Medical Services and Military Medicine during the
Anglo-Zulu war of 1879. Part 2.

By Dr Andres Traverse

The cloak of Aesculapius and the mantle of Mars

Under the sub-tropical conditions of colonial warfare in Zululand, army, naval and civilian surgeons were constantly challenged by the often insurmountable numbers of sickness cases among the troops, in addition to the associated workload. Adaptation to the circumstances and ceaseless effort was necessary for all medical and hospital personnel, in order to provide an acceptable level of care. At the same time, these men were not immune to battlefield risks and disease. In describing his personal experiences during combat in 1879, Dr Andrew Duncan, a civil surgeon, befittingly described the responsibilities and perils of medical officers under fire:
'Albeit the non-combatants in the army are honoured with but a slender modicum of glory, they very often come in for a lion's share of the danger. Bullets cannot discriminate between the fiercest of enemies and the messenger of balm and healing, and will tear through the middle of a gonfalon blazoned with the Geneva cross as readily as through a regimental flag. The surgeon non-combatant though he requires a courage of a higher order than his fighting associate; he has to perform the most difficult and delicate of operations under fire, and has to preserve his coolness all the time. As a rule he shrinks from no self-sacrifice; he works with quiet brave perseverance through the long watches of the night , while others are taking their repose; and in the heat of combat is generally like to that of the gallant Reynolds at Rorke's Drift.'
Woolfryes summarised the difficult conditions and circumstances encountered by his staff in the coastal belt of Zululand and Natal, by stating that:
'The duties throughout the campaign were severe and unremitting, especially those of the Medical Officers of the 1st Division.....owing to protracted occupation of entrenched camps on the Coast line between the Tugela & Inyezane rivers- a district proverbially unhealthy from its marsh mists, etc & indifferent water supply- suffered from exceptional sickness & mortality, the result of the conditions above with fatigue & exposure superadded.'

The tragic deaths of Surgeon Major Shepherd and Civilian Surgeon Cobbin are well documented in accounts of the Anglo-Zulu war, though the loss of other medical staff has not been given the same attention and is therefore, less well known. These include Acting Surgeon Brice, attached to the NNC and killed at Isandlwana. Civil Surgeons A.A. Woods and G.H Garland both died from disease during the campaign. Surgeon-Major Allcock was invalided back to England a month before the invasion of Zululand; Surgeon-Major W. J. Ingham and Surgeon-Major W. E. Dudley[1] were both sent home on sick leave in May and June respectively. The non-combatant role of the men of the AHC changed in light of the constant danger of Zulu attacks on the convoys of wounded after Isandlwana. The issued ceremonial sword bayonet was all but useless in defence, so the men were each armed with a revolver, as a very necessary precaution. The Corps too, suffered its fair share of losses during the campaign particularly at Isandlwana where Lieutenant of Orderlies, Arthur William Hall and ten enlisted men, died in action. By the end of hostilities, another Corps officer and nine men had died of disease, seven of whom served in the coastal area of Zululand. A further 29 members of the Corps were invalided back to England.

The case of Staff-Surgeon Longfield, HMS Tenedos, serving with Chelmsford's relief column and critically wounded at the Battle of Gingindhlovu on 2 April 1879, is interestingly significant. His experiences both as a medical officer and patient throughout the following three months, gave him the unique opportunity to assess the merits and shortcomings of the complete system of medical services provided for the sick and wounded of Pearson's Column. This did indeed reflect

the overall organisation and level of care, rendered by the medical services during the entire campaign, up to that point.

At the height of the battle at Gingindhlovu, while attending to a wounded private of the 99th Regiment, Longfield was severely wounded in the right arm by a large spherical ball. This had entered the arm immediately below his deltoid muscle causing a comminuted fracture of the humerus. The naval surgeon was quickly removed by Staff Surgeon Shields. Upon examining his colleague on 10 April, Norbury's assessment of the wound was guarded, as he thought Longfield might lose his right arm. By the end of the month, a discharge was noted through the soft tissue wound, which seemed to be healing, with Norbury contemplating a surgical procedure to repair the broken bone. A month later pieces of dead bone had worked their way through the skin which made the removal of fragments easier. By the beginning of June, Longfield felt that good progress at last was being made and that a new splint seemed to stabilise the arm sufficiently for further optimal healing.

Now a patient, Longfield's experiences were reflective of the deficiencies and inefficiencies plaguing the medical services. In a report to his superiors, he wrote that:

' When I came to my turn to be dressed, I found to my astonishment that no splints save ordinary wooden ones had been brought , four of these had consequently to be applied, though owing to the height to which the fracture extended they afforded little or no support. From the 2nd to the 7th I lay under a tent in the laager at Gingindhlovu, the conditions of which had become almost pestilential.

At my earnest request shortly before my removal thence the four splints were taken off and a hastily improvised angular one, composed of two strips of dial tied together with a piece of cord substituted for them. This subsequently from its want of rigidity proved more of a curse than a blessing.

On the morning of the 7th I was placed in an Ashantee cot and carried about a mile to a crowded entrenchment , where I was left to endure the heat of a broiling sun all day as best I might, the arm then being greatly swollen and in a highly inflamed state with much sympathetic constitutional disturbance. At sunset I was lifted in the cot on to some straw in a springless wagon in company of an officer of the 57th Regt who was suffering from a fracture of the fibula.

The following morning at 2.00 am I was roused out of a sleep induced by a strong subcutaneous injection of morphia by the wagon being jolted downhill at a good pace causing me most undesirable torture. At length the driver succeeded in arresting his refractory oxen and we proceeded more quickly. No care or attention on his part could mitigate the horrors of that terrible journey which lasted from 2.00 am to 9.00pm broken by one short spell to give the oxen a rest and which for miles led straight across country. As darkness fell and there was no possibility of selecting our road our sufferings were proportionately increased until at last from the long continued pain my senses appeared to become blunted the ends of the bones could grind together without an effort on my part to prevent my doing so. I may say that I was informed that the ambulance would have jolted me even more severely owing to the disselboom having been broken at any rate the experiment was never tried.

It is with much regret that I have been testimony to the utter inefficiency of the whole arrangements for the sick and transport of the wounded of this column and to the apathy and indifference with which effort is met which has for its object its amelioration of the sad state of affairs. Had we been flying before a victorious enemy, or had time been pressing, there might have been some little excuse for the treatment we received: but such was not the case. The Zulus were broken and fled in all directions and a garrison was left in the vicinity of Ginginhlovo. There was nothing therefore to prevent our being allowed to remain till some measures had been taken to provide proper transport for at least the most severely wounded. The day before we started no rations were supplied to the sick nor were they on the day of their coming in and how the poor fellows fared who prosecuted their journey to the Base Hospital at Herwen will be

apparent from the following extracts from a letter which I have received from the officer who shared the wagon down with me.
"If you are at all comfortable where you are, don't attempt to come to this place. The food is bad what little there is and there is a most hellish row kicked up day & night. I think it was very lucky that you stayed at Tugela. I assure you that the journey was enough to kill any man in fact it did kill one, he was found dead in the wagon in the morning."
Arrived here, (Fort Tenedos) *appliances of all descriptions were found to be as scarce as they were at Ginginhlovo. The Field Hospitals at Forts Pearson and Tenedos could not supply between them an ounce of carbolic acid, and I had to wait several days before this was sent to me thro' a private source in Durban. I was no stranger however to such shortcomings as these, after an experience of two and a half months in charge of what goes by the name of a Field Hospital, an experience which taught me that my urgent demands for Medicines and Appliances would in nine cases out of ten be treated with supreme indifference and that Forms and Returns were considered of far more importance than the wants and requirements of the patients who came under my charge. I can safely affirm that this great camp at the present moment does not contain one ounce of castor oil nor a grain of acetate of lead (Dysentery & Diarrhoea) being everywhere prevalent & I hear complaints of Medical Officers of every branch that it is quite impossible for them to treat their sick for the simple reason that there is nothing whatever to treat them with. This as I have said before is nothing new.....'*

By 12 June, Norbury reported that his colleague Longfield, had been transferred to the Base Hospital at Durban, to convalesce and that the wounds were healing well, with a more certain prognosis long term. The Staff Surgeon would soon be invalided back to England after he was granted a pension certificate.

Surgeon Blair-Brown fell victim to disease and contracted the prevailing fever at Helpmakaar. He was sent to Ladysmith to recuperate, after which he stayed to administer the base hospital. The continued losses of able medical officers and AHC personnel, constituted a severe blow to an already overstretched medical service, which was difficult to remedy. In this arduous environment especially in the line of fire, military and civilian surgeons were expected to wear the cloak of Aesculapius and carry the mantle of Mars, in performing their duties. This became obvious to all when among other feats performed by the AMD, medical officers were awarded the Victoria Cross. At Rorke's Drift, Surgeon James Henry Reynolds deservedly earned himself the esteemed distinction. Another recipient of the medal, Surgeon-Major Edmund Baron Hartley was recognized for his bravery at Morosi's Mountain in June 1879 while serving with the Cape Mounted Rifles. Separate from the Zulu conflict, a simultaneous sideshow developed in South Africa known as the Basuto War. Hartley demonstrated his act of courage:
'..... in attending the wounded under fire, at the unsuccessful attack on Morosi's Mountain in Basutoland, on the 5th June 1879, and for having proceeded into the open ground, under a heavy fire and carried in his arms, from an exposed position , Corporal A. Jones of the Cape Mounted Riflemen, who was wounded. While conducting him to a place of safety the Corporal was again wounded. The Surgeon-Major then returned under the severe fire of the enemy in order to dress the wounds of other men of the storming party.'

In lobbying the War Office for recognition, respect, adequate pay, benefits and parity in rank with line officers, medical staff would at last, be able to justify their claims publicly, in clearly demonstrating their importance. Furthermore, at the Battle of Kambula, the exemplary conduct of the surgeons and members of the AHC, under adverse and challenging conditions, was also noted and furthered the cases of both the AMD and NMD. The performance of the medical officers and civil surgeons was praised by Woolfryes in his reports. Civil Surgeons Jolly and Connolly risked their lives during the retreat from Hlobane; their bravery described aptly by Woolfryes:

' They were last in the retreat back to the camp when pursued by many thousand Zulus and they frequently dismounted and assisted the wounded and helpless men at their imminent risk'.

The next day, the Zulus, fresh from a great victory at Hlobane, launched an aggressive and relentless attack on Wood's defensive position. The medical services were further tested and all involved performed well:

'Civil Surgeon Jolly and two orderlies, AHC, was with the garrison in the fort during the attack, and rendered valuable aid to the wounded there. Surgeon-Major O'Reilly, Surgeons A.L. Brown and Thornton, Civil Surgeon Connolly, and Hospital Dresser Armitage remained at the field hospital in the camp. The field hospital from its position was exposed to a severe cross fire, most of which fortunately passed over head, but several of the hospital tents were struck by Zulu bullets. Surgeon-Major O'Reilly reports, Surgeon A.L. Brown and Thornton and Civil Surgeon Connolly laboured hard during the whole engagement attending to numerous wounded, by whom our resources were severely taxed. An Amputation of the upper arm was performed by Surgeons Brown and Thornton in a very exposed part of the camp during the hottest part of the fight. Colonel Wood in his despatch after the battle says, "The wounded were cared for most promptly by Surgeons O'Reilly, L Brown and staff generally under fire.'

At the Battle of Ulundi, the field hospital located inside the square, was situated closest to the heaviest fighting, with all the medical and support staff performing admirably in giving aid to 101 wounded men. The Natal native stretcher bearers were kept busy and they too suffered casualties, though only a few deaths were actually recorded in the records and literature.

The attitude of the AMD towards the use of civil surgeons and civil practitioners was mixed and at times, certainly not complimentary in the early part of the campaign. However, despite the criticisms, the civilian medical volunteers performed well in general, particularly at Hlobane and Kambula. Civil Surgeon Lewis Reynolds too, demonstrated the value of his colleagues and was even asked to report on the proficiency of the new medical arrangements, compared to the old regimental system. Those civilian surgeons, unfamiliar with military medicine protocol and the need for improvisation, soon learned to adapt.

In performing their duties, Woolfryes gave credit to the medical officers and civil surgeons in his report:

'I feel it incumbent upon me to state that the duties were performed such zealously and efficiently by the officers, AMD and the Civil Surgeons in many cases to the detriment of their health which broke down from over-work.'

The contribution of the Navy's medical officers throughout the campaign cannot be understated. By acting in a well organised and self-reliant manner, their conduct and support of the AMD reflected well on the Navy. However, in his official reports, Woolfryes omitted pertinent facts regarding the vital role played by his naval colleagues both in the zone of active conflict and in the care of hospitalised army personnel.

Given that the Chelmsford's army was waging war on natives whose principal weapon was a stabbing spear, it might sound surprising that the vast majority of wounds presenting for treatment were in fact bullet wounds. Assegai wounds were found to be less common due to the very deadly nature of hand to hand combat. At the British camp at Kambula, Surgeon-Major O'Reilly attended to only 5 wounded survivors from Hlobane[1]

At the beginning of the campaign, the Zulus possessed chiefly old inaccurate Tower flintlock and percussion muskets, while quite a few prominent members of the tribe possessed modern rifles. After Isandlwana, the cache of captured Martini Henry's bolstered the Zulu firepower, with potentially devastating consequences for the British. The quality of the ammunition, which included conical spherical for the Martini Henrys and spherical ball mostly hammered and irregularly shaped from pieces of lead, used for the varied types of antiquated firearms, caused a

variety of bullet wounds. The generally poor understanding of the use of modern firearms by the Zulus arguably benefited the British in combat, particularly in view of the large number in possession, especially immediately after Isandlwana. The effect of each type of bullet depended on the shape of the projectile and range of discharge. While the Martinis were very much deadly at long range, the muskets were mostly fired at ranges, less than optimal to cause significant damage. With less effective fire, most hits on the British troops caused mostly superficial wounds, requiring simple treatment with uncomplicated recovery. However, the Martini Henry bullets tore at the flesh and smashed bones. The unfamiliar use of the firearm resulted in often inaccurate fire which helped prevent higher casualties among the British in the post-Isandlwana period. Nevertheless, despite the poor marksmanship of the Zulus, many shots could not fail to make their mark amongst the massed ranks of redcoats, particularly at Ulundi, where Chelmsford's square was exposed in the open. The field hospital located inside the defensive position, was situated closest to the heaviest fighting, with all the medical and support staff performing admirably giving aid the wounded. At Rorke's Drift, Kambula and Gingindhlovu, most of Chelmsford's men hit by Zulu gunfire, sustained wounds mainly to the head, neck, chest and arms due to the protection available in the defensive positions.

The theory of germ-based disease in mainstream medicine had been gaining momentum in the 1870s, to the extent that Listerism and the use of carbolic acid for antisepsis had effectively reduced the incidence of infections in wounds. During the Anglo-Zulu war, the use of carbolic acid was deemed a necessity by the medical officers. While complete antiseptic treatment of wounds was impossible on campaign, Surgeon-Major Charles Cuffe, serving with Wood's Flying Column reported that the chemical was very effective for the purpose intended. By understanding the importance of antisepsis, Surgeon Blair-Brown, a pragmatic medical officer, also advocated personal cleanliness and thorough instrument washing[1]. He also favoured the new elastic ligature or bandage technique as a tourniquet taught by Professor Esmarch. The standard yet old fashioned method, involved the use of the belt, buckle and pad type of tourniquet which was more uncomfortable for the patient.

As a proponent for the benefits of fresh air in surgical treatment, Blair-Brown was particular in treating severe gunshot wounds in a well pitched marquee with adequate ventilation. He felt that stuffy enclosures such as huts, which were often the only facility available for surgery and recovery patients, were sources of contamination and subsequent infection. He also preferred to use simple techniques in performing surgical tasks, as he felt that simple oiled silk sutures, drainage tubes made from dark vulcanised India rubber and borax were basically all that was usually necessary. His technique for surgical closure of wounds was usually uncomplicated, with minimal interference during the critical healing process, which allowed for optimal results. Furthermore, Blair-Brown believed that AMD personnel understood the treatment of war wounds, better than their civilian counterparts. He commented on the nearly overwhelming weight of his responsibilities following the Isandlawana disaster, and the loss of his senior colleague, stating that a total of 646 medically treated wounded regular and colonial troops were assigned to his care at Helpmakaar. It is almost certain that this group included both sick and wounded, as his figure exceeds the total official number of wounded for the entire campaign.

Surgical procedures performed during the AZW were mostly successful, unless patients died from loss of blood and shock during the operations. However, surviving the post-surgical healing period would be the challenge. Before the advent of antibiotics, secondary infection would take the lives of many patients. Gangrene and painful erysipelas or cellulitis worked to kill the chances of wound healing and while every precaution was taken to prevent these complications, they were difficult to treat. For the ligation of damaged large blood vessels, silver wire was popular though catgut would later reach prominence as the quality improved.

Today, the use of general anaesthetics is commonplace in surgery. In the 1870s, nitrous oxide, ether and chloroform were all available to surgeons. This marked a leap for medical advancement which was not entirely embraced enthusiastically by all medical officers in the British army.

While the use of safer anaesthetics namely nitrous oxide and ether required bulky equipment, chloroform was easy to transport and administer. Although some medical officers felt that pain was an integral part of any surgical treatment, chloroform was extensively used during the Anglo-Zulu war to facilitate surgical procedures, especially amputations, removal of bullets and bone fragments. Surgeon-Major J.H. Porter strongly advocated the use of the anaesthetic, calling it: *'one of the greatest blessings and should be carefully treasured by the army surgeon and no waste allowed.....every drop is worth its weight in gold'.*

Immediate or latent shock and loss of blood pressure was a recognized complication of severe wounds and surgery due to haemorrhaging or blood loss. The signs and symptoms were well understood, though effective treatment was in generally nothing more than a cookbook approach and involved administrating consolation or encouragement, cordials, beef tea and wine or brandy. The veterinary medicines available for Fleet Surgeon Norbury during the siege at Eshowe included vital opioids, opiates, aloes, diuretics, purgatives and linen for bandages Norbury also turned to natural products to augment his diminishing supplies of medicines. He used parts of the bark of the waterboom tree readily available close to the fort at Eshowe. He managed to extract tannic acid from this product which worked well as an astringent, though the Zulus used the medicine as a purgative. Ironically, the surrounding area was in fact very rich in natural medicines, which have always been highly regarded by the Zulus for their healing powers. The Dlinza forest is located three miles from the besieged garrison and arguably, through no fault of his own, Norbury missed a great opportunity to capitalise on the availability of such materia medica.

According to official records, it can be determined that a total of 191 medical officers and civilian counterparts served in South Africa in 1879. Army Medical Department medical officers serving with the Regular forces, including those holding command or administration posts, totalled 84. Twenty one of these did not arrive in Natal until after the victory at Ulundi. There were 49 civil surgeons on contract with the AMD to serve with Chelmsford and a further 15 civil practitioners were recruited. Eighteen medical officers and civil surgeons served with the Colonial forces, of which 9 did not participate in the Anglo-Zulu war, though they were engaged with units involved in separate conflicts. The Stafford House South African Aid Committee sent two medical personnel and the Naval Medical Service contributed a total of 23 medical officers in various capacities. Of the latter, nine naval surgeons served directly with the Regular forces, though officially, their primary responsibility lay with the health and welfare of the men belonging to the Naval Landing Brigade. The loss of 15 medical personnel by the end of May 1879 by attrition, due to deaths, disability, wounds and resignations upon expiration of contracts, were an inconvenience which severely dented the efficiency of the medical services. In addition to these losses, some succumbed to the prevailing sickness and were therefore, temporarily disabled. At the height of efficiency of the medical services, the total effective strength of the AMD, supported by other departments and volunteers, likely never exceeded 130 medically trained staff.

On campaign in South Africa, pragmatism and resourcefulness were expected from all medical officers in the face of arduous circumstances and continuous demands placed on their shoulders. Surgeon-General Woolfryes never wavered in his tasks and commitment to an efficient medical service. Notable contributions by the surgeons, nurses and supporting bodies, were made to the advancement of contemporary medicine. The establishment of the profession as an important service to the British army and navy was a reflection of the quality of the men and women involved. Surgeon J.H. Reynolds and Surgeon-Major Hartley were rewarded for their valour while other colleagues were noticed for their bravery in the face of the enemy. By demonstrating the use of perceived sound principles in promoting a high standard of medical care and applying themselves to the advancement of their profession, further notable contributions were made. In aiding the recovery of sick and wounded Surgeons-Major Blair-Brown and Shepherd, Fleet

Surgeon Norbury and Civil Surgeon Stoker, amongst others all played significant roles. At times during the war, good medicine and life-saving measures were achieved for the wrong reasons, given that contemporary thinking and lack of microbiological knowledge was waiting for the next step forward.

Native medicine and treatment of Zulus

Treatment of the sick and wounded by the AMD did not restrict itself to British soldiers, colonials and native troops. Several accounts describe the care administered to wounded Zulu prisoners, by the medical officers and civilian surgeons. Given the animosity towards the Zulus as an enemy, particularly following the Isandlawana catastrophe, one might be surprised to learn that medical officers and their civilian colleagues often demonstrated a high level of care and professionalism concerning their sick and wounded prisoners.

After the Battle of Gingindhlovu, sixteen severely wounded Zulus were taken on an unavoidably rough ride to Fort Tenedos. Upon arrival, they were left practically unattended in two wagons and given little food for three days. Concerned medical officers finally arranged for proper accommodation and care for these thirsty and emaciated men, all suffering from severe and infected wounds, due to the neglect. One Zulu required immediate amputation, for multiple Gatling gun bullet wounds and died from shock, soon after the procedure. Of the remaining fifteen, all received proper medical treatment for a variety of injuries, including three fractured thigh bones, and flesh wounds.

Even as wounded prisoners under the care of British medical officers, the Zulus preferred to use their own therapies, rather than accept conventional surgical techniques. In caring for gunshot wounds and other injuries, Zulus often carried their wounded comrades to the highest elevation in the area for treatment. The wounds would be exposed to the sun, for a week or two and carefully washed several times a day. Witnesses noted remarkably rapid healing in the majority of cases. One such intrigued observer of this practise, Dr George Stoker, believed that the optimal healing of wounds was made possible, by the theory that unusually pure air was found at higher altitudes. Working in South Africa as part of the Stafford House South Africa Aid Committee contingent, Stoker's medical contribution during the Balkan wars of 1876 and 1877-78 had not impressed his superior, who questioned the surgeon's surgical abilities. During the AZW, his duties partly involved the surgical care of wounded Zulus, requiring treatment for gunshot wounds and burns.[1] Based on the practice of exposing wounds to fresh air, Stoker developed new techniques at the Oxygen Hospital in London and later, successfully applied his knowledge during the Second Boer and First World Wars. He is best remembered for his pioneer work in developing a successful method of healing sores, burns and other diseases, using therapy involving mixtures of oxygen combined with ozone. Today, this very effective mode of treatment has advanced, to the extent that it is commonplace in medicine and dentistry.

The grasslands, woodlands and high elevations of Zululand are rich in indigenous plants, which have always played a pivotal role in traditional native medicine. Almost every plant has a medicinal use. The traditional healer, in most if not all native tribes was the witch doctor, who would make up remedies in various forms and perform procedures to treat wounds and sickness. Generally, the typical ailments among the native troops serving under the British were intermittent fever, diarrhoea and dysentery. It was common for natives and Zulus to eat meat from dying and diseased cattle, which was often not properly cooked and therefore, caused much of the preventable sickness.[1] Natural medicines made from herbs and roots of trees and plants, were available for malaria, dysentery, diarrhoea, coughs, colds, influenza, pain, intestinal worms and rheumatism. The root, stem and leaves of the common fern, would be crushed and boiled, to be consumed to deal with intestinal worms. Other disorders of the bowels were treated with enemas, using a cow horn to pass copious amounts of fluids, preferably salty water, into the large intestine. This would be retained for as long as possible, even if the patient had to stand upside

down. After expelling the contents, the process would be repeated a number of times to wash out any toxins. The belief in witchcraft was strong and charms were often worn around the neck, or tied to an afflicted part of the body. Another common practice in the treatment of disease was the process of cupping or scarification. This involved pinching a small fold of skin close to the problem, nicking the area with a sharp object and rubbing gunpowder or powdered roots into the fresh wound. At the same time, cattle would be sacrificed as part of the ritual of healing. The use of traditional medicines derived from local plants, could have greatly benefited the white soldiers. The besieged garrison at Eshowe lay within walking distance of a rich natural medicinal source, the Dlinza Forest. Fleet Surgeon Norbury experimented with some plant medicines but was likely unaware of the availability of numerous local herbs, bulbs, aloes, trees and planted ground cover which would have augmented his meagre medical supplies.

Reports regarding the ill-treatment of wounded Zulus filtered back to England, to the extent that, the perception of blood thirsty vengeance for the defeat at Isandlwana, would even extend to retribution against wounded and vulnerable Zulus. It is true, that in the aftermath at Rorke's Drift, British troops spared no stragglers and wounded Zulus, particularly in view of the massacre at Isandlwana and the brutal slaying of several defenders in and around the hospital. Records regarding the medical treatment administered to the large number of wounded Zulu warriors after the battle are non-existent. Given the fact that this event has been thoroughly examined by writers, suggests that medical care was definitely not administered by the vindictive British at Rorke's Drift. Captain Cardew acting as DAQMG to Major-General John Crealock and the 1st Division remarked on the bravery of the Zulu warriors and the undeserved brutal treatment of the wounded. He recounted an incident where:

'After one of the battles he himself heard the order given by one general "Let Loose the Murderers," which meant to order out the native allies to kill the prisoners and all the wounded, and the killing was not confined to the Native allies, but the European soldiers, and even the officers took part in it.'

The issue regarding the treatment of wounded Zulus captured by Chelmsford's troops was raised in the House of Commons. Unsubstantiated insinuations of cruelty towards Zulu wounded by British soldiers, including members of the AMD, were addressed by the Government. It reassured any doubters that the medical officers of the AMD always upheld the highest professional standards expected of them, in caring for all wounded equally, regardless of their colour. Surgeon-Major Cuffe, in writing to *The Times* newspaper with his comments concerning these issues, stated that the wounded Zulus cared for at the hospital in Utrecht, were treated alongside Chelmsford's native invalids and administered proper care and attention. The prisoners made frequent remarks regarding the kindness shown which they admitted, would not have been reciprocated had British wounded fallen into the hands of the Zulus.

Generally, those fortunate Zulus that were given medical aid were reportedly well cared for. After Ulundi, some were given medical aid on the battlefield, while the severely wounded, where possible, were transported to Utrecht for treatment. Sister Janet Wells, stationed at the Utrecht Base Hospital, came into contact with many wounded Zulus as patients and wrote of the treatment rendered to these men, for whom she developed a high respect. She noted that some Zulus refused major surgical treatment such as amputations where necessary, rendering the outcome very poor; but were nevertheless not denied the care required. Captain W.C.F. Molyneux witnessed an incident, where an act of compassion by the British troops, was noticed by Zulu messengers sent back to Ulundi, during Cetshwayo's attempt to peacefully end hostilities without another slaughter, in early June 1879. In his mind, this did enhance public relations by writing that:

'*These messengers, must have been reassured by one curious sight. That day an old Zulu woman, in the last stage of decrepitude, had been found in a deserted kraal; some men hearing moans proceeding from a bundle that looked like a chrysalis, had in the kindness of their hearts brought*

the nuisance into the camp. She had been wrapped up tightly in a fresh hide, raw side inwards, put out in the sun to harden (so that the skin might protect her from the dogs), and then deserted. Our men had cut a peephole for the naked skeleton, and were feeding her with green mealies, which is all she would eat; but her great joy was snuff made out of Cavendish tobacco. Our fellows did what they could for her till she died ..... and then gave her a decent burial.'

Further acts of compassion were reported, including that of Lieutenant-Colonel Lonsdale Hale, Royal Engineers, who demonstrated an interest in the welfare of Zulus who had lost all, following the wholesale burning of their kraals in and around the Umlalazi Plains. During the evacuation of troops from Port Durnford in late August 1879, Hale organised a substantial distribution of mealies and mealie-meal to the near-starving natives.

Of Chelmsford's black irregular troops, Woolfryes reported that the records pertaining to sickness statistics among these men were not consistent with the high morbidity and sickness-related death rates, compared to the Regulars and Colonials volunteers. The Surgeon-General was of the opinion that these men preferred returning to their homes, to be treated by their witch doctors, where the natives expected a higher success rate. Of a total recorded strength of 5436 native irregulars, in addition to approximately 320 combat deaths, 766 men were admitted to hospital for a variety of sicknesses. Most of these were unclassified, whereas only 39 required care for wounds sustained in action. Blair-Brown's treatment statistics for the men under his care at Helpmakaar and Ladysmith included 84 mounted Basutos. Accurate records available regarding the treatment of the sick and wounded black soldiers are limited and do not truly reflect the extent of the suffering experienced in these units.

Combat stress, sickness and treatment

In the mid to late nineteenth century, insanity, melancholia, neurosis, nostalgia and exhaustion, all described the effects related to combat stress or battle fatigue and anxiety. Such was the poor understanding and lack of recognition of a real medical disorder, that in the 1870s, palpitations, irritability of the heart and debility, were the recognized medical conditions, which accounted for the seemingly irrational psychological behaviour of affected soldiers, while on campaign. In writing about his experiences during the Anglo-Zulu war, Captain W.C.F. Molyneux, ADC to Chelmsford, commented on the resultant effects of combat stress which gripped many soldiers, in such a manner that:

'*No one can account for the madness which seizes upon bodies of men at times. It is no use saying it is only the young soldiers that are thus affected; old ones may be less liable, but they are not impervious to it.'*

The human response to combat stress has not changed in the time since the Anglo-Zulu war. Some men crack while others do not. It is debatable whether the limits of resistance are determined by character, heredity, upbringing, ideology or simple biochemistry. True anxiety disorders can develop after exposure to a terrifying event, in which grave physical harm has occurred or was threatened. Wounds to the mind left soldiers open to imputations of malingering, allegations of cowardice and even charges of desertion. However, understanding stress disorders and interpreting the response to combat has made great strides since the nineteenth century.

The prevalence of the effects of campaign experiences increase over time in soldiers subjected to both intense combat and non-combat stress. Today, we attribute many of the signs and symptoms to a condition, known as post traumatic stress disorder (PTSD) which, in a chronic state, can last for many years. This debilitating anxiety disorder should not be confused with combat stress reactions, which is generally short term. In other words, as a psychiatric disorder, PTSD is different from depression, anxiety or fear in the face of battle. Soldiers in the nineteenth

century, both officers and men, were not expected and did their best, not to feel anxiety or display fear, in the midst of combat. Medical officers attributed this to the stolid disposition of the average soldier, who showed no imagination or curiosity as to the future and even recollection of past stirring events. Generally, soldiers simply learned to accept the effect of a traumatic experience and to get on with their lives the best they could. This attitude was also rooted in the nineteenth century view of life and death among the poor, who represented the vast majority of enlisted men and quite simply accepted their station, or class in society. There was little or no prospect of certainty, in an age of low life expectancy, to the extent that suffering in this group was not unexpected.

However, mental illness could not be considered in the restricted realm of degenerates with weak constitutions, when no one could account for the fact, that officers were found to suffer disproportionately, from stress disorders and much more likely to be invalided home. In the war of nerves during the AZW, there are numerous accounts of inexperienced and often exhausted new recruits gripped by fear and behaving irrationally both in combat and on duty. In most circumstances, cooler heads prevailed with strong leadership from the officers. Rorke's Drift survivors were not immune from the long term effects of the epic fight for survival, though most of those affected, simply learned to live with the experiences and had normal lives thereafter. For years afterwards, Private Robert Jones VC, appeared to be tormented by flashbacks, resulting from his experiences in defending the hospital at Rorke's Drift, during which, he received assegai wounds. The post traumatic effects may have been the cause of his recurring headaches and his suicide, which was officially determined as '*shot himself in the mouth being of unsound mind.'* Other defenders such as Corporal Ferdinand Scheiss and Private William Cooper, who died in unfortunate circumstances, were probably suffering from depression not related to battle stress. Fleet Surgeon Norbury noted that the circumstances associated with the lingering siege at Eshowe produced a greatly increased incidence of anxiety among many of the defenders. He described this as a '*depression of spirits'* which, if combined with sickness or hospitalisation would compound the effects of the condition, to the extent that recovery from any sickness would be made more difficult.

Upon entering the besieged garrison at Eshowe, Molyneux remarked that:

'*coast fever and typhoid had claimed many victims, while rough fare, watchfulness and anxiety had all set their mark on all.'*

These men were generally considered to be debilitated, suffering from anaemia and somewhat affected by irritability of the heart if displaying such symptoms. Without doubt, fighting the Zulus was for many soldiers, a terrifying experience, the prospect of which caused greater anxiety in most individuals, as the campaign lingered.

Many medical officers believed that debility, palpitations or irritable heart also occurred among non-combat troops who laboured with heavy packs during long marches. The straps of the webbing was thought to place too much pressure on the chest which gradually restricted blood flow to the heart. Colonel Wood, in his memoirs, recalled the effect of eighteen months campaigning on his men and even himself, which he described as stress from the difficult military situation, especially in the three month period following the disaster at Isandlwana. Wood was unable to sleep for more than 2-3 hours at a time and participated in sentry rounds twice nightly, Wood attributed this to his self proclaimed '*state of high anxiety'*.

A real attempt on establishing stress disorders in the British army began twenty years after the AZW with the work by Dr Anthony Bowlby, Civil Surgeon during the Second Boer war. That campaign lasted three years and involved ten times the number of British troops, compared to the war against the Zulus. With more time and greater number of casualties, a proper analytical approach to assessment and understanding of sickness in the British army was possible. By the end of the nineteenth century, the terms palpitation, irritability of the heart and debility, had given way to disordered action of the heart (DAH) and rheumatism. Bowlby failed to diagnose the

actual presence of true mental disorders since he was too focused on DAH. Contemporary thinking once again, attributed this condition to the effect of exertion on a soldier's chest, by tight and restrictive webbing, which had been modified in the 1870s, to deal with that particular issue. Clearly, the effects of the new webbing design and later alterations, changed very little. However, he described many symptoms, which are identical to many associated with today's understanding of PTSD. He described headaches, neck pain and discomfort in the back and limbs all associated with general feebleness of the muscular system and paralysis. Many of the afflicted soldiers were sent to the hospital as cases of rheumatism. During the Second Boer War 3,631 servicemen were hospitalised with a diagnosis of DAH, with 41% invalided back home. A further 24,460 troops were admitted for rheumatic fever or rheumatism with 4,305 men sent home. However a systematic investigation of war pension files at the Royal Hospital, Chelsea, revealed that most of these rheumatism-related pensioned veterans showed no objective signs of the disease within one year of discharge. This was remarkable as the unexpected, if not speedy recovery from a condition with a poor prognosis, often resulting in death from heart failure, continued to perplex the medical establishment. Also, of a further 20,767 men hospitalised for debility, in the period 1899-1902, many later appeared to have no demonstrable signs of organic disease or of a somatic origin.

Accepting these records and the findings by Bowlby and his colleagues, it is possible to form a statistical impression of the extent of stress-related disorders, on the British army campaigning against the Zulus. The number of British soldiers invalided during 1879 was much higher as expected, due to hard campaigning. Seventy soldiers were invalided specifically for a diagnosis of palpitations, caused by stress on the heart, compared to none in 1878 and 1880. Rheumatism and debility accounted for another 318 servicemen returning to Great Britain compared to nine in 1878 and 51 in 1880. Later, a retrospective analysis of the incidence of mental diseases from 1886-1908 by Lieutenant Colonel A. G. Kay, showed that an association between increased incidence and war. The rates of both admission and discharges rose significantly between 1899-1902; the most prevalent forms were depressive and delusional disorders. With regularity, DAH had become a convenient diagnosis during the Second Boer war.

In Queen Victoria's army, treatment of stress disorders, which were clearly either undiagnosed or misdiagnosed, consisted of rest and morale reviving efforts for most men. Acutely affected soldiers could expect no help financially or medically, if discharged without a proper diagnosis. Even seeking advice from a doctor in civilian life, might land someone in a lunatic asylum. During a campaign, the emphasis on rest and the provision of comforts in the form of tobacco, healthy beverages, brandy, good food and reading materials, was deemed paramount to restoring one's mental constitution. At Eshowe, Molyneux stated that upon greeting members of the garrison, the:

'*universal cry was want of tobacco, tea leaves and coffee grounds being carefully preserved, dried and smoked; otherwise they were not in actual want.'*

In the majority of cases where combat stress and other non specific disorders had taken their toll, the availability of quality comforts quite likely eased the tormented mind. Since improving and maintaining optimal health and morale was key to preventing these problems, Colonel Wood demonstrated his leadership qualities further during the second invasion of Zululand, in ensuring that that his men were fed well. His Flying Column was treated as much as possible to fresh bread from field ovens on a daily basis, to the extent that, he simply ignored written concerns from the Commissariat, expressing alarm at the overdrawing of rations. Wood's eventual response was uncompromising, since he considered that his men had captured enough cattle to settle any trade with the Department.

Since the mid-nineteenth century, wars have been associated with a syndrome characterised by unexplainable symptoms. While psychiatric casualties were scarcely acknowledged and still less treated, a debility syndrome with or without somatic characteristics was accepted by the military

medical establishment as a plausible diagnosis during the AZW. The terminology associated with this affliction has changed over time and today, with advances in medical science, the same disorder is arguably recognized as a neuropsychiatric syndrome. Few reliable psychiatric casualty statistics are available for wars fought in the nineteenth century and given the inconsistent nature of diagnosis, at best, any figures remain estimates.