that reflected current and future workload, as well as members' lived experience data.

This presentation will discuss how the data was analysed, developed and implemented in order to prevent a foreseeable issue with service delivery and access. It will also discuss how the initial scope of the project evolved to a business as usual process as well as how the information is utilised at a local and HQ level.

Biography:

LTCOL Craig was a sponsored undergraduate student and finished his undergraduate training in 2007 before completing a Master of Clinical Dentistry (Implant Dentistry) in 2013. He is a Fellow of the International College of Dentists as well as being the Head of Corps, Royal Australian Army Dental Corps. He is currently posted to the Directorate of Clinical Services, Garrison Health, Joint Health Command as the Staff Officer Grade 1, Dental. Previous postings have included 3rd Combat Service Support Battalion, 1st Health Support Battalion, 2nd General Health Battalion and Joint Health Unit – South Queensland. LTCOL Craig has deployed on OP Render Safe and has spent time providing dental services in Germany and Papua New Guinea on Exercises Long Look and Olgeta Warrior respectively. LTCOL Craig is a strong advocate for improving oral health outcomes for ADF members, especially through education and prevention. He appreciates all sports and the outdoors and enjoys spending time with his wife Daina and their three children.

Strengthening Force Health Protection Through Integration and Interoperability

Major Melissa Zahra[1]

1 Australian Army

Disease and Non Battle Injury (DNBI) form potentially the primary loss of manpower in any exercise or operation. The health threat information gathered during a Health Threat Assessment (HTA) directly informs the development of Force Health Protection and mitigation strategies to reduce the incidence of DNBI.

Mosquito borne diseases such as Ross River Virus (RRV) and Barmah Forest virus (BFV) are endemic to Australia. As they are part of the ecology, the risk of infection is unable to be eliminated they have the potential to reduce operational capability. Outbreaks of RRV were recorded during training exercises at Shoalwater Bay Training Area (SWBTA) in 2016 and 2017, with two outbreaks of Scrub Typhus, a bacterial infection transmitted by larval mites in Cowley Beach Training Area (CBTA) in 2022. In 2022, several outbreaks of Japanese Encephalitis Virus (JEV) around Australia led to the declaration of a communicable disease incident of national significance.

Prior to Exercise Talisman Sabre 2023 (EX TS23), the Army Hazard Assessment Team (HAT), in conjunction with Australian Defence Force Malaria and Infectious Diseases Institute (ADFMIDI) Arbovirology Department, US Public Health Command–Pacific (US PHC-P) deployed to CBTA and SWBTA and undertook a Health Surveillance Activity focusing on vector bone diseases. This activity's primary aim was to develop a real-time HTA of CBTA and SWBTA for Commanders of both the Australian and US forces.

The Health Surveillance Activity also allowed the Army HAT the opportunity to collaborate with scientific colleagues ADFMIDI the US PHC-P IOT share skills and knowledge of different trapping methods for mosquitoes, ticks and mites, identification of the various vectors and the use of molecular techniques in the field environment including molecular amplification and next generation sequencing (MinION). The collaborative work helped to develop a robust deployable workflow procedure able to be used by all three capabilities.

The collaboration and cross pollination of skill and knowledge attained during this activity opens the doors for future integration and interoperability.

Biography:

MAJ Zahra started her working career as a Hospital Scientist in a Microbiology and Infectious Diseases Laboratory then worked as an Application specialist for BioMérieux Australia. In 2014 she enlisted into the Australian Regular Army as an Environmental Health Officer (EHO). During her time at the 1st Preventative Medicine Company deployed on OP Render Safe and Ex Olgetta Warrior, worked with the Army Environmental Monitoring Group along with the Marine Corps Environmental Services Division on several Ex TS. In 2019 MAJ Zahra deployed as the SO3 Health on Ex Bersama Lima and posted as the company 2IC. Whilst in this role, she provided technical advice in environmental health and occupational hygiene to broader Defence. To enhance her scientific knowledge and skills in 2020, posted to the ADFMIDI. MAJ Zahra is currently the OIC of the Hazard Assessment Team.

MAJ Zahra has graduated from the University of Western Sydney with a Bachelor of Science; Flinders University with a Graduate Diploma in Environmental Health Practice; University of Wollongong with a

Graduate Certificate in Work Health and Safety (Occupational Hygiene) and the University Queensland Master of Public Health (Global Health).

MAJ Zahra is currently the Secretary of Environmental Health Australia (Queensland) Incorporated.

Surgical Facility Guidelines for the Management of Military Casualties after Extended Duration Limb Tourniquet Application

Dr Patrick Weinrauch[1]

1 2nd Health Battalion

Tourniquet application is a universally accepted lifesaving emergency intervention for the pre-hospital management of catastrophic limb haemorrhage. Application of arterial tourniquets for short durations of time is consistently safe in relation to local tissue ischaemia, limb salvage rates and the systemic metabolic impacts upon reperfusion.

Delivery of future ready medical care within the Australian Defence Force needs to consider operational environments where casualty evacuation is delayed for multiple reasons including contested evacuation asset manoeuvre, extended evacuation distances, resource limitations and tactical constraints. Prolonged Field Care (PFC) of a casualty with a limb tourniquet applied over an extended time duration for the management of life threatening catastrophic haemorrhage creates unique clinical management issues that impact upon all levels of health care delivery. Tourniquet time correlates with ischaemic limb injury and is therefore associated not only with decreasing rates of limb viability and functional recovery but also with increasing systemic and metabolic impacts upon tourniquet release and subsequent reperfusion. Extended duration tourniquet application therefore represents a concern across all levels of health care provision as it impacts upon pre-hospital and initial emergency care, decisions relating to surgical and anaesthesia management and post-surgical care including intensive care and pharmaceutical protocols.

This paper delivers clinical management recommendations for surgical facility health care providers in the management of casualties where extended duration limb tourniquet application has been necessary. The guidance statements have been developed by comprehensive literature review including collateral information drawn from multiple models that demonstrate pathophysiologic and clinical similarities in respect of limb ischemia, reperfusion injury and systemic metabolic consequence. Guidance statements are provided with Class of Recommendation Strength (COR) and Level of Evidence (LOE) stratification according to the American College of Cardiology (ACC)/ American Heart Association (AHA) clinical guidance recommendation system.

Recommendations discussed within this presentation are as follows:

1. Primary limb amputation is to be conducted after warm ischaemia time of greater than 6 hours (Recommendation Strength: 1; Level of Evidence: C-LD).
2. Limb salvage procedures are to be conducted with situational awareness of the tactical environment (Recommendation Strength: 1; Level of Evidence: C-EO).
3. Limb re-vascularisation requires proactive resuscitation (Recommendation Strength: 1; Level of Evidence: C-LD).
4. Tourniquet removal is only to be conducted after suitable resuscitative conditions have been obtained (Recommendation Strength: 1; Level of Evidence: B-NR).
5. Tourniquet removal is an elective procedure to be conducted in controlled conditions (Recommendation Strength: 1; Level of Evidence: C-EO).
6. Fasciotomy is to be conducted in limbs after ischaemic injury (Recommendation Strength: 1; Level of Evidence: C-LD).
7. Suitable tissues from amputated limbs may be considered for subsequent reconstructive surgery (Recommendation Strength: 2B; Level of Evidence: C-EO).
8. Staged tourniquet release techniques are to be considered to minimise metabolic consequences (Recommendation Strength: 2B; Level of Evidence: C-LD).
9. Renal monitoring and protection measures are to be instituted (Recommendation Strength: 1; Level of Evidence: B-NR).
10. Adjunctive therapies to improve limb salvage rates should be considered (Recommendation Strength: 2B; Level of Evidence: C-LD).

This presentation is part two of a two part series. The accompanying first part presents recommended PFC guidelines for management of casualties who require extended duration limb tourniquet application prior to transfer to a surgical facility.