

**Confédération Interalliée des Officiers Médicaux de  
Réserve**  
**Interallied Confederation of Medical Reserve Officers**



Mid Winter Meeting 2016 – Brussels (Belgium)  
Réunion d'hiver 2016 – Bruxelles (Belgique)

**Scientific Programme**  
**Programme Scientifique**

**Presentation Abstracts**  
**Résumés des conférences**

Lt Chris Rankin QARNNS(R) (Edit. 01FEB16)  
Wednesday – 03 February 2016 - Conference Workshop

09:00 – 16:00

## **Programme for Pre-Hospital Emergency Care (PHEC) Course/Exercise**

**Instructors**                    - **Sqn. Ldr. Graham Banks (UK)**  
   - **Flt Lt Laura Hodson (UK)**  
   - **Sgt Kevin McClean (UK)**

**Course Administrator**       - **Col. Walter Henny (NL)**

### **Introduction**

- **Epidemiology of trauma**
- **Catastrophic haemorrhage**
- **Haemorrhagic shock and early trauma death**
- **Pre-hospital treatment “defines” outcome**

### **CASE STUDY Part One**

- **Traumatic amputation; junctional bleeding - CABG: treat catastrophic haemorrhage first**

### **ROUND ROBIN WORKSHOPS**

- **CAT**
  - **Introduction**
  - **One/Two handed application**
- **Haemostatic dressings:**
  - **Introduction**
  - **Celox gauze/pressure dressing application**
- **EZ-IO**
  - **Introduction**
  - **Practical use**
- **Pelvic splints**
  - **Introduction**
  - **Application**

**Lunch 1200 - 1300**

### **MASSIVE TRANSFUSION PROTOCOL**

- **Changes since 2000 – Principles - Triad of death - RBC / FFP / Platelets (1:1:1) vs. Fresh Whole Blood**
- **Tranexamic Acid**
- **Pre-hospital administration**
  - **Keeping blood products cool**
  - **Warming products on delivery**
  - **Pre-alerting hospital (“Op VAMPIRE”)**

### **Summary and Questions**

**19:00 – 2200**                    **CIOMR Dinner**

**Thursday – 04 February 2016 - Opening Ceremonies**



- 08:50**            **Welcome - *Maj. Nils Drews (D) Chairman of Scientific Committee***
- 09:00**            **The logistic and legal challenges to military – civilian Integration in the United States  
*Maj. Gen. Robert Kasulke (US)***
- 09:20**            **Bridging the gap: Medical simulation- from battle dress to scrubs  
*Lt. Col. Patricio Bruno (US)***
- 0940**            **Civilian-military cooperation in forensic odontology in southern Denmark  
*Cdr. Peter Knudsen (DK)***
- 10:00**            **Break**
- 10:30**            **Post Traumatic Stress Disorder (PTSD): Late onset presentation in geriatric veterans  
*Lt. Col. Patricio Bruno (US)***
- 11:00**            **Recruiting the medical reserves - UK challenges & perspectives - *Col. Mark Sheridan (UK)***
- 11:30**            **Role of reservists within the French military health service  
*Dr (Col) Claude Vergez-Larrouget (Fr)***
- 12:00**            **Investing in public health gives - especially in low-income countries - extremely impressive returns  
*Cdr. Stef Stienstra (NL)*Lunch**
- 12:30**            **Lunch**
- 13:30**            **Responding to Ebola. Utilising reservists to enable and enhance service delivery. A personal perspective  
*Flt. Lt. Helen Trudgeon (UK)***
- 14:00**            **Introduction to medical leadership  
*BG Griffin (US)***
- 14:30**            **LUCAST<sup>TM</sup>2 in Danish search and rescue helicopters  
*1<sup>st</sup> Lt. Kasper Winther (DK)***
- 15:00**            **Break**
- 15:30**            **Op Gritrock: A personal view – *Lt. Col. Patricia Gibson (UK)***
- 16:00**            **U.S. Air Force Reserve Medical Entitlement Policy  
*Lt.Col. Tri Trinh (USA)***
- 16:50**            **Closing remarks  
*Maj. Nils Drews (D) Chairman of CIOMR Scientific Committee***

## **Pre-Hospital Emergency Care (PHEC) Course**

*Sqn. Ldr. Graham Banks,  
Executive Officer and 2<sup>nd</sup> in Command 4626 Sqn RAuxAF, United Kingdom*

The Pre-Hospital Emergency Care Workshop seeks, through presentations, discussion and experiential training, to promote and share current thinking, methodology and systems of patient care management following significant trauma.

The workshop will address the epidemiology of trauma, what is catastrophic haemorrhage and explain that haemorrhagic shock is a major cause of early trauma deaths and that pre-hospital treatment is essential to ensure good patient outcomes. It will, through case studies and practical training, look at:

The need to treat catastrophic haemorrhage first – CABC

Introduce the Combat Applied Tourniquet (CAT) and include a practical session on the application – one handed/two handed technique

Introduce haemostatic dressings and include practical sessions on celox gauze and first field dressings, direct pressure, elevation, application.

Introduce intra-osseous transfusion, including a practical session on the use of the EZ-IO

Introduce the use of pelvic splint and include a practical session on the application of the pelvic splint.

There will be a session on the Massive Transfusion Protocol and include how MTP has changed in the last 15 years, its principles and consider the Triad of death – Coagulopathy, hypothermia, acidosis. Also, to consider the need for Red Blood Cells, Fresh Frozen Plasma, Platelets (1:1:1) vs. Fresh Whole Blood and the use of Tranexamic Acid in trauma management. Also, pre-hospital administration – keeping blood products cool until administration, warming products on delivery, pre-alerting hospital (“Op VAMPIRE”).

There will also be an introduction to MERT (Medical Emergency Response Team (UK capability)) looking at its capabilities and challenges.

### **Biography**

*Sqn Ldr Banks is the ExO and 2IC of 4626 RAuxAF Sqn, RAF Brize Norton. Sqn Ldr banks joined the RAF in Aug 76 as a medic rising to the rank of WO in Nov 98. He was predominantly employed in primary healthcare (latterly as a Practice Manager) but also spent some 12 years in aeromedical evacuation operations and training. In his non-commissioned service Banks has served across the UK but predominantly at RAF Brize Norton and RAF Lyneham. He completed 3 years at Ramstein AB in Germany on an IDO tour (1983-86). He was awarded an MBE in the 2005 New Years Honours List for his service to the RAFMS. He commissioned in Jan 05 and was appointed SO3 Medical Operations Policy before going on to become OC Medical Logistics for HQ TMW. On promotion to Sqn Ldr in Apr 08 he undertook a tour of duty in Afghanistan at HQ ISAF Kabul before being appointed to his present position in Aug 08. Since joining the RAF, Sqn Ldr Banks has served operationally in Northern Ireland (2 years) during the Falklands Conflict, in the 1<sup>st</sup> Gulf War, the 2<sup>nd</sup> Gulf War (Iraq) and has completed 3 tours of duty in Afghanistan. He has completed a number of detachments including a 6-month tour in Belize. Sqn Ldr Banks has completed ISSC, JOCC and will attend his ICSC(A) in May 10. Banks retired from the RAF in Apr 14 and joined the Reserves in May 14.*

## **Bridging the Gap: Medical Simulation- from battle**

# dress to scrubs

Lt Col (Dr) Patricio G. Bruno  
*Medical Officer, Flight Surgeon, United States Air Force Reserve*  
*Professor and Assistant Dean for Clinical Education*  
*Lake Erie College of Osteopathic Medicine*

## Concept for Discussion

Medical Simulation is an established method of training troops worldwide- from combatants on self aide and buddy care- first line care, to combat medics, to nurses and physicians. Simulation creates a safe environment that mimics the true environment where learners can master a skill, developers can ascertain gaps and system analysis is able to observe and modify unpredicted shortfalls. The field of medicine in the military has adopted this tool- albeit not to the level that aviation and ground combat forces has. In the civilian sector, aeronautical simulation is an essential, crucial part of pilot and support crew training. The medical field has begun using medical simulation. It remains, however, haphazard, inconsistent, and variable - at best.

Medical military officers- particularly reserve medical officers- are uniquely trained and qualified to lead this movement in medical education. The need for medical simulation in all aspects of clinical training and maintenance of proficiency has never been greater. Clinical practice is more technical and has a narrower margin of error than ever before. Learners do not have the ample clinical exposure due to sub specialization, higher expectations of outcome and physician necessity for more and more numbers to maintain proficiency.

This presentation will cover the following topics.

1. Principles of Adult Learning Theory
2. Principles of Medical Simulation
3. Adult Learning theory as applied to curricular development for medical simulation
4. Immersive, emotive learning strategy
5. Debriefing
6. Quality and performance tracking

Learners will come away with an basic knowledge of the use and potential of medical simulation in modern day education and the unique role reserve military medical officers can play in this world wide transformational movement in medical education.

## **Biography**

*Lt Col (Dr) Patricio Bruno serves as a medical officer in the United States Air Force Reserve. He has served in combat in Afghanistan and has held temporary duty assignments throughout Europe and in search and rescue support operations for the NASA Space Shuttle Program. He has been awarded numerous medals and commendations including two combat air medals, the meritorious service medal, the commendation medal and the NATO medal. In his civilian work, Dr. Bruno serves as Assistant Dean for Clinical Education and Professor of Family Medicine at LECOM Bradenton College of Medicine. He is on the national faculty for SimLEARN, the medical simulation division of the Veteran's Administration. He is a national speaker on medical simulation and graduate medical education and has published in peer reviewed journals and texts. He is a national and international consultant in medical education and medical simulation. Dr. Bruno practices medicine as a hospitalist. He lives in Orlando Florida with his wife and twin 6 year old daughters.*

## **Post Traumatic Stress Disorder (PTSD)**

# Late onset presentation in Geriatric Veterans

Lt Col (Dr) Patricio G. Bruno  
*Medical Officer, Flight Surgeon, United States Air Force Reserve*  
*Assistant Dean & Professor*  
*Lake Erie College of Osteopathic Medicine*

## Introduction

Post Traumatic Stress Disorder (PTSD) incidence is growing and approaching epidemic numbers during the past decade, when the United States has been fighting two simultaneous wars. The events and nature of those experiences coupled with the hugely successful clinical abilities of our modern forces in saving lives has left the home front with a generation of veterans who may suffer from PTSD. Our awareness, research and efforts to treat PTSD have appropriately focused on our young veteran generations.

However, there is literature to support that a late onset version of PTSD among veterans of past wars exist.

The literature suggests that late onset PTSD is often misdiagnosed as depression or dementia. While these two diagnoses are common in the elderly and may add to the contributing factors that elicit the onset of PTSD, it is also possible that PTSD causes depression. Psychological protective mechanisms may also begin to fall part with dementia thereby exposing memories and PTSD symptoms.

We present two cases recently treated by our practice of late onset PTSD in geriatric patients. The discussion provides a synopsis of the literature.

Case 1 Mr A is a 70-year-old Hispanic patient with past medical history of diabetes, hypothyroidism, hyperlipidemia, obstructive sleep apnea and esophageal reflux. He comes to the clinic complaining of insomnia, with frequent awakenings through the night, nightmares and increasing anxiety for the last 6 weeks. He uses his CPAP machine on a regular basis since his sleep apnea was diagnosed three years ago. He has taken over the counter Melatonin with little relief.

Further questioning reveals that nightmares are related to his previous combat experience when he served in the Vietnam War in his late twenties. A sergeant friend passed away in the patient's arms, after he was wounded and they lost communication with those providing assistance to wounded warriors.

What the patient remembers the most is his frustration and anxiety toward his inability to help his friend. PTSD symptoms did not develop right after the traumatic event.

Case 2 Mr. O. is an 85-year-old white man with a past medical history of hypertension who presented to the hospital with altered mental status. His wife reports him as "normal" prior to the day of admission. He had spent the past several hours watching the "war channel" and serial documentaries on World War II. Concomitantly, he had lost his best friend and next-door neighbor a few days prior; patient found his friend dead in his house. Upon presentation he was agitated, guarded and floridly confused. Routine works up for metabolic, infectious and organic etiologies was negative. He continued to perseverate about "espionage during World War II." His family and close friends recounted that he was involved in "spy work" during and after the war and never talked about it much. He fought in World War II and witnessed many deaths first hand. He continually spoke of Russian infiltration and suspected everyone of "working for the Russians." He was evaluated by a psychiatrist and diagnosed with a first psychotic break with delusional features and paranoia likely brought on by Post Traumatic Stress Disorder. The death of his friend followed by hours of watching the war channel likely triggered this event. Since the hospitalization, he has been calmer with periods of lucidity. He is managed with an SSRI and a mild atypical antipsychotic. However, he has not made a full recovery.

## Discussion

Delayed-onset PTSD in aging combat veterans presents in those exposed to highly stressful combat events in their early adult years, who have functioned successfully throughout midlife and who begin to register increased combat related thoughts and feelings with the changes and challenges of aging<sup>3</sup>.

Delayed-onset PTSD prevalence remains unclear among older adults. However, it is established that around 75% of older adults report experiencing a traumatic event at some point<sup>7</sup>. Presenting at any age, delayed-onset PTSD occurs in about one quarter of all PTSD cases. When traumatized populations were followed for longer periods of time, increase incidence was detected<sup>2</sup>. During the interval between the trauma and the onset of PTSD, patients report prodromal symptoms such as memories, avoidance, depression and anxiety<sup>2</sup>.

The limited research in this area has focused mainly on exploring contributing factors to clinical presentation. There is a complex interaction among age, trauma, stress, and resilience.<sup>7</sup> Higher education was associated with delayed PTSD, as well as poor social support and new stressful life events happening several years after the traumatic episode.

Retirement from work and the decrease in family responsibilities leads to reflection on one's life meaning and the potential recurrence of unwanted memories.<sup>8</sup> Loneliness, cognitive impairment, alcohol and drug abuse also play a role.<sup>8</sup> A potential contribution of anesthesia in delayed-onset PTSD has also been recognized.<sup>5</sup>

Literature in PTSD treatment is robust, but mainly directed to young and middle-aged adults. The evidence for effective treatments in elderly population is scarce<sup>8</sup>. Older veterans were less likely than their 30 year-old counterparts to attend mental health clinics after a positive PTSD screens and those more than 75 years old were less likely to receive any antidepressant medication<sup>4</sup>. Specific treatments among older survivors of trauma include cognitive behavioral group interventions, proved useful in case series<sup>1</sup>

Regarding prognosis, a German population-based study examining 1456 60 to 85 years-old individuals reported a significantly increased risk for long-term physical health disorders among those elderly combat patients. Diseases with increased prevalence included hypertension, heart failure, peripheral vascular disease, hyperlipidemia, thyroid problems, cancer, osteoporosis and hearing loss.<sup>6</sup>

Our clinical case presentations represent differing presentations and severities of late onset PTSD. This brings to light the importance of a thorough social history, which should include military service and any details about service that can be obtained. PTSD should be on the differential diagnosis of geriatric combat war veteran patients who present with depression, anxiety, insomnia and cognitive impairment even if there is no prior history of it.

#### References

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# Op Gritrock: A personal view

Lt. Col.P L Gibson QARANC  
Medical Operational Support Unit 2 Med. Bde York UK

## Introduction

Deploying to Sierra Leone on Op Gritrock was a unique and interesting experience, Having to adopt a different mind-set to caring for the patients had its own challenges and ensuring a good integration with regular reserve and Canadian forces was added to that the fact that the military were not the lead in this effort media interest parliamentary interest all presented its challenges to the commanding officer however my main effort was firstly the safety of our staff and the appropriate and safe care of our patients

## Biography

*Lt Col Pat Gibson qualified as a state enrolled nurse in 1978 and worked on a male surgical ward until she joined the Army in 1980 as a Private soldier.*

*Following basic training her career found her posted to Northern Ireland, Germany and various UK military hospital and Medical centre.*

*In 1987 she was posted to intensive care unit in Aldershot and found her niche, she went on to complete her ENB115 for intensive care and worked in a variety if ITU around the country, 1995 she Converted to RGN and found herself posted to Bosnia for 6 months as the ITU lead Kosovo another Bosnia deployment Afghanistan and Iraq were a few of her deployments as team leader then eventually as the OiC.*

*In 1999 Lt Col Gibson Commissioned other role have included Ethnic minority recruiting for 2 years, Deputy Matron SO2 Nursing to the Director of Army nursing and she retired from the regulars as a Clinical OF4 for critical care. On leaving the regular army she joined the reserves and this enabled her to deploy on Op Gritrock in 2015.*

# Introduction to medical leadership

Gerald Dieter Griffin,MD,PharmD,FACFE  
Professor of Pharmacy Practice (Adj)  
School of Pharmacy & Health Sciences  
University of the Pacific  
Stockton,CA,USA

## **Introduction**

The basics of medical leadership will be discussed.

The need to change and build teams are emphasized, as are Senge's Principles of organizational change.

## **Methods**

Lecture

## **Results**

Attendees will be able to recognize the need for personal change in order to lead, and understand the reasons why and how.

## **Discussion/Conclusion**

This introduction to 'medical' leadership, the need to understand the guiding principles and reasons for 'leadership' will enhance the individual and team needs for medical leadership.

## **Biography**

*Dr Jerry Griffin is a retired emergency physician, clinical pharmacist and medical soldier.*

*He was an emergency room (ER) doc in the US Army for over 30 years, and has returned to his earlier academic beginnings to share his acquired expertise with pharmacy doctoral students.*

*His research focuses on mTBI, PTS(D) and the interplay with the immune system, molecular biology, infection and their contributions to homeostasis. His wider interests include organizational change & leadership, and hospice/palliative medicine.*

# The logistic and legal challenges to military: Civilian integration in the United States

MAJ. GEN (USA-RET) Robert J. Kasulke MD MPA FACS  
International President CIOMR

## **Introduction**

I will discuss the recent legal changes in the United States that pertain to the mechanisms required to begin Military- Civilian cooperation when required and requested. (For Example; as a response to a public health disaster).

## **Methods**

Historical and legal data

## **Results**

I will describe the current changes in Federal Law and Procedures that will ease the ability of the Military to assist civilian organizations when required

## **Discussion/Conclusion**

I will discuss the recent changes in Federal law and regulatory statutes which will allow Military – Civilian cooperation and integration in certain crises (I will focus on Medical crises) to develop faster and more tailored to the specific needs of the requesting authority than what was previously possible.

## **Biography.**

*Major General Robert Kasulke is a vascular and general surgeon from Watertown, New York. Educated at the United States War College, State University of New York, and Fordham University in New York; he also holds a Masters in Public Administration from Syracuse University. Having completed his residency in general surgery at Montefiore Health and Hospital Center in New York's Bronx, MGen Kasulke went on to complete his vascular fellowship at the University of Missouri - Columbia. MGen Kasulke has held the appointment of Commanding General Army Reserve Medical Command and is the International President Elect for CIOMR. He currently holds posts as a staff physician at Carthage Area Hospital; Facility Medical Director, Gouverneur Correctional Facility; and Assistant Medical Examiner, Jefferson County. He has previously been employed as a staff physician at the Veteran's Administration, as a consultant in general / vascular surgery case reviews, assistant medical examiner, vascular surgeon, and director of surgical residents research amongst other appointments.*

*He holds a board certification as a Fellow of the American College of Surgery while also having memberships in the New York State Surgical Society; Association of Military Surgeons, United States (AMSUS); a founding member of Hospice Physicians; AMA; American Society of Broadcasters; Wilderness Medical Society; amongst several other memberships.*

*Robert Kasulke has been extensively published in variety of journals on vascular surgical topics and currently holds editorial positions in the Federal Practitioner and The Journal of Military Medicine. In 2007, he was Knighted with the Order of Knights Templar.*

# Civilian-military cooperation in forensic odontology in southern Denmark

P. J. T. Knudsen<sup>1,3</sup>, J. Galtung<sup>1,2</sup>, A Løie<sup>1,2</sup>

<sup>1</sup>Danish Armed Forces Health Service, Aarhus, Denmark,

<sup>2</sup>Danish Armed Forces Dental Service, Aarhus, Denmark

<sup>3</sup>Institute of Forensic Medicine, University of Southern Denmark, Odense, Denmark

## Introduction

Dental identification is a time-honoured procedure and one of the three INTERPOL primary identifiers. Forensic odontology has been given increasing prominence in NATO in recent years with the STANAG 2464. The Danish Armed Forces Dental Service (DAFDS) decided after the Thai Tsunami in 2004 to create an indigenous DVI service.

## Methods

The creation of the DAFDS DVI unit (Forensic Odontology Identification Group) and its concomitant integration into the Institute of Forensic Medicine, University of Southern Denmark, is described.

## Results

Based upon the theoretical training (IOFOS course in Forensic Odontology) the military dentists were trained by the two senior forensic dentists at the Institute, and upon their retirement, they could in 2013 take over the full responsibility of forensic odontology – and have in 2014 obtained the ISO 9001 Quality Certificate

## Discussion/Conclusion

The training of military dentists provided the possibility to support the civilian society in both routine ID work as well as being ready for DVI events, and at the same time provided the DAFHS with a significant competence, that had not previously been available in the Danish Armed Forces.

## Biography

*Born 9th January 1948, graduated 1975, qualified as a general practitioner and specialist in morbid anatomy and histopathology and in Forensic Medicine. Associate Professor in Forensic Medicine and Deputy Chief Forensic Pathologist, Institute of Forensic Medicine, University of Southern Denmark. From February 2005 Senior Pathologist, The Identification Group of the National Commissioner of Police and 2011-2013 Deputy chair (Scientific) of the Interpol Standing Committee on DVI.*

*In 1982 commissioned into the Defence Medical Corps, now Danish Armed Forces Health Services, Royal Danish Navy Reserve, as surgeon sublieutenant, 2001 surgeon commander senior grade. 2008 retired due to old age, 2010 recommissioned in former rank and function.*

*He is the author of numerous scientific papers on normal anatomy, pathological anatomy and forensic medicine, particularly on wound ballistics and DVI. Participated as forensic pathologist in exhumations in Kosovo 1999 and in the identification work after the 2004 Tsunami, Thailand  
Served on the Board of the Reserve Officers Association of Denmark, Board of the Danish Society for Military Medicine, and Board of the Danish Society for Forensic Medicine. CIOMR President 2002-4.*

# Police ammunition: A comparative study in gelatine

Peter J. T. Knudsen

*Institute of Forensic Medicine,  
University of Southern Denmark, Odense, Denmark*

## **Introduction**

During the last decades European Police forces have turned from Full Metal Jacket (FMJ) bullets to expanding bullets in their service pistols. Denmark followed the Netherlands in the use of the ACTION 3 and later the ACTION EFFECT bullet. It was decided to compare the various types of police ammunition.

## **Methods**

The ACTION 3, ACTION EFFECT, SPEER Gold Dot, RUAG Action 4 and MEN QD PEP were fired at 5 m against 20% NATO ballistic gelatine, and penetration and energy deposit were measured, using FMJ bullets for comparison

## **Results**

The two ACTION bullets had only 10% shorter penetration than the FMJ bullets, while the expanding bullets only penetrated an average of 25 cm compared to 40 cm for FMJ. The pattern of energy deposit were similar for the two groups of police ammunition

## **Discussion/Conclusion**

The ACTION bullets give only a slight improvement compared to FMJ bullets, while the three expanding bullets provided similar and satisfactory penetration

## **Biography**

*Born 9th January 1948, graduated 1975, qualified as a general practitioner and specialist in morbid anatomy and histopathology and in Forensic Medicine. Associate Professor in Forensic Medicine and Deputy Chief Forensic Pathologist, Institute of Forensic Medicine, University of Southern Denmark. From February 2005 Senior Pathologist, The Identification Group of the National Commissioner of Police and 2011-2013 Deputy chair (Scientific) of the Interpol Standing Committee on DVI.*

*1982 commissioned into the Defence Medical Corps, now Danish Armed Forces Health Services, Royal Danish Navy Reserve, as surgeon sublieutenant, 2001 surgeon commander senior grade. 2008 retired due to old age, 2010 recommissioned in former rank and function.*

*Author of numerous scientific papers on normal anatomy, pathological anatomy and forensic medicine, particularly on wound ballistics and DVI. Participated as forensic pathologist in exhumations in Kosovo 1999 and in the identification work after the 2004 Tsunami, Thailand*

*Served on the Board of the Reserve Officers Association of Denmark, Board of the Danish Society for Military Medicine, and Board of the Danish Society for Forensic Medicine. CIOMR President 2002-4.*

# Recruiting the medical reserves – UK challenges & perspectives

Col. Mark Sheridan L/RAMC  
*Commanding Officer, 204 Field Hospital, United Kingdom*

The size of the UK's Medical Reserves is the now smaller than it has ever been, but the cadre is operationally experienced and militarily credible as never before. As a group older than their non-medical counterparts, many are nearing retirement. Recruiting suitably skilled clinicians – nursing, medical and allied health professionals – is difficult. A 'conversion factor' representing the apparent losses from initial contact with recruiters to basic trained Reservist is of the order of 20/1, against 3-5/1 for Combat Arms soldiers. Despite smaller establishment figures in medical units than during the Cold War, replacing outflow due to age retirement and resignation is highly challenging.

Highly demanding civilian careers, arduous shift work and the uncertainties of new contracts, pressures of examinations and research, not to mention family life compete for scarce time. The excitement and professional challenge of operational deployments in Iraq, Afghanistan, Sierra Leone and elsewhere were generally seen as attractors – few admitted to being put off by the danger.

As part of the overall effort to build an Integrated Reserve of 30,000 soldiers (Op FORTIFY) the Army introduced a package of 'Betterment Measures' to aid recruiting and enhance retention. Following a consultation with serving Reservists, a generous programme of improved pay, paid leave, access to expensive professional education, as well as a pension from 2015, was rolled out. Modern equipment and uniform enhancements, adventure training opportunities and a hugely expensive roster of Overseas Training Exercises (OTX) all served to improve 'The Offer' to potential joiners. The other Services, numerically much smaller, launched similar, though less comprehensive initiatives.

At the time of writing – after a hesitant start, with process issues (prolonged enlistment times and unrealistic physical and fitness requirements) prominent – the signs are encouraging and across the broader Reserve trends are strongly positive, with indications that Medical Reserves recruiting will respond to the same stimuli, albeit at a restrained pace.

## **Biography**

*Educated, more or less, by the Christian Brothers Col Sheridan graduated with Distinction in Medicine from Belfast in 1990. Trained in Anaesthesia and Intensive Care Medicine (ICM) in the UK, Germany and the Netherlands, and in addition a qualified lawyer, he works as a Consultant Anaesthetist in N Ireland.*

*From the Officer Training Corps at Queen's University, he commissioned into the TA in 1988 but quickly transferred to the Ulster Defence Regiment (subsequently R IRISH) where he served as a Platoon Commander and after qualification as Regimental Medical Officer. With the 1994 NI Ceasefires he transferred to 253 Field Ambulance serving as a troop and squadron commander, and in 2005 moved on promotion as OC Clinical Squadron in 204 Field Hospital. Regimental 2ic from 2010, he has commanded 204 since 2013.*

*With attached service with BMH Rinteln in 1996 and 1 AFA in Hohne in 1998-99, he has exercise experience around the world. Interested in forward care and helicopters, he has worked on aero-medical evacuation/transfer in Ulster, Bosnia, Iraq and most recently on the MERT in Afghanistan. Married to Karen, with a young son Raphi, he enjoys most outdoors activities, particularly on the water, as well as cooking, wine and reading.*

# Investing in public health gives - especially in low income countries - extremely impressive returns.

Stef Stienstra

*1-Civil Military Interaction Command, Dutch Armed Forces*

## **Introduction**

The implementation of the International Health Regulation (IHR) of WHO in 2005 for worldwide public health systems is already in its second extension phase. At the 2012 deadline only 16% of the countries were fully prepared to detect and respond to pandemics. In 2014 the Ebola Virus Disease outbreak in West Africa was another indicator that WHO's IHR has to be taken seriously. Especially the biosecurity part of IHR is not fully in place yet for most developing countries, which makes the world vulnerable for bioterrorism.

## **Methods & Results**

Several international programs help to prepare low- and middle-income countries to mitigate outbreaks of infectious diseases. EU CBRN CoE initiatives and the US CBEP, DTRA, CTR, GEIS, DIMO, USAID, PEPFAR and several other programs are involved in establishing public health systems and give local healthcare workers trainings in both disease outbreak mitigation and biosecurity. Zoonotic diseases are the most dangerous for outbreaks as the population does not have natural nor artificial (from vaccination) immune response to new emerging diseases. The recent Ebola Virus Disease outbreak in West Africa was such an example and with proper blood bank facilities in place, the therapy with immunoglobulins obtained from plasma donations survivors was a relatively cheap and effective therapy. Convalescent plasma can be obtained from a donor who has survived the disease with a novel hollow fiber blood separation technology of Hemanua and an immunoglobulin concentration, which does not need any sophisticated infrastructure.

## **Discussion/Conclusion**

The returns from investing in public healthcare are extremely impressive and is not a high risk venture as with a rapid mortality decline many 'value life years' (VLYs) are gained. For low- and middle-income countries typically about a quarter of the growth in full income resulted from VLYs gained and supports not only the local economy but also the world economy.

## **Biography**

*Strategic and creative consultant in biomedical science, with a parallel career as a Commander of the reserve of the Royal Dutch Navy. For the Dutch Armed Forces, he has responsibility for the counter measures in CBRNe threats and (medical) consequence management both in a military and a civilian (terrorism) setting. He is strategic functional specialist for "Health & Environment" of the 1-Civil-Military-Interaction Command (1-CMI) of the Dutch Armed Forces and for 2015 also in the NATO Response Force (NRF). He was the director of the 2014 World Congress of CBRNe Science & Consequence Management in Tbilisi, Georgia.*

*In his civil career he works international as scientific supervisory board member for several medical and biotech companies, merely involved in biodefense. He is visiting professor for Punjab University in Pakistan and Rhein-Waal University in Germany. Stef Stienstra has finished both his studies in Medicine and in Biochemistry at the University of Groningen in The Netherlands and has extensive practical experience in cell biology, immuno-hematology, biodefense and transfusion medicine.*

# U.S. Air Force Reserve Medical Entitlement Policy

Tri B. Trinh, Lieutenant Colonel, U.S. Air Force Reserve  
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## **Introduction**

This presentation provides insights into how a medical entitlement concept became operational reality for the U.S. Air Reserve Component (ARC). An overview of the U.S. Air Force Reserve is provided with details into the Reserve Medical Directorate and its role in developing the “Total Force” instruction for *Line of Duty Determination, Medical Continuation and Incapacitation Pay*. The intent and benefits of these entitlements are examined along with results achieved by the ARC Case Management Division charged with medically managing wounded, ill or injured Reserve members.

## **Methods**

Data derived from the Air Force Personnel Center located at Randolph Air Force Base, San Antonio, Texas.

## **Results**

From 2014-2015, the number of Reservists on medical continuation orders decreased 22%; the number of days a member is on medical continuation orders decreased 34%; and costs of medical orders have decreased by \$5.3 mil over the prior year.

## **Discussion/Conclusion**

The U.S. Air Force Reserve medical entitlement policy and policy development pathway can serve as a template for achievement of similar benefits depending on each respective country’s support for its Reserve forces.

## **Biography**

*Lieutenant Colonel Trinh is the Commander of the 349th Aerospace Medicine Squadron located at Travis Air Force Base, California. His previous Air Force Reserve assignments include Chief, Medical Management of Wounded, Ill, and Injured Service Members, Medical Directorate, Office of Air Force Reserve, Washington, D.C, Senior Health Services Administrator and Readiness Officer at the 944th Medical Squadron and Aeromedical Staging Squadron, Luke Air Force Base, Arizona. His prior Active Component Air Force assignments include, Headquarters Air Force Reserve Officer Training Corps, Squadron Section Commander/Royal Air Force Lakenheath United Kingdom, Space and Missile Systems Center, Los Angeles Air Force Base California, and Assistant Professor of Aerospace Studies, Embry-Riddle Aeronautical University, Arizona.*

# Responding to Ebola. Utilising reservists to enable and enhance service delivery. A personal perspective

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## **Introduction**

SDSR 2010, Future Force 2020, The Whole Force Concept, DMS 20 etc. have led to significant review and reform of Defence Medical Service, a reduction in Regular personnel and greater reliance on Reservists. Despite forecasting, incidents such as the West African Ebola outbreak required infection control personnel in numbers that the Regular cadre would've struggled to provide.

## **Methods**

Reflection on personal experience.

## **Results**

4 tranches deployed on Op GRITROCK (the UK response to Ebola in Sierra Leone). There were benefits and limitations of deploying both sole Regular & Reservist Infection Control teams. Tranche 4 saw a strong mixed team deploy, pulling on the military awareness of Regular service personnel combined with the benefit of extensive and variable civilian experiences of the Reservists.

## **Discussion/Conclusion**

Specialist Reserves provide depth, strength and resilience for Military Medicine. Intelligent tasking and recognition of the benefits civilian experiences can bring, leads to a richness of skills and service delivery.

## **Biography**

*A registered nurse, Flt Lt Trudgeon's infectious diseases career started in 2002 where she worked at The Alfred Hospital, Melbourne in one of the largest western Infectious Diseases units in the Southern Hemisphere.*

*Trudgeon returned to the UK in 2005 to complete her MSc Public Health while working as a Blood Borne Virus Nurse in Plymouth before joining the Regular RAF in 2009. Working in a variety of roles, Trudgeon transferred to the Reserves in Jul 2014 in order to return to the infectious diseases setting. After working as a TB Nurse in Bristol, Trudgeon joined Public Health England in Feb 2015 where she currently works as a Health Protection Practitioner.*

*The Ebola crisis in West Africa led to Trudgeon becoming 1<sup>st</sup> Reservist to cover the Air Transportable Isolator rota. In Apr 2015, she deployed as an Infection Control Nursing Officer at the Kerrytown Ebola Treatment Unit in Sierra Leone.*

# Role of reservists within the French military health service

Dr (col) Claude Vergez-Larroquet  
*France*

## **Introduction**

After a short presentation of the five different components of the French Military Health Service, the reserve is described: staffing, conditions of access, management, and foreign deployments.

After terrorist attacks in 2015 reinforcing the reserve is now a national priority and the French military prepares a recruiting plan.

Therefore the new strategic plan “SSA 2020” is progressively implemented with 3 key words: core missions focusing (missions and priorities redefined), collaboration (reinforcing the insertion of the military hospitals within the Public Health Service) and simplification of the governance system.

## **Biography**

*Dr (col) Claude VERGEZ-LARROUGET was born in Paris in 1962. He joined the Military Health Service School in Bordeaux in 1980 and graduated as a general practitioner in September 1988. He has served in the Navy for more than twenty years and embarked in all kind of warships: frigate, supply ship, destroyer and helicopter carrier “Jeanne d’ Arc”. In 2008 he was assigned in the naval academy in Brest as the Medical Director in charge of the medical evacuation teams: he has been directly involved in more than 50 Search and rescue missions. In 2015, he became the director of the reserve bureau in the Surgeon General office of the French armed forces.*

*Dr. VERGEZ-LARROUGET is Knight of the Legion d’ Honneur and Knight of the Sea Merit.*

# LUCAS™2 in Danish search and rescue helicopters

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## **Introduction:**

Prehospital resuscitation is often challenging. Giving uninterrupted and effective compressions are relatively impossible during transportation. The scope of this investigation was to establish whether or not mechanical chest compression devices should be considered a necessity onboard the Danish SAR helicopters.

## **Method:**

Data was compiled from SAR medical journals. From the data collected, observations were made as to when LUCAS™2 were used and what diagnosis the SAR physician made.

## **Results:**

1,090 missions were registered in the 24-month research period and LUCAS™2 was utilized in 25 missions. Cardiac emergencies amounted for 25% of the missions.

## **Conclusion:**

The Danish SAR helicopters retrieved 33 drowned/hypothermic patients during the research period and the LUCAS™2 was utilized in 11 of the patients requiring resuscitation. The LUCAS™2 was frequently used during other emergencies like sudden cardiac arrest. Cardiac emergencies were the predominant type of mission. LUCAS™2 are now considered mandatory on Danish SAR helicopters.

## **Biography**

*Kasper Winther is a medical doctor that has served with the Danish armed forces as search and rescue (SAR) physician on the Danish SAR helicopters. In addition, he has worked with AIREVAC/MEDEVAC and served in missions such as ISAF.*

*He is currently in specialty training in anesthesiology and intensive care medicine in a civilian university hospital.*