

An Equal Burden: The Men of the Royal Army Medical Corps in the First World War

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From No Man's Land to Auxiliary Hospital

The development of medical evacuation, 1914–1918

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Abstract and Keywords

This chapter revisits the chain of evacuation from the perspective of how RAMC Other Ranks' work was influenced by strategic and technological changes in practice, both military and medical, as they developed over the course of the war. By exploring how such change over time affected the working practices of the men of the RAMC, it interrogates the question of whether the war was good for medicine from the perspective of the non-professional male medical care provider. In doing so, it contributes to wider debates over the relationship between war, medicine, and modernity, suggesting that many of the aspects of change associated with progression had a more ambiguous impact on the lived experiences of the men whose practice they shaped. This ambiguity was reflected in the impact that such developments had on the status of the ranks of the RAMC as both care providers and servicemen throughout the war.

Keywords: line of evacuation, change over time, first field dressing, improvisation, Thomas splint, trenches, motor ambulances, nurses, auxiliary hospital

In 1917 the *British Medical Journal (BMJ)* published a two-part article entitled 'The Royal Army Medical Corps and its Works'. Replete with numerous illustrations depicting the three sections of the front in which medical work was undertaken, as well as images of trenches, aid posts, and evacuation vehicles of various types, the article used the structure of the chain of evacuation to describe the particular work of the RAMC on the Western Front in detail. In

doing so, it described not only the roles of those who served in the Corps, but also the various spaces in which care was undertaken.

As we saw in Chapter 3, the spaces in which the men of the RAMC worked, both static and mobile, played an important role in defining the nature of that work. Different types of healing spaces were not, however, the only variable which shaped these men's practice and experience of war service, as the publication of the *BMJ* article three years into the war indicates. In its concluding sentence, the article points to another, equally important factor: 'after the war, when details become known to those capable of assessing its more scientific aspects, it will be acknowledged that the corps has taken full advantage of opportunity offered for advancing precise knowledge of medicine and surgery as well as means of handling vast numbers of sick and wounded men'.¹ Here the significant variable is that of time, with the development of medical knowledge and skill presented as advancing in a linear fashion in all the areas described in detail by the article.

Such a narrative of medical progress in wartime is typical of official histories of the war which, underpinned by wartime propaganda, sought **(p.125)** to justify the war effort to the wider British public.² While this interpretation of the relationship between war and medicine has been challenged by more recent scholarship,³ the very question of the relationship between medicine and war has tended, as Roger Cooter suggests, to 'not only reify both war and medicine, privileging them from the societies and cultures in which they were set, but [also] locks them within a simple-minded mechanical causal relationship which only furthers an ahistorical transcendence.'⁴ In the work of medical officers, this narrative has been explored and challenged in studies of both the close engagement and even integration with civilian medical structures and expertise in wartime,⁵ and the opportunities for specialization and even experimentation that war created.⁶ Examining the work of the ranks of the RAMC across time as well as space, however, serves to further complicate our understanding of this relationship by exposing how war-induced technological and social developments shaped the labours of this particular category of medical care providers in ambiguous and paradoxical ways. This in turn influenced their agency in constructing themselves as servicemen in relation to the dominant masculine ideal of the soldier, just as the development of destructive technologies of war shaped wider understandings of dominant masculine ideals.⁷

This chapter, therefore, will examine a number of specific medical and transport technologies which were developed and elaborated upon over the course of the war to interrogate the extent to which such developments might be perceived as progressive in relation to the work of the ranks of the RAMC. It will also look at social developments in the practice and administration of medicine. In exploring the changing importance of first field dressings, mechanized forms of transportation, and the increasing range and scope of women's roles in hospital settings, this chapter will demonstrate the qualified nature of medical progress

as practised by RAMC rankers between 1914 and 1918, qualifications which call into question the assertion that medicine, and its practice during the war, 'was one of the key means of bringing ... modernity into being'.⁸

The extent to which Weberian modernist principles of technological rationalization and differentiation depersonalized and made redundant the **(p. 126)** work of men involved in the functioning of such systems forms the subject of this chapter.⁹ In exploring how military medicine and its practice changed over the course of the war in relation to the British Army Medical Services, it will ask to what extent RAMC rankers were silenced and excluded from the practice of care by such developments, and the extent to which this forced a redefinition of their roles and status over the course of the war. It will do this through the exploration of four areas of change: the evolution of first-aid practices in no man's land and at RAPs; the increased mechanization of systems of transportation along the line of evacuation; the employment of trained nurses at CCSs; and the development of the auxiliary hospital system of convalescent homes and rehabilitative care within civilian communities. All four changes would have a profound influence on the work of RAMC rankers, which would, in turn, respond and adapt to this pressure over the course of the war.

As in Chapter 3, these areas will be explored along the chain of evacuation as travelled by men wounded on the front line. The topics examined cover the three key zones of medical evacuation which underpinned military medical operational planning. First aid took place predominantly in the collecting zone; transport formed the backbone of the evacuating zone; and women's work in both the evacuating and distribution zones was central to the changing nature of nurses' wartime roles. Yet it is not in relation to space that these themes can best be understood. While the shape of the three zones of medical evacuation, and the medical spaces of care within them, influenced the work of RAMC rankers, both stretcher bearers and orderlies, forcing them to engage flexibly and improvisationally in their provision of care, the spaces themselves were never static. Across the war they altered in response to changing military strategy and tactics,¹⁰ as well as to the introduction of new medical technologies. This chapter will explore how such developments affected both the work and status of RAMC rankers in relation to both wounded men and the women they worked alongside. Focusing on the spaces between sites of care, it will look at the promulgation of first aid technologies, developments in trench design, the employment of motorized transport, policies around the deployment of women in a range of medical roles, and the growth in the social significance of the auxiliary and convalescent hospital. In doing so, it will argue that RAMC rankers' work, viewed through the paradigm **(p.127)** of space, can be seen to be continuous, with a consistent focus on core themes of carrying, cleaning, and caring, and the men themselves providing continuity from front line to home front. When viewed through the prism of time, however, these men's wartime

roles were discontinuous, with technological developments disrupting the scope of their work and, with it, their status as servicemen.

No Man's Land

While as a whole the medical technologies to be examined will be shown to create discontinuities in care provision by RAMC servicemen, the first set of such technologies, those related to first aid, may be said to represent a form of continuity with pre-war care provision. The development of the first-aid movement as both an element of the international humanitarian movement and as a national voluntary endeavour in the years before the war had, as discussed in Chapter 1, profound implications for the organization and status of military medicine before 1914.¹¹ The continuities with this trajectory were most clearly reflected in possibly the most ubiquitous wartime medical technology—the first field dressing. This packet of supplies, including wool pad, square of gauze, and waterproof jaccenet, was the first item of medical technology that a serviceman would encounter. It was first introduced in the British armed services during the Crimean War, although it was not until 1884 that it formally appeared on the *List of Changes in War Material*.¹² Designed to enable individual combat troops to undertake initial medical treatment of wounds, 'any British soldier was considered qualified, to administer the first field dressing'.¹³ Indeed, not only any but all soldiers were deemed qualified and would encounter this technology as they were issued as a standard element of service kit throughout the war.¹⁴

The content of the field dressing changed somewhat between its 19th-century issue and 1914. Most notably, the advice on using the waterproof jaccenet, which lacked breathability, to cover the dressing once in place was reversed during the Second Anglo-Boer War. In the hot, arid conditions of South Africa, the practice of covering the wound with the jaccenet was **(p.128)** found to keep 'wounds moist and liable to infection, whereas uncovered wounds would dry out and scab over'.¹⁵ By 1911, while the packets still consisted of 'Two dressings in waterproof covers, each consisting of a gauze pad stitched to a bandage, and a safety pin',¹⁶ the waterproof element was provided as a protective shield for the dressing prior to use, rather than as part of the process of wound care. Additionally, by this date the gauze was impregnated with the solvent sal alembroth and tinted with aniline blue to aid the identification of leakage once the bandage was in place. It appears that earlier practices of impregnating all dressing materials with a solution of 1 in 1,000 solution of corrosive sublimate for the purposes of antisepsis had been discontinued. Instead, the instructions printed on the dressings included an emphasized warning not to touch the gauze padding or the wound itself. Men were also briefly issued with a phial of iodine for cleaning wounds prior to the application of the dressing, although this was discontinued for combatant servicemen by the middle of the war.¹⁷

As this narrative indicates, throughout the war several small changes were made to the first field dressing. A separate wool pad took the place of the stitched-on gauze pad and the waterproof cover was reintroduced, reflecting the greater wetness of conditions on the Western Front in comparison to the South African veldt. In 1916 a larger 'shell dressing' began to be issued, in response to wounds arising from increasingly industrialized weaponry and the dominance of artillery on the field of battle, although, like iodine, this dressing were predominantly issued to medical servicemen. Increased demand for dressings, which accompanied the rapid expansion of military service under Lord Kitchener, also meant that producers of medical supplies, such as Thackray's Pharmaceutical Shop in Leeds, invested in specialist technologies, enabling increased and improved production of branded 'Aseptic' field dressings under Home Office contracts.¹⁸

However, the technology of the field dressing itself, as issued in 1918, would have been easily recognized by servicemen of previous conflicts, just as the field dressings issued during the Second World War were little different from those issued between 1914 and 1918. A similar continuity can be seen in the triangular bandages which formed part of the standard **(p.129)** kit of the surgical haversack, medical companion, and fracture kit which accompanied medical officers and which it was the responsibility of the medical orderly to pack and maintain.¹⁹ Introduced in the first half of the nineteenth century, these highly flexible objects were central to the first-aid training offered by the St John Ambulance Association, which viewed them as 'a universal tool for the treatment of a variety of wounds and fractures', as well as to military medical practice.²⁰ Their use would thus have been familiar to men of the RAMC(T) and pre-war VAD volunteers, as well as to men of the Regular RAMC.

This material link between the practice of the St John Ambulance training and that of the RAMC is a further demonstration of the extent to which the work of civilian voluntary first aid overlapped and, indeed, integrated with military medical practice.²¹ The tools of primary care provision were the same for both groups. The promulgation and increased ubiquity of first-aid materials throughout the war via the issue of first field dressings to an army of mass mobilization had, however, a significant accelerating effect on understandings of *who* was qualified to undertake medical care provision on the battlefield. The issuing of all soldiers with basic medical supplies, whether volunteer or conscript, ranker or officer, combatant or non-combatant, democratized medical caregiving in line with Sir John Furley's ambitions for first aid training in the nineteenth century, but further and faster than he could have anticipated in peacetime.²² Meanwhile, the triangular bandage, an aid to improvisation, could itself be improvised out of a range of materials, putting the means of carrying out basic first aid in the hands of the ordinary soldier rather than the trained or part-trained medical serviceman.

Yet the democratization of medical caring over the course of the war ultimately remained limited. Information about the ways in which a puttee might substitute for a triangular bandage, whether as a bandage or to strap a splint, was never part of formal military first aid training in the way in which the application of the first field dressing was decreed to be.²³ It appears to have remained confined to training manuals, both formal publications for use of more specialized medical service personnel and unofficial ones which had to be purchased privately. Similarly, the more sophisticated wound and shell dressings, where the gauze was **(p.130)** impregnated with 2 per cent iodine solution or, in the case of 'extensive or foul wounds ... [either] 1-60 carbolic lotion to which has been added 5 percent of sodium chloride; Lysol 1 drachm to 1 pint; or 1-2000 mercuric chloride or biniodide',²⁴ were primarily supplied to the staff of Field Ambulances and other medical establishments, rather than to combatant servicemen.

While a form of specialized wound dressing could thus occur at multiple points along the lines of evacuation provided by the men of the RAMC, the CCS increasingly became a particular site for complex wound drainage and care, due to the presence of 'trained nurses ... [who] were competent and confident wound dressers'.²⁵ This spatial focus for complex wound care reflected the increasing levels of technical and specialist knowledge attained by trained female nurses in the late nineteenth and early twentieth century, but it also progressed over the course of the war, not least through the development of the Carrel-Dakin method of wound treatment between 1915 and 1917.²⁶ Onerous, labour-intensive, and requiring both painstaking aseptic medical practice and meticulous record-keeping, this method was increasingly used in the second half of the war and created a specific sphere of practice in which those who provided such care could point to their development of a specialized skill set.²⁷ As surgeons Richard Charles and Arthur Sladden noted in 1919, 'the successful management of ... a ward [of a CCS] is very greatly dependent on the skill and untiring patience and energy of the sisters and orderlies'.²⁸

Part of this skill was knowledge and practice of asepsis in the treatment of wounds by both nurses and orderlies, including, where possible, orderlies serving in dressing stations as well as CCSs and Base hospitals. The War Office's 1915 *Memorandum on the Treatment of Injuries in War* (hereafter *Memorandum*) instructed that 'Both medical officers and orderlies should wear clean aprons or gowns, and sterile rubber gloves should be worn if wounds are explored with the finger, or opened up for drainage, or **(p.131)** other manipulation'.²⁹ Instructions were given on the winding of gauze around splints to prevent the tightening of bandages as blood dried, as well as on the necessity to fill in tallies to include 'An *accurate* description of the injury, for example — "Compound fracture of skull", not "G.S.W. head." "Compound fracture of femur," not "Shrapnel wound of leg."' ³⁰ While the practicality of such instructions being put into practice in the actual battlefield conditions which

field-ambulance medical officers and nursing orderlies found themselves providing care in must be open to question, the inclusion of orderlies in such instructions identifies them as part of the development of medical expertise around wound care over the course of the war.³¹ Like trained female nurses, they formed part of a larger process of developing and communicating particular technical expertise which could, over time, be constructed as semi-professional.³²

This narrative of increasing professionalism was not fully inclusive, however, with the RAMC stretcher bearer positioned uncomfortably in relation to narratives of developing knowledge of asepsis and appropriate wound care, which increasingly foregrounded the role of women. Although, at least in theory, in receipt of more first-aid training than combatant troops, stretcher bearers' work tended to place them outside of the CCS and other physically defined spaces of care, the context in which expertise in drainage and asepsis was increasingly being developed. Instead, these men assisted with the provision of unskilled wound care through their work on the battlefield, something which placed them in an ambiguous position in relation to developing medical standards. The *Memorandum*, for example, asserted that those who applied the first field dressings in the front line could be viewed as dangerously unskilled:

It is of the utmost importance that the *first field dressing should always be removed as soon as possible*. It has in many cases been applied by the soldier himself or by his comrades, it has been soiled by contact with dirty clothes and dirty hands, and it is often applied to a dirty skin. It has almost always been put on too tightly if applied by unskilled persons, and even if not put on too tightly, the swelling of an injured limb may soon make the bandage too tight.³³

(Original emphasis.)

H. W. M. Gray, in his monograph *The Early Treatment of War Wounds* (1919), gave a contrasting view, arguing that dressings should not **(p.132)** automatically be changed at dressing stations unless one of six definite indicators was present. These included the application of a first field dressing over dirty or imperfectly cleaned skin, bandages that were either too loose or too tight, and imperfectly applied splints.³⁴ While offering contrasting advice to MOs, both the *Memorandum* and Gray built their cases on the assumption that the first field dressing was likely to be poorly applied by combatant troops and that stretcher bearers, whatever training they might have received, would still lack the skill necessary to remedy poor application prior to arrival at either the RAP or dressing station. The lack of standardized training provided to regimental stretcher bearers would seem to support this understanding of bearer skills in stabilizing wounds for initial transport; however, the generalized circulation of the *Memorandum*, in particular to all MOs, whether attached to a

regiment or other military medical establishment, would appear to also implicate RAMC bearers attached to Field Ambulances in this critique.

At the same time, while stretcher bearers, both regimental and RAMC, were issued with additional dressings, the application was not necessarily seen as the prerogative of bearers as medical care providers. Arthur Mills, a captain in the Duke of Cornwall's Light Infantry Special Reserve, for instance, did not associate the first field dressing with bearers, describing the dressings as 'two pads of gauze and cotton-wool and a bandage, [which] can be ripped out of its case and clapped on to the wound, and so save the injured man, who may have to lie out hours before he can be taken back to a dressing station, many risks from loss of blood or outside infection'.³⁵ Mills associated the bearers who carried him back under enemy fire after he was wounded not with the initial dressing of his wound but rather with the speed of their collection and transportation. While Mills did not have long to wait for such transport,³⁶ the delay for others was noted and often blamed by doctors and nurses for infections setting in due to lack of prompt treatment.³⁷ With the overall speed of the evacuation process a source of public criticism and political contention from the early days of the war,³⁸ stretcher bearers found themselves from the start the subject of scrutiny and criticism similar to that levelled at hospital orderlies during the Crimean War, with their labour criticized as more damaging than healing, whatever their intentions.³⁹

(p.133) While the use of first field dressings had the potential to lay stretcher bearers open to scrutiny and criticisms, the development of other medical technologies had the opposite effect. The Thomas splint, introduced as part of orthopaedic practice from 1915,⁴⁰ for example, was credited with reducing fatalities due to bone haemorrhage in cases of femoral fracture from 80 per cent to 15.5 per cent.⁴¹ While the splints themselves were primarily used by medical officers who applied them at RAPs, their increasing use was part of a wider trend in the promulgation of practices aimed at improving the stabilization of broken limbs through appropriate splinting throughout front-line medical services. *The Soldier's First Aid*, published in 1917, for instance, included a description of how to manufacture a Thomas splint out of a rifle, a bayonet, a bayonet scabbard, and some puttees for use on the battlefield.⁴² Building on the emphasis placed on improvisation in RAMC rankers' training, such knowledge and skills made the work of both manual and mechanically assisted carriage by bearers easier, safer, and more effective.

Similarly, and related to this, improved knowledge of the impact of shock on wound survival shaped bearer practice, as well as that of nurses and nursing orderlies.⁴³ Shock was defined by the RAMC manual as 'a condition produced by severe injury or emotional disturbance', whereby 'The sufferer becomes pale and cold, he lies in a semi-conscious and helpless state, the face pinched, the lips ashy, the temperature sub-normal, the pulse feeble or absent. He often

breaks out into a cold sweat, and may have fits of shivering, or be restless.'⁴⁴ According to Christine Hallett, it was 'conceptualised as a form of disintegration caused by injury, haemorrhage, pain and exposure to cold[,] ... part of a process by which the body systems seemed to "shut down", threatening physiological coherence'.⁴⁵ Although "The diagnosis and conceptualisation of "shock" or "collapse" was problematic in the second decade of the twentieth century',⁴⁶ the condition was already understood to require rapid 'containment' of the patient, both physiologically and psychologically. While nurses undertook much of this labour in CCSs, it was the responsibility of the bearers during the periods of transport that got them there.

(p.134) According to H. M. W. Gray and K. M. Walker's pamphlet on *The Treatment of Wounded Men in Regimental Aid Posts and Field Ambulances* (1918), therefore, 'Regimental Stretcher Bearers should ... be instructed in the gentle handling of patients and in the application of splints. Rough or unnecessary movement must be avoided as one of the most potent factors in precipitating shock.'⁴⁷ They were also to be made aware of 'the necessity for mobilizing every means of warmth in the forward area',⁴⁸ to be instructed in

the danger of wound shock and taught the urgency of preventing unnecessary loss of body heat during the carry back to the Aid Post. To obviate this loss, R.S.B.s should be supplied with a certain number of waterproof sheet-blanket packets, each packet consisting of one blanket wrapped in a ground sheet. These are strapped to the stretcher ready for use, and returned with the R.S.B.s as soon as they have delivered the wounded man at the Aid Post. ... The occasional loss of a blanket will be amply compensated for by the saving of wounded men who would otherwise die from the effects of a carry on bare stretchers.⁴⁹

According to Gray and Walker:

The chief protection of the wounded man against cold during the first part of his journey lies in the liberal use of blankets. At no time is the loss of heat more rapid during the first two hours after wounding, and every effort must be made to prevent exposure to cold at this period. Nothing is more striking than the deterioration in condition that takes place when a stretcher case has been started on his journey without a blanket beneath him as well as one on top. ... In cold weather and with shocked cases a third must be added.⁵⁰

In *The Early Treatment of Wounds*, Gray included three pages of instructions on how to wrap patients in blankets, including detailed illustrations (Figure 4.1), as well as a further nine pages of instructions on keeping the patient warm and dry once he had arrived at the RAP or dressing station. Again, the emphasis was placed on the capacity of medical servicemen for innovation, with sterilizing and

heating devices being variously constructed from biscuit tins and the exhausts of motor ambulance cars (Figure 4.2). Indeed, so successful was this last improvisation that it was **(p.135) (p.136)** developed into a formal technical innovation in motor ambulance design, with exhausts being routed to provide heating to vehicle interiors.⁵¹

The Trenches

While the development of medical knowledge and consequent instruction of bearers around the treatment of shock were undoubtedly effective in saving lives as the war progressed, the logistics of providing more detailed and sophisticated treatment continued to present problems. David Rorie, serving as a medical officer with a Field Ambulance attached to the 51st (Highland) Division, recalled:

[I]t was a common experience that no proper attempt was made at the C.C.S. to return promptly the Field Ambulance's supply of hot-water bottles, Thomas' splints and other special appliances—things always of the utmost value to us—sent down with patients, nor see that proper drying arrangements existed for dealing with blankets and stretchers soaked by the **(p. 137)** rain and mud of the long carry from the front line. As the war went on there was a great improvement effected; for each motor transport driver was ultimately given a chit at the Main Dressing Station by the despatching N.C.O.,

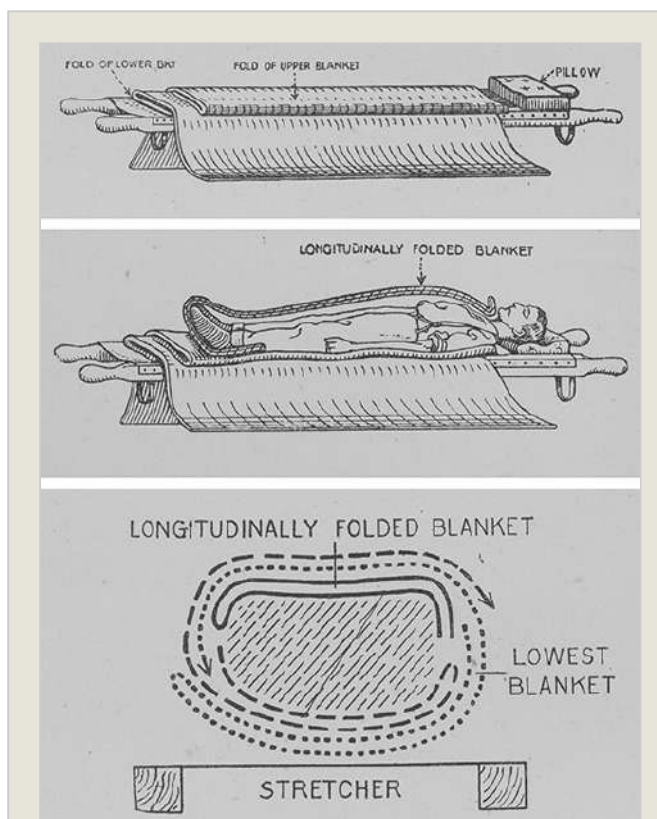


Fig. 4.1. Wrapping a patient; Gray, *Early Treatment of War Wounds*, pp.13-15.

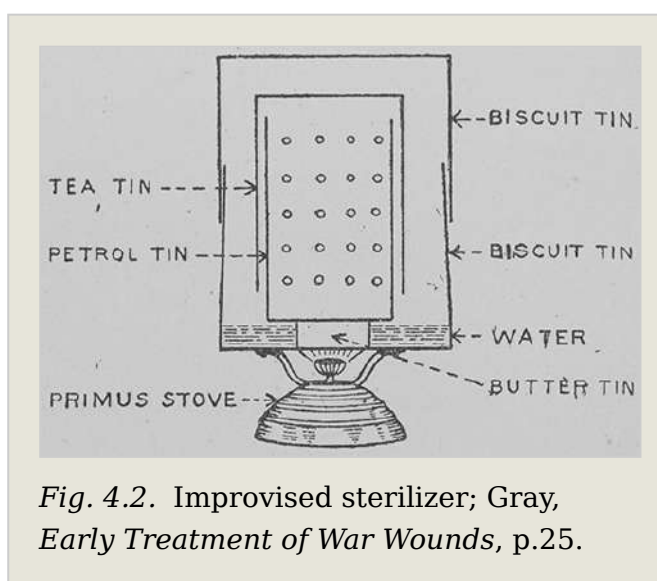


Fig. 4.2. Improved sterilizer; Gray, *Early Treatment of War Wounds*, p.25.

detailing what special appliances went with the patients on his car; and this chit had to be signed by the C.C.S.'s receiving N.C.O., so that a check was available. And when the Casualty Clearing Stations were at last awake to the fact that blanket-drying was not a troublesome side-show but an important factor in combating shock up the line, we had taken a step forward by which everyone benefited.⁵²

Such developments had the potential to make the life of an MO such as Rorie easier, but they created additional labour, both bureaucratic and domestic, for RAMC rankers.

Other developments which had less than positive implications for the delivery of care by RAMC rankers, particularly bearers, were some of those relating to 'trench work'. This was a subject to which the *BMJ* devoted two pages and nine illustrations in its 1917 article, and it appears to have been an area which presented particular logistical problems for medical personnel. While for the medical services the trenches were the first point of contact for wounded men with a trained medical professional and were spaces to be negotiated in the process of evacuating men rapidly out of danger to a site where they could receive appropriate care, for the military they were strategic tools of offence and defence.⁵³ Unsurprisingly, the development of trench design over the course of the war owed more to their role in changing military strategy than considerations for the convenience of medical services. Thus the introduction of the zigzag formation of trenches, designed to make it more difficult for an enemy to control them in the event of a successful attack, made the negotiation of corners so difficult as to render the design of stretcher then in use all but unusable (Figure 4.3). According to the *BMJ*, 'it is common for the problem [of negotiating corners] to be solved by lifting the patient on a blanket or on a stretcher over the parapet or back wall of the trench, and carrying him to the regimental aid post over the intervening ground'. This was a risky manoeuvre: 'Should the trenches happen to lie at the top of an ascent this is a relatively easy process, but otherwise it can only be carried out after nightfall unless the need for removal is so urgent that the risk must be taken of the patient and his bearers all being killed.'⁵⁴

The width of trenches was also a problem. As the *BMJ* noted, the twin trench, new in 1917, 'may be nowhere wider than 24 in., while the (p.138) average width of a fully-developed trench is not more than 4 ft. at the level of the shoulders'. Again, 'its course is invariably interrupted by angles round which an ordinary stretcher cannot be carried except by tilting'.⁵⁵ Trenches located where the ground water was low enough to allow a trench depth of over 6 feet, meanwhile, may have provided excellent protection for the men in them at the expense of only three layers of sandbags, but were designed to be dug at an angle whereby the bottom was 2 feet wide and the ground-level width was 4 feet. With Army pattern stretchers measuring 1 foot 11 inches in width, and 7 feet 9 inches in length including the poles, stretchers could not physically be carried along such trenches, again forcing bearers and their patients to leave the comparative protection they offered for open ground.

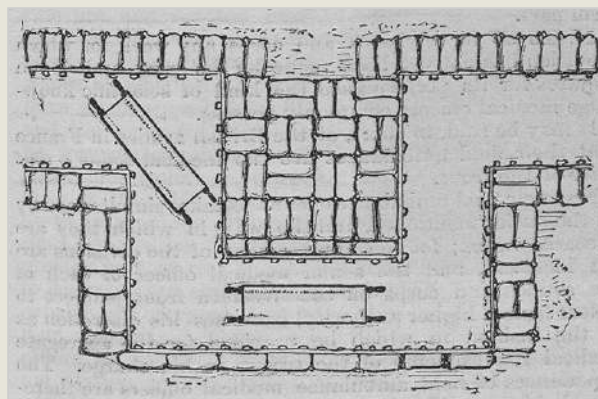


Fig. 4.3. Diagram to illustrate the difficulty of getting a stretcher round the angle of a trench; 'The Royal Army Medical Corps and Its Work', *BMJ*: 219.

These developments in trench design thus posed not merely challenges but actual risks to the evacuation process undertaken by RAMC bearers. The design of stretchers failed to develop in an integrated manner with that of trenches, with direct implications for the way in which bearers were required to work, forcing them to face greater danger than they would (p.139) have otherwise. It also affected bearers' ability to improvise, particularly in relation to piggyback lifts, which were problematic in narrow spaces. Manual carries remained useful, as Sir George Beatson noted in his pamphlet on *How the Wounded are Cared for in War*: 'In the trenches it is difficult to use the ordinary Army stretcher, especially in the zig-zag communication trenches, and it has been found that the wounded are best conveyed on a blanket. Modified stretchers have been devised to meet the difficulties, but it cannot be said that they have been very successful. Use has, however, been made of wheeled stretchers after the wounded have left the communication trenches.'⁵⁶

The Motor Ambulance Corps

Wheeled stretchers were not the only form of wheeled transportation that saw increased use over the course of the war. As Beatson went on to note, 'It is the Motor Ambulances that have done the chief part of the transportation in the present campaign.'⁵⁷ This was in spite of the fact that this form of mobile

medical unit had not been 'contemplated in the original scheme of mobilization',⁵⁸ reflecting wider weaknesses in the 'rather vague' arrangements for medical provision in the event of a European war drawn up by the then Director of Military Operations, Sir Henry Wilson, in 1911.⁵⁹ Plans were in place for the mobilization of horse-drawn transport, although difficulties in acquiring suitable animals presented problems. Walter Bentham, recalled to service having previously served with the Royal Garrison Artillery, remembered that 'all the harness for the horses had to be got ready, as well as the horses and a good many of the horses had to be broken in for the work, for they were quite fresh and never used in the Army before'.⁶⁰

It was, however, the lack of specifically *motorized* ambulance cars in the early days of the war that became a focus for political and public criticisms of the work of the RAMC.⁶¹ The deficiency was initially made up by donated ambulance cars coordinated by the BRCS, but by the end of 1914, 'the formation of motor ambulance convoys, in proportion to the number of divisions in the field, had become definitely authorized, and the War Office ... had prepared and despatched as many as 324 motor **(p.140)** ambulance cars to France'.⁶² These added to the eighty Wolseley chassis cars sent in September, which already formed No. 1 Motor Ambulance Convoy. 'Subsequent convoys were made up of motor ambulance cars presented by various generous donors, local committees, and the British Red Cross Society and Order of St. John, as well as of cars purchased by the War Office. ... By the end of 1915 eighteen motor ambulance convoys had been sent overseas. ... [The] total number of convoys mobilized before the termination of the war was 48.'⁶³ Each convoy was made up of fifty vehicles, with a convoy allocated to each army corps. Their establishment was, according to the *BMJ*, 'an outcome of the circumstances of the war in France, and an example of the ingenuity of the Royal Army Medical Corps in promptly adapting its arrangements to the needs from time to time arising'.⁶⁴ Here medical improvisation in the face of circumstances may be said to have occurred at unit rather than individual level.

The development of this new medical unit was not, however, as smooth as this summary implies. In theatres other than the Western Front, particular landscapes often made motorized vehicles unsuitable as forms of transport,⁶⁵ while even on the Western Front conditions created by industrialized warfare produced problems for the deployment of a technology that was still lacking in robustness as well as comfort.⁶⁶ Horse-drawn ambulance waggons, with their RASC drivers, remained in service throughout the war, clearing the wounded at Pozières who had been brought down by trolley from the fighting at Courcellette in 1916.⁶⁷ At the Second Battle of Ypres, a combination of heavy shelling and the disruption to RAMC pre-battle planning by orders from the General Officer Commanding (GOC) of the Vth Corps for all units to fall back on Ypres made the distance to be covered in the evacuation from front line to aid post much longer than planned. As a result, motor ambulance cars were all but unusable. Instead,

field-ambulance bearer units were mobilized for extended manual carries, and wheeled stretchers were deployed.⁶⁸ Despite the fact that the following year, at St. Eloi, motor ambulance cars 'continued running both night and day under frequent and heavy shell-fire',⁶⁹ the problem of the destruction of roads by shelling for the deployment of motorized medical transport would never be fully resolved. On the Somme in 1916 and at Passchendaele in 1917, levels of destruction to the landscape, particularly when combined with poor **(p.141)** weather, would continue to make manual carries a necessary part of medical evacuations.

In Palestine, lack of any roads forced the officers and men of the Field Ambulances to rely on their own initiative and improvisation of road surfaces for effective transport, as well as on the Camel Corps. W. D. Fothergill recalled, 'During our trek across the Sinae [*sic*] Desert ... [w]e also had sledges drawn by mules to carry the sick and wounded but eventually got Model T Ford ambulances which ran on "roads" made by laying down ordinary rabbit netting on top of the sand—it worked.'⁷⁰ Charles Ammons also recalled the invention of the 'wire road' '[t]o ease the movement of vehicles, animals and men in the loose sands This consisted of mesh chicken wire pegged down at the edges and it fulfilled its purpose admirably of keeping wheels and feet on the surface.'⁷¹ Even so, officers such as W. Brown and R. C. Evans spent a great deal of time experimenting with alternative forms of transport. These included a variety of sleighs and wheeled stretchers which were designed to enable greater ease of evacuating the wounded, partly due to the shortage of suitable motorized transport but mainly to replace the camel cacolets, detested for their lack of comfort or convenience and their tendency, like the pavé roads of France, to cause further pain and injury to patients transported in them.⁷²

While increased use of motor ambulance cars could never fully replace the labour of the men of the RAMC, as a technological innovation they posed a significant challenge to the Medical Corp's control of casualties. The men who made up the motor ambulance convoys were drawn from the RASC, recruited for their engineering skills, rather than the RAMC—at a ratio of three to one. The *BMJ* noted that the small section of RAMC men attached to any given convoy

is commonly employed solely for train embarkation, and is then attached to one of the group of casualty clearing stations, and works under its commanding officer. The other two sections are each under the control of a motor convoy medical officer, who is personally responsible for the safe delivery of all patients loaded on the ambulance cars in his charge. Whenever possible he accompanies his section personally, not only because his attendance may be required for a patient, but also in order to regulated the travelling pace.⁷³

(p.142) Medical authority over the MAC sections was thus limited: 'vehicles conveying seriously wounded cases requiring special medical equipment will be accompanied by R.A.M.C. personnel. ... However, it may frequently happen that this duty will devolve on the driver, as the number of medical personnel in the M.A.C. is not sufficient to provide one nursing orderly for each vehicle.'⁷⁴

Nor was the substitution of RASC personnel and expertise the only way in which the RAMC relinquished authority in these mobile spaces of medical evacuation. The medical services' increasing reliance on voluntary-aid organizations to run transportation links, with the Red Cross staffing 1,484 motor ambulances and three ambulance trains by the end of the war, provides another example. Thus a hospital train would be supervised by a single RAMC medical officer but, in the case of those staffed by the voluntary services, the forty-one male orderlies who formed the bulk of the train's staff were drawn from the BRCS male VAD units and volunteers attached to associated voluntary units such as the FAU. This latter, after 1916, drew an increasing amount of its personnel from the ranks of non-absolutist conscientious objectors.⁷⁵

While the men of the FAU ultimately provided 600 personnel serving overseas and ran four ambulance trains,⁷⁶ the substitution of voluntary for military medical provision also entailed the increased use of women as motor ambulance drivers, whether as part of the BRCS's Women's Ambulance Corps or the First Aid Nursing Yeomanry (FANY). On the one hand, this development served to reinforce women's claims to the role of care provider based on gendered divisions of labour, even in the context of the battlefield, with one wounded soldier writing that 'I would a thousand times prefer to be driven by a woman' as 'they bump less'.⁷⁷ On the other hand, just as the recruitment of conscientious objectors to the Corps from 1916 helped create an association between male military medical service and men commonly viewed as 'despised and rejected',⁷⁸ so **(p.143)** the increasing use of women in roles previously occupied by men served to undermine the claims to masculine status of men who still occupied those roles.

While the work of women in the dangerous masculine space of a theatre of war overseas was the subject of much press discussion,⁷⁹ the men of the RAMC did continue to serve in these roles throughout the war. Sixty-three ambulance trains were mobilized over the course of the war, only three of which were run by the BRCS. The Corps thus continued to play an important role in providing both the medical officers and the male orderlies who staffed trains, just as it provided the two officers and twenty-eight orderlies of the medical wing of an MAC. Yet the prominence given by the British press to female and voluntary staffing of these mobile medical units, as well as the outnumbering of RAMC staff by RASC staff in each MAC, resulted to a large extent in the cultural effacement of RAMC rankers as transport operatives beyond the Casualty Clearing Station, both in terms of physical presence and masculine status. The

introduction of a range of non-military medical care providers into the evacuation process would prove to be one of the most significant developments for the gendered status of the RAMC as the unit where men provided medical care within the military.

Casualty Clearing Stations

The increased use of voluntary medical care units as staff for transport units, alongside the increasing importance of non-medical transport servicemen in these mobile spaces of care, was one element of a wider change in military practice, whereby dilution and substitution were used to address the ongoing manpower crisis.⁸⁰ For the medical services this meant not only the dilution of staff at Base and home hospitals through the employment of women at the uneven ratio of two or three women to one man,⁸¹ but also the more direct substitution of enlisted men by both male conscientious objectors and trained medical women to free up combatant manpower. The latter included both female doctors and trained military nurses. The work of women doctors remained, as Whitehead has **(p.144)** shown, contested throughout the war. This meant that while their work might be welcomed by Allied military services, including France and Serbia, and the Scottish Women's Hospital was asked to establish a hospital at Wimereaux and allowed to run a military hospital at Endell Street, London, their service overseas as part of the British Army Medical Services was limited.⁸² By contrast, the British military authorities' embrace of the work of trained military nurses as substitutes for male orderlies overseas, particularly at CCSs, would have significant implications for the changing role and status of the men of the RAMC over the course of the war.

The idea of placing nurses in CCSs was suggested as early as 1914, when Colonel Arthur Lee, serving as Kitchener's personal commissioner on the state of the medical service, recommended in his reports the use of trained nurses 'on account of their superior training by comparison with most RAMC orderlies and their powerful effect on morale.'⁸³ While his opinion echoes the assessment of the work of female military nurses advanced after the Crimean War,⁸⁴ Lee's proposal was initially viewed by the senior ranks of the Corps 'as highly experimental and very dangerous. Male military medical officers had serious doubts over the wisdom of posting women so close to the front line, believing that they would be unable to cope with the privations and stresses of life in the "zone of armies".'⁸⁵ However, Sir Anthony Bowlby's suggestion, as Consulting Surgeon to the Forces, in advance of the Somme Offensive, that 'most CCSs became general hospitals in all but name' meant that it became 'possible to contemplate the employment of female nurses' in these units, in spite of their location relatively close to the front line.⁸⁶ As the *BMJ* noted in 1917, CCSs were

no longer mere stations but real hospitals, despite the fact that some are only about six miles from the fighting line, and few lie further off than double that distance. The patients are nursed by trained women nurses;

ordinary hospital beds are provided for the more serious cases; the operating theatres have usually four operating tables, are equipped with electric light and the appliances familiar in the hospitals of large towns; and while some have x-ray annexes of their own, all have at their command the services of travelling x-ray outfits and clinical laboratory work is done for them by the mobile laboratories which are commonly to be found in the neighbourhood.⁸⁷

Stasis and complexity appear to have helped to overcome anxieties about relative proximity to the front line.

(p.145) The increasing capacity for CCSs to undertake surgery close to the front line was central to their status as what David Rorie called the 'spoiled children' of the army medical services,⁸⁸ although 'the chief differences between it and a base hospital are attributable to the diversity of duties that the casualty clearing station has to fulfil'.⁸⁹ As the *BMJ* noted,

the general practice is to provide sufficient accommodation and personnel for the performance of at least four operations simultaneously and continuously for an unlimited number of hours or days. Even when a battle is in progress, of the wounded men who arrive at the casualty clearing station at least 10 per cent must visit the operating theatre before they can be sent to the base hospital.⁹⁰

This meant that, within these spaces of care, 'The surgical team was the important unit of practice, and the [nursing] sister was the lynch-pin of this team, setting up the operating theatre, preparing dressings and sterilizing equipment; assisting in the surgical procedure; and finally, dressing the wounds and caring for the patient as he began to recover consciousness.'⁹¹

Nurses also played a significant role in the process of triage as it developed at CCSs,⁹² as well as increasingly providing specialized medical support as anaesthetists and X-ray operators.⁹³ The multiple roles that women occupied within the CCS, along with the fact that this was the first site where a wounded soldier would encounter a woman as part of the process of medical evacuation, meant that they were a recurrent theme in wounded men's memories of their medical evacuation. W. J. Handy, for instance, recalled that, on arrival at the CCS, 'the nurse packed me up with hot water bottles and I soon found myself in the operating theatre. A white figure made a rapid survey and I heard a voice a long way off say "Bring me the transfusion apparatus" before once more I slipped off into unconsciousness.'⁹⁴ The nurse was clearly a more solid individual to Handy than the dehumanized white figure of the anaesthetist.

While Handy had vivid recollections of the nursing care he received at the base and convalescent hospitals he spent time in, as well as the CCS, his memoir is also notable for the number of references he makes to the orderlies he

encountered as part of his experience of medical care. In addition to the orderly who dressed his first wound at a CCS before he **(p.146)** returned to service, it was an orderly, rather than a nurse, who provided emotional support when he came round from the anaesthetic after his leg was amputated later in the conflict:

I wakened to find myself in a real bed with sheets, a luxury that I had almost forgotten still existed in the world. It seemed like heaven except that my left foot was aching. I moved the other one over to rub it. 'That's funny' I thought and was settling down to sleep again when the orderly dashed over, thinking perhaps that I might have had a shock at my discovery, but I was past that. They could have taken my head off for all I should have cared.⁹⁵

Thus despite the cultural dominance of female nurses, the male rankers of the RAMC continued to play a role in these spaces of care, just as they made up the bulk of ambulance-train staff throughout the war. Men needed to be transported from ambulance to distribution room, from triage to preparation room to surgery, from surgery to recovery ward and, because CCSs still predominantly acted as evacuation units, from ward to train for transport to the base. Such labour required physical strength, which it was presumed women could not supply.

In the process, as Handy bore witness, medical orderlies also provided emotional comfort and reassurance to the wounded. More prosaically, David Rorie wrote that 'Constant demands were made by Corps to detail officers and nursing orderlies from the Ambulances for the purposes of assisting the C.C.S.s; ... when sent to the C.C.S., they were looked on as "nobody's bairns", and too often given all the dirty work to do: in one such a case a medical officer and twenty nursing orderlies were set to dig drains!'⁹⁶ While this labour may not have differed in essence from the physical labour Field Ambulance tent orderlies and stretcher bearers were expected to undertake further up the line, Rorie's comments indicate the extent to which the Corps viewed itself, and the work of the men who served in it, as more than a labour corps. Such views find a parallel in the anxieties expressed by female VADs about the work expected of them by trained military nurses. Having enlisted to nurse, many felt the drudgery of cleaning, bed-making, and bandage-rolling that they were assigned to do did not make full use of their enthusiasm and skills.⁹⁷

As the war continued, VAD nurses increasingly developed the specialist skills that allowed them to position themselves as appropriate medical care providers in relation to the trained nurses who supervised them.⁹⁸ **(p.147)** Similarly, the men of the RAMC in CCSs were, over time, able to carve out new roles for themselves. Even as women were increasingly being recruited and trained to fill technical roles as anaesthetists and X-ray technicians, growing surgical

specialism and expertise created new roles for men serving in the ranks in the form of innovations such as the mobile 'theatre trailer' (Figure 4.4). This mobile unit was designed 'to push an operating section forward' when the more static unit of the CCS as a whole would take too much time to pack up and move. Each trailer, comprising a pitch-pine frame and a 'lorry loaded with stretchers, blankets, cooking and feeding requisites for a hundred serious surgical cases for two days and ... also a hospital marquee and operating tent', was staffed by four RAMC orderlies and two RASC drivers: 'These six men pack the loaded furniture in ten minutes.'⁹⁹ The orderlies would also, once in place, act as theatre and nursing staff, in place of the female nurses who remained in the more static main units. The work of these men thus required not only strength but also expertise.

(p.148) While the theatre trailer represents a way in which medical innovation could enable RAMC rankers serving in CCSs to position themselves as significant contributors to the work of the unit, such repositioning can also be seen in a more continuous aspect of caregiving across the course of the war. Medical innovations such as blood transfusions and wound drainage via the Carrel-Dakin method, both of which women were intimately involved

in delivering,¹⁰⁰ may have led to the development of a new space with the CCS, the resuscitation ward, where men often experienced seemingly miraculous recoveries.¹⁰¹ Nonetheless, the moribund ward, where men beyond saving were taken following triage, remained a significant space within these sites, one which remained the preserve of the men of the ranks of the RAMC. The mortuary also remained a feature of the CCS throughout the war, meaning that the role of gravedigger for those who died continued to be one that needed to be filled throughout the conflict. Such work formed a significant part of the construction of a specific unit identity and sense of expertise for the men of the Corps.¹⁰² It also serves to indicate the limits of both medical advances and a dichotomous gendered reading of care giving which the increased role of women in advanced medical units has tended to be read as. In the chaotic, overburdened surroundings of a CCS at full capacity, nurses did indeed care for men in their final moments before death.¹⁰³ Nonetheless, male orderlies were still expected to take on the emotional labour of care for the dying in particularly rigorous circumstances because they were perceived as combining gentleness

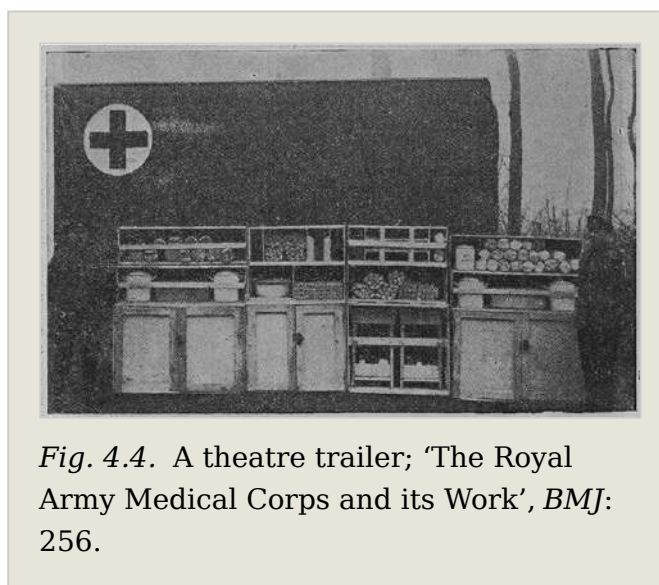


Fig. 4.4. A theatre trailer; 'The Royal Army Medical Corps and its Work', BMJ: 256.

with a lack of the emotional fragility which was attributed to women. Where the medical advances of the war failed in their goal of saving life, it was often the men of the Royal Army Medical Corps who were there to provide comfort at the end.

Thus in spite of social and medical advances that made it easier for women to claim a role in front-line medical caregiving, there remained requirements for the physical and emotional labour of men in such spaces of care throughout the war. These developments, which served to expand women's professional experiences, horizons and claims to status, were more ambiguous for male medical carers, limiting, as they did, the sphere in which they could claim a specific form of non-professional expertise in the context of military effort. At the same time, technical advances in surgery and medical mobility opened up new spaces of care in which **(p.149)** forms of expertise could be displayed, particularly in relation to handling specialist equipment efficiently and carefully.

Auxiliary Hospitals

While male medical caregivers other than doctors were able to maintain a presence, and indeed a sense of purpose, in CCSs and, to a lesser extent, Base and home military hospitals,¹⁰⁴ the same cannot be said for auxiliary hospitals, the final stage in the chain of evacuation for wounded men. These hospitals, based in Britain, were primarily utilized by the military medical services as convalescent units, although those classed as A were staffed by trained nursing personnel and supplied with suitable equipment for operations. Those classed as B were considered suitable for convalescents requiring little or no further treatment.¹⁰⁵ Comyns Berkeley and Victor Bonney, medical officers at the Middlesex Hospital at Clacton-on-Sea, noted that 'there were very few of our patients who required any further surgical treatment after they had left us, but we were always ready to, and did, on several occasions, go to various parts of the country to visit an auxiliary hospital at which our advice, as to the further treatment of some patient we had sent them, was wanted'.¹⁰⁶ Indeed, according to the official history 'the employment of officers and men in the R.A.M.C. in [auxiliary hospitals] was permitted in very exceptional cases only'.¹⁰⁷ These sites of care were thus predominantly staffed by volunteers organized by the BRCS, although the War Office continued to provide oversight and the convalescent men remained under military discipline and were required to wear a uniform of 'hospital blues'.¹⁰⁸

This dilution of the medical services on the home front had important implications for the status of male medical care providers. The work undertaken by women in these spaces was not merely that which had been 'considered to be more appropriate for the orderlies',¹⁰⁹ as in military hospitals. It was, in cases such as that of several of the auxiliary hospitals attached to the 1st Southern General Hospital, Birmingham, *all* the work of caring, excluding men entirely from such roles. In taking on the **(p.150)** work that would otherwise have been

undertaken by men, these women increased the chance that the men they were replacing would be sent overseas or transferred into combatant service in the same way as the increased use of voluntary carers in medical transports already discussed. It also reinforced the cultural norms around caring as appropriate women's wartime work, ideas which, as we will see in the next chapter, worked through representation to actively diminish men engaged in such labour.

Conclusion

The technological and social changes that medical caregiving in the British armed forces underwent over the course of the war can thus be seen to be ambiguously progressive for RAMC rankers. Medical tools such as the Thomas splint and improvised versions thereof could enable semi-skilled non-combatants to help save lives through making their work of transport easier, safer and more effective. However, the increasing use of first aid techniques on the battlefield challenged the distinctiveness of the men of the RAMC as a unit providing first aid and medical care by placing the means of saving life in the hands of the unskilled combatant. With the concurrent development of specialist techniques such as the Carrel-Dakin treatment, which enabled trained nurses to position themselves ever more effectively as skilled experts in wound drainage, the caring space occupied by the RAMC bearer shrank, with his identity as a semi-skilled care provider challenged by association with the development of infection through delay in treatment.

Other ambiguities can be seen in developments in mechanical and transport technologies across the course of the war. Motorization reduced the area of expertise occupied by RAMC rankers in relation to the transport of the wounded as they found their roles increasingly occupied by both mechanical specialists of the RASC and the non-military members of voluntary aid units. However, the limits of such developments, most notably in the context of landscapes destroyed by the mechanical firepower of industrialized war, re-emphasized the importance of both the manual labour and the human ingenuity of the stretcher bearer all along the line of evacuation. Similarly, the limits of medical developments, however dramatic, in the face of the sheer scale and destructiveness of industrialized warfare meant that the men of the RAMC continued to have a role to play as orderlies on moribund wards and as gravediggers, as comforters and witnesses to the suffering and sacrifice of the dying and the dead.

(p.151) The challenges that modernizing developments presented to RAMC rankers, however, were not only technological but also social, with the expansion of the role of women into spaces of care previously occupied by male care providers having multiple effects across the entire period of the war. While to some extent the origin of this particular development predated the war and, indeed, was a defining feature of the direction of development of the RAMC as a formal military medical unit in the second half of the nineteenth century, the acceleration of women's occupation of spaces of care ever closer to the front line

during the war meant that, by the end of the conflict, the challenges posed by women's caring roles to the identity of the men of the RAMC had become acute. The shrinking of the spaces of care in which male medical caregivers could claim a right to perform, even on the field of battle, has tended to dominate analyses of the war in terms of gender progression. Yet the Corps emerged from the war with its reputation for effective, even efficient, care enhanced.¹¹⁰ How the men of the RAMC were able to construct an identity as a specialized and necessary unit of non-combatant servicemen in the context of a society engaged in total war, and how this was reflected in cultural representations of their work and roles, form the subject of Chapter 5.

Notes:

- (¹) 'The Royal Army Medical Corps and its Work', *British Medical Journal*: 260.
- (²) Carden-Coyne *The Politics of Wounds*, pp.44-52.
- (³) Cooter, 'Medicine and the Goodness of War': 150.
- (⁴) *Ibid.*: 151.
- (⁵) Carden-Coyne, *The Politics of Wounds*; Whitehead, *Doctors in the Great War*.
- (⁶) Howell, "'Soldier's heart'"; Cooter, *Surgery and Society*; Hallett, *Veiled Warriors*, pp.91-3; Pelis, 'Taking Credit'; Carden-Coyne, *The Politics of Wounds*, pp.88-139; van Bergen, *Before My Helpless Sight*, pp.340-50.
- (⁷) Horne, 'Masculinity in politics and war', pp.32-3.
- (⁸) Cooter and Sturdy, 'Of War, Medicine and Modernity', p.17.
- (⁹) See Max Weber, 'Bureaucracy', in *From Max Weber: Essays in Sociology*, ed. and tr. H. H. Gerth and C. Wright Mills (London: Routledge & Kegan Paul, 1948), pp.196-244. For a discussion of Weberian interpretations of war and medicine, see Cooter and Sturdy, 'Of War, Medicine and Modernity', pp.1-6.
- (¹⁰) Gary Sheffield, *Forgotten Victory: The First World War: Myths and Realities* (London: Headline Books, 2001); Boff, *Winning and Losing on the Western Front*, pp.246-51.
- (¹¹) Gill, *Calculating Compassion*, p.193; Chapter 1, pp.22-6.
- (¹²) P. H. Starling, 'First Field Dressing', *Journal of the Royal Army Medical Corps* 147 (October 2001): 371, PMID: 11766226.
- (¹³) Edward H. Benton, 'British Surgery in the South African War: The Work of Major Frederick Porter', *Medical History* 21 (1977): 281.

(¹⁴) Peter Doyle and Chris Foster, *What Tommy Took To War 1914-1918* (Oxford: Shire Publications, 2014), p.107.

(¹⁵) Benton, 'British Surgery in the South African War', 280.

(¹⁶) War Office, *Royal Army Medical Corps Training*, p.321.

(¹⁷) RAMC bearers continued to be issued with iodine throughout the war, and it formed part of the RMO's medical pack for use at RAPs.

(¹⁸) Penny Wainright, 'Chas. F. Thackray Ltd: suppliers to the surgeons', in *Leeds City Business 1893-1993: Essays Marking the Centenary of the Incorporation*, ed. John Chartres and Katrina Honeyman (Leeds: Leeds University Press, 1993), pp.244-69.

(¹⁹) Beggs, *Guide to Promotions*, pp.240, 242, 245.

(²⁰) Vincent Little, 'The Fabric of First Aid: A History of the Triangular Bandage', *Pharmacy History Australia* 9 (November 1999): 10-12; 'Historical Happenings: The Triangular Bandage', *The Newsletter of St John Ambulance South Australia* (August 2012): 9.

(²¹) Chapter 2, pp.54-5.

(²²) Furley, *The Proper Sphere of Volunteer Societies*.

(²³) Wood, *The Soldier's First Aid*, pp.11, 54-5.

(²⁴) *Memorandum on the Treatment of Injuries in War Based on Experience of the Present Campaign* (London: HMSO, 1915), pp.5-6.

(²⁵) Hallett, *Containing Trauma*, p.41.

(²⁶) The process of this development can be traced from the original formulation of the method in 1915, through the publication of scientific papers in medical journals, to its official adoption as the preferred method of wound treatment in British CCSs in 1917. See Carden-Coyne, *The Politics of Wounds*, pp.127-9 and Hallett, *Containing Trauma*, pp.56-9.

(²⁷) *Ibid.*, pp.41-2.

(²⁸) Richard Charles and Arthur Sladden, 'Resuscitation Work in a Casualty Clearing Station', *British Medical Journal* 1 (5 April 1919): 403.

(²⁹) *Memorandum*, p.2.

(³⁰) *Ibid.*, p.7.

⁽³¹⁾ In doing so, it also implicates these men in ongoing debates about the best and most appropriate methods of treating wounds and wound infection which were played out in the pages of medical journals throughout the war. See Harrison, *The Medical War*, pp.28-9; Carden-Coyne, *The Politics of Wounds*, pp. 122-9.

⁽³²⁾ Hallett, *Containing Trauma*, p.68.

⁽³³⁾ *Memorandum*, p.2.

⁽³⁴⁾ Gray, *The Early Treatment of War Wounds*, p.41.

⁽³⁵⁾ Platoon Commander [Arthur Mills], *Hospital Days* (London: T. Fisher Unwin, 1916), p.14.

⁽³⁶⁾ *Ibid.*, pp.14-15.

⁽³⁷⁾ Carden-Coyne, *The Politics of Wounds*, p.102.

⁽³⁸⁾ *Ibid.*, p.44.

⁽³⁹⁾ Furneaux, *Military Men of Feeling*, p.196.

⁽⁴⁰⁾ Harrison, *The Medical War*, p.101.

⁽⁴¹⁾ P. M. Robinson and M. J. O'Meara, 'The Thomas Splint: Its origins and use in trauma', *The Journal of Bone and Joint Surgery* 91 (April 2009): 540-4, DOI: 10.1302/0301-620X.91B4.21962.

⁽⁴²⁾ Wood, *The Soldier's First Aid*, p.20-1. Mayhew, *Wounded*, pp.240-1.

⁽⁴³⁾ Hallett, *Containing Trauma*, pp.28-35.

⁽⁴⁴⁾ *Royal Army Medical Corps Training*, p.352.

⁽⁴⁵⁾ Hallett, *Containing Trauma*, p.28.

⁽⁴⁶⁾ *Ibid.*, p.30.

⁽⁴⁷⁾ H. M. W. Gray and K. M. Walker, *The Treatment of Wounded Men in Regimental Aid Posts and Field Ambulances* (Third Field Survey Company, 1916), p.3 in Papers of R. A. Bryden, RAMC/PE/1/BRYD/63, AMS.

⁽⁴⁸⁾ Gray, *Early Treatment of War Wounds*, p.12.

⁽⁴⁹⁾ Gray and Walker, *The Treatment of Wounded Men*, p.3.

⁽⁵⁰⁾ *Ibid.*, pp.2-3.

- (⁵¹) John S. Haller, Jr, *Farmcarts to Fords: A History of the Military Ambulance 1790-1925* (Carbondale and Edwardsville: Southern Illinois University Press, 1992), p.172.
- (⁵²) Rorie, *A Medico's Luck in the War*, pp.6-7.
- (⁵³) Sheffield, *Forgotten Victory*, pp.118-19.
- (⁵⁴) 'The Royal Army Medical Corps and its Work', *British Medical Journal*: 219.
- (⁵⁵) Ibid.
- (⁵⁶) George Thomas Beatson, *How the Wounded Are Cared for in War* (Glasgow: Scottish Branch, British Red Cross Society, n.d.), p.20.
- (⁵⁷) Ibid.
- (⁵⁸) Macpherson, *History of the Great War*, Vol. 1, p.52.
- (⁵⁹) Harrison *The Medical War*, p.17.
- (⁶⁰) Bentham, *Diary*, 9 August 1914.
- (⁶¹) Carden-Coyne, *The Politics of Wounds*, pp.28-37.
- (⁶²) Macpherson, *History of the Great War*, Vol. 1, p.53.
- (⁶³) Ibid., pp.53-4.
- (⁶⁴) 'The Royal Army Medical Corps and its Work', *British Medical Journal*: 223-4.
- (⁶⁵) Carden-Coyne, *The Politics of Wounds*, p.36.
- (⁶⁶) Carden-Coyne, *The Politics of Wounds*, pp.55-6.
- (⁶⁷) Macpherson, *History of the Great War*, Vol. 3, p.25.
- (⁶⁸) Ibid., Vol. 2, p.399.
- (⁶⁹) Ibid., Vol. 3, p.2.
- (⁷⁰) W. D. Fothergill, *Memoir*, TS, p.4, Papers of W. D. Fothergill, LIDDLE/WWI/GS/0575. LC.
- (⁷¹) Ammons, 'Service in the First World War', p.18.
- (⁷²) W. Brown, *Diary*, TS, 23 February 1917, 28 February 1917, Papers of W. Brown, LIDDLE/WW1/GS/0211, LC; *Midwinter, 1914-1919 Memoirs*, p.48.

(⁷³) 'The Royal Army Medical Corps and its Work', 223.

(⁷⁴) 'Organization and Operation of a Motor Ambulance Convoy', *Journal of the Royal Army Medical Corps*, repr. from the *Royal Army Service Corps Quarterly* (November 1934): 105.

(⁷⁵) Rebecca Wynter, 'Conscription, Conscience and Controversy: The Friends' Ambulance Unit and the "Middle Course" in the First World War', *Quaker Studies* 21 (December 2016): 213–33, DOI: 10.3828/quaker.2016.21.2.6; Meyer, 'Neutral Caregivers or Military Support?', 116–17; Chapter 2, p.71.

(⁷⁶) Greenwood, *Friends and Relief*, p.193.

(⁷⁷) Quoted in Laura Doan, 'Primum Mobile: Women and Auto/mobility in the Era of the Great War', *Women: A Cultural Review* 17 (August 2006): 34–5, DOI: 10.1080/09574040600628468.

(⁷⁸) This phrase was first used in relation to conscientious objectors as the title of Rose Alatini's 1917 novel, now viewed as a landmark in gay and lesbian fiction. (A. T. Fitzroy [Rose Alatini], *Despised and Rejected* (C. W. Daniel, Ltd, 1917)). For further discussion of the novel and its significance, see Lois Bibbings, 'Images of Manliness: The Portrayal of Soldiers and Conscientious Objectors in the Great War', *Social & Legal Studies* 12 (September 2003): 355–8, DOI: 10.1177/09646639030123003.

(⁷⁹) Robert, "'All that is Best of the Modern Woman"'?; Lucy Noakes, "'Playing at Being Soldiers"'?: British women and military uniform in the First World War', in *British Popular Culture and the First World War*, ed. Jessica Meyer (Leiden: Brill, 2009), pp.123–45.

(⁸⁰) Thom, *Nice Girls and Rude Girls*, pp.53–77.

(⁸¹) Macpherson, *History of the Great War*, Vol. 1, p.142.

(⁸²) Whitehead, *Doctors in the Great War*, pp.107–12.

(⁸³) Harrison, *The Medical War*, p.32.

(⁸⁴) Chapter 1, pp.28–9.

(⁸⁵) Hallett, *Veiled Warriors*, p.48.

(⁸⁶) Harrison, *The Medical War*, pp. 32, 38.

(⁸⁷) 'The Royal Army Medical Corps and its Work', 254.

(⁸⁸) Rorie, *A Medico's Luck in War*, p.6.

(⁸⁹) 'The Royal Army Medical Corps and its Work', 254.

(⁹⁰) Ibid.

(⁹¹) Hallett, *Containing Trauma*, p.94.

(⁹²) Hallett, *Veiled Warriors*, p.74.

(⁹³) Carden-Coyne, *The Politics of Wounds*, p.161.

(⁹⁴) W. J. Handy, 'The Adventures of a Civilian in Khaki', TS memoir, 1935, unpaginated, privately held, used with permission of Handy's family.

(⁹⁵) Handy, 'The Adventures of a Civilian in Khaki'.

(⁹⁶) Rorie, *A Medico's Luck in War*, p.6.

(⁹⁷) Watson, 'War in the Wards', 500.

(⁹⁸) Hallett, *Containing Trauma*, p.41.

(⁹⁹) 'The Royal Army Medical Corps and its Work', *British Medical Journal*: 256.

(¹⁰⁰) Pelis, 'Taking Credit': 271; Hallett, *Veiled Warriors*, pp.91-2.

(¹⁰¹) Carden-Coyne, *The Politics of Wounds*, p.69.

(¹⁰²) Chapter 3, pp.124-5.

(¹⁰³) Vera Brittain, *Testament of Youth: An Autobiographical Study of the Years 1900-1925* (Macmillan, 1933), p.178; Ellen La Motte, *The Backwash of War: The Human Wreckage of the Battlefield as Witnessed by an American Hospital Nurse*, in *Nurses at the Front*, edited by Higgonet, p.19.

(¹⁰⁴) Chapter 3, pp.89-94.

(¹⁰⁵) Macpherson, *History of the Great War*, Vol. 1, p.85.

(¹⁰⁶) Comyns Berkeley and Victor Bonney, *The Annals of the Middlesex Hospital at Clacton-on-Sea During the Great War, 1914-1919* (London: W. J. Clark and Co., n.d.), p.56.

(¹⁰⁷) Macpherson, *History of the Great War*, Vol. 1, p.86.

(¹⁰⁸) Reznick, *Healing the Nation*, pp.99-115. Convalescent officers were cared for in separate wartime convalescent homes and had privileges including being allowed to wear their own clothes.

(¹⁰⁹) Watson, 'War on the Wards': 502.

(¹¹⁰) Harrison, *A Medical War*, p.9; Furneaux, *Military Men of Feeling*, p.203.

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