

A history of first aid and its role in armed forces

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St John Ambulance Australia, the largest teacher of first aid in Australia, defines first aid as the initial care of the sick or injured.¹ The objectives of first aid are to sustain life, prevent further injury and relieve pain until medical help arrives. The term "first aid" translates a German phrase used by Friedrich Von Esmarch, the Prussian Surgeon General who introduced first aid procedures to the Prussian Army during the Franco–Prussian War. The English term was first used by members of the St John Ambulance Association who taught the first British course in first aid in 1878. Of course, informal first aid is as old as illness and injury, but organised and trained first aid had its origins in the military.

Roman military medicine

Many ancient armies tried to reduce morbidity and mortality on the battlefield through provision of early first aid. The most successful were the Romans under Emperor Augustus (63 BC–14 AD), who developed advanced military medical services to support their legions. Their military medical services included physicians, surgeons, hygiene officers and bandagers called *capsarii*.³ The *capsarii* were essentially combat medics. They wore the same combat gear as other soldiers and received their medical training within the legion. Because they were placed in forward positions they were effective in providing prompt first aid. They were supported by stretcherbearers, special units of horses, wagons and carriages who would transport the wounded to field hospitals.

This medical system paralleled our current level 1, level 2 and level 3 medical support. In another similarity with modern times, the Roman army of the first century BC had difficulty in attracting physicians to military service. To remedy this the Roman Emperor Augustus

conferred on all free physicians the equestrian dignity,



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Scene depicted on the Bowl of Socia, held at the Berlin Museum and believed to date from the 5th century BC. Achilles, the greatest of warriors in Greek mythology, at the siege of Troy applying a bandage to his wounded squire Patroclus, an early example of "buddy help", or first aid administered on the battlefield by a fellow warrior and not by supporting service personnel.²

dignitas equestris, which brought with it the rights of full citizenship, the status of a knight, and the right to wear the knightly ring. Over the years, again as an attraction to military service, physicians were not only given the customary land grants and other retirement benefits of the career legionnaire, but a retired military physician was allowed to resume civilian practise exempt from certain taxes and civic duties. These financial and status inducements were highly successful and ensured a good supply of well-trained physicians to the Roman Armies.³

Sadly, with the fall of the Roman Empire the concept of health care integral to an army was lost for centuries.

Battlefield first aid in the 19th century

It was not until the turn of the 19th century that battlefield care was to re-emerge. Napoleon's chief medical officer, Baron Dominique-Jean Larrey, developed the "flying" ambulance, two-wheeled or four-wheeled wagons which transported surgeons forward and casualties to the rear. This initiative reduced mortality on the battlefield. Other armies

of the time lacked a formal method of removing casualties to the rear.

Charles Tripler, medical director of the Army of the Potomac during the American Civil War, saw the need to establish and train stretcherbearers to locate, treat and remove battlefield casualties.

Perhaps the Prussian surgeon Friedrich Von Esmarch made the greatest contribution to battlefield first aid. He was appointed Surgeon General at the outbreak of the Franco-Prussian War (1870) and introduced battlefield bandaging and splinting techniques. These skills were later adopted by the British military stretcherbearers. Von Esmarch produced two manuals entitled *First aid on the battlefield* and *First aid to the injured*. Von Esmarch adopted the triangular bandage (diagonally cut from a 40 cm square of calico) for use on the battlefield. This bandage was invented by Dr Mayor of Lausanne and is still in use today. The triangular bandage carried by every Prussian soldier as part of his first aid kit was imprinted with six drawings showing its various applications.

Origins of modern first aid

Modern first aid is a series of drills and skills developed for the minimisation of mortality and morbidity of the sick and injured. These drills and skills evolved from medical observations and in recent times from medical research. Although taken for granted today, first aid as a profession has a history of only 125 years.

In Britain, first aid was one of the good works to arise out of the Order of St John. The Order was established in Britain on 29 January 1831, as a philanthropic organisation inspired by the 12th century Order of St John of Jerusalem. In 1872 the Order of St John supported the creation of Britain's first ambulance, modelled on the two-wheeled litters used by the Prussian Army in the Franco-Prussian war. By 1875 the Order had developed its own wheeled transport, known as the St John Ambulance. The first St John centre was opened in Australia in 1883. A Royal Charter conferring the status of a Royal Order of Chivalry was granted to the Order by Queen Victoria on 14 May 1888. To this day it has

continued to play a vital part in ambulance services and first aid training throughout the Commonwealth countries of the world.

Surgeon-Major Peter Shepherd

Two strong proponents of first aid in the 1870s were Colonel Francis Duncan (1836–1888) and Surgeon-Major Peter Shepherd (1841–1879). Duncan was a career artillery officer and in 1875 he was posted to Woolwich Arsenal, London. A deeply religious man with high humanitarian values, he strongly supported the principle of battlefield ambulance transport.

Shepherd also came from Aberdeen and was posted to the Royal Herbert Military Hospital at Woolwich from 1872 to 1875. As a medical practitioner, he had the technical expertise to complement Duncan's ideas. Duncan persuaded Shepherd to join the St John Ambulance Association, which was formed on 1 July 1877 by the Order of St John as part of the Voluntary Aid Movement and as a civilian reserve for the Army Medical Department. To begin with, the Ambulance Association received more support from the army than from the civilian medical profession, which was concerned that this voluntary work would erode professional standards.

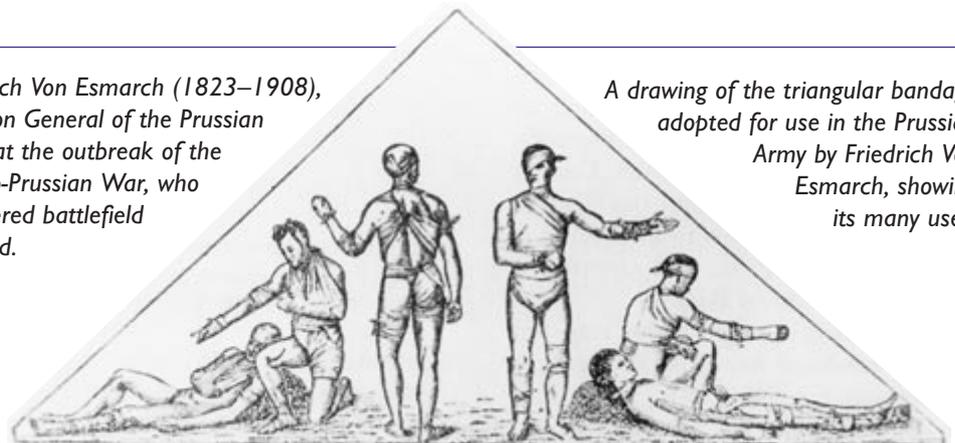
Both Duncan and Shepherd were active members of the Presbyterian Church at Woolwich, where Shepherd, together with a Dr Coleman, held the first public first aid course in January 1878. Soon after, the St John Ambulance Association was holding similar classes in other cities, and within a year more than a thousand people had been trained in first aid.⁴

In 1878 Shepherd was posted to South Africa as part of the British expedition to Zululand under Lieutenant General Chelmsford. Sadly, Shepherd was killed at Isandhlwana on 22 January 1879 when the British force was overrun by Zulus.

His lecture notes for the course in first aid were published as *First aid to the injured* by Dr (later Lieutenant General Sir) James Cantlie.⁴



Friedrich Von Esmarch (1823–1908), Surgeon General of the Prussian army at the outbreak of the Franco-Prussian War, who pioneered battlefield first aid.



A drawing of the triangular bandage adopted for use in the Prussian Army by Friedrich Von Esmarch, showing its many uses.

First aid and the Woolwich disasters

Within nine months of the first public first aid courses, two disasters in the Woolwich area put the first aid readiness of the community to the test.

On 13 March 1878, 160 men were building a storage shed at the dockyard when it collapsed, trapping the workmen. Many were killed or severely injured. It was reported approvingly in the newspapers that the injured were treated on the spot and transported to hospitals by St John Ambulance.

On 3 September 1878, on the Thames at Woolwich, an empty collier, the *Bywell Castle*, collided with a 250-ton paddle steamer, the *Princess Alice*, loaded with families on a day's outing. The pleasure boat was cut in two and the bow disappeared almost immediately. All available civilian and military resources were mobilised to provide support to those plucked from the water. Although over 600 lives were lost, about 200 were saved.

Early first aid in Australia

Australia's early settlers experienced special problems with medical care. The widely dispersed population, long distances to medical aid, extremes of temperature, large coastline and waterways and a hostile environment were a challenge to the meagre medical resources. Settlers often had to be self-reliant and to provide their own medical treatment, including first aid.

Many of the early treatments were empirical and have not stood the test of time. For example, at one time or another snakebite was variously treated with alcohol, injections of ammonia or even strychnine, or by tourniquet — all of which, thankfully, were replaced with the current evidence-based treatment of pressure immobilisation bandage in the 1970s.

The only book possessed by many colonial families (other than a Bible) was a medical guide, which provided a source of first aid and medical treatments. A family medical guide written specifically for Australian conditions was published in 1870 by Dr George Fullerton, the first President of the Medical Board of Queensland.⁵

By the 1870s British troops were progressively withdrawn from the Australian colonies. Accordingly, the individual states had to provide their own forces for their protection against a perceived threat posed by France and later Germany.

The Queensland Defence Force established an Ambulance Corps in 1884. The New South Wales Volunteers established a military ambulance corps to go with its contingent to the Sudan in 1885 to support the British troops after General Gordon was killed at Khartoum. The Victorians established a military ambulance unit in 1886 and the Tasmanians in 1892.

Even before the creation of military ambulance units, first aid was promoted by the military in Australia. Surgeon-Major Robert Robertson delivered four lectures on first aid

between March 1880 and February 1881 to members of the St Kilda Artillery, and members of the public were allowed to attend. By the end of the 19th century first aid training had spread rapidly to the civil community and civil ambulance services had developed in parallel.

Influence of Lord and Lady Brassey

The teaching of first aid was given a significant boost with the visit to Australia by Lord and Lady Brassey in 1887. Lord Brassey was a wealthy businessman and both he and his wife were strong proponents of first aid. They visited most Australian States and, through their considerable influence, first aid classes were promoted and new centres opened throughout Australia.

Within three decades of the Brasseys' visit four other organisations had joined St John Ambulance in promoting first aid: the Surf Life Saving Association of Australia, the Royal Life Saving Society, the Australian Red Cross and the full-time ambulance services of each State. All these organisations were united in their aim to promote first aid in the community.

First aid today

Prehospital care today has developed into a profession in its own right, employing special skills and services taught at tertiary institutions. The modern ambulance officer is a highly trained professional capable of giving treatments unimaginable 30 years ago. A good example of this advance is the use of defibrillators in ambulances today, which in the hands of trained staff improve the survival of heart attack victims.

First aid practice in the community has also evolved and advanced in the light of evidence-based treatments, community expectations and individual capability.

Today 250 000 Australians receive training in first aid each year and over 1 000 000 have done a first aid course at some stage in their lives. The book *St John First Aid* is owned by one in every seven Australian households. This high level of first aid training does much to reduce mortality and morbidity in our community.

Currently the level of first aid training varies across the Australian Defence Force, but our objective is to establish a high minimum standard across all three Services.

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