Preparing Medics for War: WW1 to the Present Day

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Scope

- The birth of the NZMC
- Establishment of Awapuni MedicalCamp
- Preparing Medics for War
  - A timeline from WW1 to the present day
- The Awapuni Medical Memorial

MAJ Andrew Brooks

The Birth of the New Zealand Medical Corps

On the 7th of May 1908, an amendment to the Defence Regulations, gazetted as No. 38/1908 saw the formation of a new Corps: The New Zealand Medical Corps (NZMC).

- Bearer Companies became Field Ambulances
- The Nursing Reserve was established
- At that time the strength of the new NZMC was:
  - Officers attached: 115
  - Officers unattached: 52
  - Field Ambulances: 207 all ranks

Establishment of the Awapuni Medical Camp

Awapuni Racecourse - home to one of New Zealand's largest military training camps during WW1.

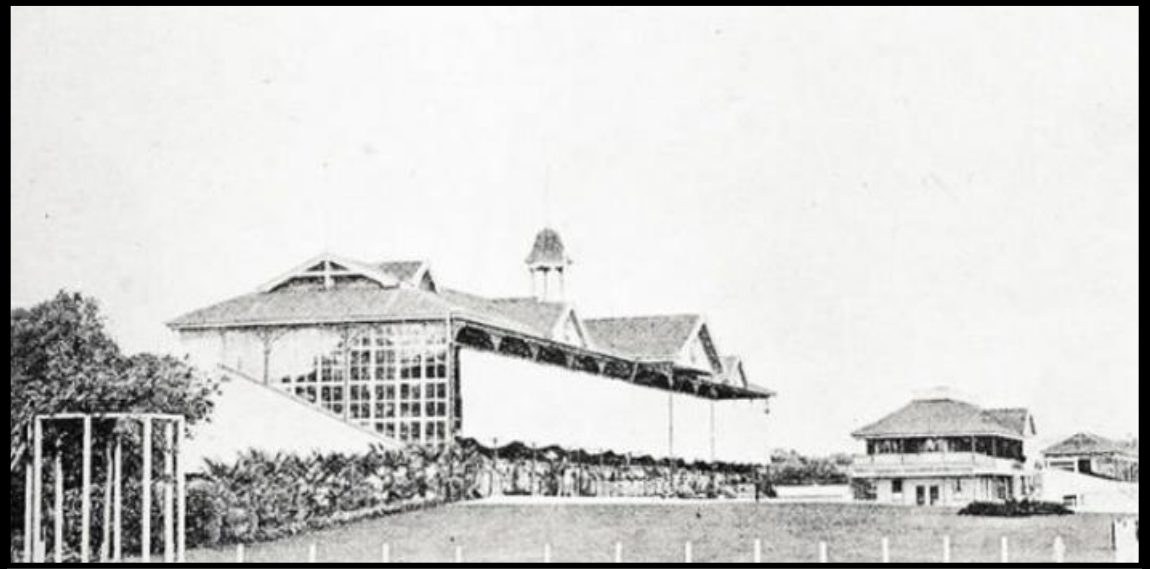
Mounted Field Ambulance stationed at Awapuni Racecourse provided initial medic training – but was woefully under-prepared.

In Sept 1915, a RAMC Officer, Col Robert Henderson assumes the appointment of Director General Medical Services. Among his first initiatives was the establishment of the Awapuni Medical Camp.

This Camp became the only NZMC Training Centre and operated from 6 October 1915 to February 1919.

Training was driven by the need to improve the preparedness of Army medical services for war.

Col Sir Robert Samuel Findlay Henderson, KCMG, CB, KHP, DGMS 1915-19. Served in Sudan, Burma, India and South Africa.



Awapuni Camp near Palmerston North where recruits for the New Zealand Medical Corps are trained for active service. The Grandstand of the Awapuni Racecourse which is now used a s barracks

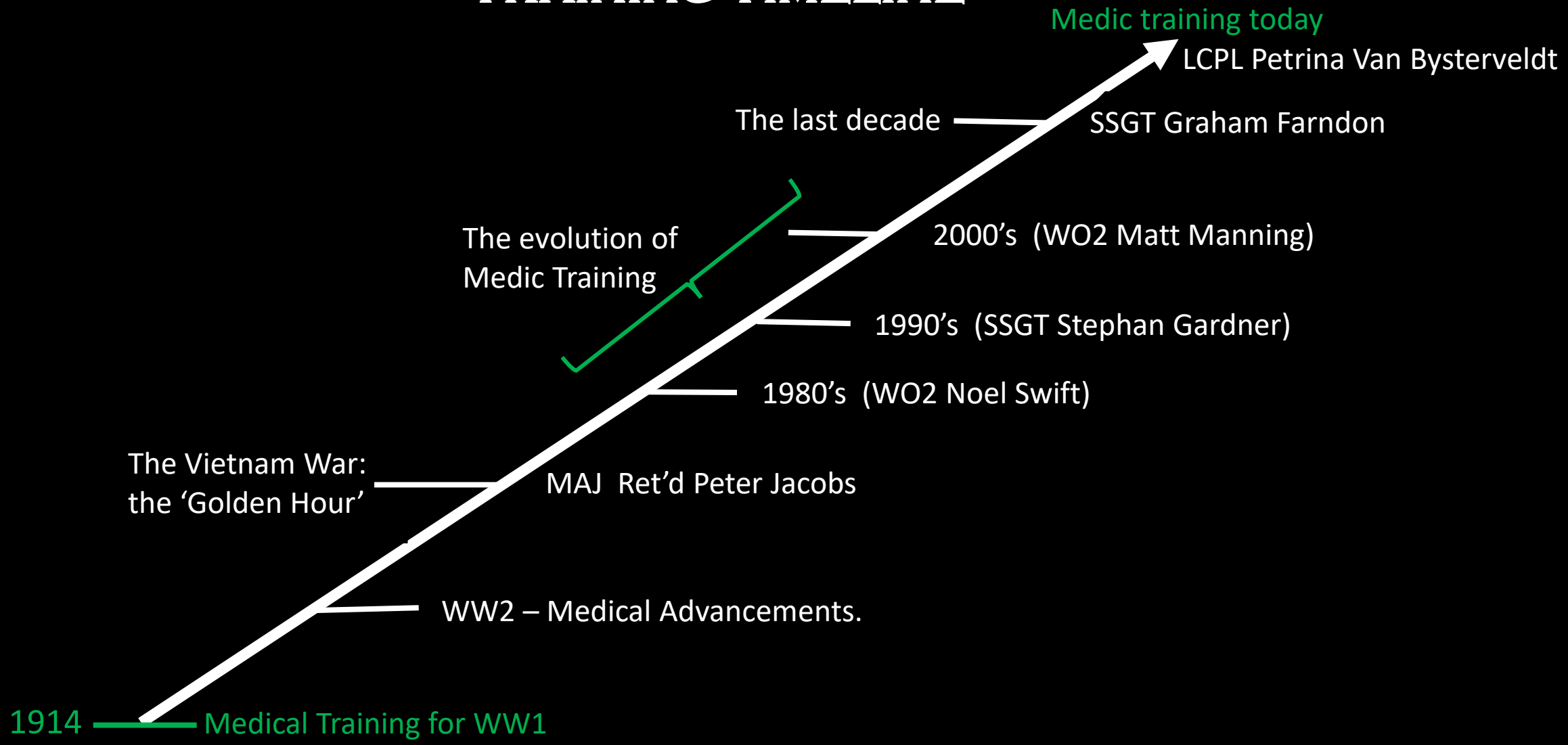
A group of about 30 recruits sit in the grandstand of the Awapuni Racecourse. This was home to one of New Zealand's largest training camps in World War One, and was the sole location for training the New Zealand Medical Corps staff.

Leisure hours in Camp: Volunteers at Awapuni, Palmerston North

Volunteers in training at Awapuni, Palmerston North

Preparing Medics For War

Training Timeline



Medical Training for WWI

- 350 – 400 Army medical personnel in training at any given time.
- Medics were quite literally ‘jacks of all trades’.
- Recruits took part in a challenging 15-week programme which included:
  - 9 weeks of basic medical instruction
  - 4 weeks of hands-on practical clinical experience in a hospital setting
  - 1 week of leave
  - 1 week of final training and mobilisation.

Medic volunteers training at Awapuni, Palmerston North c. 1915

Medical Training for WWI

- First group of medics deploys on SS Marama in Dec 15.
- Learning continues at sea.
- It is uncertain exactly how many personnel served overseas with the NZMC during WW1.
- Best estimates suggest:
  - Doctors: 385 – 430
  - Nurses: 550 deployed
  - Other ranks: 3248
- NZMC had a number of notable Distinguished Conduct Medal recipients as a result of their service during WW1

SS Marama at sea.

3/158 WOII James Comrie D.C.M., MiD
No. 1 Field Ambulance, NZMC

3/115a WO I Herbery R. H. Beauchamp DCM, MiD
New Zealand Mounted Field Ambulance, NZMC

3/269 Major Fredrick W. Moor D.C.M., E.D., MiD
No. 1 Field Ambulance, NZMC

3/168 WO II William J. Henry D.C.M. MiD
New Zealand Medical Corps

15/606A Private Lewis Crawford-Watson D.C.M. MiD
New Zealand Medical Corps

WW2 - Medical Advancements

War stimulates significant advances in medical technology, procedures and training. Innovations born out of WW1 are now second nature in military medicine during WW2:

- Triage – prioritisation of treatment for casualties' based on their condition.
- Wound debridement – the removal of dead and dying tissue from wounds to encouraged healing.
- 'Shock' - Haemorrhage control, Blood transfusion and fluid resuscitation.
- Use of portable X-rays machines – to assist with diagnosis of injuries and illnesses.
- The discovery of Penicillin – antibiotic treatments.
- Rapid analgesia – injectable pain relief
- The importance of vaccination to help reduce the impacts of disease and non-battle injuries
- Life altering maxillo-facial and oral surgery
- The treatment of psychological impacts of war
- The role of physiotherapy and rehabilitation in recovery

The Vietnam Era

RNZAMC Medic Training Courses

- Junior Medical Course
- Intermediate Medical Course
- Health & Water Duties (Environmental Health)
- Hospital Training (Military and Civilian)
- Senior Medical Course

OPERATIONAL HELICOPTER MOVEMENT

The Vietnam Era

1st LEVEL CARE - THE PLATOON OR COMPANY MEDIC

2nd LEVEL CARE - HELICOPTER CASUALTY MOVEMENT (CASEVAC)

The Vietnam Era

HELO ARRIVING AT 8 FIELD AMBULANCE – VUNG TAU

2nd LEVEL CARE: STRETCHER TRANSPORT TO HOSPITAL

The Vietnam Era

8 FIELD AMBULANCE HOSPITAL - CONTINUING CARE

BONG SON HOSPITAL – QUI NON

WO2 Noel Swift

The Evolution of Medic Training – 1980's

Situational Context

- Situation in NZ and overseas "relatively stable" – No major conflicts.
- (Bougainville, 1st Fiji coup)
- Four 24/7 Army hospitals (Pap, Wai, Ltn, Bhm)
- However…as camps got smaller and military hospitals closed, the medical training was to change in the 1990's……
- Medics only recognition for all their training by St John is a First Aid Certificate (valid 3 Yrs.)

Junior Medical Assistants (JMA) course 6x weeks:

- "Advanced First Aid", stretcher drills and pitching tents. Setting up Regimental Aid Posts (RAP's) and Casualty Clearing Posts (CCP's) (WW2 and Korean War)
- TF (Reservists) were allowed to do the courses after their basic training too.
- Quiz every morning
- Classed as **a Band 2 Medical Assistant**
- After JMA Course – 12 - 18 mths 'on- the- job' experience

The Evolution of Medic Training – 1980's

Intermediate Medical Assistants (IMA) course - 8 weeks

- Anatomy and Physiology , IV's, Injections, Suturing, Medical conditions and pharmacology.
- Environmental medical conditions: Hypothermia, Heat exhaustion/stroke
- Nursing skills- bed bathing, sheet changing, personal cares
- Quiz every morning

Additional Training for Band 3

- 10 weeks Civilian Hospital training
- 6 weeks Ambulance training
- Classed as **Band Three Medical Assistant** - Operationally Deployable (after 2-3 years service)
- Eligible for promotion to **LCPL**

Preventative Medicine Course ("Prev-Med").

- 6 weeks study of infectious diseases and treatments,
- Prevention of diseases by water testing and treating, mosquito control (The Fogger") vermin control
- Siting and erecting field hygiene fixtures-, Wash stands, soak holes, showers, urinals, latrines ("6 Packs"). Lots of "scrim and star picket poles"
- Quiz's every morning
- 2x weeks on a Pacific Island completing health surveys and general health and hygiene assistance, if required.
- After a further 18 months OJE classed as a **Band Four Medical Assistant**

The Evolution of Medic Training – 1980's

Additional experience / training for promotion

- Further 2-3 years 'on- the- job' experience
- Exercises in NZ and overseas
- Junior Non-commissioned Officers Cse (JNCO's)
- Med section commanders course
- Eligible for promotion to **CPL**

Advanced Medical assistants (AMA) course

- Advanced , invasive techniques.
- IV's, ECG's , Manual Defibrillation, Endotracheal intubation, mass-casualty scenarios, Traumatic head injuries, IV analgesic.

Band 5 - Elective courses

- Had to complete at least one of five options:
  - Radiology
  - Pharmacology
  - Aviation Medicine
  - STD Course
  - First Aid instructor
- **Band Five Medical Assistant – 'top of trade'.**

Additional coursing for promotion

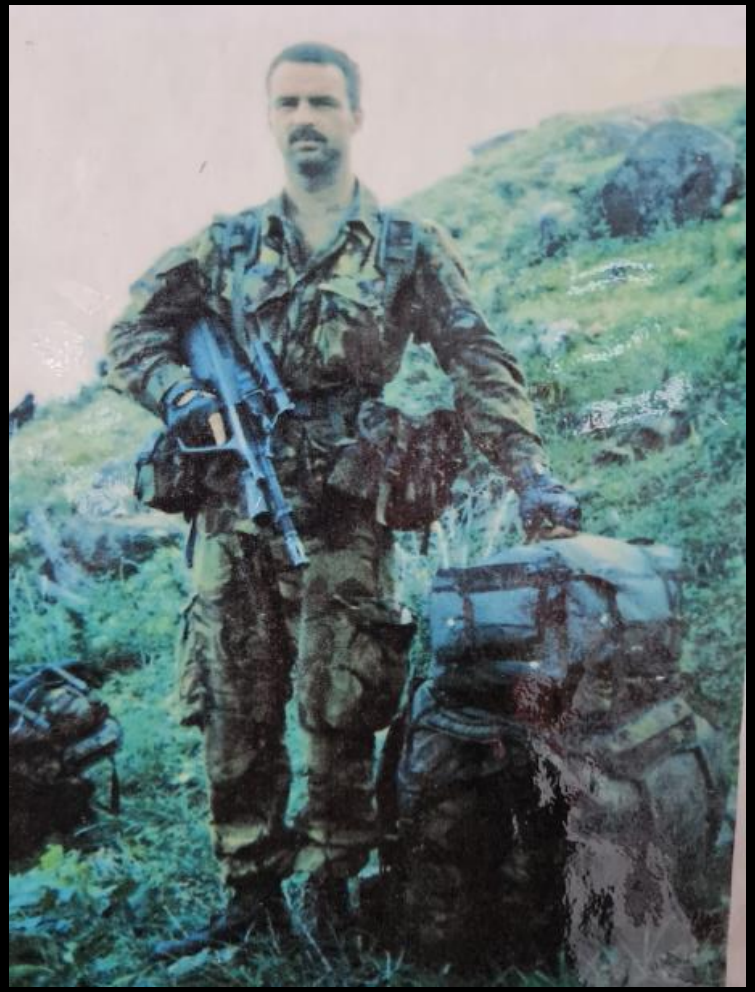
- Senior Non-commissioned Officers Cse (SNCO's)
  - Eligible for promotion to **SGT**
- Junior Health Planners Course
  - Eligible for promotion to S**SGT**

SSGT Stephan Gardner

The Evolution of Medic Training – 1990's

Junior Medic training:

- Junior Medical Assistants (JMA) Course
  - 5 – 6 weeks duration
  - Concentrated on Basic Anatomy & Physiology, First Aid, patient assessment and working within a Ward environment.
- Field Training (FT) Course
  - 2 weeks duration
  - Pre-hospital Emergency Care
  - Green skills focus.
- 'On-the-job' training and experience 12 – 18 months



The Evolution of Medic Training – 1990's

Intermediate Medic training:

- Post JMA, FTC and OJE period
- Intermediate Medics Course (IMC):
  - 5 – 6 week duration
  - Medics were taught more advanced trauma and casualty care techniques
  - Emphasis was on developing sole charge medics with the ability to deploy in close support of combat elements
- Civilian Hospital Training – 10 weeks
- St John Ambulance Training – 6 weeks

Advanced Medic training:

- Normally once a Medic reached a senior LCPL / CPL level
- Changed from the Advanced Medic Course to the Diploma in Military Medicine consisting of:
  - Emergency Care and Disaster Medicine
  - Diagnosis and Treatment
  - Practice of Military Medicine.
  - Biological and Social Sciences.
  - *Special Module (Radiography, Lab, FA Instr)
- Started sooner than the Adv Med Course and completed within 18 mths to 2 yrs

WO2 Matt Manning

The Evolution of Medic Training – 2000's

What changed in the 2000's:

- JMC and IMC courses remained
- Diploma of military medicine still the highest level of achievement available for military medics

How our medical teaching /training evolved:

- Conflict in Afghanistan between the US lead coalition forces and the Taliban
- A lot of battlefield casualty data was being collected (i.e. evidence based practice)
- Identified 3 distinct types of casualty:
  - People that will die of their wounds regardless
  - People who die of preventable causes
  - People who die of infection

The Evolution of Medic Training – 2000's

Outcomes from this research data:

- They found medics can make the most difference at the point of injury by:
  - Treating massive hemorrhage via either direct pressure or the use of a tourniquet
  - Rectifying simple airway obstructions
  - Sealing and decompressing tension pneumothorax

DRSABC versus MARCHH:

- New teaching paradigm and approach for all First Aid / Combat Lifesaver training

The rise of TCCC

- Medics were adding to the high number of battle casualties
- To limit the amount of exposure to enemy fire medical interventions were limited and when to treat was broken down into three phases:
  - Care under fire
  - Tactical field care
  - Tactical evacuation
    - Prolonged field care

SSGT Graham Farndon

The Last Decade

NZDF Medic Training 2010-2017

- NZDF successfully re-orientated training to align with current operations.
- 2009: Joint Services Health School (JSHS) hosted a series of roadshows outlining the change to NZDF Medic Corps Training.
- Factors driving change:
  - Diploma of Military Medicine was superseded by the Diploma of Paramedic Science rendering it obsolete,
  - NZDF Medics leaving the organisation to obtain higher education,
  - The new generation of recruits were seeking purposeful employment and obtaining qualifications through NZDF training,
  - Civilian paramedics move towards becoming registered.
- With the NZDF's operational tempo scheduled to downscale, the organization's mindset shifted from an operational focus to an academic focus in order to retain personnel.

The Last Decade

The AUT Scheme

- 2010: The first class of the AUT scheme medics march into JSHS.
- Medics undertake tertiary study through Auckland University of Technology.
  - 1 year of training medics receive a Diploma in Paramedic Science.
  - After a further 1 year 6 months training medics receive a Graduate Diploma in Health Science (Grad Dip).
- Grad Dip training included papers in:
  - Human anatomy and physiology,
  - Intravenous therapy,
  - Hemodynamics,
  - Pharmacology,
  - Disaster theory,
  - Cardiology,
  - Paediatric and geriatric care,
  - Resuscitative care, and
  - Applied military medicine.
- JMA, IMA and DMM medics were required to complete the following papers to gain the Grad Dip:
  - Intravenous therapy,
  - Pharmacology,
  - Disaster theory,
  - Cardiology, and
  - Resuscitative care.

The Last Decade

The AUT Scheme

- Late 2012: The first class of the AUT scheme medics graduate training.
- Medics trained under the AUT Scheme possess superior clinical knowledge to their DMM counterparts.
- ‘Applied Military Medicine’ paper is identified as insufficient to meet organizational requirements.
- 2.5-3 years to produce an operationally capable medic was too long and could not keep up with attrition.
- Lengthy training resulted in loss of soldier skills and operational mindset.
- High attrition / failure rate during training.
- Cost = $200,000 to train each medic.
- NZDF rethinks medic registration and an update to the Defence Medical Treatment Protocols changes training requirements.
- 2016: NZDF and Defence Health plan a new medic training framework to reduce the length of time to train a medic and reduce the cost on the organisation.
- 2017: AUT Scheme was terminated and new training framework begins.

LCPL Petrina Van Bysterveldt

Medic Training Now

The Current Programme:

- Split into 2 phases
  - Military Medical Technician (MMT)
  - Medic
- Tri-service classes – Navy, Army, Airforce
- New classes march in every 6 months
- Around 20 students in each class

Medic Training Now

Military Medical Technician Phase

- 2 months Human Anatomy
- 3 months Pathophysiology
- 4 months intro to Primary Healthcare (PHC)
- 3 months On the Job Experience OJE
- 2 months MMT Operational Skills
- 2 months OJE – St John Ambulance shifts as 3rd Crew
- Graduate MMT with limited medic scope

Medic Training Now

The Medic Phase

- 2 months PHC extended skills
- 2 months OJE
- 3 months Medic Op extended skills
- 2 months OJE at posting location
- Graduate as fully qualified NZDF Medic
- Move to new unit location

Medic Training Now

Altered Programme

- AUT paper inclusion
- Graduate with Diploma in Paramedic Science (EMT scope in Hato Hone St John) and Graduate Certificate in Health Science
- Further part time study paid for by DHS towards Bachelor of Paramedic Science (an extra 8-10 papers) after graduation
- Current Medic programme under revision and will be changing again soon to better suit NZDF needs

MAJ Andrew Brooks

Awapuni Medical Memorial

NEW ZEALAND MEDICAL CORP WAR MEMORIAL.
ERECTED ON THEIR TRAINING GROUND, AWAPUNI RACECOURSE, N.Z.
Set in a secluded spot, the emblematic cross is ringed with seasonable red flowers. In the centre is a stone pillar, down which water cascades continuously.

In Arduis Fidelis

In Proud Memory

of the Officers and Men of the

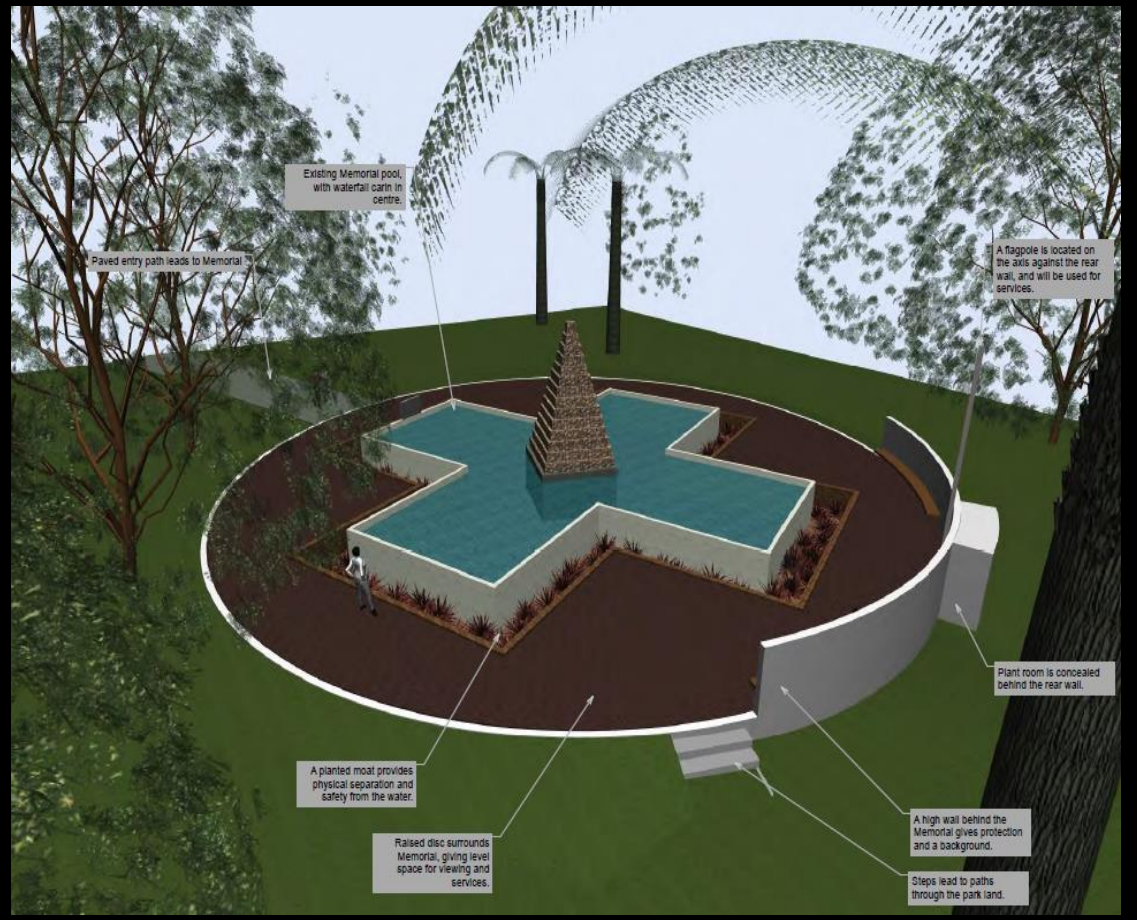
New Zealand Medical Corps

Who were trained on the grounds 1914 – 1918

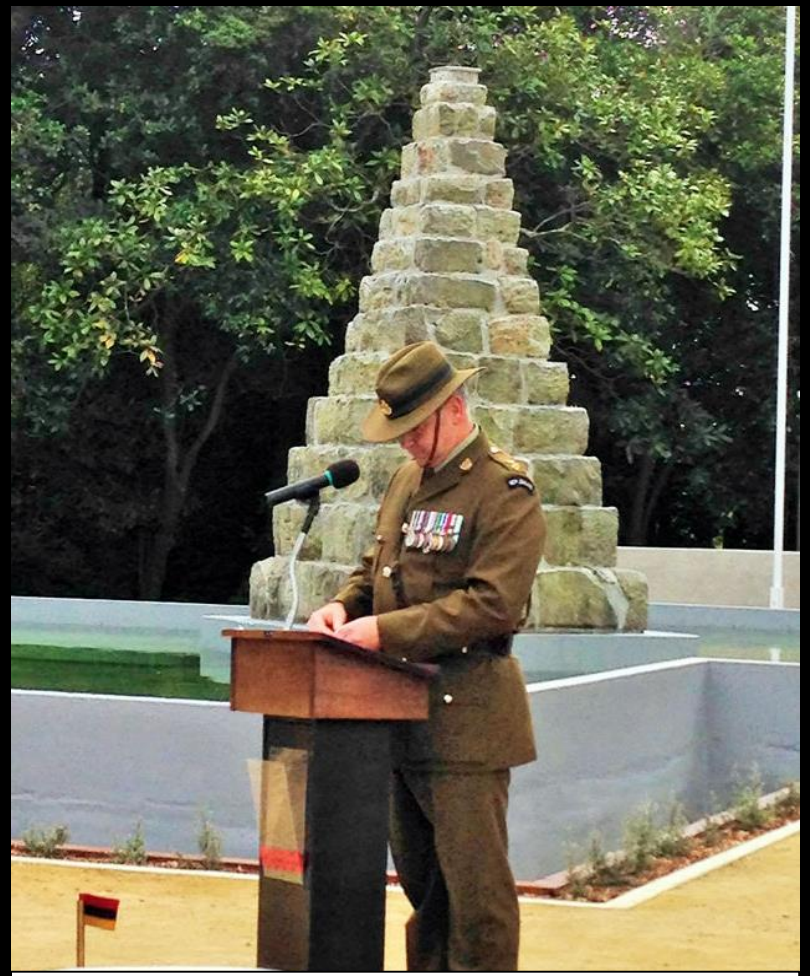
and who sacrificed their lives for the Empire

Awapuni Medical Memorial

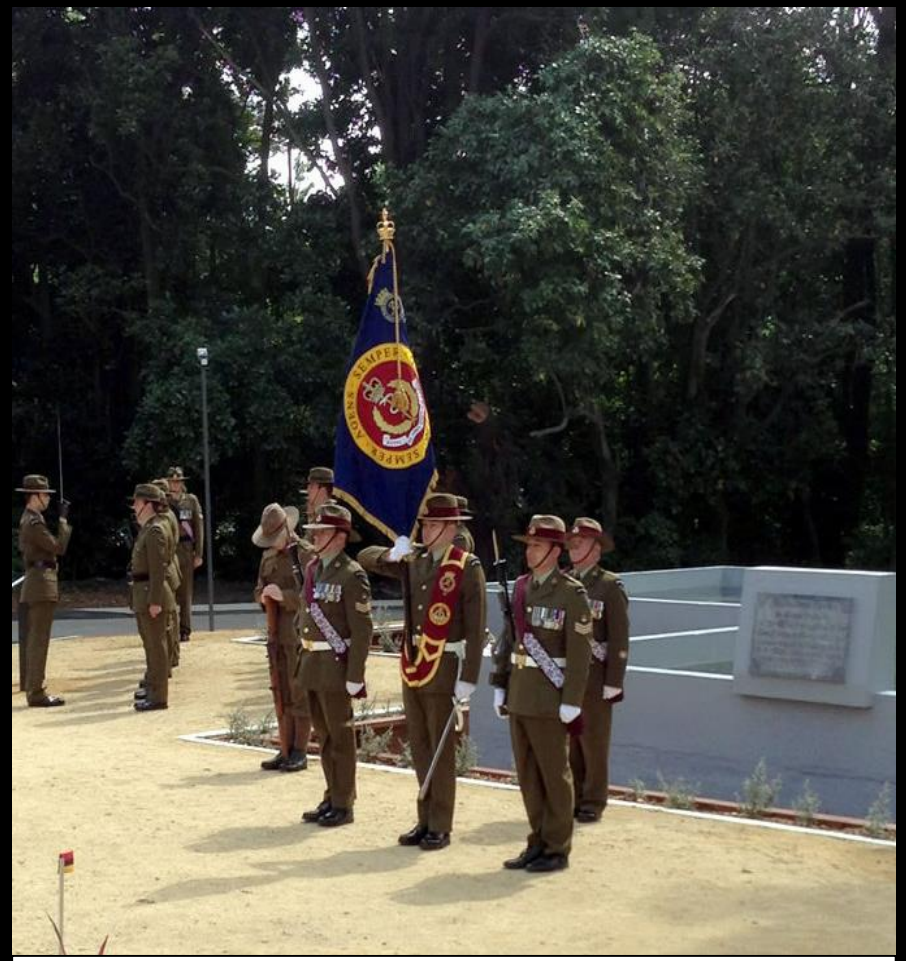
- The history and significance of the Awapuni Medical Memorial faded over time and it gradually fell into a state of disrepair over many decades.
- The Awapuni Medical Memorial was the subject of an extensive restoration project between 2014 – 2016 to mark the centenary of WW1.
- The Project was led by the Royal New Zealand Army Medical Corps with the assistance of Palmerston North City Council , the Awapuni Racing Centre and numerous community partners.



Awapuni Medical Memorial



LTCOL Darren Beck at the re-dedication ceremony in 2016



The RNZAMC Banner on parade during the re-dedication ceremony in 2016

Conclusion

- NZMC and the establishment of Awapuni MedicalCamp
- The efforts over time to prepare NZ Army / NZDF medics for War
  - From glorified ‘first-aiders’ to highly skilled, qualified and competent clinicians
  - How we innovate and develop … and in some cases how the wheel was re-invented
  - Academia and the professionalisation of pre-hospital emergency care qualifications
- Major influences that have seen he need for medic training to evolve
  - Change and diversity in weapon systems employed in the battle space
  - Changes in tactics (‘attrition-based’ warfare to the ‘manoeuvrist’ approach , ‘three-block’ war etc.)
  - Research and development using near to real time casualty data = evidence based practice
  - Advancement in medical equipment, techniques and procedures
- The Awapuni Medical Memorial

“By failing to train, you are training to fail”.

- Benjamin Franklin