



**ARMY MEDICINE**  
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# US Military Cold Platelet Program

2018 RDCR Symposium

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18 June 2018

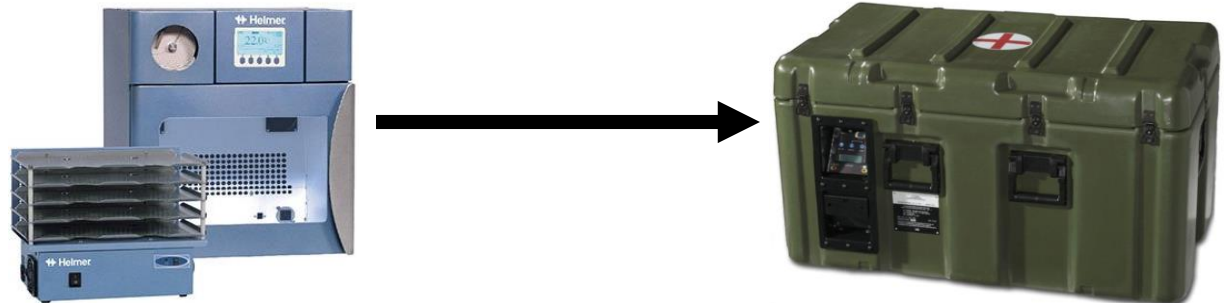
# Room Temp Platelets – CENTCOM

- Military platelet collection teams deployed into CENTCOM since 2006
- As of Feb 2018: 11,684 platelets transfused to 5262 patients
- Teams co-located with R3's – Baghdad, Balad, Sather, Bagram, Kandahar
- Room temp platelets may be extended to 7 days shelf life
- Platelet incubators/rotators provided to R2s – OIF/OEF Surge
- Availability limited: shelf life / equipment support requirements



# Move to Cold Stored Platelets

- 27 Mar 2015 – Mayo Clinic Receives FDA variance for cold stored apheresis platelets – 3 days
- Cold storage simplifies logistics – store in same refrigerator as red blood cell units / no bacterial testing required
- Nov 2015 – CENTCOM Surgeon approves validation protocol for 3 day cold stored platelets in plasma
- Validation purpose was for “proof-of-concept” / 3 days isn’t better than RT 5 days for distribution



# 3 Day Cold Stored Platelets

- Jan 2016 Validation: pH $\geq$ 6.2 at end of storage, plt yield  $\geq 3.0 \times 10^{11}$  at collection, neg cultures, acceptable appearance
- Collections performed using Haemonetics MCS+9000
- Validation Successful: 3-day CSP available for Trauma resuscitation / bleeding patients

TASK FORCE MED-A CRAIG JOINT THEATER HOSPITAL BLOOD PRODUCT ADMINISTRATION GUIDELINES		
<b>Blood Product Name:</b> Cold Storage Apheresis Platelets	<b>Approved By:</b> [REDACTED]	<b>Page 1 of 3</b>
<b>Other Names:</b>	<b>Date Approved:</b> 04 JAN 2016	<b>Document #:</b> EMDG 4022-APP 1
<ul style="list-style-type: none"> <li>• Refrigerated Platelets</li> <li>• Cold Platelets</li> </ul>	<b>Effective Date:</b> 18 JAN 2016	<b>Version#:</b> 1



# Move to 10-day Cold Stored Platelets


- 2015 – Planning begins to deploy an Air Force apheresis team to Al Udiid Qatar
- Team arrives summer 2016 – AF uses Terumo TRIMA apheresis instruments
- Nov 2016: AF Team validation begins for extended – 10 day storage
- Blood Support Detachment, Bagram receives 2 new TRIMAs / begins validation Nov 2016 for extended – 10 day storage
- Same acceptance criteria:  $\text{pH} \geq 6.2$  at end of storage,  $\text{plt yield} \geq 3.0 \times 10^{11}$  at time of collection, negative cultures, acceptable appearance
- Storage out to 16 days just to have extended storage data, even though goal was to ask for 10 day storage






# Move to 10-day Cold Stored Platelets

- Both AF and Army Team 16 day validation successful
- Some visible clumping
- Platelet yields below  $3.0 \times 10^{11}$  at end of storage

JOINT TRAUMA SYSTEM CLINICAL PRACTICE GUIDELINE (JTS CPG)		
	<b>Damage Control Resuscitation (CPG ID: 18)</b> This CPG provides evidence-based guidance to minimize variation in resuscitation practices and improve the care of massively hemorrhaging, severely injured casualties.	
	<b>Contributors</b>	
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Opinions, interpretations, conclusions, and recommendations are those of the authors and are not necessarily endorsed by the Services or DoD.		

- 26 June 2017 CENTCOM Surgeon approves 10-day CSP for patient care





**UNITED STATES CENTRAL COMMAND**  
**FORWARD HEADQUARTERS**  
**AL UDEID AB, QATAR**  
**APO AE 09365**

JBPO-F 21 April 2017

MEMORANDUM FOR US CENTCOM Surgeon General, CAPT Darin K. Via

SUBJECT: Cold Platelet Storage (CPS) Life Extension

1. **BLUF:** Request that US CENTCOM be granted an extension on the storage of cold platelets from 3-days to 10-days. This change will improve platelet product management within theater, making platelets more readily available to treat massively bleeding patient.

# Further Developments

- Clumping is a random problem – moving to PAS collections
  - Bagram Blood Support Detachment now validated for PAS collections
  - Qatar AF team working on a PAS validation
- Validate 10-day CSP production at R3 Baghdad
- Continue to collect data to determine if storage beyond 10 days is supported
- Patient follow-up difficult
  - location and type of patients treated



# Cold Platelets Transfused

	3-Day Plasma CSP	10-Day Plasma CSP	10-Day PAS CSP
<b>Plt Units Transfused</b>	47	15	8
<b># Patients</b>	34	7	7

Most patients receive 1-2 CSP

2 Patients each received 5, 3-day CSP

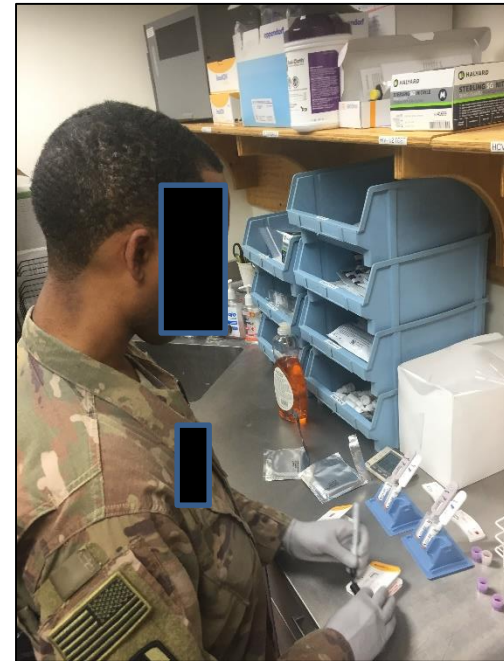
No reactions or negative outcomes noted





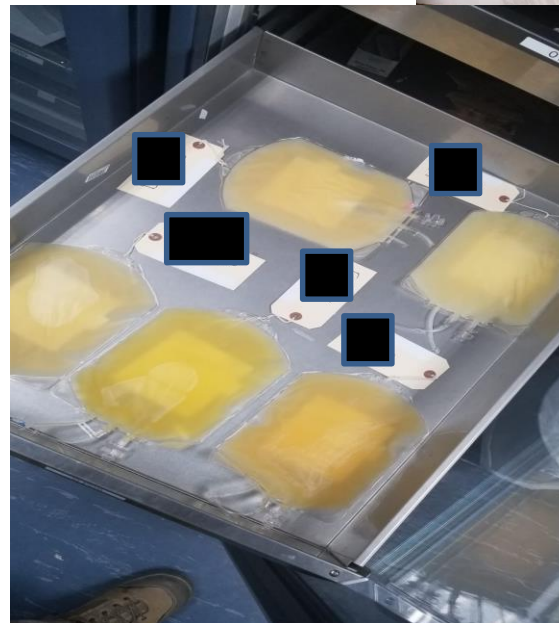
# Donor Screening / Testing

- Donors are pre-screened upon arrival at deployed location
  - ABO/Rh (tested at deployed R3/BSD/AF Platelet Team)
  - Antibody Screen (plasma/serum shipped to CONUS)
  - Transfusion Transmitted Disease Screening (plasma/serum shipped to CONUS)
- At time of platelet donation:
  - ABO/Rh (tested at deployed R3/BSD/AF Platelet Team)
  - Rapid disease testing (HIV-1, HCV, HBV, Syphilis, Malaria)
  - Antibody Screen (plasma/serum shipped to CONUS)\*
  - Transfusion Transmitted Disease Screening (plasma/serum shipped to CONUS)\*
- \*Platelet products labeled and distributed prior to receiving results from CONUS
- CONUS testing results: 2 – 4 Weeks



# Cold Platelet Distribution

- 10-day Cold Stored Platelet available at all R3s in CENTCOM
- Army and AF Platelet Collection sites ship to some R2s – use standard Collins Box / wet ice
- Most supported locations prefer LTOWB vs. cold stored platelets
- Armed Services Blood Program Views CSP as another “Tool in the Toolkit” to support resuscitation
- Work to sustain capability: Doctrine, Training, Equipment



# QUESTIONS

