



THE IMPLICATIONS OF WORKING ON TRUST AMBULANCES WITH NON-FUNCTIONING AIR-CONDITIONING SYSTEMS IN EXTREME WEATHER CONDITIONS

For all frontline staff, ambulances constitute their 'workplace' given the time they spent in them whilst:

- Responding to incidents in the cab
- Treating and caring for patients in the saloon
- Conveying patients to hospital with one crewmate driving in the cab whilst the other attends to patients in the saloon
- Waiting for jobs at standby points away from their bases

It thus follows that their 'workplace' has to conform to applicable legal requirements which include the provision of a safe working environment for employees as a duty of the employer.

In cases where the prevailing weather conditions result in extreme temperatures, hot or cold, the ambulances fail to be 'workplaces' that present a safe working environment for staff and a safe place for treatment, care and conveyance for patients if their air-conditioning systems are not working.

Air conditioning systems are the main control measure staff have at their disposal to counteract the effects of extreme temperatures in their vehicles. The use of sirens on ambulances precludes the introduction of temporary solutions like the opening of windows (when experiencing hot weather conditions) on ambulances with non-working air-conditioning systems as the benefits are traded-off with the introduction an increased noise risk to occupants when the siren is turned on.

With windows closed whilst high ambient temperatures are being experienced, ambulances can be termed a 'confined space' for staff as they have little or no choice to work without the ambulance or from outside it if the air-conditioning system is not working. Other control measures like encouraging staff to drink plenty of fluids and keeping hydrated during hot weather conditions, whilst plausible, only help staff cope better with extreme temperatures but do not have the direct counteracting effect air-conditioning systems have on extreme temperatures.

Equally, low ambient temperatures can result in temperatures in ambulance cabs and saloon falling below the statutory minimum of 13°C when the air-conditioning system is not working.

It is imperative that air conditioning systems should be '*maintained (including cleaned as appropriate) in an efficient state, in efficient working order and in good repair*'. They should be '*free of faults likely to affect the health, safety or welfare of workers*' and should any potentially harm-causing defects be identified, '*they should be rectified immediately or steps should be taken to protect anyone who might be put at risk*'.

It should be noted that the Trust has an obligation to provide a service which meets stakeholder expectations and as things stand, cannot afford to have ambulances taken off the road with due to faulty air conditioning systems. Unfortunately faulty air conditioning systems on ambulances are usually discovered when needed (i.e. when extreme temperatures are being experienced) which leads to a number of them being reported all at once thus overwhelming the capacity Fleet Services have to effectively address the issue. Some faults can be quick fixes whilst others have been reported to need spare parts which have to be ordered, delivered and installed thus increasing the length of time staff working on affected vehicles and the patients they convey have to bear with the extreme temperatures should the inclement weather persist.

The unfortunate thing about the whole situation is that extreme weather conditions come to pass which then puts the whole problem away from scrutiny as other pressing issues come to the fore only for it to resurface when they return thus reigniting interest with the cycle beginning over again.



Location: Trust-wide **Assessment of:** Working in on ambulances with non-working air conditioning systems **Version:** V2.0
Assessment Date: 20/04/2016 **Assessors:** J. Mugwara, S. Farnsworth
Approved by: Risk, Safety and Governance Group **Date:** 29/04/2016
Reviewed by: J. Mugwara, S. Farnsworth **Date:** June 2018
Approved by: Risk, Safety and Governance Group **Date:** June 2018 **Review due:** June 2020

No	Risk/Hazard Identified	Nature of Possible Harm	How Might it Occur	People/ entity at Risk	Description of Existing Control Measures	Assessment Rating		Further Action Required to Reduce Eliminate Risk
						Likelihood of Harm/ Level of severity	Risk rating	
1	Hot and humid conditions inside the ambulance	<p>Hyperthermia related illnesses/ symptoms like heat exhaustion/ fatigue leading to those affected feeling amongst other things thirsty, giddy, weak, uncoordinated, nauseous, and sweating profusely.</p> <p>Sickness absence</p> <p>Exacerbation of other medical conditions in patients</p> <p>Dampened staff morale</p> <p>Poor patient experience although their exposure is of a shorter duration than</p>	<p>Non-working air-conditioning system on during periods of hot weather conditions like heat-waves</p> <p>No feasible alternative safe system of working (like opening windows) on vehicles if air conditioning system is not working</p> <p>EOC failure to have vehicle released for repairs to be effected due operational demands</p>	<p>Frontline staff (affected by risk due to near continuous exposure to the vehicle conditions during shift)</p> <p>Patients (Limited exposure due the short duration on ambulance when being conveyed on it)</p> <p>Escorts (Limited exposure due the short duration on</p>	<p>Planned preventive and speedy corrective maintenance by Fleet Services</p> <p>Encouraging and enabling staff to drink lots of fluids and keeping hydrated during hot weather conditions</p> <p>Facilitating the quick release of vehicle for air-conditioning system repairs when needed</p> <p>Providing staff reporting air conditioning faults with advice and information in a customer friendly manner</p>	2-3	6(M)	None

		<p>that of staff</p> <p>Enforcement action by the HSE</p> <p>Potential for litigation by those worst affected</p> <p>Perceived delays in getting reported faults attended to</p> <p>Perceived lack of support when reporting faults</p> <p>Reduced capacity on the part of affected staff to carry-out their other core duties like manual handling and driving effectively due to the heat induced physical effects on their bodily functions</p> <p>Situation can be exacerbated by the fact that the fault may lead to the air conditioning systems blowing in hot air instead of cooler air.</p> <p>In the most extreme of circumstances which are yet to be experienced, those affected may suffer heat stroke</p>	<p>Reporting of a number of the same type of fault during a single period which can render Fleet Services incapable of having them repaired timely</p> <p>Staff wearing uniform shirts have to wear them with t-shirts underneath for comfort leading them to be overdressed for the hot weather conditions</p> <p>Staff attending RTCs have to wear high visibility jackets and helmets giving staff little or no respite from the stifling heat</p> <p>Most patient houses staff respond to have no air-conditioning systems</p>	<p>ambulance when being conveyed on it)</p> <p>EMAS (mainly affected by the Health and Safety law duties, attendant liability, possible enforcement action, low staff morale and managing sickness)</p>	<p>The fact that most patients are in a vehicle for short periods of time reduces their exposure to the hot temperatures in the saloon when air-conditioning systems on ambulances are not working but nevertheless their underlying medical condition may be such that they are unable to cope with the conditions even for a very short time.</p>			
--	--	---	--	--	---	--	--	--

Location:

Task / Operation:

Continued

No	Risk/Hazard Identified	Nature of Possible Harm	How Might it Occur	People/entity at Risk	Description of Existing Control Measures	Assessment Rating		Further Action Required to Reduce Eliminate Risk
						Likelihood of Harm/ Level of severity	Risk rating	
2	Cold conditions inside the ambulance	<p>Chronic hypothermia – where heat is lost slowly over time (as common in elders and those sleeping rough)</p> <p>Increased vulnerability to pneumonia, colds and flu</p> <p>Reduced capacity on the part of affected staff to carry-out their other core duties like manual handling and driving effectively due to the heat induced physical effects on their bodily functions</p> <p>Enforcement action by the HSE should it come to their attention that staff are</p>	<p>Non-working air-conditioning system on during periods of cold weather conditions</p> <p>IPC induced dress restrictions like bare below the elbow which prevent staff from wearing long sleeved apparel whilst on duty</p> <p>Conveying patients vulnerable to low temperatures</p>	<p>Frontline staff (affected by risk due to near continuous exposure to the vehicle conditions during shift)</p> <p>Patients (particularly the elderly, the homeless, heavy alcohol or drug users, patients with severe head injuries, have had prolonged exposure to cold as well as those with conditions like Alzheimer's, arthritis,</p> <p>Escorts (particularly the elderly, the homeless-sleeping rough, heavy alcohol or drug users)</p>	<p>Planned preventive and speedy corrective maintenance by Fleet Services</p> <p>Facilitating the quick release of vehicle for air-conditioning system repairs when needed</p> <p>Providing staff reporting air conditioning faults with advice and information in a customer friendly manner</p> <p>Providing patient with extra blankets</p> <p>Staff engaging in heat generating activity like manual handling, cleaning, walking about and/or exercising</p>	2-3	6(M)	None

		expected to work in vehicles with temperatures lower than 13°C which statutory lower temperature permissible for those in a sedentary position. Complaints/litigation		EMAS (mainly affected by the Health and Safety law duties, attendant liability, possible enforcement action, low staff morale and managing sickness)				
--	--	--	--	--	--	--	--	--

No	Risk/Hazard Identified	Nature of Possible Harm	How Might it Occur	People/entity at Risk	Description of Existing Control Measures	Assessment Rating		Further Action Required to Reduce Eliminate Risk
						Likelihood of Harm/ Level of severity	Risk rating	
3.	The Trust failing to meet its mandate i.e. performing to stakeholder expectations	Failure to meet core performance targets leading to: -loss of commissioners' goodwill and funding -inability to fund operations -adverse publicity -loss of public confidence	Making non-working air-conditioning systems a fault which causes vehicles to be taken off the road leading to poor performance	Patients (to whom staff may fail to respond to due to vehicles being off the road for or awaiting repairs) EMAS	Air conditioning system faults are not a fault for which vehicles can be taken off the road	2-4	8(H)	None



RISK MATRIX

Impact (Severity level)	Impact score and descriptor	Likelihood				
		Likelihood score and <u>descriptor</u>				
		1 <u>Rare</u>	2 <u>Unlikely</u>	3 <u>Possible</u>	4 <u>Likely</u>	5 <u>Almost certain</u>
	5 <u>Catastrophic</u>	5	10	15	20	25
	4 <u>Major</u>	4	8	12	16	20
	3 <u>Moderate</u>	3	6	9	12	15
	2 <u>Minor</u>	2	4	6	8	10
	1 <u>Negligible</u>	1	2	3	4	5

EMAS has based its risk matrix for defining or classifying levels of risk on that described in the Australian/New Zealand Risk Management Standard AS/NZS 4360:1999 and the National Patient Safety Agency, as follows:

Measures of severity/impact

Level	Descriptor	Example detail description
1	Negligible	Minimal injury requiring no/minimal intervention or treatment; no time off work low financial loss (£0 – 5K)
2	Minor	Minor injury/illness requiring minor intervention or treatment; time off for >3days; impact immediately containable; medium financial loss (£5 – 10K)
3	Moderate	Moderate injury requiring professional intervention; 4-14 days time off; impact contained with assistance; high financial loss (£10 - 50K)
4	Major	Major injury resulting in long term incapacity /disability; >14days time off; loss of ability to provide Services; major financial loss (£50 – 100K)
5	Catastrophic	Death; multiple permanent injuries or irreversible health effects; Collapse of Service; huge financial loss (£100K+)

Measures of Likelihood

For grading risk, the scores obtained from the risk matrix are assigned grades as follows

Likelihood						
Likelihood score and descriptor		1 <u>Rare</u>	2 <u>Unlikely</u>	3 <u>Possible</u>	4 <u>Likely</u>	5 <u>Almost certain</u>
Likelihood evaluation basis	How often might it/does it happen (qualitative measure based on a value judgement of what descriptor best fits the risk)	This will probably never happen/recur	Do not expect it to happen/recur but it is possible it may do so	Might happen or recur occasionally	Will probably happen/recur but it is not a persisting issue	Will undoubtedly happen/recur,possibly frequently
	OR What is the probability of the impact occurring (based on statistical inference informed by experience or data)	OR 0-10% of time	OR 10-30% of time	OR 30-60% of time	OR 60-80% of time	OR 90-100% of time

Grading		
	1-3	Low risk
	4-6	Moderate risk
	8-12	High risk
	15-25	Extreme risk

(NB. The above is given as guidance only. It is up to the individual or working group, following any risk assessment, to decide on the appropriate level of management involvement required, either in analysing the risk or taking action against it. In-depth guidance on application of the risk matrix can be sought from the Corporate Risk Management Toolkit v4 as well as the learning from untoward incidents policy and the Health and Safety toolkit on S:/drive.)

Risk Assessment Remedial Action Plan

Recommendation for additional control measures		Action to be taken by:	Manager Responsible	Date completed
	1. Fleet Services need to be more proactive with their preventive maintenance programme by publicising it well before the on-set of seasonal spikes and drops in temperature to reassure staff they are not being reactive in all cases.	Fleet Services	Head of Fleet Services	Completed as per Fleet Services email
	2. Fleet Services will need to come up with assurances which will commit them to look at reported air-conditioning faults on vehicles within specified time frames, secure spare parts within specified time frames and have the repairs effected within specified time frames barring unforeseen impediments. Where impediments are encountered, these should be communicated to the divisions concerned to enable them to understand and appreciate what is happening.	Fleet Services	Head of Fleet Services	Completed as per Fleet Services email
	3. EOC should work with both Fleet Services and the divisions concerned to ensure the timely release of vehicles when vehicles are needed for repairs.	Fleet Services & EOC	Head of Fleet Services & EOC GM	Completed as per Fleet Services email
	4. Fleet Services should consider supply of temporary vehicles to be used in divisions to replace those undergoing repairs should release still prove to be problematic.	Fleet Services	Head of Fleet Services	Completed as per Fleet Services email
	4. Fleet Services should consider supply of temporary vehicles to be used in divisions to replace those undergoing repairs should release still prove to be problematic.	Fleet Services	Head of Fleet Services	Completed as per Fleet Services email
	6. Customer services training for Vehicle Resources Centre staff to enable them deal with staff reporting faults better	Fleet Services	Head of Fleet Services	Completed as per Fleet Services email
	7. Staff who find themselves susceptible to the effects of high temperatures should consider having polo shirts as part of their uniform allocation.	Operations (Divisions)	Divisional GMs	Completed