



RAMS/USAF & NATO STO TECHNICAL COURSE

on Aerospace Medicine – One for All, and All for One!

sur “La médecine aérospatiale – Un pour Tous, et
Tous pour Un !”

organized by

RAMS/USAF

&

NATO Human Factors and Medicine Panel

to be held at

Ramstein AFB (DEU) on 20-24 March 2017

All nations invited, with the exception of the nations
designated by NATO

Latest Enrolment Date

10 March 2017

Enroll on-line at

<https://events.sto.nato.int/index.php/event-summary>

CME Credit Point are appointed

All presentations and discussions will be held in
English.

Theme

Modern (NATO) expeditionary missions are characterized by several factors which combine to increase both the importance of evacuation and the challenge of carrying it out effectively. There has also been ongoing pressure to decrease the logistic-support footprint in theatre and therefore to deploy smaller, less capable medical facilities into theatre. At the same time governments and populations of (NATO) nations demonstrate low tolerance for fatalities, and expect their personnel to receive the best possible chance of surviving with the least possible morbidity.

In forward areas rotary wing platforms have long been the norm, fixed wing platforms have traditionally only been employed for moving stable patients between medical facilities in the area of operations or from the area of operations to the home country. However, recently the factors above have triggered an increase in the movement of less stable casualties over long distances. It has also become possible to foresee the use of fixed wing aircraft in a forward evacuation role. All of these capabilities are costly, technologically intensive and require highly trained providers. Multinational solutions are increasingly sought as a way to share this burden but this brings additional challenges.

This Technical Course will address advances in aeromedical evacuation, human factors, clinical practice and emerging technology. The objective of this course is to provide state of the art knowledge and practices in aerospace medicine; sharing national practices; evaluate new, emerging and proposed technologies in order to optimise Aerospace Medicine in deployed area and multinational environments, focusing on Operational Aviation Medicine.

Topics to be covered

Multinational Operations - Cooperation and Partnerships - Interoperability - Operational Aviation Medicine - Aeromedical Evacuation - Human Factors - Situational Awareness - Psycho-physiological Enhancement - Mission Effectiveness - Clinical Practices - Selection and Training - Medical Standards

Thème

Les missions expéditionnaires modernes (de l'OTAN) sont caractérisées par plusieurs facteurs, lesquels combinés rendent primordial l'exécution d'évacuations médicales efficaces. La pression opérationnelle est constante pour diminuer l'empreinte du support logistique sur les théâtres, et donc déployer des installations médicales plus réduites et donc moins performantes. Dans le même temps, les gouvernements et les populations des nations (de l'OTAN) éprouvent une faible tolérance à l'égard des décès et s'attendent à ce que leur personnel bénéficie des meilleures chances de survie avec la moindre morbidité possible.

Les aéronefs à voilure tournante ont longtemps été la norme dans la zone de l'avant, et les aéronefs à voilure fixe ont traditionnellement été utilisés pour évacuer des patients stables entre les installations médicales de la zone d'opérations ou de la zone d'opérations vers le pays d'origine. Cependant, récemment, les facteurs mentionnés précédemment ont entraîné une augmentation des transferts de victimes moins stables sur de longues distances. Des aéronefs à voilure fixe ont alors été utilisés dans le cadre d'évacuations depuis l'avant. Toutes ces capacités sont coûteuses, technologiquement avancées et nécessitent des acteurs hautement qualifiés. Des solutions multinationales sont de plus en plus recherchées comme moyen de partager les coûts, mais cela induit des défis supplémentaires.

Ce cours technique traitera des progrès des évacuations médicales par voie aérienne, des facteurs humains, de la pratique clinique et des technologies émergentes. L'objectif de ce cours est de fournir des connaissances et pratiques de pointe en médecine aérospatiale, en partageant les pratiques nationales, et d'évaluer les nouvelles technologies et pratiques émergentes afin d'optimiser la médecine aérospatiale en environnement opérationnel et multinational, en se concentrant sur la médecine aéronautique opérationnelle.

Sujets traités

Opérations Multinationales - Coopération et Partenariats - Interopérabilité - Médecine Aéronautique Opérationnelle - Evacuation Aéromédicale - Facteurs Humains - Appréciation de Situation - Amélioration Psychophysologique - Efficacité de la mission - Pratiques Cliniques - Sélection et Formation - Normes Médicales



RAMS/NATO STO Technical Course on "Aerospace Medicine – One for All, and All for One!" Programme

Monday 20 March 2017

DAY ONE - 20 March 2017

- 07:00** Coffee & Refreshments; Registration
- 08:00** Welcome - Opening Remarks
Lt Gen Mark Ediger
- 08:30** Audiotactile Displays for Improving Pilot Situation
Awareness Cross-modal Performance and Implications for Trust
J. Christopher Brill, Ph.D
- 09:00** 2B-Alert: tools for predicting alertness decrement due to sleep loss and the recuperative effects of caffeine
Jaques Reifman, Ph.D
- 09:30** BREAK
- 10:00** Factors Influencing Fatigue on a Busy Typhoon Squadron – A Pilot Study
Wing Commander Catherine Wilkinson
- 10:30** Tiredness in drone cockpit and countermeasures
Vincent Beylot
- 11:00** Ten Things I Learned While Developing a Fatigue Risk Management System (FRMS) for the Royal Canadian Air Force(RCAF)
Col Pierre Morissette, RCAF Surgeon
- 11:30** LUNCH
- 13:00** USAF Combat Search and Rescue Aircrew and Special Duty Operators
Wayne Chappelle, Psy.D
- 13:30** Germanwings Flight 9525-Where is the risk?
Maj Helena Ribeiro
- 14:00** Aircrew random testing for psychotropic substance abuse in Europe
Col Dr. Ulrich Werner
- 14:30** BREAK
- 15:00** Space Medicine as an example of international cooperation
Vincent J. Michaud, MD
- 15:30** Development of the 1st Emergency Operational Procedures for a Long Term, Deep Space Human Mission to Mars
Irene Schneider
- 16:00** AEROMEDICAL DECISIONS FOR GENDER DYSPHORIA IN CANADIAN ARMED FORCES AIRCREW
Maj Aaron Minkley

16:30 Policy on transgender aircrew and fitness to fly
Col Duncan Hughes

18:00 ICE BREAKER
Officers Club

Tuesday 21 March 2017

DAY TWO - 21 March 2017

- 08:00** In-Flight Physiologic Incidents and High-Performance AirUKt
Ryan Mayes PhD
- 08:30** Limitations of portable pulse dose oxygen systems for aircrew
Dr. Wing Commander Pete Hodkinson
- 09:00** Hypocapnia: An Important Consideration for Evaluating In-Flight Physiologic Events (F-15)
William P. Mueller, Col
- 09:30** BREAK
- 10:00** Working Together to Determine Optimal CPAP Compliance in the Aviator – USAF, USN, USA, FAA
Lt Col Dara D. Regn, MD Lt Col
- 10:30** CELLULAR METABOLIC AND SEROLOGICAL CHANGES IN HUMANS FOLLOWING HYPOBARIC EXPOSURE – POSSIBLE EXPLANATION FOR WHITE MATTER INJURY WITH HYPOBARIA (brain injury with altitude exposure) + TRANSIENT BRAIN INJURY DURING ROUTINE AIRCREW TRAINING HYPOBARIC EXPOSURE – SINGLE EXPOSURE TRIAL
Steve McGuire + PAUL Col M. Sherman
- 11:10** Battlefield Accupuncture and integrative medicine
Thomas Piazza
- 11:40** TRAVEL
- 12:00** GROUP LUNCH
Flying Pig
- 13:00** TRAVEL
- 13:30** Battlefield Accupuncture (BA) I - Panel Discussions
Thomas Piazza / Panel
- 15:00** BREAK
- 15:30** BA II - Reduction in Musculoskeletal Injury Risk due to the Functional Injury Reduction Strength Training (FIRST) Program
Col Mark R. Coakwell, Thomas Piazza
- 16:00** BA II- Neck Pain in RCAF Fast Jet Pilots: Prevalence & characterization of pain, potential contributing factors and operational impact
Major Erin Smith, Thomas Piazza
- 16:30** BA II - A Broad Overview of Neck/Back Pain in US Air Force Pilots
MPH Anthony Turner, Thomas Piazza

Wednesday 22 March 2017

DAY THREE - 22 March 2017

- 08:00** CT coronary angiography for the occupational assessment of Coronary Artery Disease in United Kingdom Armed Forces Aircrew
Wg Cdr Edward Nicol

08:30 Cardiac Pacemaker due to a Progressive AV-Block as Athletic Heart Syndrome ?
Lessons learned from an AirUKt Mishap
Christoph Wonhas MD, Col MC (ret.)

09:10 Developing of risk screening algorithm for asymptomatic coronary disease in Aircrew
Maj Dr. med. Denis BRON

09:25 BREAK

10:00 Coming Together to Prevent Cardiovascular Disease in the Aviator – USAF, NASA, FAA, NATO
Eddie D. Davenport M.D

10:30 ALLIANCE AEROMEDICAL EVACUATION: IS IT ACCEPTABLE TO THE UK MILITARY?
Wg Cdr Kristian Mears

11:00 Multinational Aeromedical Evacuation Working Group (MAEWG): An Idea to Reality
Maj Reginald T. Brown

11:30 LUNCH

13:00 International cooperation for AEROMEDEVAC during Barkhane operation; Patient Evacuation Coordination Cell flight surgeon point of view
J-Ph Even

13:30 IMPROVING CLINICAL-INTEROPERABILITY BETWEEN UK CRITICAL CARE AIR SUPPORT TEAMS AND USAF CRITICAL CARE AIR TRANSPORT TEAMS
Sqn Ldr David Hall, Sqn Ldr Mark Howley

14:00 TACTICAL AEROMEDEVAC TRAINING BEFORE DEPLOYMENT, INTEREST OF INTERNATIONAL EXERCICES
Hélène Mabit, Laurent Vitiello

14:30 BREAK

15:00 European Personnel Recovery Center - Air Centric Personnel Recovery Operative Course APROC 2016
MC Boris Bourgeois

15:30 Finger Mounted Ultra Sound Integration
Michael Sedillo

16:00 Ultrasound in the RDAF SAR helicopter
René C. Bleege

16:30 TRAVEL TO ROOM

17:30 TRAVEL OUT
CTR

18:00 GROUP DINNER
Haus de Burgers

21:00 TRAVEL HOME
CTR

Thursday 23 March 2017

DAY FOUR - 23 March 2017

08:00 Transcranial Direct Current Stimulation: Augmenting Human Performance
Pavel Mazirka

08:30 Human Performance Enhancement - a concept for the evaluation of a training program for the german air force
Oliver Daum

09:00 Data-Based Gap Analysis of United States Military En Route Care Training
Col Marla J. De Jong

09:30 BREAK

10:00 Ten years of en route critical care training in the French Military Medical Service
Mathieu Bountonnet

10:30 SIMULATION TRAINING FOR AEROMEDICAL EVACUATION
Stéphane Saboureau

11:00 Virtual Patient Simulation: A Tool for Flight Surgeon Education
Lt Col Tracy Bozung

11:20 LUNCH

13:00 AE En route Damage Control Surgery in the RDAF
Claus Lie (Technical Course Director)

13:30 the role of military aircrafts in aeromedical evacuation of romanian citizens involved in mass casualty incidents
LTC Leonard Marin Lupu

14:00 BREAK

14:30 Medevac off the grid: International collaboration for Antarctic operations
Maj Nathalie Pattyn

15:00 Peace and Security Cooperation Under the ADMM Plus Framework - ASEAN Center of Military Medicine (ACMM)
Capt. Pume Navaporn Verayangkura

15:30 TRAVEL TO ROOM
LRS

16:30 TRAVEL OUT
CTR

17:00 TOWER TOUR

18:00 SPEAKERS DINER
Burg Schenke

21:00 TRAVEL HOME
CTR

Friday 24 March 2017

DAY FIVE - 24 March 2017

08:00 Prescribing Cabin Altitude Restriction for Aeromedical Evacuation - Methodology & Evidence
William P. Butler, MD

08:30 Apnoic ventilation during AE/Flight
Carsten Simonsen MD

09:00 Flying EBOLA in the RDAF, 2 case reports
Jean-Michel Ferrieux

09:30 BREAK

10:00 Operational color vision testing and Pilot/RPA color vision requirements. With advanced multifunction displays and computer automation in the newest generation manned and RPA airUKt are the color vision requirements out of date and too strict?
Steven Hadley, MD

10:30 Laser Dazzle - Ocular Effects and Characterization
Lt Col Wes Kinerk, Maj Christopher Putnam

11:10 New Software Tool Visualizes Spatial Disorientation in Airplane Safety Events
Dr. Eric Groen

11:40 Caring for the caregiver - the potential application of the US Navy's Human Factors Council paradigm to healthcare organizations
LTC William Porter, MD

12:10 Closing Remarks

ENROLMENT TECHNICAL COURSE

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Enrolment must be made via internet only at

<https://events.sto.nato.int/index.php/event-summary>

Once your enrolment has been validated, you can download a General Information Package with the latest information on travel, accommodation and local arrangements. Please note that participants are to make their own travel arrangements and hotel bookings.

If you are unable to enrol via the internet, please contact the NATO CSO enrolment coordinator:

lectureseries@cso.nato.int

Please respect the following dates for enrolment:

Latest Enrolment Dates

10 March 2017