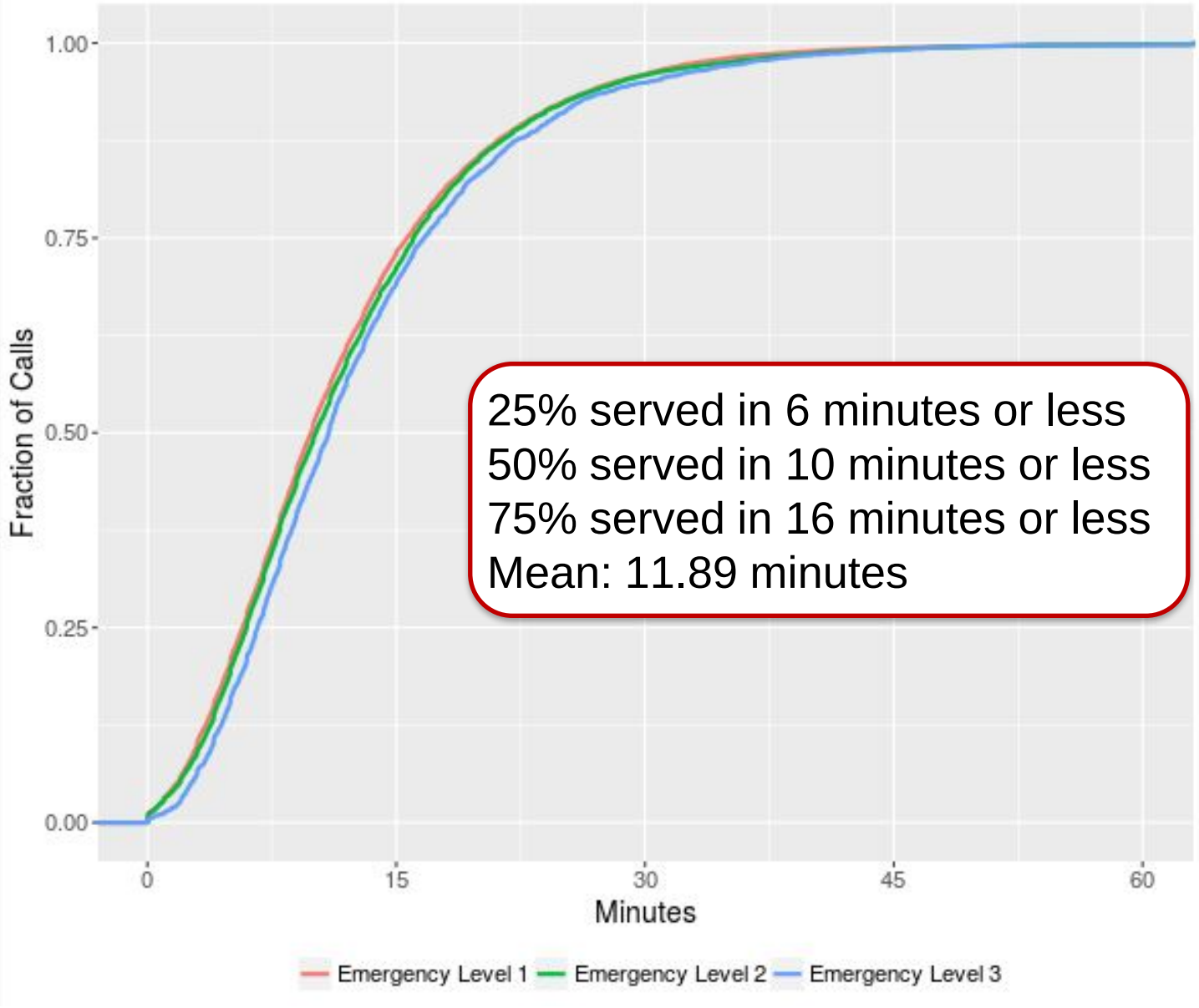
54% increase **in 10 years**

Impact of day shift teams



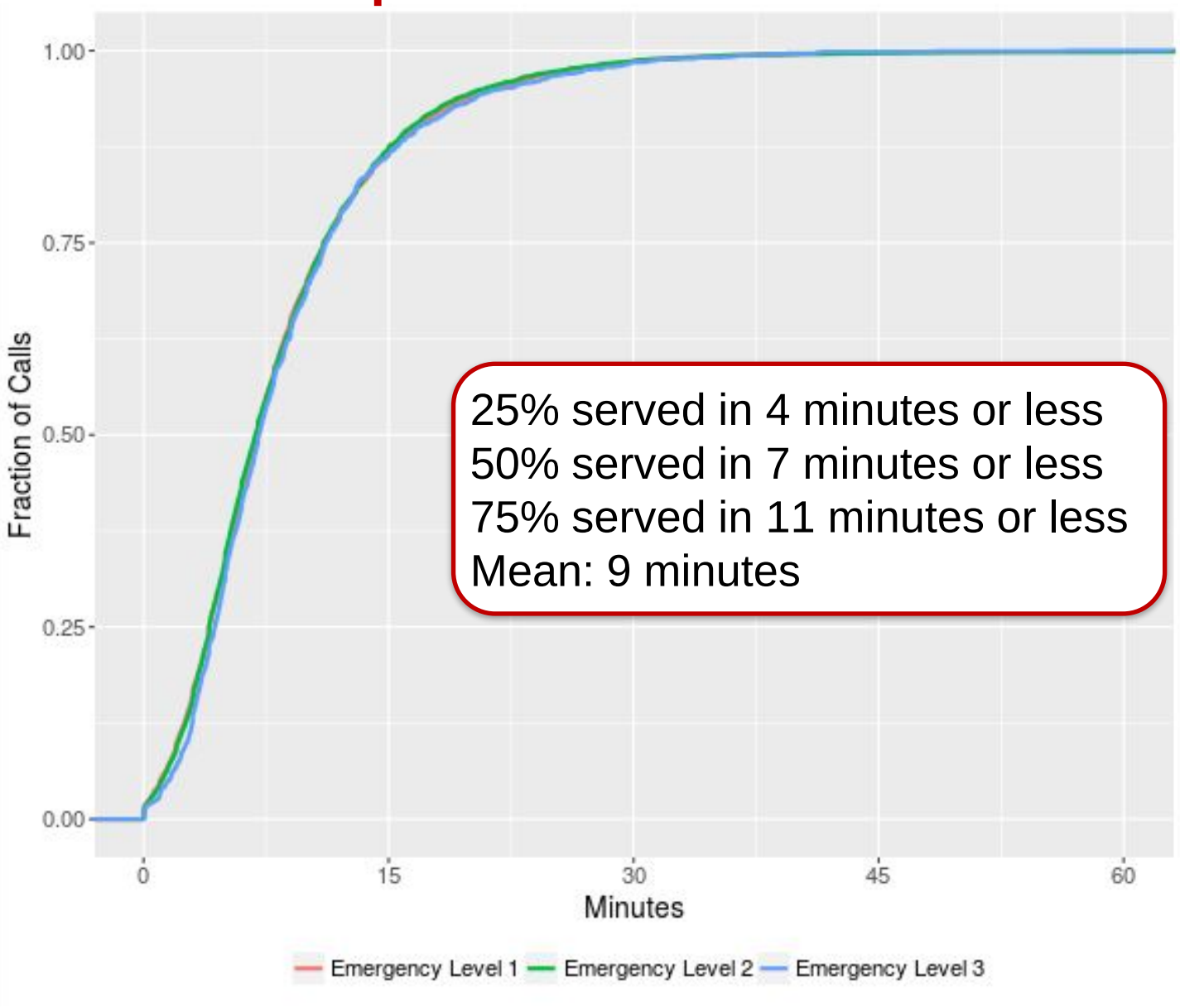
20% of unserved calls

Response time 6AM-6PM



25% served in 6 minutes or less
50% served in 10 minutes or less
75% served in 16 minutes or less
Mean: 11.89 minutes

Response time 6PM-6AM



25% served in 4 minutes or less
50% served in 7 minutes or less
75% served in 11 minutes or less
Mean: 9 minutes

LRC EMS Scope of Practice

First Aid	First Responder	Emergency Medical Technician	PHTLS
			
Life saving gestures - Acting alone	Basic knowledge & skills to provide life saving interventions	Knowledge, skills, critical thinking to provide adequate patient care	Critical thinking Trauma Principles
8 hours	**50 hours**	**100 hours**	**20 hours**

LRC EMS Guidelines

ASSISTED VENTILATION GUIDELINE

| CLINICAL GUIDLINE PURPOSE |

- Identify patient in need of assisted ventilation
- Perform assisted ventilation in accordance with international guidelines

| CLINICAL FINDINGS |

	ADEQUATE BREATHING		INADEQUATE BREATHING	
	NORMAL BREATHING	RESPIRATORY DISTRESS	RESPIRATORY FAILURE	RESPIRATORY ARREST
SOUND	Quiet, no unusual sounds	Possible unusual sounds (wheezing, stridor, or coughing)	unusual sounds (wheezing, stridor, or coughing) audible without stethoscope	No sounds of breathing
RATE	Normal	Typically elevated rate of breathing; not excessively fast, though Adequate minute volume	Often too fast >30 or too slow <10 Irregular Inadequate decreased tidal volume, shallow	None
SKIN	Normal color	Sometimes normal or pale, or cyanotic due to vasoconstriction	Pale Cyanotic	Cyanotic
MENTAL STATUS	Normal	Normal, sometimes agitated or anxious	Altered Mental Status (AMS)	Typically unconscious or rapidly becoming unconscious
CHEST MOVEMENT	Normal	Normal, possible use of accessory muscles	Minimal, unequal, use of accessory muscle, abdominal breathing, unable to speak in full sentences	Absent
OXYGEN SATURATION	>94%	94 - 90%	<90%	N/A

| PATIENT ASSESSMENT |

> Perform a primary assessment:

- Breathing:
  - » Assess the chest rise and fall
  - » Check for abnormal breathing sounds
  - » Check for cyanosis: lips and extremities
  - » Check for asymmetrical and paradoxical movement of the chest
  - » Obtain SpO2 reading
  - » Obtain the following information:
    - Respiratory rate
    - Rhythm
    - Quality of breathing
    - Depth of breathing

| PATIENT MANAGEMENT AND INTERVENTIONS |

> Assess the patient for breathing adequacy as described in the above table:

- For adequate breathing:
  - » If the patient is breathing adequately, continue patient assessment and manage accordingly
- For inadequate breathing:
  - » If the patient is in respiratory arrest, start artificial ventilation according to BLSD guideline
  - » If the patient is showing signs of respiratory failure provide oxygen according to the oxygen guideline, and assess for indications of assisted ventilation

> Indications for Assisted Ventilation: Consider providing assisted ventilation if the patient has all of the following:

- Signs of respiratory failure
- No response after oxygen provision for 3 min (e.g. SpO2<90%)
- Any of the following conditions:
  - » Respiratory Rate <10
  - » Respiratory Rate >30
  - » Inadequate chest expansion

> If indicated, start providing the patient with assisted ventilations as follows:

- Explain the procedure to the patient
- Attach BVM to high flow supplemental oxygen
- Place the mask of the BVM over the patient's mouth and nose
- Observe the patient's respirations. Gently squeeze the BVM when they begin to inhale
- Deliver the ventilation over 1 to 2 seconds until the chest rises, avoid hyperventilation
- Do not squeeze the bag with high pressure, to avoid gastric distention
- Allow the patient to exhale normally
- Follow the table below when delivering ventilations

LRC EMS Guidelines

CG9

ASSISTED VENTILATION GUIDELINE

PATIENT WITH RR >30	PATIENT WITH RR <10	INADEQUATE TIDAL VOLUME
• Start by delivering breaths every time the patient begins to inhale.	• Start by delivering breaths every time the patient begins to inhale	• Start by delivering breaths every time the patient begins to inhale
• The goal will be to increase the volume and reach an adequate rate of 12bpm	• The goal will be reach an adequate rate of 12bpm	• The goal will be to increase the volume of the breaths you deliver, monitored by chest expansion
• Over the next several breaths, adjust the rate to 12bpm so you are ventilating fewer times per minute but with greater volume per breath	• If the rate is very slow, add ventilations in between the patient's own to obtain a rate of approximately 12 per minute with adequate volume	• Adjust the rate to 12 bpm

> Patient's position while delivering assisted ventilations:

- If patient exhibits a decreased level of consciousness (LOC), insert an oropharyngeal airway (OPA, cannula), and provide ventilation while patient is in supine position
- If patient is awake and unable to lie down, provide the ventilation while the patient is in semi-sitting position without inserting an Oropharyngeal airway (OPA)

> Record all patient care information, including the patient's medical history and all treatment provided, on a Patient Care Report (PCR)

CONTRAINDICATIONS

> Do not provide assisted ventilations for patients who:

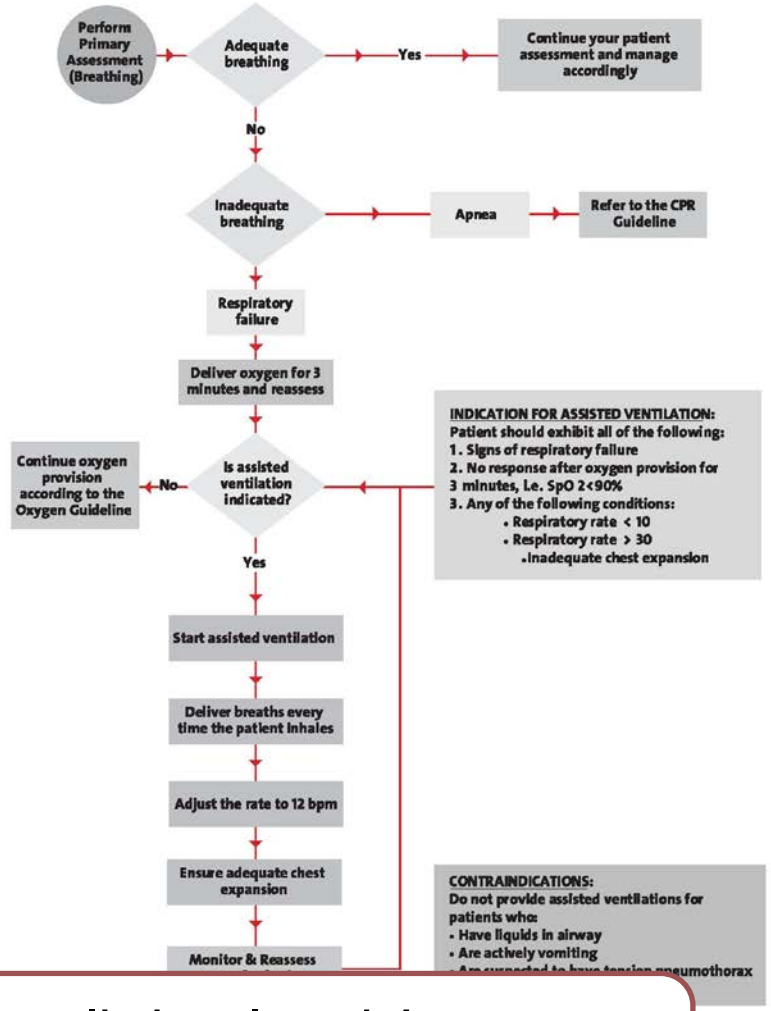
- Have liquids in his airway (blood, secretions), positive pressure ventilation will force the liquids into the patient's lungs
- Are actively vomiting, suction any vomitus from the airway before ventilating
- Are suspected to have tension pneumothorax, positive pressure ventilation will worsen their condition

PATIENT TRANSPORT

> Transport:

- Supine position if patient has decreased LOC
- In half sitting position if unable to lie down

> Monitor and reassess the pati



LRC EMS 02

eline / Dec. 2017

Introduction of written clinical guidance as part of wider governance reform

MISSION | ePCR | SUBMIT

Chest Pain

P1, M 33 years

ADD PICTURES | RECORD AUDIO

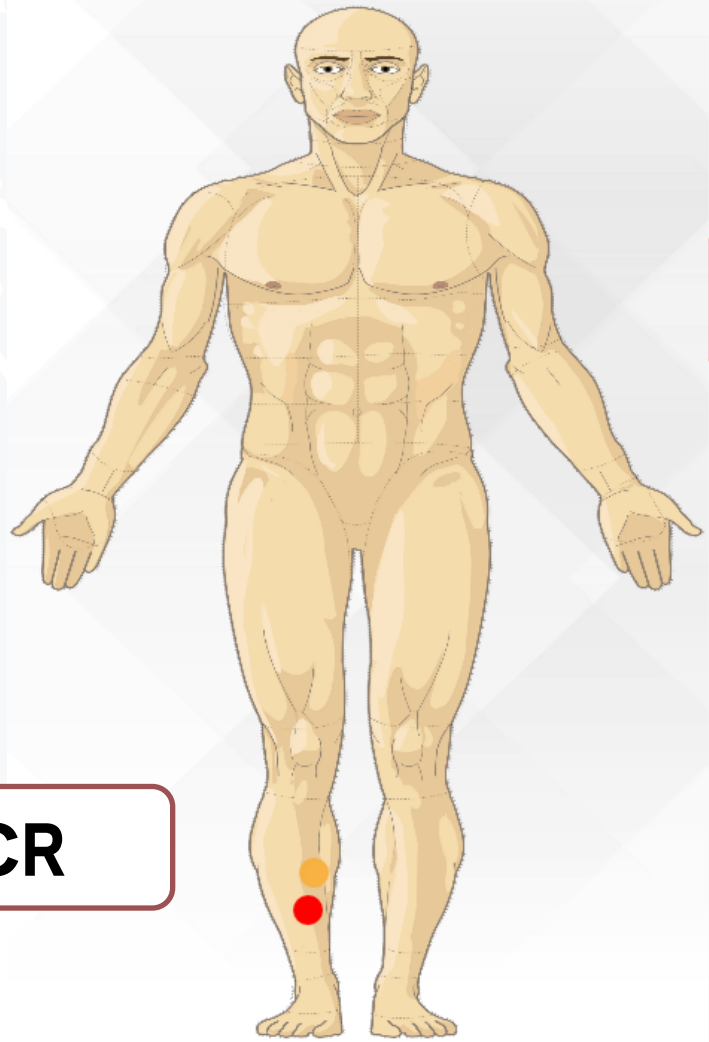
View ePcr Media Section

- PRIMARY ASSESSMENT
- BODY
- VITALS & OBSERVATIONS
- MANAGEMENT
- CLINICAL INFORMATION
- PATIENT DETAILS

ePCR

<<Swipe down for mission progress>>

BODY | RESET



- H Hemorrhage
- A Amputation
- C Contusion
- W Wound
- F Fracture
- B Burn
- P Pain
- M Motor Deficit
- S Sensory Deficit

VIEW BACK

Fracture in Right Leg ×

Contusion in Right Leg ×

EMS Challenges in Lebanon

- Fragmented system
- Lack of standardized prehospital procedures, training and education
- Non-sufficient financing for EMS

Key Stakeholders and Service Providers

Patient Transportation

- Request communicated to dispatch “140”

- Patient information included in Medical report:
  - Name, age…
  - Case, criticality
  - Required equipment (respirator…)
  - Infectious status

Patient Transportation

- Confirmation of booking in receiving hospital
  - Treating physician
  - Admission approval
- Transportation process documented
- Presence of qualified staff from transporting hospital is a must to monitor high risk patients

Pt. Transportation – Medical Oversight

- Hospital report is shared with LRC EMS medical director
- Medical director confirms the appropriate use of PPE in case of unknown communicable disease
- Disinfection of ambulance is done after the patient transport

Challenges related to patient transport

- Request for transporting a patient to another facility with infectious disease should be communicated from hospital staff and not family members
- Lack of awareness of infectious diseases among EMT's
- Lack of standardized prehospital procedures in relation to infectious diseases

Looking forward

- Dissemination of Clinical Guidelines and Infection Prevention and Control Policies to all LRC EMS personnel
- Better communication about communicable diseases internally and with external stakeholders
- A unified transportation request sheet is under progress between LRC and syndicate of hospitals

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Questions