

DEPARTMENT OF THE ARMY
US ARMY MEDICAL DEPARTMENT ACTIVITY
Fort Huachuca, Arizona 85613-7079

MEDDAC PAM
No. 750-5

24 March 2008

Logistics

MEDICAL REFRIGERATOR AND FREEZER AUTOMATED NOTIFICATION ALARM
SYSTEM

	PARA	PAGE
History-----	1	1
Purpose-----	2	1
Scope-----	3	1
References-----	4	1
System Components-----	5	2
Responsibilities-----	6	2
Appendix A (Areas Monitored)-----		A-1
Appendix B (Explanation of Alarm Response)-----		B-1
Appendix C (Contact Notification Information)-----		C-1
Appendix D (Temperature Chart)-----		D-1

1. HISTORY: This is a revision of an existing publication.

2. PURPOSE:

2.1 To provide guidance for the use and maintenance of the automated alarm and notification system. This system is used to monitor refrigeration and freezer temperature.

2.2 This plan provides procedures for the safe operation, maintenance, and response to system problems. The plan ensures compliance with Army Regulations (AR), Association of American Blood Banks (AABB), National Fire Protection Agency (NFPA) Code 99, and Joint Commission (JC) standards.

3. SCOPE: This Memo is applicable to all personnel assigned or attached to the USA MEDDAC, DENTAC and VETCOM, Fort Huachuca, Arizona.

4. REFERENCES:

4.1 The Joint Commission Accreditation on Ambulatory Care, Current Edition.

4.2 Army Regulation 40-61, Medical Logistics Policies

4.3 Army Regulation 40-657, Veterinary/Medical Food Safety, Quality Assurance and Laboratory Service.

4.4 Supply Bulletin 8-75-11, Army Medical Department Supply Information.

*This publication supersedes MEDDAC Pamphlet 750-5, dated 20 September 2006

- 4.5 American Association of Blood Banks (AABB).
- 4.6 National Institute of Standards Bureau (NISB).
- 4.7 CFR 41 (Code of Federal Regulations).
- 4.8 National Fire Protection Agency (NFPA) code 99.
- 4.9 USP Temperature Standards (United States Pharmacopeia)
- 4.10. MEDDAC MEMO 420-2, Electric Power Outage Plan
- 4.11 MEDDAC MEMO 420-5, Utilities Management Plan

5. SYSTEM COMPONENTS AND TESTS: All medical refrigerators and freezers will be equipped with an automated notification alarm system. The system consists of a monitor sensor and a notification alarm box. The Circon EMCS (which is hardwired into emergency power) monitors refrigerator and freezer temperatures and will alert the automated voice/pager dialer (which is also on battery back-up power) when a refrigerator or freezer is out of the temperature range. This system will automatically call the duty Administrative Officer of the Day (AOD) phone at 520-533-2963. IAW SB 8-75-11 storage areas with restricted access will have a device installed (light indicator/audible alarm) indicating when the storage unit temperature is out of range and can be checked without physically entering the restricted area.

6. RESPONSIBILITIES:

6.1 The Commander designates the Chief, Logistics Division, Raymond W. Bliss Army Health Center as the single MTF entity with the overall responsibility for monitoring Temperature Sensitive Medical Product (TSMP). The acceptable dollar-value risk level below which refrigerators/freezers are not required to have a centrally monitored electronic alarm system is \$1000. Vaccines and mission essential TSMP are required to have a centrally monitored electronic alarm system.

6.2 The Chief of Logistics will:

6.2.1 Oversee the TSMP Cold Chain Management Inspection Program.

6.2.2 Approve all new refrigerator and freezer purchases.

6.2.3 Ensure all medical refrigerators and freezers are alarmed and have a notification system.

6.2.4 Ensure all units are properly labeled.

6.2.5 Ensure contact rosters of Logistics personnel are on file with the AOD digital book.

6.2.6 Ensure that refrigerators and freezers are not **MOVED** or **DISCONNECTED** without prior written approval from the Deputy Commander for Administration.

6.3 The Information Management Division (IMD) will issue a cell phone to the Administrative Officer of the Day (AOD) office, the Chief of Logistics, the Facilities Manager, and the Medical Company Commander.

6.4 The First Sergeant will:

6.4.1 Ensure the AOD/AAOD is aware and trained on the refrigerator alarm and notification system.

6.4.2 Ensure all AOD/AAOD are trained on the procedures to respond to a call alerting them of a refrigeration problem as written in MEDDAC PAM750-5

6.4.3 Ensure all AOD/AAOD are trained on temperature logging.

6.4.4 Keep documents of training on file.

6.4.5 Ensure the AOD/AAOD is performing physical temperature checks.

6.4.6 Maintain a copy of this Memo in the AOD/AAOD instruction book.

6.5 The AOD/AAOD will:

6.5.1 Monitor the cordless phone (533-2963)/cell phone (236-5578) using normal monitoring procedures and respond to alarm notifications as directed in Appendix B and by properly logging the incident on the Duty Officer's Log (DA Form 1594).

6.5.2 Conduct a visual inspection of all refrigerators and freezers and annotate the information on the refrigerator log sheets and record the DA Form 1594 at 0630, 1830 and again at 0030 during the normal duty work week. The AAOD will make an additional check at 1230 on weekends and holidays. During normal duty hours the check at 1230 will be performed by the department. See Appendices A and B for refrigerator and freezer locations and procedures for notifying appropriate staff for any malfunction or temperature alarm. IAW SB 8-75-11 all refrigerator/freezer units storing bulk TSMP on a routine basis will be checked at least two times per shift.

6.5.3 Will not stop the communication process until an individual has been contacted. Leaving a message on the answering machine does not constitute "contact".

6.6 Department NCOIC(s) will:

6.6.1 Ensure department personnel are properly trained on MEDDAC PAM750-5 and TSMPs IAW Appendix B.

6.6.2 Develop internal SOPs for handling and monitoring TSMPs that comply with this publication and develop an on-call duty roster to ensure continuous section cold chain management.

6.6.3 Ensure that temperature logs are used to monitor and record temperatures at least two times per shift at six hour intervals. Temperature logs will be maintained and kept on file for inspection purposes.

6.6.4 Ensure that TSMP moved to an interim storage location has chain of custody documentation for accountability.

6.6.5 Document any loss of TSMP due to out of range temperatures and prepare a Commander's Critical Information Report (CCIR). The CCIR will be forwarded through the Chief, Logistics Division and the Deputy Commander of Administration to the Commander immediately.

6.6.6 Ensure that refrigerators and freezers are not **MOVED** or **DISCONNECTED** without prior written approval from the Deputy Commander for Administration.

6.7 The Logistics Division MMB will:

6.7.1 Provide adequate cold storage space (refrigerator and or freezer) for medical materiel and is the back-up storage area for TSMP.

6.8 The Logistics Division Facilities Management Branch will:

6.8.1 Respond to alert notifications as appropriate (see Appendix B for procedures) and provide technical expertise to fix any mal-functioning refrigerator/freezer or alarm unit.

6.8.2 Review MEDDAC PAM 750-5 annually or when required based on changes.

6.8.3 Provide a battery backup system for the automated voice pager dialer that will call the AOD phone when power is interrupted; ensure that the Circon EMCS is plugged into emergency power and that it is on the same circuit as the refrigerator or freezer.

6.8.4 Ensure that a technician is available on-call after duty hours to respond to failures of the related alarms

6.8.5 Conduct monthly quality control maintenance generated through DMLSS on the entire alarm system from the refrigerator/freezer unit to the remote monitoring station. Supporting documents for the tests will be retained for six months within the Branch and a copy will be furnished to the Chief, Logistics Division. The tests will be performed on all alarm notification devices; verify the temperature is correct; check the high and low temperature alarm parameters; disconnect power and verify that the AOD/AAOD has been notified on the duty cell phone or cordless telephone; document any discrepancies or malfunctions.

6.9 IAW SB 8-75-11 activities maintaining vaccines outside of bulk storage areas such as Soldier Readiness Processing (SRP) site or clinics should maintain minimal on-hand stock to minimize potential losses. These sites will post temperature logs on their refrigerator/freezer unit(s) that must be filled in at least twice daily. If this is not feasible alternative monitoring procedures are required and must be included in the SOP.

6.10 IAW SB 8-75-11 medication storage areas that do not possess remote monitoring and alarm capabilities and do not document twice daily physical temperatures checks seven days a week will transport their excess vaccines to the Medical Materiel Branch (MMB) warehouse or the Outpatient Pharmacy refrigerators/freezers at the close of business everyday. MMB shall provide appropriate packing materials to safely transport or temporarily store vaccine.

6.11 The following storage requirements must be met for the following environmentally sensitive items:

6.11.1 X-Ray film will be stored per manufacturer's recommended storage methods, usually on edge in a vertical position.

6.11.2 Dry-cell batteries will be removed from instruments prior to storing.

6.11.3 Rubber goods will be stored in rolls or laid flat; Talc will be used to separate rubber goods surfaces.

The proponent of this publication is the Chief Logistics Division. Users are invited to send comments and suggested improvements on DA Form 2028 directly to Logistics Division, ATTN: MCXJ-LO, Fort Huachuca, Arizona 85613-7079.

FOR THE COMMANDER:

OFFICIAL:

GREGORY A. SWANSON
LTC, MS
Deputy Commander for
Administration

ROBERT D. LAKE
Information Management Officer

Distribution: E

APPENDIX A
Medical Refrigerator Alarm Notification Standing Operating Procedure

DEPARTMENT	TYPE	#	BRAND	ECN #	SN	LOCATION
Logistics	Refrigerator (Walk-in) (Bulk)	1	Bootz	N/A	N/A	Warehouse
Logistics (Back-up)	Refrigerator	2	Helmer	003200	973402	Warehouse
Logistics (Receiving)	Refrigerator	3	Helmer	003201	973403	Warehouse
Logistics	Freezer	4	Helmer	003199	973372	Warehouse
Immunization Clinic	Refrigerator (Bulk)	22	Helmer	004034	976853	J-14
Immunization Clinic	Freezer	23	Helmer	004033	976767	J-14
Immunization Clinic	Refrigerator	24	Helmer	004035	976854	J-14
LAB	Refrigerator	16	Helmer	004391	978032	LAB
LAB	Refrigerator	17	Helmer	004392	978033	LAB
LAB	Refrigerator	18	Fischer Scientific	003169	1526060893482	LAB
LAB	Freezer	19	Helmer	004390	977945	LAB
MI Student Clinic	Refrigerator	8	Helmer	004393	978011	Bldg 84550A/Rm #304
Optometry Clinic	Refrigerator	26	Sanyo	004237	070500447	F11
OR	Refrigerator	7	Cryofridge/American Scientific	004001	ZX78016	A-14 Anesthesia
Pharmacy	Refrigerator	13	Barnstead Lab Line	002740	1444051223901	Pharmacy/Rm #103-07
Pharmacy	Refrigerator	21	Helmer	002791	TE033106151	Pharmacy/Rm #103-07
PX Refill Pharmacy	Refrigerator	12	Marvel Scientific	002790	TE040306022	PX Pharmacy
Ray Clinic (SRP)	Refrigerator	25	Helmer	004226	976668	Room #108
Runion Dental Clinic	Refrigerator	10	Kenmore	004002	LA92427676	Room #70
Veterinary Clinic	Refrigerator	11	Jewitt	0C2031	58439-396	Room #12
Military Medicine Clinic	Renovation in progress					Renovation in progress

APPENDIX B**Medical Refrigerator and Freezer Alarm Notification Standing Operating Procedure**

1. The AOD/AAOD will receive an alarm notification via the duty AOD cell phone when the following occurs:
 - a. If the refrigerator sensor detects a temperature drop **below 35°F (2°C) or above 46°F (8°C)** or if a freezer detects a temperature drop **below 16°F (-9°C) or above 34°F (1°C) or as indicated on the unit.**
 - b. When power is interrupted.
2. What to do when you receive a message on the duty cell phone that a refrigerator or freezer is experiencing a problem:
 - a. Answer the phone and listen to the message.

The refrigerator in the (location) _____ has a problem. I repeat, the refrigerator in the (location) _____ has a problem. Please contact the on-call personnel for the clinic and follow the instructions located in The “O” drive on your Computer and MEDDAC PAM750-5 in the AOD/AAOD instruction book. The phone will continue to call once per minute until the phone is answered

- b. Contact the on-call person **for the clinic** (See roster of department numbers posted in AOD office). **Refer to 6.13 under responsibilities**
- c. Meet the on-call person at the clinic (if in the main facility) to verify if the refrigerator or freezer is too hot or too cold. Use the inside thermometer to make this determination. Check the door to ensure it is closed. If the alarm notification received is not from a unit in the main facility tell the on-call person from the clinic to call back with a status.
- d. If the refrigerator or freezer is functioning properly and the temperature monitor has malfunctioned;
 - (1) Contact the Facilities Management Branch during duty hours at 533-5554/2000.
 - (2) After duty hours call the Facilities Management Branch at cell phone 236-5557 and the Chief of Logistics cell phone 236-5386.
 - (3) **Log all actions concerning the alarm notification incident on the Daily Staff Journal or Duty Officer’s Log (DA Form 1594)**

e. If the refrigerator or freezer is **not** functioning properly, contact the following personnel in sequence as necessary; **leaving a message is not acceptable.**

(1) Materiel Branch at 533-2070. After duty hours on call cell phone at 236-5526.

(2) Facilities Management Branch at 533-5554/2000. After duty hours call 236-5557. If no response, contact After Hours Work Order Desk at 533-2623.

(3) Chief of Logistics at 533-5115. After duty hours call 236-5386.

(4) Company Commander/1SG at 533-9295/5575. After duty hours call 220-9511/
236-5409

(5) Deputy Commander of Administration (DCA) at 533-9026. After duty hours call blackberry cell 450-2649.

(6) RWBAHC Commander at 533-9026. After duty hours call 266-2867.

f. Log all actions concerning the alarm notification incident on the Daily Staff Journal or Duty Officer's Log (DA Form 1594).

APPENDIX C
Medical Refrigerator and Freezer Alarm Notification Standing Operating Procedure

(1) Logistics contact info:

(a) Medical Materiel Branch:

During duty hours: 533-2070, 533-5486.
After duty hours on call cell phone: 236-5526

(b) Facilities contact info (temperature alarm repair tech):

During duty hours(Work Order Desk): 533-5444/2000.
After duty hours: Facilities Branch Chief: 236-5557.
After Hours Work Order Desk: 533-2623

(c) Chief, Logistics Division phone: B: 533-5115,C: 236-5386

(d) Pharmacy NCOIC:

During duty hours: 533-3958
After duty hours: Refer to RWBAHC Military Master Alert Roster

(e) Laboratory NCOIC:

During duty hours: 533-5070
After duty hours: Refer to RWBAHC Military Master Alert Roster

(f) Provost Marshall/Fire Station:

MP Desk: 533-2181
Physical Security: 533-2447
Fire Station #1: Bldg #51028..... 533-2116

(g) Medical Maintenance:

During duty hours: 533-2836
After duty hours: Refer to RWBAHC Civilian Master Alert Roster

(3) Dry ice vendor contact info:

Airgas Dry Ice: (602) 272-0497
Emergencies Only: Food City 439-6080

(4) Emergency repair companies contact info: Contact Facilities Management Branch

During duty hours(Work Order Desk): 533-5444/2000
After duty hours: FAC Branch Chief: 236-5557
After Hours Work Order Desk: 533-2623

(5) Methods of determining vaccine viability: Contact the MMB so that they may refer to the Vaccine Management Publication, US Army Medical Materiel Agency (USAMMA) (the approving authority) and/or the manufacturers. The vaccine manufacturers contact information follows:

VACCINE MANAGEMENT: Recommendations for Storage and Handling of Selected
Biologicals 20 Manufacturer/Distributor/Telephone Number/Products

Sanofi Pasteur

www.sanofipasteur.us

800-822-2463

DTaP, DTaP-Hib, DT, Td, Tdap, TT, Hib, Influenza (TIV), IPV, MCV4, MPSV4

Talecris Biotherapeutics

www.talecrisusa.com/

800-520-2807

HBIG, IGIM, RIG, TIG

Centers for Disease Control and Prevention Drug Service

www.cdc.gov/ncidod/srp/drugs/drug-service.html

404-639-3670

Distributor for Diphtheria antitoxin

Novartis

www.novartis-vaccines.com/products/index.shtml

800-244-7668

Influenza (TIV)

866-475-8222

(customer support)

888-825-5249

(customer support)

DTaP, DTaP-HepB-IPV, Tdap, HepA, HepB, HepA-HepB,

Influenza (TIV)

GlaxoSmithKline

www.gsk.com/

617-474-3000

617-983-6400

Td, IGIM, TT

Massachusetts Biological Labs

Telephone: 617-983-6400

Td, TT, IGIM

MedImmune, Inc.

www.medimmune.com

877-358-6478

Influenza (LAIV)

800-637-2590

Hib, Hib-HepB, HepA, HepB, HPV, Measles, Mumps, Rubella, MMR, MMRV, PPV23,

Rotavirus, Varicella, Zoster

24 March 2008`

MEDDAC PAM 750-5

Merck
www.merckvaccines.com
Nabi Biopharmaceuticals
www.nabi.com
800-635-1766
HBIG

Wyeth
www.wyeth.com
800-999-9384
Hib, PCV7

APPENDIX D
TEMPERATURE CHARTS

RAYMOND W. BLISS MEDICAL REFRIGERATION CHART

CELSIUS TEMPERATURE LOG		MONTH/YEAR:		DAYS 1-31																													
Day of Mo	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
AM/ PM																																	
° C Temp																																	
> 11																																	
10																																	
9																																	
8																																	
7																																	
6																																	
5																																	
4																																	
3																																	
2																																	
1																																	
0																																	
< -1																																	

TAKE CORRECTIVE ACTION IF THE TEMPERATURE IS IN THE SHADED SECTION

TAKE CORRECTIVE ACTION IF THE TEMPERATURE IS IN THE SHADED SECTION

Instructions: Place "initials" in the box that corresponds with temperature. The gray zones represent unacceptable temperature ranges. If the temperature is recorded in the gray zone the following actions will be taken.

1. Store the vaccine under proper conditions as quickly as possible.
2. Call the AOD 533-2963/FACILITIES 533-2000 for further assistance.
3. Document the action taken on the reverse side of this log to include POC, Name, Time and etc.

RWBAHC Form 541, 1 Oct 2007

RAYMOND W. BLISS MEDICAL FREEZER CHART -10 Degrees, -20 Degrees Celsius

CELSIUS TEMPERATURE LOG

MONTH/YEAR: _____

DAYS 1-31

Day of Mo	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Time	AM	PM																														
C Temp																																
< -7																																
-8																																
-9																																
-10																																
-11																																
-12																																
-13																																
-14																																
-15																																
-16																																
-17																																
-18																																
-19																																
-20																																
-21																																
-22																																
-23																																
-24																																
< -25																																

Instructions: Place "initials" in the box that corresponds with temperature. The gray zones represent unacceptable temperature ranges. If the temperature is recorded in the gray zone the following actions will be taken.

1. Store the vaccine under proper conditions as quickly as possible.
2. Call the AOD 533-2963/FACILITIES 533-2000 for further assistance.
3. Document the action taken on the reverse side of this log to include POC, Name, Time and etc.