

TITLE

THRESHOLDS FOR ASSIGNED WORK HOURS AND RESOURCE UTILIZATION

SCOPE

Provincial: Emergency Medical Services

DOCUMENT

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NOTE: The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

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OBJECTIVES

- To outline Alberta Health Services (AHS) process to determine Emergency Medical Services (EMS) hours of work and resource utilization. Decisions are inclusive of start/stop times, start/stop locations, **core-flex** hours, on-call hours, **24 hour resources**, **day/night resources**, and **peak resources**.
- To utilize established key indicators for all EMS 24 hour resources to be categorized into **unit commitment thresholds (UCTs)**. UCTs assist in defining the appropriateness of the use of the resource. The thresholds for assigned work hours shall be reassessed annually.
- To align with the *Employment Standards Code* (Alberta).

PRINCIPLES

Historically, varying workloads in EMS have been perceived and measured in many different ways, including **unit hour utilization**, incident responses, and availability percentages. This data could be interpreted in assorted ways depending on various factors and create inconsistent processes and direction. This Policy identifies standardized, measurable core attributes that quantify the activities of an EMS crew.

APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, students, volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary).

ELEMENTS

1. Unit Commitment Threshold

- 1.1 All EMS 24 hour resources must be categorized into a UCT using the **Tolerance Schedule**, see Appendix A: *Tolerance Schedule*.
- 1.2 Core attributes that quantify the activities of an EMS crew:
 - a) **dark hour assigned**;
 - b) **dark hour utilization**;
 - c) **downtime compliance**;
 - d) **emergent event volume**;
 - e) **fatigued** history;
 - f) **global unit hour utilization**;
 - g) **timed out** history; and
 - h) **total downtime**.

2. Unit Commitment Threshold - Under Utilization

- 2.1 A UCT Tolerance Schedule ranking of (an average score of 0-2 in 6 of 7 attributes) 34.3 points or less indicates under utilization and means that the resource may be:
 - a) placed in rural/remote communities due to the extended distance of the next closest EMS resource; and
 - b) evaluated for more efficient use as additional operating capacity is available.
- 2.2 When the Tolerance Schedule ranking indicates under-utilization, a 24 hour resource may be determined to be appropriate.

3. Unit Commitment Threshold - Optimal

- 3.1 A UCT Tolerance Schedule ranking of 34.3 to 71.4 points indicates optimal and means that resource availability and sustainability is acceptable.
- 3.2 When the Tolerance Schedule ranking indicates optimal, a 24 hour resource may be determined to be appropriate.

- 3.3 AHS EMS leadership must determine the correct shifting model based on local nuances. Consultation is encouraged with employees, unions, and AHS System Status Management (SSM) teams. The following questions must be considered:
- a) Do the majority of full-time employees commute from other communities or do they live in community?
 - b) For local employees: are there community specific barriers or challenges hindering the employee's ability to meet organizational **chute** performance parameters?
 - c) Is infrastructure in place that supports the employees to reside at the EMS station while **on duty**?
 - d) Is the UCT trending higher or lower?
 - e) What is the distance to the next closest EMS resource?

4. Unit Commitment Threshold - System Stress

- 4.1 A UCT Tolerance Schedule ranking of (an average score of 5+ in 5 of 7 attributes) 71.4 to 102.9 points indicates system stress and means that changes are required in a timely manner to reduce the UCT.
- 4.2 System stress is an indication for system changes that influence the resource ranking within the UCTs. The following must be considered:
- a) Deployment model changes are required to ease the pressure on this resource and influence it further towards the UCT - optimal range. The changes may include shifting workflows, SSM changes and/or additional resources which better align with the work required.

5. Unit Commitment Threshold - Not Sustainable

- 5.1 A UCT Tolerance Schedule ranking of (an average score of 6+ in 6 of 7 attributes) 102.9 points or greater indicates not sustainable and means that commitment factors are too high and system relief is required.
- 5.2 When the Tolerance Schedule ranking indicates not sustainable, a 24 hour resource is not appropriate. The following must be considered:
- a) The 24 hour resource must be converted to either a day/night resource or a peak resource; whichever best aligns with the work required; and
 - b) Deployment model changes may also be necessary.

DEFINITIONS

24 hour resource means any EMS crew or staff member who is on duty and expected to immediately respond to an EMS event notification for a duration of 24 hours.

Chute means the time interval from Unit Dispatch (DP) to the crew marking Enroute (EN) on their Mobile Data Terminal (MDT).

Core-flex means a scheduling provision whereby an EMS staff member is on duty and their shift is made up of Core Hours, Flex Hours, and On-Call Hours. Time spent in Core Hours is assembled time – Available Station / Available Mobile (AS/AM) and time spent within Flex Hours and On-Call Hours is unassembled time – Available Call Out (AC). Refer to the Core-Flex Operational Parameters (see Appendix B).

Dark hours means the period of time between 2300hrs and 0530hrs.

Dark hour assigned means the number of times a specific EMS resource has been assigned to an event during dark hours.

Dark hour utilization means the total amount of elapsed time a specific EMS resource has been assigned to events during dark hours.

Day/night resource means a scheduling provision which consists of a regularly scheduled rotation of day shifts and/or night shifts. Individual shifts are not scheduled to be longer than 14 hours in duration. The crew is assembled for the duration of this shift.

Downtime compliance means the portion of periods where a specific EMS resource achieved eight (8) consecutive hours in AC status between 1900hrs and 0700hrs daily.

Emergent event volume means the total 9-1-1 and emergent transfer events for a specific EMS resource. Inclusive of all Medical Priority Dispatch System call determinates as well as priority RED inter-facility transfers.

Fatigued means when a duty crew has been placed out of service due to the inability to perform duties in a safe manner related to fatigue impairment.

Global unit hour utilization means the combination of unit hour utilization as well as moving (MV) and relocations.

On duty means the period of time which an EMS employee is receiving compensation from the employer, and the employee is either actively engaged in EMS activities, readied for immediate response, or available for call back.

Peak resource means a regularly scheduled shift that aligns with peak work loads. The crew is assembled for the duration of this shift.

Timed out means when a duty crew has been placed out-of-service because it has met or exceeded maximum contractual or legislated hours of Time on Task. The crew cannot be deployed for any purpose during this time.

Tolerance schedule means the specified criteria utilized to rank EMS resources according to the parameters assigned to each individual core system attribute. Resulting in an overall score specific to an individual EMS resource.

Total downtime means the total unassembled time during a Core-Flex shift. Inclusive of time in Available Call Out (AC) status for crews who choose to remain or stay at station.

Unit commitment threshold (UCT) means the overall tolerance ranking of a resource based on their identified activity levels via the Tolerance Schedule.

Unit hour utilization means time specifically committed to an EMS dispatched event.

REFERENCES

- Appendix A: *Tolerance Schedule*
- Appendix B: *Core-Flex Operational Parameters*
- Alberta Health Services Governance Documents:
 - *Use of EMS Mobile Data Terminals Policy* (ITM-EMS-03)
 - *Fatigue Management North Zone EMS Local Service Standard* (EMS-NZ-22)
- Alberta Health Services Resources:
 - *CAD Data Standards – Unit Statuses SSM Local Service Standard* (GV-DCD-065)
 - *CAD Data Standards – Units SSM Local Service Standard* (GV-DCD-067)
 - *Collective Bargaining Agreement Internal AHS* (Health Sciences Association of Alberta)
 - *Data Dictionary* (EMS System Performance and Innovation)
- Non-Alberta Health Services Documents:
 - *Collective Bargaining Agreement External AHS* (Canadian Union of Public Employees)
 - *Collective Bargaining Agreement External AHS* (Health Sciences Association of Alberta)
 - *Employment Standards Code* (Alberta)
 - *Employment Standards Regulation* (Alberta)

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APPENDIX A

Tolerance Schedule

Note: Aggregate data sets of six (6) months or longer must be used.

Dark Hour Assigned

- **Weighting Factor 3.9**
 - 3 or less per Month 0 pts
 - 3-6 per Month 2 pts
 - 6-15 per Month 4 pts
 - 16-30 per Month 6 pts
 - 30 or more per Month 8 pts

Global Unit Hour Utilization

- **Weighting Factor 1.8**
 - Less than 10% 0 pts
 - 10-15% 2 pts
 - 15-20% 4 pts
 - 20-25% 6 pts
 - More than 25% 8 pts

Dark Hour Utilization

- **Weighting Factor 3.1**
 - Less than 1% 0 pts
 - 1-2% 2 pts
 - 2-3% 4 pts
 - 3-5% 6 pts
 - More than 5% 8 pts

Timed-Out & Fatigued History

- **Weighting Factor 3.3**
 - Less than 1% 0 pts
 - 1-2% 2 pts
 - 2-3% 4 pts
 - 3-5% 6 pts
 - More than 5% 8 pts

Downtime Compliance

- **Weighting Factor 4.0**
 - More than 80% 0 pt
 - 60-80% 2 pt
 - 40-60% 4 pt
 - 20-40% 6 pt
 - Less than 20% 8 pt

Total Downtime (Hours per Shift)

- **Weighting Factor 1.9**
 - More than 18 hours/shift 0 pts
 - 18 -16 hours/shift 2 pts
 - 16 -14 hours/shift 4 pts
 - 14 -12 hours/shift 6 pts
 - Less than 12.0 hours/shift 8 pts

Emergent Event Volume

- **Weighting Factor 2.0**
 - Less than 15% 0 pts
 - 15-35% 2 pts
 - 35-65% 4 pts
 - 65-85% 6 pts
 - More than 85% 8 pts

APPENDIX B**Core-Flex Operational Parameters****Core Hours**

The hours in which an employee is required to be assembled; in uniform, and at the station (or identified location) and ready for immediate response per organizational or identified chute performance parameters.

In alignment with contractual agreements (if any), management determines the appropriate amount of Core Hours for the location in order to best address regional needs.

Flex Hours

The amount of hours remaining based on set Core Hours and calculated by subtracting the Core Hours from the regular paid hours of an employees shift.

As examples only:

- A. For a 12/12 - 12 hour paid shift and 12 hours on call: a crew starts at 08:00 hours, works six (6) Core Hours, " $12 - 6 = 6$ ", the employee will have six (6) Flex Hours before the start of their next shift.
- B. For a 10/14 - 10 hour paid shift and 14 hours on call: a crew starts at 06:00 hours, works three (3) Core Hours, " $10 - 3 = 7$ ", the employee will have seven (7) Flex Hours before the start of their next shift.

Flex Hours are "used up or expended" in a flexible format starting from the end of set Core Hours until the start of the staff member's next shift. Flex Hours are expended as the staff member is required to be actively engaged in work as directed or requested by the employer.

The number of Flex Hours is calculated and fixed in quantity, and expended in a flexible manner as used during any portion of a twenty-four (24) hour period excluding Core Hours.

On-Call Hours

The on-call period only commences once all Flex Hours have been expended. The EMS staff member continues to be on duty and available for immediate call back when notified, responds without delay, and undertakes required duties and responsibilities. Any hours worked during the on-call period may be subject to call-back procedures and/or overtime as contractually or legislatively identified.