SUPREME HEADQUARTERS ALLIED POWERS
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GRAND QUARTIER GÉNÉRAL DES PUISSANCES ALLIÉES
EN EUROPE

B-7010 SHAPE, BELGIUM

Our ref: 9100/SHJMED/07/13

Date: 08 March 2013

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TO: See Distribution

SUBJECT: **NATO MEDICAL NEWSLETTER**

This edition of the NATO Medical Newsletter is intended to provide a forum for sharing and coordination of information and efforts balancing the involvement and participation of the NATO Command Structure, NATO– and Partner nations on medical support in NATO.
Following the adoption by COMEDS, the Bi-SC Medical Newsletter has now transitioned into the NATO Medical Newsletter. This Newsletter is a sampling of NATO Commands updates, Operations, Training, courses and exercises and information on past and future events.
The primary audience for this newsletter includes: NATO Command Medical Staffs; NATO Agencies and National Medical Staff of NATO- and Partner nations.
Future editions of this newsletter will continue to capture and solicit articles highlighting high-quality information of NATO medical support without inhibiting discussion on areas needing improvement. I trust you will find these articles informative and consider using them as desk references on these critical issues.

for

Dr. Frank Schindelhauer
Brigadier-General, DEU A
ACO Medical Advisor
SHAPE
BELGIUM

Annex:
A. Newsletter

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[1] Turkey recognizes the Republic of Macedonia with its constitutional name

ANNEX A TO
9100/SHJMED/07/13
Dated 8 March 2013

NATO MEDICAL NEWSLETTER

NATO NON-CLASSIFIED
Releasable to the Internet

March 2013

Welcome to the New NATO MEDICAL NEWSLETTER

As the new COMEDS Chairman, I'm very pleased to inaugurate the new formula of this newsletter, transitioning from a Bi-Strategic Command to a NATO Medical Newsletter. I place a very strong emphasis on communications. The NATO Medical Newsletter will be a very good tool and platform for exchanging ideas and information.

We all have many subjects and perspectives to share and to coordinate inside the medical community, inside COMEDS, and also between COMEDS and other NATO structures. This Newsletter is also a good way to enhance our visibility and positioning among the NATO Command Structure.

Whilst you will inevitably see changes to how the NATO Medical Newsletter is put together and distributed, one thing will not change and that is the NATO Medical Newsletter will only work if we all contribute articles. I would, therefore, ask for your support in ensuring we have the articles in order to make a valuable publication

I told to the Surgeons General after my election, my desire is to continue with the work begun by my predecessor. Significant work is ongoing but we still have work to do. With the emergence of new tasks and actions, specifically regarding the new strategic concept outlines during the Lisbon and Chicago Summits, our

work is not complete with the concept of Smart Defence being at the root of our future works.

To fit these ideas we have to strengthen the vision and renew the objectives of the COMEDS. This will be one of our first taskings during the next months.

The aim of our involvement must remain the same; maintaining the level of military healthcare as high as possible, providing the best care to our military personnel.

Lieutenant General
Gérard NEDELLEC

Chairman COMEDS

CONTENT

The NATO Medical Community:
One team to save lives and support the missions!

ALLIED COMMAND OPERATIONS
ACO

NATO Medical Battle Rhythm

Historically, medical matters within NATO were regarded strictly as a national responsibility. For the greatest part of the Alliance's existence, there was therefore no real requirement for the establishment of a high-level military medical authority giving advice to the commander within NATO.

During the early NATO missions, IFOR, SFOR and KFOR, concepts of operations placed increased emphasis on joint military operations, enhancing the importance given to the coordination of medical support in peacekeeping, disaster relief and humanitarian operations. Presently, NATO operates in a far more complex environment than ever before, both in terms of different force structures and the operational geography. For medical support contributions, there are the additional considerations of scrutiny from families, national command structures and the unblinking eye of the world's media to address. NATO seeks to balance the collective contributions of 28 member nations, the many partner nations and the massed numbers of contracted support. The expectations to deliver first class and unfailing medical care can only be addressed through effective coordination of all care delivery at every level.

Early 2012, ACO/ACT/IMS/COMEDS started their coordinated approach, focusing on the most urgent and important military medical challenges in NATO.

The process started as the Bi-SC Medical Battle Rhythm and is now about to become the NATO Medical Battle Rhythm.

Although interoperability and standardisation being the cornerstones of co-operation within the Alliance, NATO has embraced the principles of Healthcare Quality Assurance as a means of establishing and maintaining the expected levels of healthcare, for the well-being of the forces entrusted to the Alliance. As a result, coordination of the medical efforts based on lessons derived from operations, the NATO Strategic Concept and their political and military guidelines takes place within the wider NATO Medical Community.

The First 10 minutes after wounding, the role of Medical in the Comprehensive Approach, CBRN-environment, donation-policy of medical goods and infrastructure and the modular approach, were discussed in the 2012 Conferences. As a standing theme in all conferences the current and predicted future status of medical support to NATO operations is discussed. For the upcoming conference the role of modern multi-national military medical management, medical support in a maritime environment, aero-medical evacuation and future medical developments influencing medical concepts of operations are the major theme-blocks.

Medical support is too important to restrict the outcome of NATO Operational Medical Conferences and COMEDS-plenaries to the NATO medical community but, will indeed be communicated as widely as possible at all levels, including the Military Committee.

The NATO Medical Battle Rhythm is an inter-related process in which we pro-actively and holistically manage medical performance, resources and associated risks/issues in order to enable the optimal prioritised delivery of military medical healthcare, or in other words to **save lives in operations**.

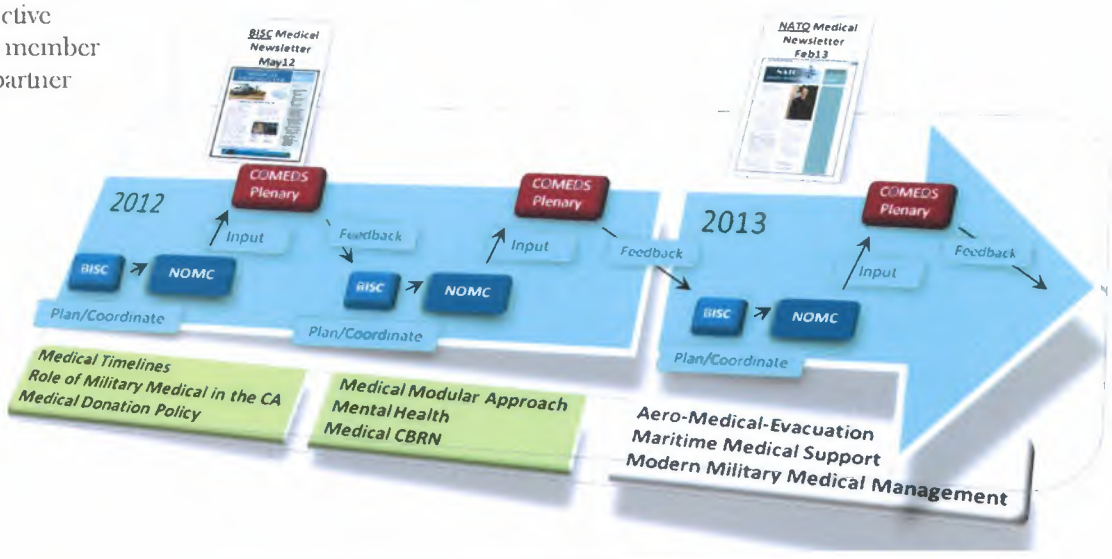
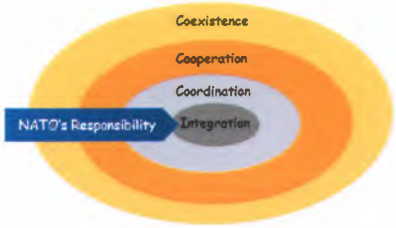


Figure:
The NATO Medical Battle Rhythm 2012/2013:

ALLIED COMMAND TRANSFORMATIONS

ACT



NATO is affected by long standing shortfalls in deployable medical capability. To increase the assets available to the Alliance, Medical Branch of Allied Command Transformation (ACT) has been working with Nations and the NATO Command Structure, on a range of innovative, complementary initiatives. The work is complex and challenging, but significant progress has been made in a number of key areas.

Multinational Healthcare.

Experience from current operations has shown that a multinational approach to the delivery of military healthcare can be an effective and efficient way to share burdens and avoid duplication of effort. To institutionalise such an approach within NATO, ACT prepared an overarching concept paper, setting out a vision for the delivery of multinational healthcare whilst still allowing nations to choose their level of commitment, from simple coexistence, through cooperation and coordination to full integration.

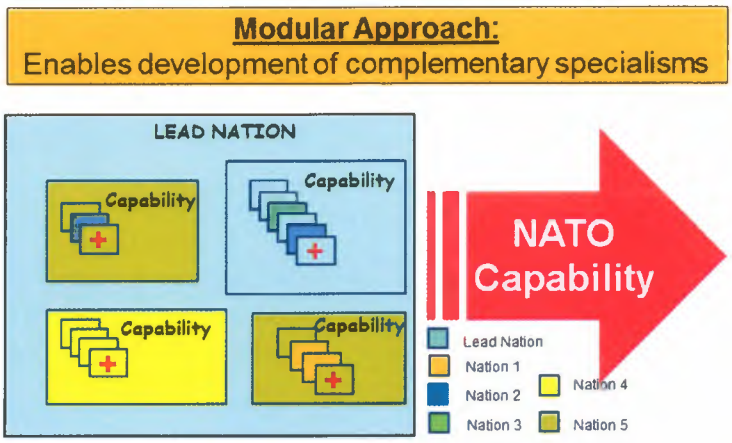
A significant milestone has now been achieved with the endorsement of the concept by NATO's Military Committee. This work also has real relevance to all actors involved in humanitarian healthcare delivery and will enable NATO Medical to make an important contribution to NATO's policy of active engagement.

Multinational Medical Facilities.

There are many opportunities by which multination healthcare may be delivered in practice. Perhaps the greatest opportunity lies in enabling groups of nations to be able to pool and share national medical capabilities and create multinational treatment facilities, either as contingent capabilities held at readiness or for deployment on operations. By defining and generating military medical support in terms of modular components rather than complete medical treatment facilities, utilisation of existing medical assets within NATO will be improved: By achieving standardisation and interoperability of modular medical components, NATO will have access to a flexible pool of assets on which it can draw to meet specific operational demand. The complexities of achieving this in practice should not be underestimated, but two great steps have now been taken. First, the approval by NATO's Military Committee of ACT's concept for modular medical capability. Second, the formation of a *Smart Defence* project team co-led by France and Italy, turning concept into reality. This vital work is an excellent example of the collective benefits possible through cooperative working within the Alliance.

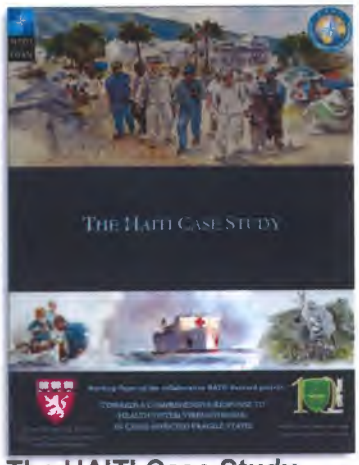
MEDICS
Medical Information and Coordination System

ACT has been working on the development of a dedicated NATO medical information system (MEDICS) for several years. MEDICS will provide a recognized medical picture to NATO commanders in the field



and improve information exchange and interoperability between NATO and national forces. After many years developing the functional requirements for MEDICS in conjunction with NATO Nations and the operational user community, the invitation for international Bid to acquire the system has been circulated to industry. This is a hugely significant step forward in this project and brings achievement of an operational capability. To raise awareness of MEDICS and what it will provide, an information video has been produced and published online on NATO internet websites and also on *You Tube* to increase its exposure. It can be viewed at

http://youtu.be/dKIFOSm8oxM.



The HAITI Case Study

ACT Medical has been working in conjunction with Harvard University and the NATO Joint Analysis and Lessons Learned Centre to examine the key issue of military medical engagement in civilian health sector stabilisation and reconstruction. The first of a series of case studies has been published, covering the Haiti crisis of 2009 (copies available at http://ghsm.hms.harvard.edu/uploads/pdf/haiti_case_study.pdf:)

The report identifies key lessons on how the military can successfully contribute in such situations. The lessons will be combined with those from the subsequent studies and collectively will help guide future NATO policy. Further case studies are already underway and the aim is to publish these during 2013 followed by an overarching study that sets out the key issues for NATO.

THE COMEDS DOMINIQUE-JEAN LARREY AWARD

Left to right:
Brigadier General Jean-Robert Bernier
Colonel Jacques Ricard
Brigadier General Rob van der Meer (Chairman COMEDS)

Le baron Jean-Dominique Larrey
(1776-1844)

Artist:
Anne-Louis Girodet de Roussy-Trioson

Location:
Louvre Museum, Paris

The COMEDS Dominique-Jean LARREY Award is the highest honour that COMEDS can bestow. It is given in recognition of a significant and lasting contribution to NATO multi-nationality and/or interoperability or to improvements in the provision of health care in NATO missions within the areas of military medical support or military healthcare development.

Any individual or group of individuals being a member of a military medical service, may be nominated to receive the COMEDS Dominique-Jean LARREY Award.

The Award is named after the French Military Surgeon baron Dominique-Jean Larrey, who worked in many campaigns during the Napoleonic Area and was known all over Europe, by friend and enemy, for his provision of care to wounded on both sides.

For 2012, the Award was granted to Canada for its establishment and command of the NATO Role 3 Multinational Medical Unit at Kandahar Airfield, Afghanistan, from 2006 to 2009. The Canadian Forces Health Services Commander, Brigadier General Jean-Robert Bernier, and the first unit-commander, Col Jacques Ricard, received the symbolic price (a model of the field ambulance as designed by baron Larrey) and the certificate.

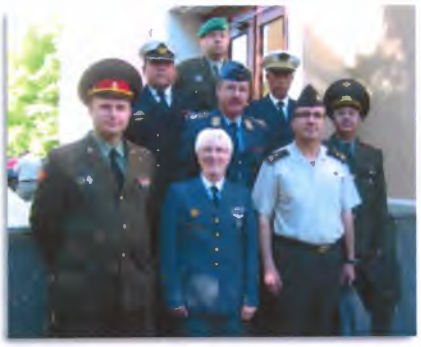
INTERNATIONAL MILITARY STAFF

IMS

NATO-Russia Council Medical Seminar

Since 2002, when NATO-Russia Council (NRC) has been established, the area of Medical support and Health care became one of key components of that process.

The Russian Federation hosted



the NRC Medical seminar combined with a special tactical exercise of the Russian military medical units RUBEZH, at polygon in Krasnoe Selo in St. Petersburg, from 19-23 June 2012. NRC Medical seminar has been organised in accordance with the list of Logistics Activities for 2012 of the NATO-Russia Council Ad Hoc Working Group on Logistics. A NATO delegation from five NATO countries, led by BG Suat Dönmez, Deputy Director of IMS/L&R, attended the seminar. The aim of the seminar was to expand the framework of cooperation between NATO and the Russian Federation beyond exchange of

information, enhance medical expertise and to broad cooperation between NATO and the Russian Federation beyond the various areas of medical expertise. NATO medical experts participated as observers in a demonstration exercise that introduced medical care provided by RF Armed forces, from point of injury to ROLE 2E/3 and bring opportunity to discuss issues related to provision of medical care during current operations. The medical seminar aimed at the comparison of NATO and RF medical standards in area of Emergency medicine; Force Health Protection; CBRN and MEDEVAC. NATO presentations focused on Strategic Aeromedical Evacuation, the Challenge of Combat Casualties Care on Modern Operations and Medical support under CBRN conditions. RF representatives introduced their training system of the Military Medical Academy for Combat Medicine, medical protection against weapon of mass destruction, chemical and radiation accidents, neurosurgical care in a modern armed conflict, challenges of modern war surgery, organisation of medical care for infectious patients in the pre-hospital phase and prospects for medical and technical support in anesthesiology and resuscitation service under current conditions.

At the end of the seminar it was stated that those activities promote cooperation and represents value for both sides. Consequently, identification of future projects should be considered. As an example the education and training in clinical areas can be mentioned.

NATO School (Oberammergau)

NATO Joint Medical Planners Course	6-10 May 2013
NATO Medical Intelligence Course	17-24 May 2013
NATO Senior Medical Staff Officer Course	28 Oct-1Nov 2013

Additional Information
at the NATO School website
https://www.natoschool.nato.int/index.asp

Food for thought on the future of military health care in operations. (IMS Medical Advisor)

Part of the NATO HQ/IMS Medical branch is to translate possible future security-developments of interest for the Alliance into possible Military Health care options and challenges and the other way around. This is linked to Defence planning as well, for the long term. As today we have to shape the reality of the future the options might not yet be real or even be unrealistic for the moment but should be mirrored with future and current developments in health care.

We face more and more expeditionary operations, at any place in the world with often smaller military units whilst it is necessary to ensure a high level of health care support. In the same time health care and the medical support to operations has evolved over the last decades. We can, and certainly do not want, to go back to levels of medical care of World War I or II. So we need to adapt to the modern standards, quality and outcome of care and look forward to developments. Translating this to military health care support requires us to sometimes think out-of-the-box, see challenges and developments that are not real or realistic yet, or connect security developments in the world with developments in health care. In a time of financial constraints and even reductions in many military forces that puts great emphasis on smart solutions.

So Military Health Care has to adopt or develop new and innovative solutions to meet the needs. In this way we have a possibility to deliver the desired care and we might manage to remain attractive to work for.

What should we think about then?

1. The "Golden Hour" might in some scenarios need to be extended without losing quality of care. We have to transport the patient over longer distances in order to manage centralized specialized care, or maybe use Host Nation Support in neighboring nations. Developments that increase the survival of the patients are therefore important. Especially for those wounds and illnesses that would now result in death, or in an impossibility to transport (Eg. internal abdominal injuries and associated internal bleeding that cannot be stopped by external compression. Innovative solutions to overcome this would immensely change the outcome of the patients' situation). Slowing down metabolic processes and pathologic effects of blood loss and lack of oxygen supply, including limiting organ failure, might become interesting to extend the time-to-treatment and increase the survival rates. Hibernation and cooling techniques, used in cardiac surgery, could be an area of interest for that.
2. Developments to increase the speed of transportation, the delivery (unmanned medevac) or the ease to link into evacuation chains will support time-to-treatment. Vertical take-off Medevac would be beneficial in maritime situations or in areas with no airstrip, but with distances too long to cover with rotary wing (arctic, desert, jungle). Short take off and landing (STOL) planes could be useful in remote areas in Africa.
3. Developments to decrease the risk of the patients (prevention, smart protective suits, early detection of deterioration by using sensors in our battle dresses) or the risk of the illness (vaccination and other Force Health Protection measurements) will be supportive.

4. Innovative solutions to health care in support of operations include also the concept of modularity and multinational health care. This will have great impact in the way that health care is delivered, with legal and practical challenges. It will require trust in each other, a common understanding of quality and standards of care, and training together. The NATO Medical community needs to continue to improve interoperability and standardization. A possible road to take could be for contracting certain parts of health care, but besides immense financial constraints, this also has operational limitations of availability.

5. As mentioned, we need to invest in training. Not only doctors and nurses, but certainly also those who deliver first aid in the battle field: the military in the field. And in addition to that we need to train multinational medical units in order to ensure that health care is appropriate and to our agreed standards. So this will require evaluation and certification, in order to support the needed trust.

6. Innovative techniques can improve health care and can bridge the distance between the patient and the treatment: telemedicine (tele-diagnostics, tele-dermatology, tele-radiology, and robotic/remote surgery). This last area has seen in civil health care enormous developments, and in the military we can definitely benefit from this. Robotic-surgery will allow centralizing the operators and de-centralizing the care. Such developments require in fact simple data-connections and investment in new materiel. With continuing advances in communication technologies, the availability of greater bandwidth and more powerful computers, the ease and cost effectiveness of deploying remote surgery units is likely to become more realistic soon. As the techniques of expert surgeons are studied and stored in special computer systems, robots might one day be able to perform surgeries with little or no human input. Camera observation will help to monitor and improve the quality of care. These developments go rapidly and the technology is practically ready for it. What it requires is legal/juridical and societal acceptance. And of course access to high-speed data connection. With that, practically all areas in the world, and beyond, can benefit from it. Unfortunately, costs go before benefit, and these developments will not only require specific robotics at considerable costs, but also investment in research. And still, at the place of the wounded or ill patient, it will be necessary to have a core team for health care, preventive medicine, emergency back-up surgery, etc. But such a team could be more generic, smaller and be supported by highly specialized techniques and doctors from a centralized place anywhere in the world.

7. Last but not least we need to think about the possibilities that technological developments will offer us in the future and will allow us to cut on costs. I will just mention a few: The use of Apps for information; the applicability of 3-D printers in resupply of medical materiel or the construction of prosthesis, for instance in humanitarian assistance. The future use of new technology both for support in operations as well in training and simulation (eg. virtual reality), the use of head-up display or camera remote-monitoring to improve quality of care.

All might seem a far away future, but the future of tomorrow starts today.

The Swiss Interoperability Military Medical Conference

Over the period 7-11 May 2012 the first Swiss Interoperability Military Medical Conference was held. Military medical planners and policy-makers, medical personnel deployed in military operations from across Europe and the US, met to present and discuss the role of the military medical services in pre-hospital emergency care, focussing on the first 10 minutes, the transition-phase of military operations and one day was reserved to discuss the role of military medical services in the Comprehensive Approach. For the latter, outreach workers

MG Dr. Andreas Stettbacher
Swiss Surgeon General

from International Organisations completed the list of participants.
The office of the Swiss Surgeon-General generously sponsored the conference, as did the Surgeon-Generals of Austria and Germany.
There were many linkages between the individual presentations even across the theme-blocks and the discussions spilled out of the conference room into the coffee and lunch breaks.

The challenges of pre-hospital medical care and the role of military medical services in the first 10 minutes.

We were treated to presentations on different developments and analysis's: Colonel Jeff Bailley, Director Joint Trauma System, introduced us and led us in an analysis answering the question:

What are the key-factors to save lives within the first 10 minutes after wounding?

Brigadier Chis Parker, the former ISAF Medical Advisor, shared the first 10 minutes in an operational environment and the related challenges.
LtCol Dr. Axel Franke helped us to understand the physiological demands a human body suffers in the first 10 minutes.
Meeting the medical timelines in austere situations and the implications for the first 10 minutes, was illustrated by LTC Dan Irrizarry and Capt(N) Stuart Millar, respectively for medical support to special operations and in a maritime setting. Lastly LTC Andreas Valentiner and Col Tim Hodgetts explained the national first responder training of respectively Germany and Great Britain.

The pace of development in medical support to operations continues to increase, with substantial evidence of haemorrhage control as the most important to save lives in the first 10 minutes. Haemorrhage control by tourniquets, junctional haemorrhage control and haemostatic dressings can in almost 50% of all wounding's. Controlled haemostatic resuscitation must be applied in sites not amenable to haemorrhage control on the battlefield, namely torso haemorrhage. Not to add to the severity of injury (primum nonnocere) is still a valid principle. Treatments have moved away from traditional use of fluids as first choice due to evidence from the 'triangle of death' – metabolism, temperature, and coagulation.

UK research has shown that continued use of red cells/plasma beyond one hour, results in such severe acidosis that the casualty is no longer salvageable. Only for the first hour, red cells and plasma should be used, and for the second hour (if the casualty is not yet at surgery) switch to crystalloids. Combined with intra-corporeal haemostasis with freeze dried plasma or blood-clotting drugs like TXA (Tranexamic Acid), death as a result of the triangle of death cycle can be prevented. Also the Haemostatic Clamp, is now being used for control of junctional haemorrhage in medical evacuation. The provision of immediate lifesaving care by first responders can only be a first step in improving casualty care. The next step is the rapid and safe evacuation of casualties to an appropriate medical treatment facility. Avoidable deaths can be prevented by intelligent tasking of (rotary wing) medical evacuation assets. Recent figures show that the most severely injured, ISS 20-29, have 7% mortality when a physician is leading compared to 25% for a paramedic. The right medical team directed to the right patient. At the moment the current used 9-liner is good, but over-classification of casualties to Cat A is a trend. Information on the clinical status of the casualty, inclusion of MIST data within the 9-Liner and/or on the basis of a first responder triage algorithm, would enable the Patient Evacuation Coordination Cell (PECC) to cross-check casualty information and use intelligent tasking of medical evacuation assets. Already SOF personnel are given 'Casualty Response Training' not 'Medical Training'. The difference in emphasis is important as the former focuses on the procedure to be followed under field combat conditions rather than appreciation of the medical basis for the actions taken. The PECC would also benefit from being staffed by more experienced personnel to use their experience to analyse the info received and use intelligent tasking. We have to consider the skills sets needed for PECCs now and for future force generations. Is it simply having good message taking skills or having the medical support experience to intelligently analyse the information?
A study by Brethauer et al. on US Navy/Marine Corps forward surgical care, showed that delayed evacuation and surgical care resulted in higher mortality. These findings confirm that rapid evacuation of casualties from the scene of injury to a medical treatment facility and rapid surgical treatment after initial care and stabilisation by appropriately trained first responders, is the most effective approach from a clinical perspective. If damage control surgery (DCS) or Tactical Abbreviated Surgical Control (TASC) criteria are applied and surgery is performed only if there is bleeding into a body cavity, or if there is an injury to intra-abdominal organs in association with abdominal cavity contamination, at least 25% of combat casualties require rapid care.

The care, the first responders provide within the first 10 minutes must be followed by as early as possible surgical intervention to reduce complications and to prevent a

NATO Centre of Excellence for Military Medicine

Courses in 2013

NATO Medical Evaluation (MEDEVAL) Course	18-22February (BUDAPEST)
NATO First Responder Trainer (FRT) Training	5-7 March (BUDAPEST)
NATO Emergency Medical Pre-deployment Team (EMPT) Training	11-15 March (HAMBURG)
Emergency Management of Battlefield Injuries (EMBI) Course	18-22 March (BUDAPEST)
NATO Patiënt Evacuation Coordination Cell (PECC) Course	13-17 May (FELDKIRCHEN)
Major Incident Medical Management and Support (MIMMS) Course	14---16 May (BUDAPEST)

Additional Information and Registration on the courses is available at MILMED COE website www.coemed.org

fatal outcome.

The concept of **the Golden Hour still applies** together with the **platinum 10 minutes.**

Not only clinical research but also the capture of data, directly comparable, measured over time, between rotations of units and maintaining this data for subsequent analysis and research, illustrates the importance of application of good science to clinical analysis. Efforts are ongoing to standardise format for gathering Trauma Registry Data in military operations. For **NATO Trauma Registry** the core requirement for data capture should be set at the highest standard of protection required by all nations.

The role of military medical services in the Comprehensive Approach.

Non-governmental and international organisations (NGO/IO) such as UN Office for the Co-ordination of Humanitarian Affairs (UNOCHA), International Committee of the Red Cross and World Health Organisation (WHO) were invited to the conference-day focusing on the role of military medical in the Comprehensive Approach.

Dr. Louis Lillywhite, senior consultant research fellow, Centre on Global Health Security, Chatham House, London, was the moderator for this day.
Based on a fictious scenario the medical roles of NATO, IO's

and NGO's in the framework of the Comprehensive Approach, was discussed and for what elements we have a common understanding. There is a shared understanding that the need for humanitarian relief is likely to be a common feature of future operations, but such relief cannot be considered in isolation given the complexity of modern conflict.
NATO's Comprehensive Approach is not yet defined. Clarity on the purpose of such engagement will be needed. Military and political difficulties might be the unintended consequence of the provision of humanitarian aid, particularly where there are underlying political purposes for the delivery of such aid and there is a clear requirement both for military organisations as IO/NGO's for such a definition, especially in the medical domain.
One of the core humanitarian principles of IO/NGO's is impartiality; NATO is not neutral and is not impartial in the eyes of international organisations or in the eyes of local civilians. Military medical's role should not primarily be that of a humanitarian player, but rather the military be a creator of the conditions for security, or an enabler within this humanitarian space.
Medical care connects and creates willingness for coordinating medical issues; nevertheless understanding of the organisations is necessary. Information exchange, common training, exercises and courses will enhance common understanding.

Saving life on the battlefield within the first 10 minutes of wounding

COL Brian Eastridge and colleagues have recently published a landmark and comprehensive investigation of US Military Combat Death in Operation Iraqi Freedom and Operation Enduring Freedom , entitled "Death on the battlefield (2001-2011): Implications for the future of combat casualty care". Col Jeffrey Bailey, Director of the US Joint Trauma System briefed the importance of this information at the Swiss Interoperable Military Medical Conference in Bern, Switzerland. He related that 9 out of 10 deaths occurred on the battlefield before casualties reached a medical treatment facility. Most significantly, up to 25% of the deaths were potentially survivable, and that among these potentially survivable deaths, an overwhelming 9 out of 10 died as a result of hemorrhage. Further, one third of these hemorrhage casualties died as a result of compressible hemorrhage; the other two thirds died as a result of truncal hemorrhage. He briefed that the implication of these findings on the first 10 minutes after wounding are threefold:

1. Prevent or reduce the extent of injury. Seventy-five percent of combat death is non-survivable. We must intervene before the wounding with preventive strategies: adaptation of tactics, techniques and procedures to avoid or neutralise threats; and deployment of personnel protective equipment engineered to mitigate the extent of injury.
2. Provide early proven life-saving interventions on the battlefield. Universal application of proven guidelines for tactical combat casualty care, could make a difference in up to 25% of casualties. First do no harm: avoid inappropriate intervention such as "over" resuscitation in uncontrolled truncal hemorrhage and immediately apply proven life-saving intervention: tourniquets, thoracic decompression, airway support.
3. Enhance the capability for life-saving and resuscitative intervention on the battlefield. Continue to develop capability to provide early life-saving and resuscitative intervention within the first 10 minutes of wounding coupled with – or as a component of en route care - rapid evacuation from the battlefield.

NATO OPERATIONS MEDICAL CONFERENCE (NOMC) IEPER (BEL) 22.-26. Oct. 2012

In late October, 2012, 90 delegates from 21 countries attended the NATO Medical Operations Conference held at Ieper (Ypres) in Flanders, Belgium. Chaired by Brigadier General Dr Frank Schindelhauer, the event was hosted and organised by the SHAPE Medical Directorate and supported by the Office of the Belgian Surgeon-General.

The overall aim of the Conference was to bring together those involved in medical support policy and to use the direction of current operations to reflect on collective experience. The Conference was designed to assist in guiding and directing current and contingent operations, providing 'Lessons Identified' to be presented and discussed at the Committee of the Chiefs of Military Medical Services (COMEDS) in NATO during November 2012.

The Conference was structured around 4 specific theme blocks; NATO operations, Mental Health, CBRN and Medical

Brigadier General Dr. Frank Schindelhauer (Chairman NOMC) presented the SHAPE Crest to the Belgian Surgeon - General Major General Dr. Geert Laire for the excellent Belgian support to the NOMC in Ieper.

Support and, finally, Modularity. A series of presentations examined each of these theme blocks in detail, with a wide variety of expert presenters exploring a variety of topics surrounding the theme blocks. The presentations generated a great deal of lively debate among the Conference participants.

In addition to a detailed Conference programme alongside a busy social programme, there was also the opportunity for delegates to explore the rich history of the local area, with a 'Staff Ride' consisting of a World War 1 Battlefield Tour and a visit to the Kemmelberg Cold War bunker. This development event culminated in a private visit for delegates to the recently refurbished 'In Flanders Fields' Museum in the centre of Ieper, followed by a private reception with Mr Peter Slosse, the Head of Tourism for the town.

The NOMC was a very successful Conference which met its aims, provided a useful networking opportunity for delegates, and provided valuable insights into how current operations are directed and how future operations may benefit from this experience.

THE LAST POST

The Last Post, the traditional final salute to the fallen, is played by the buglers in honour of the memory of the soldiers of the former British Empire and its allies, who died in the Ypres Salient during the First World War, was attended by the participants. Brigadier Chris Parker, ISAF Medical Advisor was invited to say the words of the Exhortation, taken from Laurence Binyon's poem "For the Fallen". Standing in the centre of the road under the arch of the Hall of Memory he said the words:

"They shall grow not old, as we that are left grow old:
Age shall not weary them, nor the years condemn.
At the going down of the sun and in the morning,
We will remember them."

No Health without Mental Health

Mental Health and Healthcare has been an area focussed on in the last NOMC and COMEDs

Plenary. Its importance relates to the commonality of MH problems (30% of all primary care consultations), treatability with effective, yet inexpensive interventions and yet stigma, causing personnel to shy away from accessing care is a significant problem.

At NOMC, in Ieper, a morning session chaired by Surgeon Captain John Sharpley, the chair of the Military Mental Health Expert Panel for COMEDs, covered a variety of topics: Operational Mental Health (Col Rakesh Jetley, CAN), Medically Unexplained Physical Symptoms (Col Dr Cisca Linn & Dr Monique Zeijlemaker, NLD) and mild Traumatic Brain Injury - mTBI (Col Eric Vermetten, NLD). There were themed questions (Figure 1) for the session in order to form take away messages for the subsequent COMEDs Plenary.

What is the role of morale and leadership?

Is PTSD and mTBI training included for military doctors-in-training?

What are the national differences in prevention, diagnostics and treatment and how does that reflect in incidence and prevalence?

Figure 1

Like most situations, it is easier to ask than answer questions, and the outputs for this session created some answers, but also more questions. The role of morale and leadership is very important in the management of overall mental health of any deployed force and is very much a command function, supported by medical & mental healthcare personnel. Nations do train doctors in mental health conditions, but the amount is quite variable across nations. The answers to questions about national differences in prevention, diagnosis and treatment are yet to be identified (and therefore will be work for the Expert Panel), but a framework of dividing these questions into manageable pieces is at Figure 2.

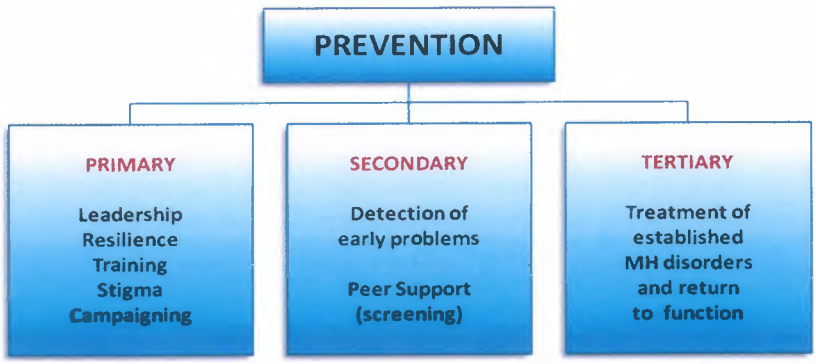


Figure 2

Deployment mental health is about providing expertise to both manage serious cases during operations and for mental health professionals to be prepared (i.e. have their own operational experience) for the management of patients presenting post-operationally. Medical Unexplained symptoms are common and a treatment programme for these was described - the importance of giving patients with this problem enough time was emphasised. The research requirements for mental health, in particular mTBI are ongoing.

At the COMEDs Plenary on 19 & 20 November 2012, Surgeon Captain Sharpley presented to introduce a workshop on mental health, stressing the importance of mental health in terms of its media presence, which focuses variously on topics such as: Stigma, Suicide, Post Traumatic Stress Disorder (yet this is not the most common post deployment MH problem), mTBI, Alcohol and Care for Veterans. The COMEDs mental health subgroup [the Plenary split into three such groups] produced some key outputs (Figure 3). There was much discussion about resilience and how this could be measured with respect to selecting fit personnel. In summary, mental health and healthcare have had some good exposure in these and there is some good direction on what the Expert Panel should be working on in the near future.

Leadership: Statement for Military Committee (MC)

Nations agree on selection & retention criteria

Joint working with respect to mTBI

Statement of training Requirement

Consider adding mental health to Joint Theater Trauma Registry (JTTR)

NOMC CBRN Medical Topics

During the introduction of "CBRN and Medical" theme block at the 7th NOMC, 25 October 2012, held in Ieper, Belgium; ACO MEDAD BG Dr. Frank Schindelhauer discussed the CBRN threat and that we have to face reality. Weapons of Mass Destruction (WMD) and Chemical, Biological, Radiological and Nuclear (CBRN) materials are one part of that threat and it is NATO's responsibility to provide answers and how the NATO medical community can save lives in a CBRN Environment.
Four key areas were discussed during CBRN and Medical Theme block - Current CBRN threat; Medical doctrine for support to CBRN defensive operations; NATO and National medical capability response to a WMD/CBRN threat, and CBRN Medical education, training and exercises. Those four areas were covered by 12 presenters from IMS, ACO, NAMSA, CBRNMED WG, BioMedAC EP and Nations including the Russian federation. All presentations are available on ACO webpage http://www.aco.nato.int/medical-support/nomc.

The extensive number of participating CBRN MED SME's had fruitful discussions following each presentation, validating the importance of CBRN Medical activities and outlined the way ahead which will be characterised by the development and effective contribution of credible and coherent NATO CBRN medical defence capabilities. These include the doctrinal development and its implementation into the NATO planning process and both collective and individual CBRN Medical training. From an operational point of view, the importance of collaboration between elements of NATO Command Structure and COMEDS CBRN MED WG and BioMedAC EP has been highlighted and only through these continued efforts will the medical response to a CBRN environment improve.

Outcomes of the syndicate sessions held at the 38th COMEDS, NATO HQ, Brussles, 19-21 Nov 2012

Military Mental Health
COMEDS endorsed the following recommendations of the syndicate group:

- To provide a statement at MC regarding the responsibility of leadership and the commanders' responsibility for mental wellbeing (action: COMEDS LO in cooperation with MMHep chair)
- To create selection & retention criteria (action: MMHep)
- To create a joint work with respect to mTBI and co-morbidity (action: MMHep in coordination with EMep and MHCwg)
- To provide a statement of mental health training requirement to COMEDS (action: MMHep)
- Consider adding mental health to JTTR

CBRNMed

- COMEDS agreed to list and evaluate the NATO available education and training technologies for CBRN Medical issues (ADL, online virtual gaming…) (action : CBRN Med WG with support of MMT EP)
- COMEDS agreed to seek for appropriate solutions to improve sharing of predeployment CBRN-related medical intelligence (action: FHP WG + CBRN Med WG with support of MedIntel EP) – relation to the CBRN reachback and fusion element will have to be sought.
- COMEDS endorsed to evaluate the pros and cons (including legal limitations) of using the NATO virtual stockpile for antidotes (action : CBRN Med WG with support of MMMP EP)
- COMEDS endorsed to determine the current CBRN casualty evacuation capabilities (action : CBRN Med WG)
- COMEDS endorsed to evaluate the issues related to the evacuation of a contagious patient from a theatre of operations (action : CBRN Med WG with support of BioMedAC)
- COMEDS endorsed to evaluate the issues related to the repatriation of potentially contaminated medical equipment from a theatre of operations (action : FHP WG with support of CBRN Med WG, BioMedAC and FWSVS EP– with liaison with the MC/Joint Standardisation Board- Environmental Protection WG).
- COMEDS tasks FHP WG to launch a key-player-meeting with CBRN Med WG, BioMedAC, FWSVS, MedIntel on the mentioned issues. FHP WG is to invite STO, IS/CEPC.