

**Confédération Interalliée  
des Officiers Médicaux de Réserve**

**Interallied Confederation of Medical Reserve Officers**



**Scientific Programme  
Programme Scientifique  
Abstracts**

Summer Congress 2017 – Prague (Czech Republic)

Congrès d'été 2017 – Prague (la République tchèque)  
July 30<sup>th</sup> – August 4<sup>th</sup>



Confédération Interalliée des Officiers Médicaux de Réserve (CIOMR)  
Interallied Confederation of Medical Reserve Officers



## SCIENTIFIC PROGRAM CIOMR SC 2017

### THEME

**“Reserve Medical Planning and Participation  
in the Current Migration Crisis and Natural Disasters”**

#### MONDAY 31<sup>st</sup> JUL

##### **Military Traumatic Brain Injury - WORKSHOP (08.30 – 16.30)**

Open to All Medical Personnel, Venue: Hotel International, Prague  
(Service dress short sleeves)

**Moderator:** *LtCol Stuart HARRISSON (UK), UK DCA Neurosurgery*

**Course Administrator** *Col. Walter HENNY (NL)*

*During the Workshop many aspects will be addressed by Lt Col Stuart HARRISSON, the present UK Defence Consultant Advisor on Neurosurgery and participants will have the opportunity to practice techniques.*

**LUNCH (12.30 – 13.30)** - Hotel International, Prague

#### TUESDAY 01 AUG

##### **EXECUTIVE COUNCIL & COMMITTEE MEETINGS (08.00 – 12.30)**

All CIOMR + invited Guests (Hotel International, Prague)  
(Service dress or jacket and tie)

08.00 – 10.00 Executive Council 1

10.00 – 11.00 Break

11.00 – 12.30 Scientific Committee Meeting

**LUNCH (12.30 – 13.30)**, Hotel International, Prague

## TUESDAY 01<sup>st</sup> AUG

### SCIENTIFIC SESSION I (13.30 – 16.00)

All CIOMR + Guests, Venue: Hotel International, Prague  
(Service dress short sleeves)

- 13.30 **Welcome & Introduction to Scientific Session I**  
*Major (MD) Nils Drews (GER) Chairman, Scientific Committee CIOMR*

#### The mini blood symposium: Taking transfusion forward

- 13.35 **Mechanisms and Pathophysiology of Combat Injury**  
*Maj Dr. Iain M. Smith RAMC, (UK)*  
*Academic Department of Military Surgery & Trauma at the Royal Centre for Defence Medicine*

**Abstract:** Military operations in Iraq and Afghanistan saw unprecedented survival of battlefield casualties. Lessons learned must be translated to future contingency operations. In these, mature deployed trauma systems will be absent, but the pathophysiology of combat trauma will be unchanged.

Massive hemorrhage due to anatomical disruption remains the most immediate, but treatable, hazard to the casualty. Trauma-induced coagulopathy is common and increases mortality, but may be mitigated with aggressive blood product resuscitation. Activation of the sympathetic nervous system leads to vascular endothelial disruption, fluid extravasation, edema and organ dysfunction and is associated with increased mortality. Preclinical studies suggest that this endotheliopathy may be reduced by plasma-based resuscitation strategies.

This presentation will review the mechanisms and patterns of injury seen in recent and ongoing conflicts and the early physiological consequences, highlighting the need for ongoing delivery of early blood product resuscitation.

- 14.05 **Taking transfusion forward: Current perspectives in military transfusion**  
*Col (Retd) Dr. Heidi Doughty, Consultant in Transfusion Medicine*  
*NHS Blood and Transplant, (UK) Birmingham*  
**Abstract:** This presenter described the changes in blood transfusion practice in the last decade. A brief history of blood product administration was presented, as well as an overview of recent developments in transfusion support.

- 14.35 **Stop the bleed – save a life!**  
**Introducing civilian bystanders as immediate responders in the Netherlands**  
*LtCol Prof. Dr. Arie B. van Vugt,*  
*Traumasurgeon, Enschede (NL)*  
**Abstract:** Due to terrorist attacks in Europe, we are increasingly confronted with civilian victims sustaining military-type injuries with life-threatening hemorrhage. Direct control of external bleeding is the most important lifesaving measurement of the life saving phase

and is dictated in the BATLS-doctrine. The military principles of early hemorrhage control through direct pressure, tourniquet and wound packing have been successfully translated to civilian prehospital care. However, to save more lives, bystanders at the scene should act as immediate responders to stop external hemorrhage after a terrorist attack.

15.05 **The Blood Supply in Disaster Medicine**

*Col Prof. Milos Bohonek (CZ), Consultant in Transfusion Medicine  
Central Military Hospital, Prague*

**Abstract:** The blood supply is strategic and logistic problem of the military medical service as well as for civilian management of crisis situations and disaster medicine. Not all crisis situations need vast amounts of blood, but an unorganized panic could lead to an extensive blood drive, followed by a massive expiry of blood.

Certain situations need blood and it is necessary to know how much of it and when.

1/ "Bloodless" crisis state with many casualties but the demand for blood is not extensive.

2/ "Bloody" crisis state with many casualties and the demand for blood is extensive.

Problems with blood supply are often caused by a destroyed infrastructure which brings logistic and transportation problems.

Governments should have an emergency plan, solves situations leading to blood shortage. The solution can be designed jointly for civilian and military medical service, or separately. A model example of cooperation between military and civilian medical service represents the blood crisis policy in The Czech Republic with 7 blood crisis centers – 6 civilians, 1 military. The civilian centers covers a majority of demands for blood, the military blood bank coordinates the distribution and provides a special blood freezing programme.

15.35 **Panel discussion**

**BREAKOUT SESSION II (16.30 – 18.00)**

All CIOMR + Guests, Venue: Hotel International, Prague

(Service dress short sleeves)

16.30 **Welcome & Introduction to Breakout Session II**

*Major (MD) Nils Drews (GER) Chairman, Scientific Committee CIOMR*

16.35 **SURVIVAL MEDICINE - Improvise, Adapt & Overcome**

*Christo Motz, International Consultant on Survival and Resilience  
FYLGIJUR Wilderness First Aid & Survival*

**Abstract:** The presenter suggested techniques that contribute to individual resilience: specifically, mental and physical resilience, body awareness and situational awareness and their contributions to the likelihood of survival. He described the human as an ecosystem, confronted by both internal and external stressors. Survival medicine combines breathing, exercise and diet as contributory factors to resilience.

**WEDNESDAY 02<sup>nd</sup> AUG**

**SCIENTIFIC SESSION III (08.00 – 18.00)**

All CIOMR + Guests, Venue: Hotel International, Prague  
(Service dress short sleeves)

08.00 **Welcome & Introduction to Scientific Session II**  
*Major (MD) Nils Drews (GER) Chairman, Scientific Committee*

***“Reserve Medical Planning and Participation  
in the Current Migration Crisis and Natural Disasters”***

08.10 **Interoperability in Enhancing Resilience: An example of Joint Working in Wales**  
*Col Prof. Kevin Davies (UK), President CIOMR*

**Abstract:** Uniquely within the UK the Welsh Joint Emergency Services Group (JESG) is the strategic focus for interoperability between the civilian emergency services, defence and governments. Membership consists of the Chief Police Officers, Chief Fire Officers, Chief Ambulance Officer, Commander of the Infantry Brigade as defence lead and senior civil servants representing government. *Ex officio* members are invited when specific expertise is required for example Hazardous Area Response Teams (HART). Utilizing two examples of how this strategic group manages high impact events in order to ensure security, safety and resilience this paper will highlight the complexity of the work and highlighting the importance of interoperability in planning, implementation and evaluating the examples. The two examples will be the 2014 NATO Summit and the 2017 UEFA Champions League Final.

08.45 **Resilience Decline Caused by Chronic Operational Stress**

*Dr. Ibolja Cernak, MD, PhD, ME, MHS (CA), Professor & Chair  
Canadian Military and Veterans' Clinical Rehabilitation, Faculty of Rehabilitation Medicine  
University of Alberta, Edmonton, CA*

**Abstract:** Resilience can be viewed as a defense mechanism that enables people to thrive in the face of adversity. However, resilience is not just social competence or positive mental health; rather it is an interactive concept that combines previous serious risk experiences, education and training with biological traits and social support in finding the optimal psychological response to environmental hazard. The main operational stressors the troops encounter during military tasks are repeated exposures to blast, isolation, ambiguity, powerlessness, boredom, increased workload, sleep deprivation and exposure to life-endangering situations. The ability of military personnel to maintain operational readiness is in direct relationship to their resilience to withstand these operational stressors. Accordingly, different resilience levels may correspondingly influence performance, professional success and response to and recovery from injury and determine the likelihood of chronic health problems.

Executive functions (EFs) can be defined as regulatory mechanisms of the brain that control the processes of planning, initiation, organization, inhibition, problem solving, self monitoring and error correction. The prefrontal cortex has been shown to be key to the performance of EFs. Maintaining optimal function despite exposure to stressors or, better yet, showing enhanced functioning in response to stress are abilities that are essential to survival and resilience.

This lecture discussed early biomarkers of operational stress-induced resilience and cognitive function decline and addressed some training approaches for enhancing psychological health.

09.30 **Panel discussion - Resilience**

*Prof. Kevin Davies (UK), Prof. Ibolja Cernak (CA)*

10.30 **The Role of the Reservist**

*Maj Stuart Neilson (UK), Medical Operational Support Group  
Headquarter, 2nd Medical Brigade, British Army*

**Abstract:** This was a short presentation on the employment of reservists in Medical Planning and Participation in Current Migration Crisis and Natural Disasters. The presenter prompted a discussion to explore delegates' views on whether reservists have something extra or different to these types of operations over and above their individual skill sets.

11.00 **The University Reserve Officer Training Programme, South Africa**

*Cpt. Gareth HIDE (ZA)*

**Abstract:** The Republic of South Africa moved from a policy of conscription to a policy of voluntary military service with the advent of constitutional democratic government in 1994. For historical reasons, widespread hostility towards the armed forces existed at that time in a deeply polarized nation. Experience with promoting voluntarism amongst graduate students at South African universities to encourage service in the Reserve of the South African National Defence Force is discussed. Methods of selection and challenges encountered with retention are highlighted in particular.

11.30 **OP GRITROCK – The West African ebola outbreak and a UK Royal Navy reservist's experience as part of the UK's response in Sierra Leone**

*Surg Cdr D.P Whitehouse (UK), HMS King Alfred, Portsmouth, United Kingdom*

**Abstract:** The recent Ebola epidemic had a wide and severe effect on West Africa. By late 2014 there were nearly 3000 deaths and 10,000 cases in Sierra Leone (SL) alone. W]The World Health Organization (WHO) declared an international public health emergency and the United Nations Security Council declared the Ebola virus a «threat to international peace and security.» Britain, France and the USA deployed to offer leadership, expertise and resources to the three affected countries. This presentation outlines the UK's earlier involvement in SL and wider involvement in the Ebola response before focusing on the work done by the UK MOD-run Kerrytown Ebola treatment unit and the role of reservists in that facility. An overview of the facility, the clinical work undertaken and the management protocols used there were described.

12.00 **Autologous white blood cell infusion for trauma**

*BG Gerald Griffin, U.S. Army (ret), PharmD, MD, FACFE*

**Abstract:** The presenter discussed the use of autologous white blood cell infusion as a novel and promising therapy for trauma. He examined and described proofs of concept and further needs for answering questions posed by this therapy.

13.30 **Blast-induced Neurotrauma: Acute and Chronic Consequences**

*Dr. Ibolja Cernak, MD, PhD, ME, MHS (CA), Professor & Chair*

*Canadian Military and Veterans' Clinical Rehabilitation, Faculty of Rehabilitation Medicine  
University of Alberta, Edmonton, CA*

**Abstract:** Blast injuries, including blast-induced neurotrauma (BINT), are caused by blast waves generated during an explosion. Accordingly, their history coincides with that of explosives. Throughout current military actions, explosive devices have become more powerful, their detonation systems more creative and their additives more devastating. As a continuing threat to military troops and civilians. Blast injuries, especially BINT, have been called the «signature wound» of the wars in Iraq and Afghanistan.

In both civilian and military environments, exposure to a blast may cause instant death, injuries with immediate manifestation of symptoms, and latent injuries that are initiated at the time of exposure and may manifest over a period of hours, months or even years. In parallel with this increased survival rate, the number of victims with severe debilitating long-term consequences, not seen before, is also increased. BINT is a traumatic brain injury (TBI) caused by a blast that is generated during an explosion. It is a unique clinical entity in which the functional and morphological impairments in the brain are coupled with considerable systemic and local changes. When operational information on blast exposure exists, special attention should be given to early vascular and neurological changes. Months and years after blast exposure, diagnostic tests for ongoing neurodegenerative processes and neurological deficits should be implemented as part of routine care and follow-up. Because systemic alterations, in general, occur parallel with BINT chronic multi-organ dysfunction, including neuroendocrine insufficiency, cardiovascular instability, dyspepsia and irritable bowel, among others, might accompany and aggravate the BINT-related symptoms.

14.30 **Discussion with Prof. Ibolja Cernak**

15.00 **Utilisation de la reserve medicale dans les crises migratoires et/ou en cas de catastrophes naturelles | Calling on French medical reserves during natural disasters or migration crisis (French)**

*Maj / Médecin Principal (R) Dr. Jean CATINEAU, MD (FR)*

*UIISC 7 - Unité d'Instruction et d'Intervention de Sécurité Civile n°7*

**Abstract:** The French army relies on a 12300-strong specialized force to face large-scale disasters such as CBRN incidents, healthcare crisis and natural disasters. This workforce is composed of five different units (UIISC 1-5-7, BSPP and BMPM) which are stationed around the country.

The French military health service plays a central role in these units and reserves are a key part of this work force. These are highly operational units that can be deployed on the mainland or overseas and of those five units, three are each in action for an average of 150 days per year.

Over the last 30 years the French civil protection units have been deployed 121 times all over the world and healthcare reserve personnel have contributed to many missions such as the earthquake in Haiti or the civil war in Sri Lanka.

16.30 **Cooperation in public health to fight infectious diseases in developing countries is good for the global economy**

*Cdr Dr Stef Stienstra (NL), Navy*

*Civil-Military-Interaction-Command Royal Dutch Armed Forces*

**Abstract:** Public Health systems are not always prepared for outbreaks of infectious diseases. Although in the past several public health institutes, like the French «institut Pasteur» and the Dutch «Tropeninstituut» were prominent surveyors of infectious diseases, the investments in worldwide public health have decreased. Now more attention is given to curative health care compared to preventive healthcare. The recent Ebola virus disease outbreak in West Africa initiated a new wave of interest to invest in Worldwide Public Health to prevent outbreaks of highly contagious diseases. Zoonotic diseases are threatening as the population does not have natural or artificial (from vaccination) immune response to new diseases like the Ebola Virus Disease outbreak of 2014. The new strain of the Ebola Virus in West Africa was slightly less lethal, compared to other Ebola Virus strains, but the threat of spreading was far bigger as it had a longer incubation time. Most public health systems are not trained well enough to mitigate highly infectious and deadly disease outbreaks. NGOs helping to fight the outbreak are often better trained in curative treatments and have less experience with biological (bioweapon) threats for which the military is trained. The UNMEER mission was unique in this. It was a setting in which military and civilian actors cooperate in fighting a biological threat. Protection is essential for health workers. Smart systems have to be developed to prevent further spread of the disease but it is not only the biosafety that has to be considered but also the biosecurity, as misuse of extremely dangerous strains of microorganisms cannot be excluded. Several zoonotic infectious diseases, such as anthrax,, smallpox and hemorrhagic fevers are listed a s potential bioweapons. Therefore both biosafety and biosecurity have to be implemented in all measures to fight outbreaks of highly infectious diseases.

17.30 **Closing remarks**

*Major (MD) Nils Drews (GER) Chairman, Scientific Committee CIOMR*

## THURSDAY 03<sup>rd</sup> AUG

### 3C COMPETITION (06.00 – 13.00)

All CIOMR related Judges, Milovice  
(Please see separate program / instructions)

### SCIENTIFIC SESSION IV

All CIOMR + Guests, Venue: Hotel International, Prague  
(Service dress short sleeves)

#### 14.00 **The Challenges of Civil-Military Humanitarian Healthcare Provision, Military vs. NGO Perspectives**

*Fg Off Lisa Page MSc FIBMS (UK), Medical Support Officer  
612 Sqn, RAF*

**Abstract:** This presentation will outline the main challenges of providing Civil-Military humanitarian healthcare, focusing on the detrimental effect on humanitarian principles and the risk to Nongovernmental organisations (NGOs). Reviewing the challenges of Civil-Military humanitarian healthcare provision from the Military and NGOs perspectives. Evaluating these perspectives will show there is a gap between civil-military relations due to their difference in capabilities and agendas. This gap needs to be closed with the proactive cultural awareness of each other, to enable the improvement of the inevitable Civil-Military humanitarian healthcare provision in future complex humanitarian emergencies. The final part will look to the future and the possibilities to improve Civil-Military relations within the medical services in order to provide appropriate and effective humanitarian healthcare.

The military need the NGOs as much as the NGOs need the military to provide sustainable humanitarian healthcare, but they can also be a liability to each other and their efforts. Therefore, we must close the gap in civil-military relations with communication at home first to be able to work interdependently in complex humanitarian emergencies in the future.

#### 14.30 **Physiotherapy: More than just a sportsbag with a magic sponge!**

*Flt.Lt Judy Dunn (UK), Medical Support Officer (Physiotherapist)  
612 Sqn RauxAF*

**Abstract:** NATO defines Med FP as «the onservation of the fighting potential of a force so that it is healthy, fully combat capable, applied at the decisive time and place.» Actions to counter the debilitating effects of environment and disease through preventive measures permeate all levels of pre-deployment operational activity, enduring throughout the operation and into the post-deployment recovery period.

Physiotherapy forms an integral part of the multi-disciplinary rehabilitation team with valuable, flexible skills working within varied settings, including deployed operations, supporting NATO exercises, primary care and in the Medical Support Officer role for international disaster relief. Civilian Physiotherapists are now considered an essential participant in international emergency medical teams. With changing aspects of asymmetrical warfare and humanitarian relief supporting «hearts and minds,» diversification of the physiotherapist role may be considered to support these challenges.

**15.00 Damage control surgery minimises stoma formation after battlefield abdominal injury**

*Maj Dr. Iain M. Smith RAMC, (UK), Academic Department of Military Surgery & Trauma at the Royal Centre for Defence Medicine*

**Abstract:** This presenter offered a brief history of Damage Control Surgery, a history of colonic surgery past and present as well as a description of the approach to abdominal injury during Operation HERRICK 2016.

**15:30 Biological Defense and how Armed Forces of The Czech Republic deal with BW-threats**

*Lt.Col. Zbynek VALENTA, M.D. (CZ), Czech Army Biological Defence Centre*

**Abstract:** This Host Nation presenter provided a description of the Czech Army Bio-Defense System along with a description of the most common bioweapons. He described the capabilities of the Special Mobile Biological Teams and their ability to detect various forms of biological warfare agents. A description of the CZE Deployable NBC-Analytical Lab was provided. Established in 2005, it complies with the requirements of STANAG 4632 and related documents. It provides a high level of protection of personnel, environment and has a primary aim of identification of specific biological warfare agents to obtain a «confirmatory level» of identification.

**16.00 The HIV epidemic early research history**

*Lt Col Lasse BRAATHEN (NOR) (ret), Professor and Chairman Emeritus of the Universities of Bern, Switzerland and Tromsø Norway.*

**Abstract:** In the early 1980s a strange new disease occurred in the U.S. The patients were all young male homosexuals and the disease was called Acquired Immune Deficiency Syndrome, AIDS. The etiology was then identified as viral, called Human Immunodeficiency Virus, HIV, and it was believed to be sexually transmitted. It was however also declared that it was only possible to be infected through a bleeding wound. The first blood test was marketed in 1985.

The general idea was that T-cells were infected which were then depleted causing the immunodeficiency. Reports of probable infections through skin led to the hypothesis that skin cells might also become infected.

We were working with a dendritic, antigen-presenting cell, the Langerhans Cell, which is situated in the outer layer of the skin, the epidermis. The epidermis is on average 1/10 mm thick and the Langerhans cells is therefore very close to the surface. Any antigen penetrating the stratum corneum will get contact with a Langerhans cell, be taken up by the cell and be transported to the regional lymphnode.

In a series of experiments using living Langerhans cells and viable HIV we could demonstrate infection. We furthermore also demonstrated Langerhans cells in genital

mucosa. We concluded that primary HIV infection occurs first of all of the dendritic Langerhans cells in genital mucosa, but can also occur through the skin. These findings, that HIV can infect through skin, was published at a number of congresses, amongst others also at the First National Congress on AIDS in Washington, leading to widespread publishing in news media in the world, and led to adjustment of some of the beliefs at the time.

**16:30 No increased mortality for weekend emergency laparotomies**

*Surg Lt Cdr Anders Peter Skovsen (DK) Consultant*

*Department of Surgery, Herlev Hospital, Univ. of Copenhagen*

**Summary (no abstract submitted):** This presentation described a study of weekend and week day laparotomies performed from 2009-2013. Cases were reviewed for comorbidities and complications. As a result of the study, the presenter concluded that there was no difference of pooled week day vs. weekend surgeries when adjusted for age and ASA score. Results were based on the date of admission and the lowest mortality rate was noted on Saturday.

**16.45 Damage Control Surgery: A staged approach in the severely injured**

*LtCol Prof. Dr. Arie B. van Vugt (NL) Traumasurgeon, Enschede*

**Abstract:** Indications and principles of DCS are outlined and related to a retrospective case report.

A staged approach with only life-saving surgery and prevention of infectious complications in the first phase is indicated in each patient with signs of manifest hypovolaemic shock and need for multiple transfusion. After the first surgical intervention stabilisation in the intensive care of physiology (ventilation, circulation, metabolic acidosis and clotting disturbances) is the second phase. Then after 24-72 hours the next step will be a roadmap to definitive treatment. Damage Control Surgery, including orthopaedics is a multidisciplinary approach from the beginning (prehospital) up to the end of care in rehabilitation. All co-workers (ED, OR, ICU, Ward) must understand this approach, which is complete different from early total care.

In the military approach, the next step depends strongly on the surgical and intensive care facilities available and stratevac to a role 4 military hospital must be planned carefully.

**17.45 Closing remarks**

*Major (MD) Nils Drews (GER) Chairman, Scientific Committee CIOMR*



## FRIDAY 04<sup>th</sup> AUG

### **EXECUTIVE COUNCIL & COMMITTEE MEETINGS (08.00 – 12.30)**

All CIOMR + invited Guests (Hotel International, Prague)

(Service dress or jacket and tie)

08.00 – 10.00 Executive Council 2

10.00 – 11.00 Break

11.00 – 12.30 Scientific Committee Meeting

**LUNCH (12.30 – 13.30)**, Hotel International, Prague

### **CLOSING CIOR – CIOMR GENERAL COUNCIL (14.00 – 16.30)**

All CIOR/CIOMR + invited Guests (Hotel International, Prague)

(Service dress or jacket and tie)