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Editorial Comment

"No Service-trained medical officer ever recognises such a condition as malingering. I do not remember if there is even a column for it in the quarterly medical returns.

"If a man pretends to have a physical disability where none is present, or grossly exaggerates one that is present, in order to shirk some duty, it is the greatest mistake to mention the word malingering. In all cases there will be found a psychological condition with which to deal.

"The problem of malingering is a psychological one, and what we are concerned about is its treatment and the making of the individual fit..

". . . [Men] entertain each other with a continual fire of good-natured chaff and repartee, and amusement is given to the company by the discomfiture of any one individual. . . . [But] there comes a time to most individuals when they are unable to parry the jokes made at their expense. The individual retreats within himself. If he is of a neurasthenic nature, . . . he becomes morbid, and suffers mental torpitude. If in this condition any disability, from which he suffers, becomes exaggerated, he rushes to his best friend, the doctor. If the doctor is wise, he will listen[,] . . . give him . . . a day's rest in bed, . . . or other 'placebo' [and] . . . [in] one or two days the individual is cured. . . . If the doctor is not wise, . . . he accuses the man of being a malingerer. A man in that condition will die to prove he is not."[1]

These words were written nearly 70 years ago, but Australian Defence Force corporate management could do well to heed the advice.

The Armed Forces place great store on tenure of service (at least in so far as it relates to holding individuals to their engagements, or return of service obligations). But, perhaps we should ask, in these times of Quality Management, whether it is worth it?

Most of us have probably seen individuals whose lives have been severely damaged, sometimes wrecked, and even, dare I say it, destroyed, by the Service's insistence that they cannot, under any circumstances, discharge before their time, on their own terms.

The member who presents with a genuine desire to leave the Service, I suggest, falls into the category of the 'malingerer', as defined by Horsfall. The correct response is to take him (or her) out of his environment, usually permanently. This should be expedited, not hindered. If he applies for a Discharge at Own Request (DAOR), it should be given freely. Authorities should avoid the common response of changing a DAOR to a discharge Retention Not in the Interests of the Navy (RNIN, or other Service equivalent), which, it often appears, is done merely out of spite ("we will not *let him go*, we will *discharge* him - he won't *get away with it* with us").

I hear the cries now - all these people, on whom we've spent thousands on training, will use this training to their advantage! They'll see us off!

But, what is the cost of retaining them? - months, often, of ineffective service, with a discharge usually eventuating anyway. During this ineffective service, thousands of administrative man-hours 'sorting them out'. The risk of more severe 'illness', with increased therapeutic (medical and psychological) costs, and, perhaps, compensation claims later. Even where a 'cure' is effected, relapse is common, with more of the same. Posting turbulence is often created by the need to make these personnel non-operational for periods of time, and usually at short notice.

Taking a more liberal view of people wanting out, I suggest, would effect savings in areas of increased manpower efficiency and effectiveness, reduction in posting turbulence, and probably an ability to reduce the requirement for medical and psychological services across the ADF (I noted often that a significant proportion of beds in BNH were occupied by those with service-related psychological problems).

These savings, I am sure, would outstrip the loss of the training dollar invested in personnel who, almost invariably, are unsuited to Service life.

Russ Schedlich

Letters to the Editor

From Captain S.P. McCallum

I refer to the article published in the June issue of *Australian Military Medicine*, entitled "Clinical problems in a military force in Somalia"[1].

As the dental officer deployed with the Australian Army contingent to Somalia for Operation Solace, I should like to clarify the number of dental attendances at medical facilities depicted in Figures 2, 3 and 4 of Major Duncan's article.

Members who experienced dental problems presented to the Field Dental Section which was co-located with the Medical Treatment Section as stated in figure 2. Treatment included preventative oral hygiene, general restorative dentistry and surgical extractions of teeth. One soldier who had four third molars removed was admitted to the Treatment Section for post operative care as depicted in figure 3.

The total figures for dental treatment for the period 22 January to 1 May 1993 were:

Australian	238
United States	56
Other	16
TOTAL	310

Yours sincerely,
S.P. McCallum

1. Horsfall WN, 1924. Remarks on converting a merchant vessel into a hospital ship at a time of emergency. *J Roy Nav Med Serv;* 10(2):92-110
1. Duncan D, 1993. Clinical problems in a military force in Somalia. Aust Mil Med 2(2):5-9

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DEADLINE FOR MARCH ISSUE: 15 February 1993

President's Message

The relationship between the Australian Military Medicine Association and the Australian Defence Force is one that is open to interpretation, and misinterpretation. Comments made to me over the course of the last year, and again during the last conference, make it important that I clarify the situation.

AMMA is an independent organisation. It was established expressly to function quite separately from, and without reliance upon, the ADF. AMMA receives no funding from the ADF. AMMA is an organisation with interest in an aspect of the military, and not a military organisation. There are close ties with the ADF nonetheless. The vast majority of members are also members of the military. There is, however, nothing stopping civilians becoming members.

AMMA is dedicated to the dissemination of information, and education and research in military medicine. It is a forum for all with a common interest in the field to meet, professionally and socially. Major areas I see the AMMA dealing with are training, particularly postgraduate training, review and debate of Health Policy in the military, and providing a forum for original research. The constitution expressly forbids the association being used to consider conditions of service questions.

A question related to this raised at the conference was that of appropriate dress to AMMA meetings. I don't think as an association we should be dictating dress requirements. Certainly there is no suggestion that uniform should be worn. Equally, we cannot decree that civilian dress is required. Among other reasons, Services often require people who are being sponsored to a conference to wear uniform, at least on the first day. I would, in general, like to see the conference, and other AMMA meetings, being reasonably informal, so that there can be a free exchange of ideas, without the potential intimidation of rank.

AMMA is the only opportunity in Australia for all interested in military medicine to be able to gather. For those not in Canberra for the conference, I am sure you will find, should you talk to someone who was there, that attendance at the conference is becoming required should you wish to maintain currency in military medicine in Australia. And it will only get better.

James Ross

Volume 2, Number 3. October 1993

Sir Edward "Weary" Dunlop

AC, Kt, CMG, OBE, KStJ, MB, MS, FRCS, FRACS, FACS, DSc

1907-1993

It is with deep regret that *Australian Military Medicine* records the passing of Sir Edward "Weary" Dunlop, honorary life member of the AMMA, on 2 July 1993 in Melbourne. With the kind permission of *The Weekend Australian* newspaper, we reprint an obituary published on 3-4 July.

Humble heroism beyond call of duty

Gary Hughes

"Somehow I seem to have lost all emotional depths these days and am living in a drab way without much thought or feeling or reaction to anything. One can't feel very much anymore. I can't react much to physical suffering or death."

These words scrawled in minute handwriting in Sir Edward "Weary" Dunlop's diaries on Easter Sunday 1944 record one of the rare moments the legendary war surgeon allowed himself to indulge in self-reflection during more than three years as a Japanese prisoner of war.

Even then, Dunlop chided himself for such self-indulgence while those around him in the Japanese POW camps on the notorious Thai-Burma railway were suffering and dying.

"The wretched state of the sick and the inability to admit many poor wretches to hospital is getting completely on my nerves," he wrote on May 18, 1943. "I am ashamed of my irritability."

To those many thousands of people whose lives were touched by Sir Edward Dunlop and in particular those POWs from the so-called hell camps of Burma and Thailand, such self-effacement was as typical of the legendary figure as his limitless selflessness and, perhaps surprisingly, lack of animosity towards his former captors.

"I never felt the ordinary Japanese had any inbuilt desire to be brutal," he said at one point. "They just worked within a very ruthless and terrible system and on a couple of occasions my life was saved by Japanese intervention."

It took Sir Edward, known among fellow POWs as "Christ of the Burma Road", 40 years to agree to publish his wartime diaries in 1978 - and even then he had reservations because of fears they might stir up ill feeling towards the Japanese.

"After all these years I've still got reservations - reservations that they are a hymn of hate written in a mood," he said of his decision.

"I want the diaries to be published with a commentary and room for retrospective thinking."

Although forgiving, Sir Edward was the first to speak out publicly whenever any attempt was made to minimise what the Japanese had done. Determined to ensure future generations of Australians did not forget what POWs endured at the hands of the Japanese, he spent much of his latter years involved in commemorations and the building of memorials in Thailand and Burma to those who did not return.

Born in country Victoria in 1907, Weary - his nickname dated from his days at Melbourne University's Ormond College and involved a play

on words involving Dunlop tyres - was a young surgeon studying in London when he "pulled a few wires" at the outbreak of World War II to get posted to the Australian 2nd AIF in Palestine as a captain.

After serving in Libya, retreating through Greece and being evacuated from Crete, he was "privileged" to join the infamous Rats of Tobruk before the 7th Division was ordered back to Australia.

His ship diverted to Java in a desperate bid to stem the Japanese move southwards, Dunlop was taken prisoner in February 1942.

Of the 22,000 Australians captured by the Japanese with the invasion of Malaya and fall of Singapore, more than 7,000 died during the following 3½ years, many of disease, starvation and beatings while working on the Burma-Thailand railway - Japan's bid to force a railway line through virtually impenetrable jungle to supply its army in Burma.

Dunlop's meticulous and frequently harrowing description of nightmare conditions in the forced labour camps, where men were worked literally to death, has become the definitive account of the plight of POWs at the hands of the Japanese.

With surgical instruments fashioned from knives and forks, intravenous drips made from bamboo shoots and an almost complete lack of drugs, Dunlop and other doctors battled cholera, dysentery, beriberi, jungle ulcers, malaria and malnutrition as well as the unpredictable savagery of the Japanese.

Often the only treatment available for gaping tropical ulcers was amputation, carried out in the jungle camps by the light of oil lamps with an audience of curious Japanese guards.

Dunlop suffered his share of illness and attacks by the Japanese.

Often made to kneel by the Japanese so they could hit him because of his towering 192 cm frame, Dunlop recalled how on one occasion an officer drew his sword and lunged towards his throat.

"I was lucky enough to sway my neck those vital 2 or 3 inches away from the thrust," he wrote. "The handle of the sword hit me in the larynx and I was completely speechless."

In July 1945 he related how he had been beaten and tortured for ignoring the lights-out bugle.

"They belaboured me with rifle butts, chairs, boots," he wrote.

"Eventually I was motionless beyond resistance, lying face down in the dust, conscious of broken ribs and blood from scalp wounds.

"I was gathered up, dazed and rubber-limbed and trussed and roped backward, kneeling with a large log between my seat and knees.

"As my head cleared there was intolerable pain due to rough ground pressure on the knees and the weight and pressure of the log. Breathing was sharply painful with fractured ribs."

Kept trussed all day, he was finally released and staggered off to amputate the arm of a Dutch patient who had been waiting for surgery during the ordeal.

Perhaps the best known of Dunlop's understated heroism when standing up to the violent excesses of the Japanese involves British serviceman Bill Griffiths. Blinded and with his hands blown off by an exploding mine, the Japanese tried to bayonet the helpless soldier because he was unable to travel. Dunlop put himself between Griffiths and the Japanese and said they would have to kill him first.

Griffiths was allowed to live and the pair remained life-long friends.

Yet only rarely in his diaries did Dunlop allow a glimpse of ill feeling towards the Japanese.

"The most primitive of races would scarcely treat sick and starving dogs in this fashion," he wrote at one point.

And in obvious exasperation in May 1943 he wrote: "These days, in which I see men being progressively broken into emaciated, pitiful wrecks, bloated with beriberi, terribly reduced with pellagra, dysentery, malaria and covered in disgusting sores, a searing hate arises in me whenever I see a Nip.

"Disgusting, deplorable, hateful troop of men - apes. It is squalor and degradation of body and mind. I could never go through it again."

After the war Dunlop rose to prominence in public life as a surgeon of international standing, a medical researcher specialising in treatment of tropical diseases and campaigner for a host of organisations and charities.

With his slight stoop, soft voice and heavily lidded eyes the "Weary" nickname seemed entirely apt, yet it belied his energy and drive which saw him spend long hours working in a professional capacity only then to dedicate spare

time to helping fellow POWs in trouble. This role working away from the public eye aiding returned POWs in the post-war years went largely unnoticed.

He also worked tirelessly to forge links between Australia and Asia and encouraged closer relations with Japan in particular. On a number of occasions he opened his own home in Melbourne's exclusive Toorak to accommodate members of visiting Japanese delegations.

A fellow of the College of Surgery in Sri Lanka, patron of the Australian Thailand Association and of the Sri Lankan Association of Victoria and vice-president of the International Society of Surgeons, he led an Australian medical team to South Vietnam in 1969 to provide care for civilians injured in the Vietnam war.

He was a member of the advisory committee to the Federal Government inquiry into Agent Orange, president of the ex-POWs Relatives Association in Victoria and Commonwealth Trust Fund chairman from 1969 to 1977.

Among the many honours awarded to him were the Valiant Freedom Award 1990, the St. John Jerusalem Cross Merit 1989, the World Veterans' Federation Rehabilitation Award in 1988 and Thailand's top civilian honour.

Awarded an Order of the British Empire in 1947, Sir Edward was made a Commander of St Michael and St George in 1965 and knight in 1969. He was made a Companion of the Order of Australia in 1987.

He was an ardent campaigner against alcohol and drug abuse, serving as president of the Alcoholism Foundation of Victoria.

His private passions were rugby union (he played in his pre-war days and proudly belonged to the British Barbarians Football Club), golf and travelling and he enjoyed raising cattle on a small property north-east of Melbourne.

He was left a widower in 1988 when his wife, Lady Helen Dunlop, died after a long illness and in recent years he made the strenuous trek back to Thailand to commemorate various World War II anniversaries, including walking through the infamous Hellfire Pass.

Even yesterday, on the day of his death, he had been scheduled to meet Victorian RSL president Bruce Ruxton to discuss a claim by former POWs for compensation from the Japanese.

Second AMMA Scientific Conference

Opening Address

Senator John Faulkner, Minister for Defence Science and Personnel

As minister for Defence Science and Personnel, I was very pleased indeed to be asked by your President to address you today. I think the number of people attending this conference bears testimony to the recognition by the wider community of the worthiness of your association's goal - the promotion and advancement of military medicine as a discipline throughout the wider health community in Australia.

The welfare of service men and women lies very much at the heart of my portfolio. The preservation and, if necessary, the restoration of physical and mental health of servicemen and women in peace and in conflict are the very reason for having a uniformed health service. I know that you will be hearing a wide ranging selection of presentations over the next three days: key events in military history, the experience of peace-keeping activities, the latest concepts in training for severe trauma management, and medical ethics as they apply to research in the ADF.

Military physicians have played a pivotal role in the development of Australia from the time of the First Fleet. Four of the ten doctors who accompanied Governor Philip were naval surgeons. John White, the principal surgeon, continued to serve in that capacity for seven years of the Colony's existence. Since then, military medical personnel have served with Australian forces in all foreign campaigns from the Maori wars of the 1860s, to Sudan in 1885, through to the Gulf Conflict in 1991. Many Australian Defence Force doctors and nurses have distinguished themselves in civilian life, and I would like to mention a few of these.

Sir Neville Howse was Director General of Army Health Services and one of my own Ministerial predecessors, received a Victoria Cross in the Boer War, and was a World War I veteran. In 1925, he became Minister for Health, and Defence and Repatriation.

Sister Elizabeth Kenny, a nurse from Queensland, in her time incurred the displeasure of both the nursing and medical professions. After the Australian Trained Nurses' Association refused to recognise her training, she made her own way to London to serve the first AIF. She was wounded at Dieppe in 1915. Sister Kenny went on to a distinguished career both in Australia and in the United States, gaining international recognition for her pioneering treatment of poliomyelitis.

The late Sir Edward Dunlop and Sir Albert Coates were Thai Burma Railway surgeons about whom we know so much.

And Sister Vivian Statham, the former Sister Vivian Bullwinkel, was the sole survivor of the Banka Island massacre. I am pleased to see that your organisation has seen fit to honour her here at this conference, although I understand that ill-health has unfortunately prevented her from attending in person.

Military medical history has great relevance to general medicine today. Many advances in medicine and surgery have come out of the need to care for the wounded and sick in wartime. Various conflicts have seen the development of an effective vaccine against tetanus, and the establishment of the principles for the treatment of wounds, the treatment of burns and the prevention of gas gangrene. The large scale production of penicillin, the development of effective resuscitation, the treatment of shock, blood transfusions, and the development of blood substitutes, have similar origin. Pioneered or refined in war they have all been applied with benefit to civilian practice.

The use of the helicopter as a means of battlefield evacuation was pioneered in Korea and became an art form in Vietnam. The wounded can now be transported rapidly to sophisticated field hospitals with injuries which would previously have been fatal. The lessons learned in conflict are also very relevant to the major trauma centres in our urban areas. I am told, for instance, that a number of Reservists act as instructors on the Early Management of Severe Trauma course undertaken throughout Australia under the auspices of the Royal Australasian College of Surgeons.

Recently, many have thought that the end of the threat of nuclear warfare between super powers was the beginning of a new era of peace - that armies could be demobilised and that the energies and enterprise of defence industries could be redirected.

Since the dissolution of the USSR, the attention of the world has been focused on strategic arms limitation treaties. But an equally important advance has been made in the control of chemical weapons and chemical weapon precursors. The Australia Group, which meets at the Australian Embassy in Paris, and consists of 25 nations plus the European Commission, has been instrumental in achieving an important breakthrough in the control of what is sometimes known as the poor man's nuclear bomb.

There is a continuing need for us to maintain expertise in the field of medical defence against biological and chemical weapons. Defence scientists from the materials research laboratory in Melbourne and members of the Australian Defence Force, including medical personnel, have supervised weapons' destruction in Iraq and have been of pivotal importance in establishing our credibility in this important area.

Much of the initial optimism of the post cold war era appears to have been misplaced. The world of the 90's is, if anything, more unstable than it has been for decades. Australia continues to maintain its commitment to international peace-keeping efforts under the auspices of the United Nations. At this moment men and women of the ADF are serving in eight countries around the world. Australian Blue Berets, and others involved in multinational operations, are in Somalia, Cambodia, the Red Sea, Sinai, Afghanistan, Western Sahara, Israel and Iraq. ADF Health Service elements have been involved in planning, or deployed as integral components in all of those operations.

The professionalism of our forces on these deployments, in what are very difficult and challenging operational settings, has won widespread recognition and praise from United Nations commanders.

There is, of course, a price to be paid for these achievements. Despite rigorous standards, the very nature of ADF training and peace-keeping operations is hazardous.

Since 1980 a member of each of the three Services has paid the supreme sacrifice in the course of duty. In 1982, Corporal James Campbell, an RAAF medical assistant, died in an helicopter crash in Bass Strait when supporting oil rig protection activities. In 1985, Able Seaman Ian McLaughlin attempted to rescue an unconscious crew member on HMAS Stalwart. He was overcome by gas and died after several days in hospital.

Just recently, Major Sue Felsch was killed in an aircraft crash in Western Sahara and, as I sure you are aware, she was providing medical support to Australian service men with the United Nations peace keeping force. Her death represents the first of a service woman overseas on duty since the end of the Second World War. It is a dramatic, if poignant, reminder of the increasingly important role of women in our Defence Force, and I take this opportunity to pay tribute to those young men and to Major Felsch. Tragically, of course, there have been many other medical personnel who have been lost on active service.

Tomorrow, Surgeon Captain Habersberger will be presenting an address on the loss of the *Centaur* just over 50 years ago. In May this year on the 50th anniversary of its sinking, I unveiled the *Centaur* memorial and Walk of Remembrance at Point Danger in Queensland on behalf of the Prime Minister. The *Centaur* was clearly marked and notified as a Hospital Ship and its destruction was a particularly senseless and inhumane act. Two hundred and sixty-eight lives were lost out of the 330 on board at the time. Losses in the embarked Army 2/12th Field Ambulance were heavy. Of the 12 nurses on board, only Sister Ellen Savage survived.

I have been told that active planning is under way for *Centaur* to return to sea. The Army First Field Hospital "*Project Centaur*" is due to be embarked on board HMAS *Jervis Bay* for an exercise at sea for the first time in October, and I see this as an important initiative in keeping with our need to be able to maintain and deploy mobile self-contained and advanced medical facilities to support relief operations in our area of operations.

The changes being implemented through the ADF reflect the need for Australia to employ its forces efficiently. Whilst a sense of individual service identity will certainly be maintained, the need for joint operations under a unified command is preeminent. Similarly, the integration of the Reserve Forces as an integral part of the ADF is a key government strategy.

In both of these areas, the Health Services have led the way. The current restructuring of the office of the Surgeon General, and the intimate involvement of Reserve health service officers, particularly in the specialist fields, demonstrates the potential for Reserve participation and for triservice integration.

A review of health standards in the ADF has recently been initiated to ensure that they are consistent with evolving community standards and expectations. The review will look at how health standards in the ADF affect recruitment, continued employment and discharge. It will also look at how ADF health policy is affected by wider community standards while considering the unique need of the ADF to have a fit fighting force.

Complaints by some members indicate that discriminatory practices and policies might still be in place. In particular, the review will focus on policies that affect women in the ADF, and on rehabilitation and subsequent employment of those who develop serious illnesses or are injured during their service.

The challenge for the future is to ensure that the ADF provides professional and efficient health care, consistent with changing community standards.

In research, there is a need to maintain core expertise in the many specialised facets of military medicine, particularly in aviation and underwater medicine. The ADF quite rightly continues to play a leading role in the defence against the Anopheles mosquito vector. The Malaria Research Unit at Ingleburn has acquired a worldwide reputation for the quality of its research, particularly in the South Pacific. With large groups of Australian servicemen returning to Northern Australia from overseas, it is incumbent upon us to prevent the reintroduction of the Malaria parasite.

I understand that one of your original keynote speakers, the Director of Medical Services and Senior Surgeon of the Papua New Guinea Defence Force, Lieutenant Colonel Torova, has been unable to be spared from Bougainville for operational reasons.

I also understand that the recent death of your second invited speaker, Sir Edward "Weary" Dunlop, has seen an outpouring of praise and recognition for someone who is genuinely a true Australian hero and a very great Australian. It is not my intention to add to that praise in detail, though I spoke at length in Parliament during the condolence motion on the death of Weary Dunlop, but I was happy to hear of your Association's decision to name an annual prize in Weary Dunlop's honour, and I am sure it will be one of many memorials that will perpetuate his name.

Two letters recently published in the Australian Newspaper and the Canberra Times both referred to Weary's greatness but, at the same time, spoke of the many other Australian doctors who served so selflessly in the Prisoner of War camps in South East Asia. Names such as Parker, Fagan, Hindler, Karl, Brandt, Mills, Hendry and Hunt. Many of these doctors are still living, and it is important that their story be told. I understand that another of the Thai Burma Railway doctors, Dr. Rowley Richards, will be speaking to you tomorrow morning.

The recurring theme that shines through their experience, is that they were ordinary Australians doing their jobs as well as they could under the most horrific of circumstances.

Ladies and gentlemen, next week I am leading a commemorative Mission to the Western Front battlefields of France and Belgium. Fourteen Western Front veterans, all in their 90s, seven widows of Western Front veterans, and two junior legatees with forebears who fought there, will be on the mission which will coincide with the 75th anniversaries of the battles of Mont St. Quentin and Peron. We will be present at the recovery of the remains of the unknown Australian soldier to be interred at the Australian War Memorial in a ceremony on Armistice Day. This Tomb of the Unknown Soldier will pay tribute to all Australians who served in times of war, including non-combat personnel such as nurses and doctors.

It is evident to me that the traditions that were enshrined at Gallipoli and in France are just as strong in the armed services of this country today as they were then. These values have been reaffirmed by so many ordinary Australian men and women carrying out their military duties professionally, or just simply doing their job. Men and women from all ranks and from all the health disciplines have contributed significantly to this legacy and the health services continue to form a vital part of the Australian Defence Force.

Your Association is dedicated to furthering knowledge about this proud heritage, and to fostering the professional development of the many aspects of military medicine in the wider

community. I commend the Association for your efforts to date, I wish you a most successful conference. I thank you very much for your invitation to address you today, your courtesy in listening to me, and I have much pleasure in declaring officially open the second conference of the Australian Military Medicine Association.

Future directions of Australian Military Medicine

Major-General David Rossi RAAMC. Patron of the AMMA. Surgeon General, Australian Defence Force

This is indeed an important occasion for us as a fledgling Association, and I am most pleased to see that the Minister for Defence Science and Personnel was able to be with us today to deliver the Opening Address and to offer such encouragement.

My predecessor, Air Vice Marshal Michael Miller, indicated last year that a forum such as this was unique in Australia, and was long overdue. I can only echo his words and agree. I would like to use this occasion to publicly congratulate the President, Squadron Leader James Ross, and his Council for their efforts in establishing the Association and making it such a professional one, in such a short time. While I am sure that there is ample room for further improvement and innovation, the fact that we already have a journal on the street and can mount a scientific conference on a yearly basis is cause for great heart.

Before getting down to the main issues of my presentation, I would like to add my regrets at the passing of Sir Edward Dunlop. It is a great pity that he did not survive long enough to address us. I knew him well, and I am sure that he approved of our Association and its aims. I had the pleasure of accompanying him at a parade to commemorate the naming of 'Dunlop Barracks' in Melbourne in 1991, and it is pleasing to reflect that we were able to honour him in such a tangible way before his passing. However, I emphasize that 'Weary' is not Australia's only military medicine hero. Many other men and women have given exceptional service to the Armed Forces of this country and we are fortunate to have Dr Rowley Richards and Father Frank Flynn to address us over the next two days.

Military medicine as a discipline is not new. We may now only just be recognising it formally in Australia, but its existence as an entity has been recognised for well over one hundred years. The Association of Military Surgeons of the United States, AMSUS, is celebrating its one hundredth anniversary in November this year. AMSUS has a journal, "Military Medicine," which is an internationally recognised professional journal and I am pleased to say that our President has had two articles published in the recent June issue. Our own journal must take its place alongside this well-established publication. Your support with contributions is crucial to this end.

I cannot let the opportunity pass without spending some time on the structural changes taking place within the health services. In essence, we are attempting to achieve a more efficient and integrated health service: one which will meet the needs and requirements of all ADF members, one which will be capable of supporting our operational commitments such as our involvement with United Nations operations, and one which will support the professional development of the varied health disciplines.

You must be aware, I'm sure, of the wide ranging changes taking place within the ADF. The Force Structure Review and the Defence Regional Support Review are but two of the many major reviews underway. There is a significant manpower drawdown to be achieved, and, it would seem after Tuesday's news, this is to be accelerated. With this as a backdrop, the future of the Office of the Surgeon General and the three Service Health Directorates was considered by the Chiefs of Staff Committee (COSC) last December. Unlike some other areas of the

Defence organisation, we were given the task to manage our own restructuring . . . with reorganisation by integration being the preferred option. You should note here that the restructuring is confined to the Canberra based staff components of the health services. There will be no appreciable impact from these changes at the unit work place. The operational parts of each Service's health structure are also to be left entirely alone. The health staff function of the Australian Support Area is the only area left to be investigated with a view to rationalisation.

I will now recount a brief chronology of events and then explain in more detail the functions of the new integrated organisation, and discuss some of the challenges for the future.

The COSC decision of December 1992 required me to implement a merger of the health directorates of the three Services with the existing Office of the Surgeon General, and to integrate the Occupational Health and Safety elements of the three Service Offices and the civilian OH&S directorate from Human Resources and Management Division. This involved merging elements from five different programs. The Secretary and the Deputy Secretary B&M were involved in the COSC decision as it involved the civilian element of the Defence organisation.

It is worth noting here that COSC endorsed the principle that, where it was not clearly a requirement for a position to be filled by a doctor, dentist or nurse (or any other specialist for that matter), the position was to be open to all health service officers, and all positions were to be filled on a best person for the job basis; that is, on merit. This has broadened the scope for many health service officers and has injected a greater degree of competition for senior and key appointments.

The Chief of the Defence Force issued a directive giving me considerably more responsibilities than before. In particular, I am now responsible for providing health advice to the CDF, the Secretary and the Service Chiefs of Staff, for determining health policy for the ADF, and for exercising technical control over all ADF health assets. Of particular note is the new and onerous responsibility for OH&S for the Defence organisation at large.

An implementing directive was jointly issued by the Vice Chief and Deputy Secretary B&M which advised that the Service office health directorates were to come under command of the Surgeon General on 1 March this year. This directive also advised that all arrangements were to be finalised by 31 January 1994. I can assure you that the new Office of the Surgeon General will be up and running well before then. We have been given scope to further refine the organisation in the twelve months following January 1994.

On 24 March, I issued the Restructuring Implementation Strategy. This required implementation to be completed in three phases: the first included the preparation of the duty statements and establishment tables. This was completed on 11 June. The second phase was to consider manning, equipping, accommodating and funding the new organisation. This is the current phase and is due for completion by October. Phase three will see the transfer of surplus manpower to higher priority health areas and is scheduled for completion by 31 January 1994.

There are three branches in the Office of the Surgeon General:

- Operational Health Support Branch
- Clinical Services Branch, and
- Corporate Health Services and Programs Branch.

Each branch is headed by a Director General and the three Service Directors General of Health will fill these positions, thus ensuring each Service will have a one star officer at all times. These DGs will be double hatted, providing single Service specific advice to their respective Service Chiefs. In the first iteration of manning, Brigadier Buckley will have Operational Health Support Branch, Air Commodore Moller Clinical Services Branch and Commodore Dowsett Corporate Health Services and Programs Branch.

Broadly, the responsibilities of the branches are as follows:

- for Operational Health Support Branch:
  - Operational Health Support Policy and Doctrine,
  - Health Intelligence, and Strategic Level Health Planning, and
  - Health Training Policy,
- for Clinical Services Branch:
  - Medical, Dental and Nursing Policy,

- Medical Research and Development, and
- Health Quality Assurance,

- for Corporate Health Services and Programs Branch:
  - Health Records and Information Systems (including the Health Services Redevelopment Project),
  - Health Resources and Logistics, and
  - Environmental and Occupational Health and Safety.

Each Branch has a single Service cell of four or five people to provide staff for the DGs to exercise their single Service responsibilities.

I will now spend some time discussing the way ahead.

Clearly, we will be endeavouring to generate common health policy for the ADF. Common documentation with common administrative procedures, wherever possible, will support the introduction of common policy. Health records will be amalgamated to form a single ADF Health Records Office and the records will eventually become electronic rather than paper.

We will be able to more clearly focus on preventable illnesses and injuries as data gathered under OH&S reporting guidelines is analysed. From this we will be able to develop risk management strategies, and develop a nexus between health policy and the costs of rehabilitation, compensation and superannuation.

At long last we will be able to define the health status of the ADF.

Some of our major activities for the next four years include:

- contributing to the development of operational health support capabilities in accordance with strategic priorities,
- the expansion of the ADF health intelligence collection, storage and retrieval capabilities to meet the requirements of strategic guidance,
- the continued development of operational health policy and doctrine,
- the continued rationalisation of individual health training within the ADF, and
- furthering the development of links with academic, professional and other bodies and institutions, at both the national and international level, to enhance the development of military medicine in the ADF.

We will pursue the rationalisation of single Service medical, dental and nursing policy into common ADF policy:

- the development of common medical dental and nursing quality assurance programs,
- the development of priorities for and coordination of health research in the ADF, and contribution to human factors, personnel policy and other defence research,
- the development of a health services corporate plan, and
- the implementation within Defence of Commonwealth OH&S legislation.

We will pursue the continued development of environmental health and preventive medicine policy:

- the continued determination of priorities for health materiel and facilities,
- planning for the establishment of the ADF health training centre in the Sydney area,
- the development of arrangements with regional countries for the provision of reciprocal health care to military personnel,
- representations on conditions of service for health professionals, and provision of health services input into studies affecting the structure of the ADF, and
- the provision of advice to ensure more effective recruitment, personnel management and career development of ADF health professionals.

In regard to career development, it is my intention to convene a working party to investigate the establishment of a tertiary course or courses in Military Medicine. A graduate diploma in Military Medicine and perhaps a Masters degree in Military Medicine are possible. Several universities have expressed interest and I hope that something will eventuate in this regard during my time in office.

Now the list I have just run through was not exhaustive. There are many other areas that we will have to get involved in. I will mention but one more. The issue of discrimination.

The Minister has telegraphed earlier that a study into discriminatory practices in respect of health standards has been commissioned. Every bleeding heart and single issue lobbyist wants the ADF to enlist any number of halt, lame, diseased and disabled people (often, I might say, with the support of their local members). It is a fact that we do discriminate at recruiting. This is because of the nature of our business and the ceiling placed on uniformed manpower. We discriminate by age, sex, criminal record, height, weight, education, . . . but not now by sexual preferene. I will not develop further our arguments here, . . . I'm sure you already know the plot, . . . but I put to you the fact that this study, if it does not once and for all provide acceptable answers to counter the repeated discrimination claims, could spell disaster for the operational capability of the ADF.

The working party has been asked to examine policy relating to:

- recruitment health standards and specifically, grounds for rejection.
- continued employment of personnel disabled in service, and
- criteria for discharge of personnel on medical grounds.

Gross inefficiency and manpower wastage occurred in World War I and was due in part to poor entry standards and poor entry medical examinations. If our standards are relaxed to accommodate those that would have us take virtually anyone, perhaps as a social obligation, then we will be doomed to repeat the mistakes of history.

You can see that we are working in an environment of continuous change. We are constantly having to reevaluate 'how we do business'. Fortunately, our masters still appreciate the need to have their medical advice situated in the military context . . . if it were not so then we would be civilianised or our work put out to contract.

I look to you to advance military medicine in Australia.

I have appreciated this opportunity to address you, and I encourage you to get behind your committee and make this Association meaningful and relevant. All that is now left for me to say is to wish you a most successful and enjoyable conference, and trust that you will actively participate in all the sessions that follow.

Thank you.

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Papers from the Conference

Australian Military Medicine will publish several papers delivered at the 1993 Annual Scientific Conference of the AMMA over the next few issues.

Civilian applications of military medicine: the St. John Ambulance Field Medical Team

R.C. Grimmer

This paper will demonstrate now military medical principles have been effectively applied to organising and training medical teams in the civilian setting of the St. John Ambulance, and how the experience gained from this can, in turn, be utilised by the military sector.

Historical Background to St. John Ambulance Australia

The Order of St. John was founded in the eleventh century for the care and protection of pilgrims travelling to the Holy Land, although its origins go even further back, to about 600 AD. The modern organisation, known as the St. John Ambulance, which still has ties to the ancient Order, was founded in England in 1831, and first established in Australia in 1883. The initial function of the organisation was to teach first-aid and related subjects, and later to provide trained volunteer first-aiders. The black and white uniforms of St. John are a familiar sight at sporting events and pubic gatherings throughout Australia.

Field Medical Team

The Field Medical Team is a more recent concept, and has only evolved over the last decade. For many years, professional ambulance officers, nurses and doctors have played a role in St. John, both in training and on public duties. In 1986, Dr Barry Collins, an orthopaedic surgeon with extensive military experience, who was at that time the St. John Ambulance NSW District Surgeon, put forward the idea of forming specialised teams of St. John Ambulance medical professionals and first-aiders with extra training and equipment to provide a level of care over and above basic first aid in circumstances where this might be needed. Such circumstances would include large public events where crowd size delays ambulance access, disasters, etc.

These teams were originally known as Medical Cardio-Pulmonary Resuscitation (MCPR) Teams and, as their name suggests, their objectives and training (which were developed by Dr Collins and Dr Doug Gow, an anaesthetist), were directed solely towards advanced cardio-pulmonary resuscitation. Since 1986, changing public demands have brought about a broadening of the original role to include advanced resuscitation of a wide range of medical emergencies and some types of trauma, and a change of name to Field Medical Team.

Field Medical Team and the Military

The St. John Ambulance has always had a close relationship with the military. A large number of the medical professionals in St. John are serving or retired military personnel. This has meant that there has been a wealth of experience to draw on in organising both St. John Ambulance and the Field Medical Team.

The major areas where military principles have been applied have been the organisation, training and equipment

Organisation

The organisation and rank structure of St. John Ambulance is based on that of the military, and the Field Medical Team is no exception. Whereas most of the equivalent civilian medical teams (other than professional rescue and retrieval teams), have a fixed composition and rely on outside agencies for communications and administrative support, the Field Medical Team has a flexible composition and integral support elements.

The basic unit is a team consisting of a medical officer, a nurse or ambulance paramedic, and two first-aiders. These teams are designated either centre-based or mobile. The composition of the centre-based teams may vary according to the number of medical officers available. The teams and ancillary staff come under the direction of a senior medical officer, who may also be the triage officer. The triage officer role is sometimes filled by a nurse or ambulance paramedic, depending on relative experience levels. Two teams can combine to form the equivalent of a hospital disaster team if required.

Training

Many civilian medical teams have a response plan, but do not have the opportunity to train together, relying instead on the teams' members having worked together at their respective hospitals, in roles which are not necessarily the same as their medical team roles. FMT brings together medical personnel from widely differing clinical backgrounds and skill levels, and conducts specific training of the teams in resuscitation. This training is then exercised not only in mock casualty exercises but in real mass casualty situations such as the City-to-Surf run, and outdoor rock concerts.

FMT members also receive training in a number of non-medical skills. Anyone who may fill a command role can undertake leadership training through St. John. All team members receive basic radio communications training, and those in an instructing role undertake instructor training. These aspects of training allow FMT to be more self-sufficient.

All team members must have a high standard of basic first aid skills including basic life support and patient transport: how many civilian medical officers are there who can perform a stretcher or hand carry?

Equipment

In the area of equipment, durability, portability and ease of use are the prime concerns, as in the military. Being a voluntary organisation funded by donations, cost is also a factor, and low cost alternatives are always sought. Rather than attempt to recreate exactly a hospital setup, demountable equipment which can be adapted for use in either purpose-built facilities or in tents is used. Protocols for treatment are developed (in consultation with civilian organisations such as the Australian Resuscitation Council and the NSW Ambulance Service) so that while still conforming to established standards of medical treatment the range of drugs and equipment needed is kept to a minimum.

Application

The application of military medical principles has resulted in teams who can work effectively and to high standards of medical care in a wide variety of conditions.

The approach taken by organisations such as St. Vincent's Hospital at the "Concert for Life" in 1992 to "recreate the normal emergency department staffing, layout and function" is unrealistic. Teams must train in the conditions they will face in the real mass casualty situation. It should not have to come as a shock to discover that resuscitation in the pouring rain, kneeling in the mud with a large crowd looking on and possibly getting in the way, using unfamiliar equipment, is a totally different proposition to a familiar warm, dry and controlled emergency department.

Military Applications

The experience of the FMT can be used to military advantage in several ways.

First, association of military medical personnel with organisations such as the FMT allows them to practise the skills of triage and mass casualty management on real patients in real settings. This realism is difficult to simulate in exercises as one is always aware in the back of one's mind that the patients are not really in any danger.

Secondly, the circumstances of training faced by the FMT have many similarities to the military scenario of rapid call-up and deployment of reserve or civilian medical personnel. Whilst individuals may be expert in their fields, they still need rapid and effective training in how to use that expertise under field conditions and how to function effectively as part of a team. Training such as FMT provides, which is demonstrably effective, could easily be used in the setting outlined above.

About the Author

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Review Article

Beyond Chernobyl: a short report on other Russian nuclear accidents

A.G. Robertson

The explosion at Chernobyl in 1986 is the best known of the Russian nuclear accidents. Recently, however, information has become available on other Russian nuclear accidents occurring in the 1950's and 1960's. This brief report will look at the two main accidents from that era.

K-19

K-19, the first Soviet nuclear submarine armed with nuclear warheads, was a major technological breakthrough for the Russians. There were, however, problems during her construction. The primary coolant system pipe was accidentally damaged by the welders, and no secondary cooling system was fitted.

On 4 June 1961, K-19 was exercising in the North Atlantic with other submarines when the damaged pipe ruptured. With rapid rises in both the core temperature and the radiation levels, the Captain organised teams of volunteers to weld repairs to the pipe. Although successful, 22 of the 139 crew died of the acute radiation syndrome. The boat was successfully towed to the Kola Peninsula.[1]

Chelyabinsk/Kyshtym Accidents

In 1948, the USSR began operating a secret plutonium plant called Mayak in the Kyshtym / Chelyabinsk region[2]. High level waste (> 37 GBq/l) was stored in underground stainless steel tanks, medium level waste (> 37 MBq/l) was stored in Lake Karachay and nearby marshes, and low level waste (< 37 MBq/l) was dumped in the Techa River[3]. Between 1949 and 1951, 111 PBq of radiation was released into the Techa River. The radioisotopes were principally Strontium-90 and Caesium-137. Human dosimetry began in 1951. This revealed that 1,000 people living by the Techa River had greater than 37 KBq of Strontium-90 in their bones. Evacuation of people occurred over the next 11 years and involved approximately 10,000 people.[4]

In 1957, a second accident occurred when improperly ventilated storage tanks exploded at Kyshtym releasing 7.4 EBq of comparatively fresh nuclear waste into the atmosphere. Although most was dispersed near the tanks as liquid pulp, a plume dispersed radioisotopes, mainly Strontium, over a 23,000 square km area. The maximal doses were in the Metlino region where doses averaged 3 Sv per square km[5].

A third accident occurred in 1967. A severe drought dried up part of the highly radioactive Lake Karachay. Subsequent strong winds blew radioactive dust along the Techa River where levels as high as 5 cGy an hour were reached. A massive three month cleanup produced a tenfold decrease in radiation levels[6].

Occupational health practices at the Mayak plant were also less than ideal. Between 1946 and 1960, approximately 6,000 workers received a dose of greater than 1 Sievert. Over 2,000 workers developed some occupational radiation sickness[7].

Conclusion

The three accidents along the Techa River involved 437,000 people, with 1,200 receiving 2 Sv over two years and some receiving up to 4 Sv[8]. These accidents have left a chronic radioactive legacy that is only now receiving the comprehensive study it deserves. In collaboration with the Russian scientists, the Armed Forces Radiobiology Research Institute is undertaking research in this area with the first papers due out by the end of 1993.

Glossary

ACTIVITY
Becquerel (Bq) = 1 disintegration per sec
1 G(iga)Bq = 10^9 disintegrations per sec
1 T(era)Bq = 10^{12} disintegrations per sec
1P(eta)Bq = 10^{15} disintegrations per sec
1E(xa)Bq = 10^{18} disintegrations per sec

DOSE
1 Gray (Gy) = 100 rads

DOSE EQUIVALENT
1 Sievert (Sv) = 100 rem

About the Author
Surgeon Lieutenant-Commander Andrew Robertson, MB BS, MPH, FAFPHM, RAN is currently studying nuclear, biological and chemical medicine in the United States and United Kingdom.

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Case Report

A case for hard collars

R.S. Page

The Medical Team posted to HMAS *Tobruk* for medical duties during Operation *Solace* was tasked to provide modified Level 2 Medical Support for the Australian Forces in the Area of Operations, and to set up to provide Level 3 Medical Support (L3MS)[1], should it be required.

In the short period available prior to deployment, the team had to procure all stores, equipment and instrumentation that would be necessary for casualty and ship's company support. This was to enable the rapid augmentation by specialist surgical and anaesthetic staff should the need for L3MS have presented.

One piece of basic equipment not readily available was a rigid cervical collar. The Royal Australasian College of Surgeons in their Early Management of Severe Trauma (EMST) course both use and recommend the collars made by Laerdal. These come in a range of sizes providing rigid cervical fixation while allowing airway access to the face and the anterior neck should a surgical approach be required. For the purposes of Operation *Solace* two sets of these collars were purchased prior to deployment, to supplement the Emergency Thomas Pack.

Whilst alongside at Mogadishu Harbour, Somalia, in March 1993, HMAS *Tobruk* was outboard of a US merchant ship providing sea transport for the US Navy. *Tobruk* was discharging cargo via the 25 tonne crane onboard the large merchant ship. At 0400 the boom of their crane collapsed injuring a US Army Load Handler, who was directing the load from below. The superstructure missed him by a mere 40cm and would have certainly crushed him. He was struck by the boom's wire cables and knocked to the ground, his right chest hitting a fire hose outlet.

At the scene, he was found to be conscious and responsive with full recollection of the preceding events. He was moving all extremities, including his head and neck, conscious and talking. He had abrasions and swelling to the right side of his face, and neck. There was redness over his right shoulder and a large wheal with a small deformity over the lateral aspect of his right chest wall. His cardiovascular status was intact and stable, but his respiratory rate was elevated with left chest wall tenderness and hypoinflation of that lung field. Slight tenderness was found in the mid-cervical region posteriorly.

Following EMST principles, the casualty had a rigid cervical collar fitted despite only minimal tenderness and being able to move his neck. This was based on his injury pattern and the potential force that appeared to have been responsible. He was cannulated and transported by military ambulance to the Navy Medical Station in the port area. Radiographs were taken of the casualty's head, neck, chest and pelvis. Fractures of the 8th and 9th right ribs laterally, with a < 10% pneumothorax, were identified. Additionally, he had fractured spinous processes of C4-5 with the suggestion of a minimally displaced lamina fracture of C4.

At this stage the casualty was stable and was evacuated to the 86 AIREVAC Field Hospital, a US Army L3MS Facility at the Mogadishu Airfield. The following day after further radiological investigations and orthopaedic review the patient was transferred by US Military transport to Germany for definitive Level 4 management of what proved to be a potentially unstable cervical injury.

When first seen the casualty appeared relatively well and gave no indication of a significant cervical injury. According to EMST principles the injury pattern dictated that adequate forces existed for a skeletal injury to have occurred. Subsequently, a suitably sized cervical collar was fitted to immobilise his neck as a precaution. This adherence to EMST principles was "rewarded" when the x-rays were first viewed with the collar in place and consequently the Army Load Handler's spinal cord intact.

There are many paths up a mountainside, but to be sure of reaching a destination safely it always helps to take a proven one, which is the basis of EMST training. The importance of using adequate cervical support in victims of head-neck

and chest trauma during any resuscitation is a lesson that I will not forget. The need to ensure that suitable support is available is obvious - don't leave home without it!

About the Author

Surgeon Lieutenant Richard Page RAN is currently serving as surgical medical officer at Balmoral Naval Hospital, HMAS Penguin. He was recently deployed in HMAS Tobruk in support of Operation Solance.

1. L3MS - is the ability to provide life and limb saving surgery

Occasional Article

The preventive medicine lecture - Public speaking to the uninterested by the unwilling about the undesirable

N. Westphalen

It comes to us all at some point early in our Service career, where the Medical Officer (usually the most junior and therefore most tongue-tied) has to give 'The STD Lecture' to "the troops". This usually takes place early in a deployment, when the troops are either working hard now things are underway, or are relaxing because things are in hand, so thoughts can gravitate to the great opportunities (nubile or otherwise) awaiting them at the first overseas port of call. Neither group are terribly interested in the health hazards awaiting them; watching the new Doc make a fool of him/herself might be fun, but besides that, they're "18 years old and bullet proof"; besides, "I've heard it all before". How can you reach them - and will it do any good?

The Preventive Medicine Lecture has a long and varied tradition in the military. It can be a very useful way to reduce morbidity, or it can take forever to live down the self-inflicted public relations debacle. Having experienced both, I feel in a good position to comment on what will and won't work, using recent experience on two ships' overseas deployments as a model to discuss the issue.

Aim

The Aim was dictated by the nature of the deployments. Besides the STD problem, most ports had problems with the local food and water; insect and animal bites were also important disease vectors. The other source of morbidity lay in sports injuries, their nature being the same but their contexts (therefore management) being potentially different to Australia. The presence of thirty-odd women aboard necessitated discussion of potential gynaecological difficulties. Finally, there was the role of alcohol in all of the above problems.

The Aim was to (re)educate the crew about all these hazards, to prevent them becoming problems.

The use of video

We would all have our own style of presenting these issues to the clientele; indeed, many Service doctors have left us an excellent range of aids to assist. A video by one officer on 'gardening' (actually STD's) is a well known naval effort. Some of us, I am sure, are quite capable of really creative, witty, and entertaining efforts; some may even have the time to produce them. I didn't do this because:

- Time and expertise was lacking. I doubted whether a video was the way to go; my own efforts in the past were not impressive.
- Videos don't allow immediate feedback.
- Modification, if necessary, was not possible - it would mean starting from scratch.
- As I was new to both ships, I felt the need to 'advertise' my presence, especially as one ship hadn't had a doctor for over a year. This was not possible with an 'off-the-shelf' video, and anyhow a 'face-to-face' meeting with the clientele seemed the best way for each to size the other up. A good PR effort would enable me to make a positive impression, encouraging the idea that I had something useful to offer - something that <u>can't</u> be taken for granted.
- Any presentation had to be kept short and remain portable to minimise disruption.

The 'Stand Up' approach

On the other hand, standing alone in front of a mob wasn't quite the idea either. I'm not that much of a public speaker; besides, a straight out lecture would leave them all asleep. What was needed was some audience participation. The assumption was therefore made that most would have had some type of lecture on these topics

before; asking them questions would give me an idea of their knowledge base, correcting where necessary. It would still educate those who didn't know, and best of all, if I singled them out individually it would put them on the defensive, make 'em think, and (best of all) keep them awake. It was almost certain that the group would add its own humour to lighten it up (so I wouldn't have to invent my own jokes), while the format would allow me to keep control (sitting on the hecklers as required). Yet another advantage was that the requirements for malaria prophylaxis, which was being issued after the sessions, could be advertised.

Breaking the crew into small groups was essential, to get the participation required. There were several ways to do this: by messes, by divisions, or by watches. Ultimately, a combination of these was used. The Officers, Chief Petty Officers and Petty Officers were done by messes. They also went first for the following reasons:

- It enabled me to practice on a reasonably receptive audience, giving me three times to get it right thereby boosting confidence. The PO's mess went first so the Petty Officer, Medical could criticise the exercise.
- Feedback provided a good idea of the knowledge base of the ship's managers (which was only slightly better than the junior sailors).
- It warned the ship's managers of the nature of the exercise. It was assumed that the junior sailors would talk about the sessions afterwards; doing the senior sailors first meant they could help reinforce the issues raised, especially as many could claim to have 'been there, done that'.

The junior sailors' sessions were arranged to minimise disruption. Venues included ships' cafes, hangars, flight decks, recreation spaces, messes, and, for one session, the starboard bridge wing. The lack of audiovisual aids became a definite plus: sessions could be given anywhere, anytime.

Preparation

Although a formal 'lecture' setup was not possible, a framework for the discussion was required. I came up with the two aides memoir shown in the boxes. Discussion on STD's focussed heavily on preventing HIV, on the premise that this was the most serious problem to avoid and that preventing HIV would also prevent other STD's.

How did it go?

The sessions in general went off surprisingly easily. Time was important: it had to be kept short, sharp, yet memorable. The emphasis was not on detail so much as providing 'handy hints' from the crew themselves, correcting as necessary. The longest session took about 50 minutes, including questions.

The repetitive nature of the exercise (about seven sessions in three days for each ship), meant they could be modified as required. An example was an impression on one ship that oral sex was safe, which forced an early change. Discussion on sports injuries and alcohol abuse naturally flowed from the STD side of the session.

The women's gynae sessions came last, and were done in their own mess, away from 'mouthy males'.

PREVENTIVE MEDICINE LECTURES - GYNAE

STD prevention:	How do you get the guy to use a condom? Correct use when he does?
STD Symptoms:	Severity less than males (usually), but harder to treat and complications usually worse (Infertility, Ectopic pregnancy, PID)
Pregnancy:	Main problem in overseas context are COMPLICATIONS - BLEEDING, ECTOPIC PREGNANCY, MISCARRIGAE, OTHERS
Hygiene:	Especially in the Tropics Toxic Shock Syndrome

Handouts available

QUESTIONS

Language style varied considerably with the audience. The use of technical terms was minimised; if anything, 'slang' was emphasised, especially with the junior sailors. The aim was to get on their level; appropriate use of slang was used to achieve a degree of rapport with the

clientele; while the discussion often became rather uncouth, it appeared to succeed in getting the points across. A more genteel, professional approach was used with the gynae session. People did go to sleep early on; these became victims to the next question, whereupon attention spans greatly improved (I found this enjoyable, to my shame - must've been revenge for all those uni lectures I slept through myself). There was considerable banter that added to the interest and kept it light, yet it was easy to come down on the 'clever dick' who threatened to take it out of control, again by asking him the next question, staying on him until he got stuck, then telling him to be quiet.

More detailed information, to back up the sessions, was required afterwards. This was provided by using the book *Patient Education* by Professor John Murtagh (McGrawHill Press, Sydney, 1992). This book has about 150 patient handouts on many subjects, including several that were relevant to the sessions. Copies of appropriate handouts appeared on Daily Orders; a handout on gynae problems was left in the women's mess. Indications were that all these were read by most of the crew.

Results

A proper clinical trial was not attempted; that was not the object of the exercise. On the other hand, personal experience indicates these measures were effective. During my first deployment on a DE in 1988 we came back from three months 'up top' with six new STD cases; in addition about half the crew of 250 had a GIT upset of some sort. My next trip 'up top' in 1993 was for four and a half months; in that time we had two STD's (one in Auckland before the sessions began), and only 30 to 40 members out of 227 had a GIT problem. Similar statistics are expected during my current deployment (so far so good!). While these figures are not conclusive, to me they suggest that the effort in preventive medicine via the use of 'the lecture', when properly done, can reduce morbidity (and therefore work load).

Conclusions

- Preventive Health Lectures can be an effective tool in disease prophylaxis.
- 'High Tech' teaching aids (eg videos) have their limitations. These include: lack of audience feed back, time/effort to prepare, lack of portability, and inability to 'sell' your medical department directly to the clientele. Besides, if it's boring, they won't watch it.
- The 'grill the audience' technique is an effective way to test the knowledge base, correcting it as required, while maintaining audience interest and conscious state.
- Back up information, via Daily Words for example, is an important adjunct to any teaching session.

About the Author

Surgeon Lieutenant-Commander Neil Westphalen, MB BS, RAN is presently in HMAS SYDNEY (his fourth ship) which is on deployment in the Northern Red Sea. Previous postings include the RAN hospitals at Cerberus and Penguin, and the Sick Bay at HMAS Kuttabul. He has recently returned from two years leave without pay in Launceston, doing the family Medicine Programme. His interests include trauma management, underwater and aviation medicine. this is his first article.

PREVENTIVE MEDICINE LECTURES

Who has not been overseas before?

Where are the health risks in an overseas port?
- WATER
- FOOD
- ANIMALS
- INSECTS
- PEOPLE

WATER Problems include:
- Lack of sanitation
- Pollution
- Pipe systems

FOOD Problems include:
- Fertilisers - types
- Refrigeration
- Cooking
- Hygiene

Both water and food contamination can result in:
- GASTROENTERITIS
- TRAVELLER'S DIARRHOEA
- CHOLERA
- TYPHOID
- HEPATITIS (A AND B)
- PARASITIC DISEASES (LOTS)
- MANY MANY MORE

PREVENTION

WATER
- Use bottled water (check seals)
- Tourist traps 'usually' OK
- Goffas OK
- *Ice - **AVOID*** (watch your drinks)
- Beer OK

FOOD
- Don't eat it - BYO
- Tourist Traps 'usually' OK
- **Avoid** roadside vendors
- **Avoid** un/semi/cold cooked food (Fruit, salad, cold meat - get it piping hot)

ANIMALS Problems include:
- Bites and scratches (INFECTIONS)
- **RABIES** - BAD NEWS

PREVENTION:
- AVOID ANIMAL CONTACTS (ANYTHING THAT BITES)
- If not - course of injections, then hope it works

INSECTS Problems include Encephalitis and **MALARIA**

PREVENTION
- Malaria tablets - but do they always work?
- Insect repellant
- Long shirts/trouser at dawn and sunset
- Mosquito netting
- Tourist Traps 'usually' OK

PEOPLE Problems include STD's, fights etc

STD's Which ones?
- HIV (AIDS) - recent RAN statistics
- Gonorrhoea
- NSU
- Syphilis
- Herpes
- Scabies (itch)
- and many many more

CAN GET ANY/ALL OF THE ABOVE AT ONCE; VIA ANY ORIFICE

PREVENTION
- Avoid local sex contacts (Best)
- Use condoms - correct use to prevent breakage
- Use of HIV test - behaviour the issue, not the test

ROLE OF ALCOHOL IN ALL OF THE ABOVE - loss of inhibitions, forget condom use/breaks; also fights with locals, getting mugged while drunk, vomit/aspirate if unconscious, others

PREVENTION
- HAVE FUN BUT DON'T GET PARALYTIC
- LOOK AFTER YOUR MATES
- DON'T GET SEPARATED

SPORTS INJURIES Injuries are either treatable on board, or patient goes home (not like a few days in PENGUIN). Problems with local hospital standards - more reason to avoid injury. Early review of cuts/abrasions to prevent infection.

****QUESTIONS****

Abstracts from the Literature

Submitted by Andy Robertson

Collins DL, 1992. Behavioural differences of irradiated persons associated with the Kyshtym, Chelyabinsk, and Chernobyl nuclear accidents. ***Mil Med*****; 157(10):548-552**

Three nuclear accidents besides Chernobyl have occurred in the former Soviet Union. The accidents occurred around Kyshtym and Chelyabinsk in the Ural Mountains between 1949 and 1967 and contaminated over half a million people. The health ministries are now interested in the data previously collected on these irradiated populations (eg psychological, hereditary, genome damage, etc.) and the implications of long term radiation exposure.

Comment *This is the first medical report of these accidents. The first accident released three million curies of radiation into the Techa River between 1949 and 1951. The second accident in 1957, involving an explosion in storage tanks, released 20 million curies of radioactive waste into the atmosphere. The long term effects of these accidents are now just being appreciated.*

Di Rita L, 1993. I went Joint (but I didn't inhale). ***Nav Inst Proc*****; 119(7):66-70**

Fresh from a tour on the Joint Staff, a naval officer records some of his observations - on Goldwater-Nichols, names, and natural fibres, to name a few - for those contemplating future assignments in the joint area.

Comment *Although written from an American perspective, Di Rita presents a humorous view of some of the benefits and problems of working in a Joint Command.*

Submitted by James Ross

Antunano MJ, 1993. Bibliographic guide to publications in aerospace medicine and related topics. ***Aviat Space Environ Med;*** **April:27-36**

This bibliographic guide is a comprehensive listing of international publications (books) in Clinical Aerospace Medicine, Operational Aerospace Medicine, Aerospace Physiology, Environmental Medicine/Physiology, Diving Medicine/Physiology, Aerospace Human Factors, as well as other important topics directly or indirectly related to aerospace medicine. This guide will be useful as a primary source of consultation for bibliographic information; especially to those colleagues who are in their formative years, and to those who do not have easy access to computer-aided literature search systems. This bibliographic article does not constitute a recommendation or endorsement of any of the publications listed herein and the merits or limitations of each article should be judged by the reader.

Comment *Like most comprehensive lists, it is not comprehensive (does not include AvMedia, the journal of the Aviation Medical Society of Australia and New Zealand) but is still a goldmine.*

Jone BH, Cowan DN, Tomlinson JP et al, 1993. Epidemiology of injuries associated with physical training among young men in the army. ***Med Sci Sports Exerc;*** **25(2):197-203**

It is widely acknowledged that musculoskeletal injuries occur as a result of vigorous physical activity and exercise, but little quantitative documentation exists on the incidence of or risk factors for these injuries. This study was conducted to assess the incidence, types, and risk factors for training-related injuries among young men undergoing Army infantry basic training. Prior to training we evaluated 303 men (median age 19 yr), utilising questionnaires and measurements of physical fitness. Subjects were followed over 12 wk of training. Physical training was documented on a daily basis, and injuries were ascertained by review of medical records for every trainee. We performed univariate and multivariate analyses of the data. Cumulative incidence of subjects with

one or more lower extremity training-related injuries was 37% (80% of all injuries). The most common injuries were muscle strains, sprains, and overuse knee conditions. A number of risk factors were identified, including: older age, smoking, previous injury (sprained ankles), low levels of previous occupational and physical activity, low frequency of running before entry into the Army, flexibility (both high and low), low physical fitness on entry, and unit training (high running mileage).

Comment *The risk factors outlined are well defined already, but miss out two important ones: female sex and overweight. What is required now is concentration on risk factors from the training perspective rather than in the individual.*

Vicq P, Rosseau G, Pailler JL, 1993. Surgery following on violent attack - experience in management of victims of terrorist bombings. ***Med Corps Int;*** **1:6-11**

The resurgence of terrorism in the large cities of France during the past few years has caused surgeons to be confronted with emergency situations and traumatic injuries similar to those encountered in wartime surgery. Nevertheless, the urban environment, speed of rescue and wealth of available hospital facilities convey special characteristics to the victims of a terrorist attack. The severity of these lesions, and the serious nature of the evolution and complications of these lesions, represent a considerable challenge for the staff who provide care and rehabilitation for these patients.

We describe our experience with the victims of terrorist attacks in Paris in 1986. Their emergent surgical care and the results of one year of follow-up are detailed.

Comment *A perennial problem experienced in Australia is providing experience for surgeons in mass casualty situations similar to that experienced in war.*

Mittelman MH, Siegel B, Still DL, 1993. Contact lenses in aviation: the Marine corps experience. ***Aviat Space Environ Med;*** **64:538-540**

In an attempt to limit safety and health risks, Naval Aeromedical Policy has historically prohibited the use of contact lenses in the Navy and Marine Corps Class 1 Aviation Personnel (pilots), approximately 18% of whom require spectacles. Recent technological advancements have rendered spectacles functionally incompatible with some mission-essential masks, goggles, and imaging devices, thus forcing a reexamination of existing policy. Recent US Army and US Air Force aviation studies favourably compare the performance of contact lenses to spectacles. In order to test the application of contact lenses in the unique US Marine Corps aviation environment, encompassing shipboard, land-based and fowardly-deployed units, 90 aviation personnel assigned to several deploying squadrons were evaluated for contact lenses; flex-wear disposable lenses were the primary modality of choice. Of the subjects, 68 (73%) were successfully fit and continued contact lens wear for a period of 16 months. Safety and health were not compromised, and job performance was favourably affected. No cases of ulcerative keratitis or vision loss were reported. The first US Marine Corps aviation contact lens study supports the growing belief that contact lenses can be safely and effectively applied in the critical and hazardous aviation environment.

Comment *No disadvantages but a number of advantages for contact lenses in aircrew.*

Mork MR, Watson LA, 1993. Prevalence of corrective lens wear in Royal Australian Air Force flight crews. ***Aviat Space Environ Med;*** **64:541-545**

This study was undertaken to determine what effect the Royal Australian Air Force's (RAAF) restrictive entry visual standards have on the prevalence of corrective lens wear in its aircrew. A 100% review of RAAF aircrew medical documents was conducted to determine the prevalence of corrective lens wear (spectacles and contact lenses) among pilots, navigators, flight engineers, loadmasters, and airborne electronics analysts. The prevalence of corrective lens wear by aircrew in the RAAF was then compared to that published by their counterparts in the USAF. Entry visual refraction standards for the RAAF and USAF were compared and related to the prevalence of corrective lens wear in each Service. Age data for RAAF aircrew were also compared to the requirement to wear corrective lenses. The study's findings indicate that the RAAF's restrictive visual refraction standards for entry into aircrew training programmes significantly reduced the prevalence of corrective lens wear among all crew positions when compared to the USAF. A discussion is presented which relates the medical wastage associated with a restrictive visual stand-

ards policy and the operational implications of such a policy.

Comment *You can indeed frame a recruitment policy to meet a particular desired outcome. The more restrictive the standards, the fewer aircrew with spectacles.*

Charpentier P, Ostfeld AM, Hadjmichael OC, Hester R, 1993. The mortality of US nuclear submariners, 1969-1982. *JOM;* 35(5):501-

A mortality study of 76 160 men who served on US nuclear submarines is reported. Indirect standardisation was used to compare mortality rates to those of the US male population. Multiplicative models were developed to explore patterns of mortality within the cohort. Mortality rates for leukaemia, acute myocardial infarction, and for motor vehicle accidents were equivalent to those of US males; rates for other causes were lower, generally consistent with the "healthy worker effect". Motor vehicle accident mortality dropped during the study period, perhaps reflecting efforts to control the problem. Suicide rates were depressed during the period of active duty. There was a suggestion that cancer mortality was associated with submarine type; however, the age distribution casts doubt that the excess was occupationally induced.

Comment *Long term effects cannot yet be excluded with follow up only to the ten-year mark. However, this study, comprehensive as it is, has much to reassure in it.*

Rieckmann KH, Yeo AET, Davis DR et al, 1993. Recent military experience with malaria chemoprophylaxis. *Med J Aust;* 158:446-449

Objective: To assess the value of various drug regimens for malaria prophylaxis under circumstances where dapsone and pyrimethamine (combined as Maloprim) and chloroquine, followed by the 14-day primaquine eradication course, were no longer effective in protecting military personnel against falciparum and vivax malaria.

Design, setting and participants: Various drug regimens given to four groups of healthy male members of the Australian Army during training exercises in malarious countries.

Interventions: Four groups of soldiers were given different regimens for 3-12 weeks: Group 1 - mefloquine (250 mg weekly); Group 2 - doxycycline (100 mg daily); Group 3 - doxycycline (100 mg daily) and primaquine (7.5 mg daily); and Group 4 - doxycycline (50 mg daily) and chloroquine (300 mg weekly). Except in Group 3, each of these regimens was followed by a 7.5 mg dose of primaquine three times a day for two weeks.

Main outcome measures: The proportion of participants in the various prophylactic drug groups who developed falciparum or vivax malaria during or after the intervention.

Results: Group 1: 40 men receiving mefloquine were all protected against falciparum malaria but four (10%) developed vivax malaria. These results were not statistically different from those obtained for either falciparum (P=0.28) or vivax (P=0.36) malaria in the control group of 64 men receiving Maloprim and chloroquine. Group 2: 60 men receiving doxycycline (no control group) were all protected against falciparum malaria but two developed vivax malaria. Group 3: 124 men, of whom 55 received doxycycline and 69 primaquine in addition to doxycycline, were all protected against falciparum malaria. However, 13 men taking only doxycycline developed vivax malaria two to three weeks after prophylaxis, whereas no vivax infections were observed in the men taking the drug combination (P=0.0001). Group 4: no malaria infections were observed in 125 men receiving doxycycline and chloroquine for 13 weeks, probably because of the low prevalence of malaria in the training area.

Conclusions: These studies confirm that doxycycline is very effective in preventing falciparum malaria and, for the first time, also suggest that doxycycline used in combination with small doses of primaquine may prevent (not only suppress) vivax malaria. If further studies confirm these findings, the use of such a drug combination would reduce the incidence of both vivax and falciparum malaria in returning travellers. For individuals with a high risk of exposure to malaria, it would also forestall the need to take the bothersome primaquine eradication course.

Comment *Malaria prophylaxis looks likely to change again soon. Practically, a removal of the need for an eradication course will be a boon. Improved compliance and no need to ground aircrew.*

News and Views

AMMA Conference Review - Canberra August 1993

James Ross

The second AMMA conference has come and gone, to the considerable relief of the organising committee. The plug will go in at the start, to thank the committee -

- James Ross
- Chris Maron
- Mike Flynn
- Kevin Donovan

We had 115 registrations, an increase of 10 percent on last year, and, considering that it was held in Canberra, with a small number of local members, this was a good achievement. The feedback from registrants was very positive; I'm sure that future conferences will be even better. The next conferences will be -

- 1994 - Melbourne
- 1995 - Sydney
- 1996 - Adelaide

Despite some last minute disappointments in losing some of our speakers, most notably Weary Dunlop and Lt Col Frank Torova of the PNGDF, we managed to recruit Dr Rowley Richards, who was on the Thai-Burma Railway, and Father Frank Flynn, priest, doctor, and for a long time associated with the Defence Force. At 86, Father Flynn is still active in ophthalmology.

The conference was opened by Senator John Faulkner, Minister for Defence Science and Personnel. A transcript of his speech is reproduced elsewhere in this issue, along with the SGADF's speech.

Free papers numbered seven, and naturally it is hoped to build on this in future years. The quality of papers, both free and invited, was uniformly high. I hope a few will get into the pages of this publication over the next few issues. The inaugural winner of the Sir Edward Dunlop prize ($500) for best paper was David Newman for his paper on the ejection experience of the RAAF from 1951 to 1992.

Vivian Statham (nee Bullwinkel) was elected by the AMMA Council as an Honorary Life Member of the Association for her contribution to military medicine. She joins Sandy Ferguson and John Lane, who became honorary members in 1992.

The trade display was also expanded, with four companies represented. The feedback received from them was also very encouraging, such that it is hoped more will be present next year. Naturally, the proceeds from the trade were very welcome.

Set aside time now to attend next year in Melbourne.

New AMMA Council

Due to lack of competition, the following comprises the new Council of the Australian Military Medicine Association, 'elected' prior to the Annual General Meeting.

President
James Ross, Squadron-Leader, RAAF.
CP4-7-01
Cambpell Park OfficeS
CANBERRA ACT 2600

(06)266-3807

Vice-President
Nader Abou-Seif, Dr.
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MOONAH TAS 7009

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Chris Maron, Surgeon Lieutenant-Commander RAN
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HMAS STIRLING
ROCKINGHAM WA 6168

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Peter Warfe, Colonel, RAAMC
Office of the Surgeon General
Campbell Park Offices
CANBERRA ACT 2600

(06)265-9111

Member Profile - Dr Marcus Welby Skinner: Secretary, AMMA

Marcus has been the foundation secretary of the AMMA since its inception in 1990. He completed a Bachelor of Science degree at the University of Tasmania in 1977 and then undertook and completed a Master of Science 1979 and Bachelor of Medicine and Surgery degree in 1984.

Prior to commencing medicine, he was a clinical biochemist in the Royal Perth Hospital in 1978 - 1979 and Repatriation Hospital in 1979 - 1980 and commenced in the RAAF undergraduate program in 1982. After graduating in medicine he did his internship and surgical resident training in Royal Hobart Hospital. His initial Permanent Air Force postings were to RAAF Laverton and then Point Cook as a Medical Officer 6 RAAF Hospital, and from there undertook a flight surgeon course at Brooks Air Force Base, Texas, with the USAF.

He was posted as Senior Medical Officer to RAAF Amberley in 1991 and resigned from the Permanent Air Force at the end of 1992 to undertake accredited specialist training in anaesthesia and hyperbaric medicine at the Royal Hobart Hospital. He is currently an Early Management of Severe Trauma instructor with the Royal College of Surgeons and he is a private pilot with an aerobatic endorsement and a current scuba diver.

New Members of AMMA

Lieutenant Geoffrey Day
Lieutenant Paul Flaherty
Lieutenant-Commander David Griffiths
Wing Commander Margaret Hine
Capatin Richard Freeman
Colonel Charles Davis
Surgeon Lieutenant Stephen Robson
Flight Lieutenant Gregory Bampson
Sub-Lieutenant Anna Harvey
Major Luis Prado
Flight Lieutenant Trevor Gardner
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The Reverend Dr. Frank Flynn
John Eather
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Surgeon Commander Michael Garvan
Jane Dawson
Sub-Lieutenant Susan Sharpe
Sub-Lieutenant Christine Prior
Surgeon Lieutenant Peter Collins

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featuring the AMMA logo!!

Ties$22

T-shirts$15

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$20 for set of 6

Add $5 for postage and packing.

Write to:

James Ross
Office of the Surgeon General
CP4-7-01
Campbell Park Offices
CANBERRA ACT 2600

Association Libray Now Available for Loans

The library of the Australian Miliatary Medicine Association is now held in Sydny by the Journal Editor. Books are available for loan under the following conditions:

- Books are only available for loan to financial members of the AMMA.
- The loan period will be six weeks, renewable for a maximum of one additional period of 6 weeks upon telephone confirmation with the Library curator. Further extensions will be conditional upon the book being presented/returned for checking.
- When boorowing books, they are to be collected or delivered by hand.
- Members out of Sydney may arrange for the loan of books by telephone or mail order. In these circumstances, despatch of the book(s) is to be through Australia Post ONLY (not Service mail). The AMMA will meet the costs of despatch to the member, the member will be responsible for meeting the costs of return. The requirement for the book to be returned to the curator at the end of the maximum period of 12 weeks (i.e. two loan periods) stands for out-of-Sydney loans.

To order books, contact:

Commander Russ Schedlich RAN
3 Orinoco Street
PYMBLE NSW 2073
(02)359-2562 or (02)563-4506

Books in the Library are listed overleaf

AMMA LIBRARY

Author	Title
Australian War Memorial	As you were 1947. A cavalcade of events with the Australian services from 1788 to 1947
Australian War Memorial	As you were 1948. With the Australian services at home and overseas from 1788 to 1948
Australian War Memorial	HMAS Mk III
Australian War Memorial	Jungle warfare. With the Australian Army in the South-West Pacific
Australian War Memorial	Soldiering on. The Australian Army at home and overseas
Barker M	Nightingales in the mud. The digger sisters of the Great War 1914-18
Benson CI	The man with the donkey. John Simpson Kirkpatrick. The good Samaritan of Gallipoli
Brereton FS	The Great War and the R.A.M.C.
British Medical Journal	War wounds and air raid casualties. Articles republished from the British Medical Journal
Caldwell R	Military hygiene
Clarke BL	Behind the wire
Connolly RP, Wislon R	Medical soldiers. 2/10 Australian Field Ambulance 8 Div. 1940-45
Crouch J	A special kind of service. the story of the 2/9 Australian General Hospital 1940-46
Deane-Butcher W	Fighter squadron doctor
Dieuaide FR	Civilian health in wartime
Dixon NF	On the psychology of military incompetence
Dunant JH	A memory of Solferino
Dunlop EE	The war diaries of Weary Dunlop. Java and the Burma-Thailand railway 1942-45
Elliot G	Twentieth century book of the dead
Fidlon PG (ed)	The journal of Arthur Bowes Smyth: Surgeon, Lady Penrhyn 1787-1798
Goodman RD	A hospital at war. The story of 2/4 Australian General Hospital 1940-45
Goodman RD	A hospital at war. The story of 2/4 Australian General Hospital 1940-45
Goodman RD	Hospital ships
Goodman RD	Our war nurses. The history of the Royal Australian Army Nursing Corps 1902-1988
Gurner J	The origins of the Royal Australian Army Medical Corps
Hamilton T	Soldier surgeon in Malaya
Harrison A (ed)	Grey and scarlet
Hayden R	Elementary hygiene. General and naval
Home Office	Medical treatment of gas casualties
Keene J	Last mile to Huesca
Maisel AQ	Miracles of military medicine
Manson-Bahr PH	Manson's tropical diseases. A manual of diseases of warm climates
Nash RW	Medical stores
Pearn J (ed)	Pioneer medicine in Australia
Richards R, McEwan M	The survival factor
Rogers L	Guerilla surgeon
Royal Navy	Handbook of the Royal Naval Sick Berth Staff (BR 888)
Seagrave GS	Burma surgeon
Seagrave GS	Burma surgeon returns
Starr A	Neville Howse VC. biography of an authentic Australian hero
Steward HD	Recollections of a Regimental Medical Officer
Strong RP, Swift HF, Opie EL et al	Trench fever. Report of Commission. Medical Research Committee. American Red Cross
Tilton M	The grey battalion
Walker AS	Clinical problems of war
Walker AS	The island campaigns
Walker AS	Middle East and Far East
Walker AS et al	Medical services of the RAN and RAAF. With a section on women in the Army medical services
Walker RI, Cervany TJ (eds)	Medical consequences of nuclear warfare
War Office	Memoranda on medical diseased in tropical and sub-tropical areas
War Office	Royal Army Medical Corps training. 1911
War Office	Royal Army Medical Corps training. 1935

AUSTRALIAN MILITARY MEDICINE ASSOCIATION

Application for Membership

I wish to become a full/student/associate member of the Australian Military Medicine Association. I submit the following details so that accurate membership records and academic status of the organization be maintained.

1. Name (Title/Rank) Surname Given Names
2. Date of Birth Day Month Year
3. Business Address Suburb State Postcode Country
4. Business Telephone 5. Home Telephone
6. Postal Address Suburb State Postcode Country
7. Primary Qualifications: University: Year
8. Qualifications to be obtained and year anticipated for completion (student membership only):
9. Other Qualifications, if any:
10. How long have you been interested in Military Medicine?
11. What is your experience in Military Medicine (List publications, if any) _____ _____ _____ _____ _____

12. Currently serving in the Defence Force? Yes/No
(please circle as appropriate)

13. If yes, which country?

14. If yes: Permanent Reserve Navy Army Air Force
(please circle as appropriate)

Signed:_____

Date:_____

Please return this form with a cheque in Australian dollars made out to AMMA for:

$80 Full Members ($50 joining/$30 annual)
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TO: Dr. M. Skinner,
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PO Box 373,
MOONAH TAS 7009
AUSTRALIA

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ALL MEMBERSHIPS ARE DUE FOR RENEWAL
IN DECEMBER 1993

To retain a current membership, please complete the form below and return it with a cheque for $30.00

To: Squadron Leader M. W. Skinner,
Secretary AMMA
PO Box 373
MOONAH TAS 7009

AUSTRALIAN MILITARY MEDICINE ASSOCIATION

Renewal of Membership

Rank:..... Name: .....

Old Address: .....

State: ..... Post Code: .....

New Address:.....

.....

State.....Post Code: .....

Enclosed is a cheque for $30 being payment of membership fees up to and including 31 December 1994

.....
Signature

AUSTRALIAN MILITARY MEDICINE ASSOCIATION

NOTIFICATION OF CHANGE OF ADDRESS

Rank:..... Name: .....

Old Address: .....

State: ..... Post Code: .....

New Address:.....

.....

State.....Post Code: .....

.....
Signature