The Social Organisation of Help: A Study of Boundaries that Matter for First Aid Provision and the Careers of The British Red Cross Volunteers

Hannah Elizabeth Stoddart
B.A. (Hons.), M.A

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Department of Sociology

Lancaster University

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Abstract

This thesis is about the provision of first aid and the changing roles of first aid practitioners and healthcare professionals in an ecology of healthcare. Rather than treating first aid as a fixed body of knowledge to be instilled in first aid practitioners and healthcare professionals through training and courses, I focus on how the boundaries of first aid and help are constituted and enacted and how expertise is distributed between professionals and practitioners. As I show, the spatial and temporal organisation of first aid is crucial for actual and potential patients and the careers of The British Red Cross volunteers. To capture aspects of this dynamic, I make use of Bowker and Star's (1999) account of boundaries and categories, Lave and Wenger's (1991) work on situated learning and Abbott's (1988) concept of professionalisation.

This thesis is based on an empirical study of The British Red Cross Event First Aid Service. This service provided medical support for major sporting and leisure events until it was disbanded in 2020. As well as observing five events between August - November 2019, I interviewed ten first aid volunteers, attended The British Red Cross training programmes and conferences, and gathered secondary sources and historical materials relating to the development of The British Red Cross and related parts of the healthcare system, particularly the history of the UK ambulance service.

Together, these materials help to show that the provision of first aid is situated within a wider 'ecology' of care that continues to evolve. I argue that the structure of this ecology matters for the day-to-day experience of volunteers, what they do, how their careers are organised, and for how first aid is delivered in space and time. The thesis concludes that first aid is a product of these arrangements and of situated but always dynamic relations between the careers of professionals and volunteers.

Key words: first-aid, healthcare, organisation, boundaries

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Declaration

I hereby declare that this thesis is my own work and has not been submitted in substantially the same form for the award of a higher degree elsewhere.

Chapter One: Positioning Help: Investigating the Multiplicity of Categories and Boundaries that Matter for First Aid Provision

What happens when someone needs urgent medical attention? The answer depends not only on the nature of the incident/problem but also on when and where it occurs, and therefore who provides help. A wide range of incidents, accidents, and injuries take place in public and private spaces, at home, work, and on the move. Sources of help vary depending on the incident and where it occurs. Sometimes help is provided by members of the public and bystanders; by trained first aiders at work, trained first aid services (e.g., at events) or ambulance services.

Existing research on the organisation of pre-hospital emergency medical work tend to focus on the work of emergency medical teams such as paramedics (see Palmer, 1989; Nurok and Henckes, 2009; Corman, 2018). Paramedics are often the first medical specialists on the scene who have the clinical skills to treat patients or transfer them to hospital to be treated by someone more senior. Their work involves working in non-standard medical settings (e.g., at public spaces like parks, train stations, city, and town centres) and paramedics now train for 3+ years at a higher education institution before qualifying (College of Paramedics, 2014). Although research on paramedics provides insights on how care is organised in non-standard medical settings, it often overlooks those who provide help and emergency response without having the same level of training and clinical skills of those working in an ambulance/emergency response department. For example, semi-professional (e.g., trained first aiders, community first aid responders) or non-professional (bystanders and members of the public) persons also deliver first aid response in non-medical settings often before an ambulance is called to the scene. My research focuses on the changing roles of first aid practitioners, specifically examining how help is socially organised in public/temporary event settings.

According to British Red Cross researchers, first aid is "the most under investigated, misunderstood, and underdeveloped feature" of the emergency care system – with much research focusing on the work of "ambulance services, emergency department care and rehabilitation" (Pellegrino et al., 2017: p.5). However, there have been efforts to change this with existing first aid research examining the role of bystanders in an emergency (Darley and Latene, 1968; Hussain and Redmond, 1994; Levine et al., 2002). This has inspired different British Red Cross campaigns and training workshops which focus on the resilience of the individual (e.g., the 'Don't Stop at 999' campaign and first aid education workshops aim to teach basic first aid skills to the public and vulnerable groups (McNulty, 2016; British Red Cross, 2016a). These programmes are implemented through The British Red Cross courses in which a trained first aid tutor delivers a 4-hour session of instructions on how to provide first aid. These courses usually occur in a classroom setting, and members 'practice' first aid by giving treatment to dummies, watching videos and taking part in quizzes.

A critique of bystander research is that it only focuses on individualistic and behavioural arguments about why and how the individual might respond to a medical situation. These studies treat first aid as abstract and fixed, (something that is universally captured), they do not look at the place, time, and organisation of first aid. First aid manuals also deal with first aid as a fixed or sets of generically applicable skills. These texts are updated every 5+ years, and changes tend to be minor (e.g., adding how to navigate the healthcare system or treating foreign bodies are the most recent updates in the revised 10th edition). Overall, these manuals have had a small number of changes over the past fifty years. This does not reflect the changing nature of the first aid providers e.g., The British Red Cross Event First Aid Service, which closed on March 31st, 2020 (elaborated below).

This thesis takes a different approach to understanding first aid, by understanding how first aid provision is situated within the ecology of care and by studying the multiple boundaries at work (expertise, careers, space, and responsibility etc.).

This thesis is about the social organisation of first aid provision and about how first aid is situated and reproduced within a wider ecology of care. This is an important topic because the details of first aid provision matter for what happens when someone needs urgent care.

It is also important that my 'ecological' approach provides fresh insight into how first aid provision by the Red Cross first aiders is professionally bounded and how these boundaries are enacted across multiple different spaces and times.

By studying first aid as part of a wider ecology of care, my aim is to show how first aid provision is structured and reproduced within specific social and institutional settings; and how this provision relates to the also changing role of the mainstream healthcare system, including the work of ambulance crews and first responders. As mentioned before, existing first aid research tends to be dominated by the physical, biological, and psychological responses of individuals, particularly focusing on the actions of the bystander (Latene & Darley, 1968; Van de Velde, 2009; Hussain and Redmond, 1994; Cho et al., 2010, Lavine and Crowther, 2008). More recent first aid research emphasises the individual responses and behaviour such as their willingness and confidence to act during a first aid situation (Oliver et al., 2014; Muise, et al., 2019). My approach is different in that I examine the social organisation of care, and how that varies and changes over time. In order to investigate first aid provision within and as part of this wider 'ecology of care' I take The British Red Cross Event First Aid Service as my main site of enquiry.

At the time of my research, The British Red Cross Event First Aid Service had been going on for more than sixty years, providing volunteers to 'cover' first aid duties at public events ranging from football matches to long distance running events. I first met volunteers and professional British Red Cross staff at The British Red Cross Event Aid First Service Conference in April 2019 and learned about their work. For my purposes, following and studying first aid events teams promised to give me access to the sorts of questions in which I was interested such as when and how are boundaries between 'mainstream' and volunteer first aiders managed? How is provision organised at complex events, such as spread-out routes (running events); and more restricted venues (festivals, shows)? This strategy also allowed me to investigate the lives and careers of the volunteers involved, and to learn more about what it is to 'be' and to become a first aid provider.

I designed my research with these aims in mind and five months later in August 2019, I was given ethical approval to carry out observations of five events at which The British Red Cross

Event First Aid Service provided medical support and to carry out ten interviews with volunteers and staff who were part of the service. The data collection lasted until March 2020 - when this part of the organisation closed.

In detail, I was able to investigate Meadowhall Festival (August 2019); Greendale Half Marathon (September 2019) Great North Run (September 2019); Westdale Arena (November 2019) and North Eastern Illumination show (November 2019). These investigations involved a combination of observation and interviews. For example, at the Great North Run I spent the Saturday shadowing volunteers at the junior 'miniature' event and then the following day I observed the finish line team at the main event. The following week I carried out follow up interviews with volunteers who I met on both days.

In addition to these observations and interviews, I gathered a wide range of secondary materials from the British Red Cross. These included event plans, risk assessments, patient report forms, training booklets and the event planning and management guidelines. These showed how first aid guidelines were set out within the service. I also consulted historical sources such as the NHS policy papers and other organisations such as the Care Quality Commission, Association of Ambulance Executives to find out how expertise was reproduced across various healthcare organisations including the National Health Service (NHS).

In collecting and working through these materials I was inspired by a range of theoretical traditions. First, and most important, I drew on Geoffrey Bowker and Susan Leigh-Star's work on classifications, categories, and boundaries. In particular, I follow their method of taking note of where and how spatial, temporal and professional boundaries are configured and enacted, and how professional and everyday practices are organised and framed by them. Although Abbott (1989) does not write about the performative work of boundaries, his analysis of professional 'jurisdictions' and his account of how these change proved to be useful in making sense of how first aid provision is, and has been organised.

Since the 'doing' of first aid is in no small measure defined by the expectations and experiences of those involved, it was important to investigate the careers and lives of first aiders, and how this intersected with the spatial and temporal organisation of provision. In

addressing this aspect of the research I drew on Lave and Wenger's (1991) ideas about apprenticeship and situated learning, in particular, their account of how newcomers (in my case, new recruits and volunteers) become 'old hands' and experienced practitioners. This allowed me to put together the different strands of my enquiry: matching aspects of bounding and organisation to first-hand accounts of the doing and delivery of first aid, and to an understanding of how this is, in turn, related to the 'careers' of providers.

To investigate how these organisational boundaries were enacted in situations of help in the moment. I drew on Bowker and Star's and other related authors work around standards. This allowed me to understand how response was organised by various protocols and guidelines during a first aid situation. It was by following one patient 'first aid' journey in which I was able to see how multiple classifications and categories were bounded and worked together to organise the patient's delivery - from their collapse on the finish line to the discharge from the hospital. The organisation of response is embedded in the setting before an accident even happens. It is only when a person becomes a patient in which categories become enacted.

To investigate how these protocols, guidelines and legislations configure responsibility within dual temporary event settings (workplace and public settings), I examined an outdoor music festival – Meadhowhall festival and an indoor music venue - Westdale Arena. To do this work, I gathered secondary documents such as event plans and risk assessments of the two event sites, as well as closely analysing the Purple Guide (which is an official Health and Safety England (HSE) guideline tool used to advise the structure of medical provision at music and art events.). It was by working with Orlikowski and Yates (2002) and other related authors around temporal structuring in which I was able to analyse how the spaces of responsibility are configured across different spaces and times. By expanding the work of these authors in discussion with Bowker and Star's ideas around the performative work of categories and boundaries, I was able to study how the Purple Guide works with other categories to bound and configure responsibility within these settings.

These four empirical cases show the organisational structure of first aid and response is part of an ecology of care, and that that is different from established ways of understanding first

aid which are usually grounded in psychological and behavioural arguments that focus on the actions of the individual willingness and confidence in a first aid situation.

These studies do not deal with or explain the constitution of temporal and spatial boundaries, the career and organisational structures and their longer histories that matter for first aid and response. To be able to understand and capture these boundaries, I needed to work with an idea of social boundaries and categorisation (Bowker and Star, 1999) – but to extend that in various ways – professionally (Abbott, 1991); organisationally (Lave and Wenger, 1991) and temporally and spatially (Bowker and Star and Orlikowski and Yates, 2002).

By taking this approach, I generate new ways of understanding first aid provision – doing so by examining organisational settings and the spatial and temporal boundaries associated with them. My research understands first aid as dynamic; by which I study how the definition and position of first aid occurs within a system of care and those organisations that provide care fluctuate and change over periods of time – in the sense they are not static nor fixed (see more details in Chapter Three and Chapter Four). These fluctuations matter for the social organisation of first aid provision on a micro level, in the sense that they matter for how first aid is organised and how responsibility is configured and re-configured on the day of an event (elaborated in Chapters Five and Chapter Six).

In setting the scene for what comes next, the introduction is divided into four separate sections: First, I begin with a brief history of The British Red Cross Event First Aid Service. Although the service did not appear as an official division of The British Red Cross until the mid 1980s[1,2], The British Red Cross has provided volunteering services for first aid and crisis support since it formed in 1870. Second, I elaborate on the reasons why I selected The British Red Cross Event First Aid Service. Third, I explain my theoretical position (the

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[1] I do not have an official date for this. When speaking to The British Red Cross volunteers and staff they could not give an accurate date but one volunteer, Gary* had been part of VAS since the 1940s, and mentioned how he started volunteering as a paramedic for the service in 1970s.

[2] Pseudonyms are used to anonymise first aiders I interviewed and the events I observed. The thesis involves interviews with 10 of The British Red Cross Event First Aid Service volunteers and staff and observations at five different events which The British Red Cross Event First Aid Service provided medical support for. (See page.23-26 for more details about conducting interviews and carrying out observations).

performative work of categories and boundaries). Fourth, I outline other literature I use to build on my theoretical position to understand first aid as historically situated, dynamic and on-going.

The Red Cross Event First Aid Service: A brief history

The British Red Cross have been providing first aid and crisis support since 1870. In 1909, The British Red Cross Society emerged as part of the Voluntary Aid Scheme (VAS) alongside St. John's Ambulance. For many years the two organisations often overlapped and collaborated and in 1939 the Joint War Organization was established to coordinate efforts of the two organisations (British Red Cross, 2022a; MacAuslan, 2021a). Although the provision of first aid at events (races, concerts, public gatherings etc.) was not an official service within The British Red Cross until the 1970s, Voluntary Aid Societies have provided medical support at events since 1908 at the London Olympic Games (St John's Ambulance, 2020)[3]. During the Second World War, The British Red Cross Society and St. John's Ambulance were a vital part of the emergency healthcare landscape and delivered "civil defence, training and providing volunteers to give emergency first-aid assistance during bombing raids" (Ramsden and Wall, 2019: p. 506). In 1940, the Museum of St. John's Order recorded a total of "298,343 certificates had been issued to those who had successfully completed the various training courses" (MacAuslan, 2021a: np).

After 1945, there was a decline in the membership of both organisations, but Voluntary Aid Society membership from the St. John's Ambulance did not dip below 1938 levels until the 1980s. While British Red Cross Society membership was in decline from the late 1950s and 1960s, membership remained over 40,000 until 1968 (Ramsden and Cresswell, 2019). According to Ramsden and Cresswell (2019: p.522), both organisations had more volunteers with first aid training in the early 1970s than in 1938.

These authors provide insights into how Voluntary Aid Societies are "able to adapt their services and their appeal to volunteers to the realities of a changing society" (2019: p.507). For example, both British Red Cross and St. John's Ambulance volunteers provided

3 St. John's Ambulance was formed to provide first aid services at public events. The brigade was first deployed at Queen Victoria's Golden Jubilee in 1887 (Swift, 2019)

ambulance support after the Second World War, but this later dissolved when in 1973, the National Health Service Reorganisation Act contracted all Ambulance Services to National Health Authorities. There is a close connection between National Health Services and the operating space of voluntary aid societies, but the details of this change all the time, for example, the position of the ambulance service matters for the space and territory of first aid providers like The British Red Cross and St. John's Ambulance (see more details about this in Chapter Three).

Ramsden and Cresswell (2019) claim that in the 1970s, society was becoming more risk aware and that this created new sites in which first aid expertise was required. The most obvious being in the workplace. In this context the Health and Safety at Work Act 1974 required workplaces (and temporary event organisers) to assess how much medical support they needed (Ramsden and Cresswell, 2019). This act provided more autonomy for industries[4] to select what type of first aid provision they wanted for their workplaces. During this time there was a growth in demand for voluntary first aid organisations to provide first aid at work training and to provide medical support at events (Ramsden and Cresswell, 2019), usually for a fee. Seven years later, The Health and Safety (First-Aid) Regulations 1981 required employers "to provide adequate and appropriate equipment, facilities and personnel to ensure their employees receive immediate attention if they are injured or taken ill at work" (Health and Safety Executive, 2013: p.7). Both these interventions increased the space for voluntary aid societies and the need for trained volunteers.

Voluntary Aid Societies continued to expand the scope for volunteering activity in the 1980's as Voluntary Aid Society volunteers would provide first aid support at school fetes, country shows, football games, concerts and music events (Ramsden and Wall, 2019). For example, in 1981, 600 St. John's Ambulance volunteers worked at the London Marathon providing

4 According to Ramsden and Cresswell (2019: p. 152), previous legislations that enforced workplace health and safety responsibilities were the First Aid (Standard of Training) Order 1960 that gave guidance on the level of training required for workplace first aid. In addition, the Factories Act 1961 required that all factories provide at least one trained first aider for every fifty employees (Ramsden and Cresswell, 2019: p. 512)

medical support to runners and spectators, and later that summer volunteered at another busy event – the Royal wedding of Diana and Charles (MacAuslan, 2021b).

Medical provision at events continued throughout the 1990's – 2010's and with the growth of public events such as festivals, music concerts, school fetes, there were plenty of opportunities for volunteers to improve their skills and progress their volunteering duties. During the late 1990's volunteers had the opportunity to develop their first aid careers. i.e., Standard First Aiders could become Enhanced First Aiders or work as Ambulance Technicians at events (more details on this in Chapter 4).

In the late 2010's, the number of patients visiting The British Red Cross medical support tents at events dropped from 26,400 in 2016 to 11,500 in 2018 (British Red Cross, 2016b; British Red Cross, 2018). However, part of this decision was deliberate. A review of their event first aid model in 2017 led to changing the organisation's focus targeting medium and large events rather than small events (British Red Cross, 2017). Two years after the event first aid programme was restructured Michael Adamson, Chief Executive of British Red Cross, released a statement announcing the closure of The British Red Cross Event First Aid Service, he said:

> *'In recent years, we have seen increasing pressures on both our income and the demands for our assistance, which means we must prioritise how we use every pound donated to us. Unfortunately, our event first aid work has been running at a financial loss for some time — the service still requires £1.8 million of donations annually to cover the shortfall between income and costs — and this is diverting vital funds from our efforts to provide emergency support for major domestic and global crises. So, it is with real sadness that we have taken the very difficult decision to close our event first aid service by March 31, 2020.'*

From March 31st, 2020, The British Red Cross Event First Aid Service closed its services because the service was causing a financial loss to the charity (The British Red Cross, 2019). After the closure of the service, all volunteers were given the option to transfer to St. John's Ambulance or St. Andrew's Ambulance in Scotland (The British Red Cross, 2019). Other

services which The British Red Cross offer involve providing support to refugees, asylum seekers and vulnerable migrants (i.e., offering emergency care supplies and providing advice and support); adults and young people who are struggling with loneliness; and more recently by providing coronavirus support (from 2021, British Red Cross volunteers have been assisting the NHS with vaccinations).

Ashley Garlick, an event management researcher, provides insights around the closure of The British Red Cross Event First Aid Service by identifying "how changes in organisational structure can trigger strategic renewal, which in turn causes a cascade of restructure down the organisation" (2020: p. 16). With hindsight, the closure of The British Red Cross Event First Aid Service related to The British Red Cross strategies and priorities as well as increased regulation in the event medical sector. For example, the growth in demand for new providers which "has been complimented by an increase in current or former NHS staff looking for new opportunities or income, as well as a relaxation of the first aid regulations making it easier to train first aiders for events" (Garlick, 2020: p. 16). Elaborating on the impact the closure of The British Red Cross events team will have for the future of the event medical sector, Garlick mentions major large events and small- community events will be affected the most. This is because large events require a level of resource beyond the capability of most first aid providers and small-community events are in any case generally unable to afford to pay for medical cover.

As described, The British Red Cross managed to transform and adapt its volunteering services to suit evolving needs and new areas in which first aid expertise is required, such as the growth of the event sector during the 1970s-1980s. This move increased the space and opportunity for first aid event volunteering teams. The closure of The British Red Cross Event First Aid Service is part of an ongoing history of first aid provision, just like the shift from Voluntary Aid Services main priority of providing ambulance transportation in the Second World War to then providing event first aid in the 1970s.

In the next section I show how The British Red Cross Event First Aid Service is positioned in a wider ecology of care: and how this fluctuates and changes. I use this discussion to expand on the concepts of boundaries and classifications.

Positioning first aid provision: how The British Red Cross Event First Aid Service is bounded and situated

This thesis focuses on the position of Red Cross Event First Aid Service within the 'landscape' of provision. I am therefore interested in how first aid provision is structured and on how it is 'bounded' in different ways: in terms of knowledge and expertise; in terms of volunteer career progression; in the social-spatial organisation of care; and the temporal bounding of medical zones. As will become clear, the position and status of first aid provided by trained volunteers depends on how the entire 'system' or the ecology of care is arranged.

My method is to study the performative work of boundaries and categories to show how The British Red Cross Event First Aid Service is situated within the ecology of care. With this ambition in mind, Chapter Three focuses on expertise and the wider system of professions; Chapter Four deals with volunteer careers and the organisation of The British Red Cross events team; Chapter Five studies the spatial organisation of response at one major event and Chapter Six explicates the temporal organisation of responsibility. It is through analysing first aid provision in these four contexts, that I argue that first aid provision is a product of multiple boundaries at work which define and delimit the scope of The British Red Cross Event First Aid Service and provide insights to the position of first aid in the wider field of healthcare. The organisations' expert knowledge, career structures, and the spatial and temporal configuration of provision revolves around boundaries and categories that are performative. These categories and forms of provision are defined in relation to each other. For example, the position of first aid depends on the provision of other types of emergency response, and on the situation involved.

My understanding of the performative work of boundaries is informed by the work of Geoffrey Bowker and Susan-Leigh Star (1999). These authors show how categories and classification systems produce and reproduce social order. I work with these ideas to show that first aid provision is a product of multiple categories the edges of which delimit and define emergency response and care in the present. This approach can also be used to trace the history of the position of first aid within the wider ecology of care. The next section

details Bowker and Star's approach to categories and boundaries and explains how I use these ideas to inform my study of the situated nature of first aid.

Investigating the performative work of categories, boundaries, and distinctions

Bowker and Star understand social life as an arrangement of categories. In their text, Sorting Things Out (1999) they explore the role of categories and classification schemes by analysing how they are used, defined, and constructed but also how they shape and sustain power relations and structures. According to Bowker and Star (1999) understanding the work of categories can be used to enrich understandings of the visible and invisible work involved in maintaining large-scale infrastructures such as the Internet, classification indexes (e.g., the International Disease Classification), guidelines and protocols (e.g., Nursing Interventions Classification), report forms etc. (Bowker and Star, 1999; Star and Strauss, 1999)

Classifications systems are defined as "a set of boxes (metaphorical or literal) into which things can be put to then do some kind of work – bureaucratic or knowledge production" which should ideally demonstrate (1) consistent, unique classificatory principles, (2) mutual exclusive categories and (3) a complete system that provides total coverage of the world it describes (p.10-11). Classifications "arise from activity, they are historically situated and temporally" and provide ways of coordinating, simplifying and guiding action but also have the structure to maintain and hold up certain hierarchies and values, particularly in bureaucratic and workplace practices and therefore central in maintaining power relations and structures (Bowker and Star, 2000: p.149). Categories are not 'made' independently, but rather bounded with ideas, techniques, technologies, people etc. They can be re-made over time, depending on new knowledge production or relations (such as membership) and often disappear "into infrastructure, into habit, into the taken for granted" (Bowker and Star, 2000: 149). I use these ideas about the historical nature of categories to follow the making of edges, roles, and responsibilities and study how they have changed and been formed over time.

A second observation is that categories are relational, they adjust to each other. For example, categories and boundaries of responsibility are often reorganised when a new service or organisation/ or provider is introduced, or when new roles emerge. The key point

here is that categories are not fixed but fluctuate over time. By implication, categories are layered, formalised, and negotiated with respect to other categories. In what follows, I draw attention to this aspect.

Third, categories often become ‘standardised’ over time. A standard is “any set of agreed-upon rules for the production of (textual or material) objects” (Bowker and Star, 1999: p.13). When a classification become standardised, routines tend to be performed habitually. This is “‘because standards are so pervasive that they have become taken for granted in our everyday environment, they may become completely embedded in everyday tools of use” (Star and Lampland 2009: p.11). There are different ways in which categories become standardised – including through organising bureaucratic practices, decision-making or arranging systems.

This brings me to the close coupled relation of categories, classifications and standards. Standards, from this view, are formalised representations that work with established categories and that reproduce related definitions and forms of classification. As Bowker and Star explain standards, are everywhere – they saturate the environment.

> “In the built world we inhabit, thousands and thousands of standards are used everywhere, from setting up the plumbing in a house to assembling a car engine to transferring a file from one computer to another. Consider the canonically simple act of writing a letter longhand, putting it in an envelope and mailing it. There are standards for (inter alia): paper size, the distance between lines in lined paper, envelope size, the glue on the envelope, the size of stamps, their glue, the ink in your pen, the sharpness of its nib, the composition of the paper (which in turn can be broken down to the nature of the watermark, if any; the degree of recycled material used in its production, the definition of what counts as recycling). And so forth.” (Bowker and Star, 2000: p.157)

In their words, standards and classifications are interdependent; “they are layered, tangled, textured; they interact to form an ecology as well as a flat set of compatibilities” (Bowker and Star, 2000: p.158). I use these ideas to investigate what they describe as an ecology of

organisational, professional, space and temporal boundaries, the combination of which matters for the position and character of first aid provision.

As already mentioned, these categories and changing relations between them are enacted and made real in the form of training pathways, volunteering and occupational roles, responsibilities, legislation, and equipment such as specialist technologies (e.g., mobile coronary units and defibrillators). Bowker and Star do not say much about variation or about differences in when and how categories are enacted. In the case I examine, there are aspects of 'the situation' that are important for how standards and categories are mobilised, and for how they have effect.

One way to conceptualise this is by using Erving Goffman's (1959) work which concerns the ordering of social interaction, and the situations and roles involved. Goffman is interested in how social action is situated and recognises that situations are dynamic and on-going. He explores how action unfolds in various settings, which affect how people perform roles related to the situation. Goffman develops the front and backstage metaphors to distinguish between different styles of impression management, and positioning. In his terms, the front stage is associated with a certain form of 'public facing' impression management. By contrast, 'backstage' refers to the region where the person can "step out of character" (Goffman, 1959: p.115). This happens when individuals or members of a group are not in the presence of an audience (other than themselves). What counts as a front, or a back region is not simply a matter of architecture. It depends on how the situation is defined, and by whom. In this context, front and back regions define, edge, and limit performances.

Goffman is also interested in the order and sequence of situations. He introduces the term 'scene' to refer to instances in which a person disrupts or destroys the impression of what is going on (1959, p.205) – this is when a situation becomes disordered and requires forms of 'repair work' and impression management' to restore the order of a situation (1959: p.205). This can occur when the order of the sequence becomes disrupted by an action that does not fit the relevant roles, and in which work is required to 'repair' the situation.

I use these ideas about the situated nature and the performative work of categories and distinctions to describe how help is arranged and enacted in the present. I am especially interested in the enactment of multiple classification schemes that organise first aid delivery when a patient falls ill (see Chapter Five), how these sequences and orders coexist and how they are formalised through guidelines and responsibilities (e.g., the Purple Guide – see more details about this in Chapter Six).

These ideas inform my study of how The British Red Cross Event First Aid provision is organised. The following chapters reveal a richly textured and multiple layered system of distinctions and boundaries (for instance in terms of professional expertise and responsibility). These arrangements and their histories matter for the experience of The British Red Cross first aiders, for their careers in the organisation, and for the organisation of responsibility and emergency response at events.

In describing these arrangements, I make reference to other sources and literatures, using these to build on and develop Bowker and Star's (1999) and Goffman's (1959) ideas about the performative work of categories in arranging and organising everyday social practices and interaction. These include Andrew Abbott's (1988) work on system of professions and jurisdictional boundaries; Lave and Wenger's (1991) approach to learning as situated; and Orlikowski and Kellogg's (2002) theories about temporal structuring.

Positioning first aid: four empirical studies

One way of thinking about the place of first aid is to make use of Andrew Abbott's work on 'The System of Professions' (1988). Abbott describes the changing and emerging distinctions between occupations and professions, analysing the process of professionalising as part of and within 'systemic' relations between co-existing occupations. The rise of one profession has implications for another: in the sense there is an ongoing jostling of positions that is evident in the making of 'jurisdictional' boundaries, of who has what rights to do what, and when. That there are – for Abbott – strong interests and forms of power involved.

According to Abbott (1988), not all occupations can become professions. In his terms, professions are defined as "…an exclusive occupational group applying somewhat abstract

knowledge to particular cases… [they] are organised around the knowledge system it applies, hence status with the profession simply reflects a degree of involvement in organising knowledge" (1988: p.8; p.188). This shows the relationship between different occupations as expertise itself evolves, and as occupations, gain, lose and maintain power relative to each other.

Rather than focusing on one system of professions (for example the relation between occupations in a singular system of professions) I combine Abbott's ideas about the relative positioning of expertise to examine the relationship between voluntary healthcare organisations (i.e., The British Red Cross and St. John's Ambulance) and the NHS including the ambulance service. It is by combining Abbott's ideas on professions and Bowker and Star (1999) ideas on categories and how they are historically situated and bound that I arrive at a distinctive account of The British Red Cross events team, and of how their work is organised.

These insights frame my analysis of the place of first aid alongside and in relation to the professionalisation of the ambulance service (related to the increase of specialist equipment (i.e., mobile coronary units, automatic external defibrillators, nebulisation therapy and aeromedical transportation) and the professionalisation of occupations such as paramedics.

Chapter Four takes a different approach. Instead of studying how first aid provision is bounded by occupational divisions, formally and 'from the outside', this chapter moves 'inside' to see how those boundaries are experienced and reproduced 'on the ground' by studying internal career structures within The British Red Cross Event First Aid Service. I focus on how individuals move through these internal career structures (e.g., Standard First Aider, Enhanced First Aider and Ambulance Technician) by studying the lives of three Red Cross first aiders.

In order for volunteers to move through these grades, first aiders have to have a mixture of training (completing certain qualifications) and experience (working at a first aid post). I build upon Lave and Wenger's ideas that learning is situated and that it happens through participation to examine the constitution of first aiders careers in The British Red Cross Event First Aid Service.

In ‘Situated Learning: Legitimate Peripheral Participation’ (1991), Lave and Wenger write about how novice practitioners (e.g., apprentice tailors, midwives, and butchers) become what they call ‘old hands’, they see learning as an outcome of what they call legitimate peripheral participation, which is “an evolving form of membership” (1991: p.53). This helps explain how practitioners move from the periphery of a practice to its ‘core’ and how the structure of the occupation/profession figures in ‘organising’ these trajectories. I take from this the idea of the ‘journey’ of becoming a ‘full’ participant – or more accurately, of moving through the grades, as set out by The British Red Cross and related to the divisions discussed in the previous chapter.

Lave and Wenger discuss learning as a trajectory. I expand their approach on situated learning to address questions such as what happens to learning when certain thresholds cannot be passed (e.g., what happens to careers when limited training opportunities are available in the area; or when branches close?). In this case, I elaborate on how various tensions occur in The British Red Cross Event First Aid Service and how volunteer progression is not fixed by formal career categories but expands beyond the organisation: i.e., volunteers have the option to move across providers or how volunteers’ careers can ‘stall’ or simply end: they exist alongside other aspects of their lives. It is not only one journey they are on, and as I learned, participants sometimes reach a dead end with no more experience to gain.

In my case, progression through a first aid career depends on a complex mix of formalised ‘learning’ (training, modules, accreditation) and experience. So, one question is how this blend works out, and how ‘experience’ is gained. What forms of ‘apprenticeship’ exist alongside the formal teaching. In theory new recruits start as standard first aiders, they can then train up to ambulance crew level, and from there they can specialise in trauma or communications etc. As I show, this is not always how it works out in practice.

So far, I have elaborated on the history and structuring of roles especially in the ambulance service and other emergency first response (Chapter Three) and second, we’ve learned how structuring figures in the lives and careers of the volunteers involved (Chapter Four). Next, I

study how these patterns and structures play out in the 'real life' setting of an event at which The British Red Cross provides first aid support.

Chapter Five is about The British Red Cross provision at the Great North Run. I analyse the social-spatial organisation of patient care by taking ideas from Bowker and Star's (1999) work on classifications and standards, and by using these to inform a study of the organisation of one patient's treatment at a long-distance running event. Focusing this time on the patient career, I get another 'view' of professional and occupational categories: the 'view' from the stretcher.

I use Bowker and Star's work on standards to understand how three classification schemes (the Priority Guideline Tool, NEWS2 and Patient Report Form) coordinate patient treatment at the Great North Run. These three tools assign the patient to particular spaces and times at distinct stages of treatment. I reveal how it is the work of these multiple schemes that bound the patient during a first aid incident. By taking these ideas into account I reveal the patient's 'journey/career' is a product of these three classification schemes that intertwine and enact together at different stages of the incident. The key insight here is that it is not just the work of one classification scheme, but multiple classification schemes that organise first aid delivery at an event.

The next chapter (Chapter Six) relocates the discussion, showing how rather different sets of distinctions are enacted not in the 'open space' of the Great North Run but indoors and within a space that is at the same time, a workplace, a place of entertainment, etc., which is governed by different regulations and guidelines, for example, the Purple Guide.

Chapter Six studies the temporal structuring of events. In this case I examine the internal space of an arena which is carved up into different medical zones. These zones are structured and organised by regulation and responsibility guidelines (e.g., the Purple Guide) and change across different times of the day/week. The point is that medical zones are not fixed but change every time a 'new' event enters or exits the arena.

In studying the organisation of responsibility, I use ideas about temporal structuring to then analyse how spatial zones are made and remade over a 7-day time frame of an arena in Northern England. During this timeframe, these medical zones are constantly assembled and reassembled. In this chapter, I take ideas from Orlikowski and Yates (2002) who see temporal structures as shaped by human activity: for example, how daily lives/ schedules are bridged together by clock time and event time e.g., 'lunch hour'.

Rather than use their ideas to understand temporal organisation in people's daily activities, I use them to understand the temporal patterns of responsibility at the arena e.g., how medical zones are carved up, renegotiated, and maintained at an arena across three different events. Other literature dealing with the spatial organisation of responsibility includes that by Mørk et al., (2012) who describe the organisation of a new scientific medical research centre. Like the medical zones within the arena, boundaries were destabilised and then stabilised over time. These ideas of how boundaries come into action because of activity parallel with how medical zones are formed at the arena. In my case, medical zones are assembled and reassembled with each event that is hosted within the building.

The key feature here and the one on which I focus is that zones (for example, the spatial configurations of responsibility such as front stage, back stage, where first aiders are positioned) change over time, even though the space stays the same. They change depending on what is going on – e.g., different kinds of events; whether it's The British Red Cross or paid paramedics or private doctors. Medical zones are not only enacted in an emergency (e.g., a major incident crisis) but are provisionally formed across every event. This chapter draws upon ideas on temporal organisation to understand the layering of medical zones at different kinds of events.

The final chapter draws these threads together to show the intersection of categories and distinctions, as these are enacted in practice, and as they change and fluctuate over time. Amongst other things, this analysis reveals the importance of formal organisational boundaries, including those that define what The British Red Cross Events First Aid Service does. As described, the longer-term politics of first aid is important for what help is

provided, when and where. It is important to note that the arrangements that I describe are no longer in place. The entire The British Red Cross events team was disbanded on March 31st, 2020.

Though beyond the scope of this thesis, the remit of all related organisations will have shifted following this development. Although I do not go into detail on the consequences of this decision, the themes explored in the thesis provide a means of conceptualising change of this kind, and its impact on the lives of volunteers and actual and potential patients alike.

Chapter Two: Research Design: Identifying Boundaries that Matter for the Organisation of First Aid provision

As detailed in Chapter One, this thesis examines the provision of first aid at different settings to understand how features of those settings shape who provides what kind of help at a given site and in a particular moment. To investigate this, I focus on The British Red Cross Event Service – a first aid provider that delivered medical support at events. The service was my main site of inquiry until the service closed in March 2020[5]. The features I pay attention to are the boundaries of care and responsibility at these events, as it is a legal requirement that all temporary events need to have a form of medical support i.e., voluntary first aid providers, private first aid companies, private doctors and nurses or NHS ambulance service support (see Health and Safety at Work Act 1974). The main aim of this thesis is to explore the structure of the service, and other organisations such as the ambulance service, to see how the boundaries of care and responsibility play out in terms of their spatial and temporal distribution.

This project began in October 2018 as a North West Social Science Doctoral Training Partnership CASE studentship[6] between The British Red Cross and Lancaster University. The aim was, to focus on understanding the situated nature of first aid provision and to examine first aid situations across a range of locations to understand the ways that 'help' is organised across different settings. The early stage involved thinking openly and creatively about the different routes which I could use to investigate this 'intellectual puzzle' (Mason, 2018: 24)

5 In October 2019, the Director of The British Red Cross, Michael Adamson, announced The British Red Cross Event First Aid Service was closing in March 2020. This was during my research and therefore past tense is used when referring to the service.

6 CASE studentships are collaborative projects set up by a higher education institution (HEI) and a non- HEI partner organisation – in my case this was The British Red Cross. These project proposals are set-up between two university supervisors and non-HEI 'expert' supervisor and candidates have to apply for the studentship with reasons for how they would 'do' and what they would bring (in terms of expertise and skills) to the project. CASE studentships also provide the candidate with opportunity to gain experience of work in a non-academic setting. See more details at (NWSDTP.ac.uk, 2021) webpage: https://nwssdtp.ac.uk/collaboration/case-studentships/

of being able to see how particular kinds of organising features structure the provision of help. This included a period of ‘trial and error’ of visiting different Red Cross services to identify different routes for getting at the issue of how the structure and organisation of first aid and various services plays out in the ‘delivery’ and provision of first aid. To learn more about the organisation and about first aid, and what might be feasible ways of attending to that ‘puzzle’, I joined formal Red Cross training courses (e.g., first aid at work courses, first aid for baby and child courses and first aid workshops for vulnerable groups) as well as meetings with The British Red Cross First Aid Education team.

At the beginning, it seemed as though one possible route might have been to try to understand the ordering of help and first aid by studying it in the workplace. Workplaces have trained and designated first aiders who respond to and handle any injuries that happen on-site. The British Red Cross offers commercial provision for different types of workplace training for settings: i.e., supermarkets, business organisations, universities etc. So, my initial plan was to gain access to public and private workplace sites (e.g., supermarkets and office spaces) to talk with first aiders and review incident reports. This would have allowed me to investigate the physical boundaries of help including what would happen if situations unfolded in different locations in workplaces (car park, staffrooms, the shop floor, warehouse etc.) or if accidents occurred when the workplace was closed to the public[7]. This did not prove possible, partly because workplaces were concerned about sharing details of their record logs and The British Red Cross Contract team warned that it would be a lengthy process of gaining consent from different workplace organisations.

Another idea was to focus on individual experiences of first aid situations by talking to members of The British Red Cross working across different services such as The British Red Cross First Aid training leaders and Red Cross emergency support volunteers. The idea was to talk with them about specific first aid situations to try to get at organisational features as they play out in the moment. During pilot and early interviews, it became clear that this was also not a useful approach because interviewees were focused on the momentary aspects of

7 Even though I could not investigate physical boundaries of help in workplace settings, I found other (and better ways) to study spatial organisations (This is elaborated in section: ‘Spatial and temporal boundaries: first aid in ‘action’ on page. 11)

incidents and help, making it hard to describe or show how organisational features and their boundaries might or might not have structured first aid provision in a given moment/incident.

In part by chance, and in part a consequence of the work focusing on how to position and see the puzzle of studying the organisational features of responses to ephemeral and seemingly unpredictable accidents and injuries, my research ended up focusing on the work and history of The British Red Cross First Aid at 'events'. Therefore, The British Red Cross Event First Aid Service became my main site of inquiry. I was first introduced to The British Red Cross First Aid Events team at a conference in Crewe in April 2018. At the conference I met a number of volunteers who worked as part of the service as well as team leaders and operational managers who mentioned that I could potentially shadow The British Red Cross Event First Aid team at events. This provided a suitable route to studying first aid provision because unlike institutional workplace settings in which trained first aiders had dual-roles (i.e., employee and trained first aider), trained The British Red Cross Event First Aid volunteers were based at events specifically for their first aid skills. Hence, observing The British Red Cross Event First Aid Service opened an alternative route to studying first aid provision; at public events instead of workplaces or public settings. The service offered different features (including the organisational structure in relation to other healthcare structures, volunteer career structure, and different event locations) to study the organisation of responsibility.

Focusing in and following one particular first aid service allowed me to examine the relation between that part of The British Red Cross and the other organisations involved. The relationship between different emergency health care organisations has changed since the 1930's particularly, as discussed in Chapter One, in terms of how institutional boundaries are organised at events and are intertwined with other kinds of boundaries such as spatial. For example, the different spaces a patient moves through during first aid treatment, and how first aid is spatially distributed across temporary events.

The British Red Cross Event First Aid Service[8] consisted of volunteers whose role was to carry out first aid at events. Volunteering teams provided support to a variety of events (i.e. long-distance running events, multicomplex arenas, football matches, festivals and concerts). The types of incidents that volunteers dealt with varied depending on the size and type of event. For example, a multi-scale long-distance running event would be likely to present first aid issues such as blisters, sprains and hypothermia incidents, whereas an outdoor festival would present bee-stings and drink or drug related incidents.

The British Red Cross Event First Aid Service team was a nationwide service and helped 11,500 patients per year (British Red Cross, 2018). The service was made up of trained volunteers who held different roles (i.e., Standard First Aider, Enhanced First Aider and Ambulance Crew) and had a mixture of experiences. First aid posts ranged in location and size including small tents, medium marquees, first aid rooms in public building and temporary field hospitals.

Because of these aspects (event types, observing situations and meeting a range of volunteers), and the potential to bring them together, I selected The British Red Cross Event First Aid Service as my main site of inquiry. I was able to observe service at five temporary events. These included two long-distance running events (large and small scale); a festival; an ice-skating show at a multicomplex arena and an Illumination show. I was given ethical approval in July 2019 by Lancaster University FASS-LUMS Research Committee (FASS-LUMS REC project reference number FL18181) and shadowed members of The British Red Cross Event First Aid Service at five events during the months August- November 2019. Over a longer period of time (and during periods in-between shadowing events), I carried out ten interviews, had conversations with Red Cross staff, attended training sessions with the service and collected a range of written documentation (including protocols, briefing notes, risk assessments and guides on how to organise first aid at events) and carried out a literature search on the history of the ambulance service between 1941- 2020.

The rest of the chapter describes the research design that followed from working with The British Red Cross Events Team. The chapter is divided into two key parts. The first section details the research questions, the specific sites of the research and the logic and rationale for their selection. The second section describes some of the practical issues I faced while conducting the research at those sites, how they impacted the research design and method, and how I overcame or worked round them.

Research Questions

As mentioned above, my thesis is divided into four empirical cases which are developed to respond to a specific question.

The project evolved from the CASE studentship brief "Situating First Aid: Social Practices and Settings of Incidents and Help". The project idea originated from a British Red Cross study around keeping people out of hospital (Oliver et al., 2017). The British Red Cross were interested in developing these ideas which resulted in a CASE studentship.

The research questions evolved as the project developed. Initially, and as set out in the original CASE studentship proposal, the project aimed to explore:

- How is everyday first aid practice organised and ordered as part of social life?
- How do first aid incidents and responses relate to the spatial and temporal organisation of social practice?
- How do different social settings within which first aid incidents happen matter for how they are dealt with and handled?

During the first six months of the studentship, and in collaboration with The British Red Cross, we explored different methods of approaching these topics. For example, some time was spent investigating the feasibility of studying 'first aid at work' in settings that straddled the public private divide (for example, train stations, supermarkets etc.). In the end this proved to be impossible because of difficulties accessing relevant sites. Instead, the plan was adjusted to focus on the bounding of first aid at events open to the public.

Instead of asking how help and response is situated and socially organised as part of everyday life across different social and institutional settings, the emphasis shifted to focusing on the multiple boundaries and categories that are involved in the organisation of first aid at public events.

It was attending the British Red Cross Event First Aid Conference 2019, in which I met several volunteers who discussed how their careers and work are organised and the different types of procedures they must follow when doing first aid at events. As already mentioned, at the time The British Red Cross Events team provided first aid services across a variety of different settings at a range of spatially diverse locations all of which offer features that matter for the type of service on offer, and for how first aiders relate to NHS ambulance crews.

Instead of asking how help and response is situated and socially organised as part of everyday life across different social and institutional settings, the emphasis shifted to focusing on the multiple boundaries and categories that are involved in the organisation of first aid at public events. It was from then on, the project shifted to a focus on how boundaries of first aid provision emerge, shaped and reproduced within public event settings.

Empirical research at a selection of carefully chosen sites including: The Great North Run, Greendale Half Marathon, Westdale Arena, Meadowhall Festival and North Eastern Illumination Show and interviews with the British Red Cross volunteers allowed me to address the four main research questions outlined below:

1. How has The British Red Cross Event First Aid Service developed and changed in relation to the development of other health services over time?

2. How is progression and experience organised within the formal structure of The British Red Cross? Are there any tensions between progression and formal career categories?

3. How are care and responsibility organised across different spaces and times during first aid treatment? Are there any organisational structures in place to hold the patient's treatment to specific spaces and times?

4. What are the temporal structures of first aid? What can temporary events tell us about the configuration and re-configuration medical zones?

Each of these research questions provide an entry point for understanding the effects of particular kinds of boundaries, categories and distinctions that matter for first aid provision.

Research design and methods

Understanding the relation between The British Red Cross, Ambulance Service and other First Aid providers

To understand how The British Red Cross Event First Aid Service provision is organised, I first take a step back and examine the longer history of emergency response. The purpose is to show how the contribution of The British Red Cross Event First Aid Service is defined by surrounding services including the ambulance service. It is by taking a step back, or "zooming out" as Nicolini (2009) points out, in that I gain an in-depth understanding of the system of care in which first aid provision is situated within.

This work is presented in Chapter Three. To find out about how these boundaries are dynamic (in the sense that they are reproduced and remade across different periods of time), I study the making and remaking of institutional boundaries between voluntary aid services and the ambulance service by looking at the professionalisation of the ambulance service from 1941-2020. I focus on the changing structure of The British Red Cross Event First Aid Service in relation to other healthcare and first aid providers to find out about the place and role of The British Red Cross. In this context, the professionalisation of the ambulance services and the changes of lay medical expertise are related to the position of first aid. By focusing on the institutional boundaries between first aid providers and healthcare organisations (such as the NHS), I understand how first aid provision is historically situated and 'shifts' through different time periods.

To identify what appeared to be changing areas of responsibility between the ambulance services and voluntary aid societies, I gathered historical materials on the professionalisation of the ambulance service between 1941-2020. These documents included archives, timelines and history of the ambulance service from The British Red Cross and St. John's Ambulance website, a journal article from historians who have studied voluntary aid societies after the interwar period (see Ramsden and Wall, 2019); websites from the London Air Ambulance and other medical journal articles about the development of the defibrillator and mobile coronary units in the UK; policy reports published by the NHS, Chief Executive of the Ambulance Committee, Care Quality Commission and scholars who have studied the development of the paramedic profession. I use these materials to make sense of how expertise is historically situated and how it has shifted from 1941-2020. This timeline then parallels the developments and changes of voluntary aid societies/ first aid provision to show that both expertise and responsibility are 'on-the-move' and are relational.

To study the professionalisation of the ambulance service, I consulted a range of sources on the history of the ambulance service and first aid provision from 1941-2020. There was a vast range of references that provided enough detail to create a narrative on the topic. For example, The British Red Cross and the Museum of St. John's Order website detailed historical information on the origins of the providers; the NHS archive for public policy documents outlined key changes to ambulance provision from the 1950s-2020s, while the London Air Ambulance website documented a timeline of the history of air ambulance medical transport and technologies (which was useful in understanding outside of the hospital medical provision developments in the 1980's but did not present the 'findings'). Other policy documents outlined similar kinds of information but did not reveal the relation between professionalisation of ambulance services and voluntary aid societies.

In total, I gathered 31 policy documents to document the changes of the ambulance service and voluntary aid services from 1941-2020. I created a table on Microsoft Excel to detail the key principles and implications of each policy. (See Appendix 1).

Moving through the organisation: The careers of The British Red Cross Event First Aid volunteers

The next feature I focus on requires a different type of historical approach, one that focuses on the history of individual careers and lives of The British Red Cross Event First Aid Service volunteers. In order to examine these relations, I have taken two steps: (1) to identify grade divisions in the structure of The British Red Cross Event First Aid Service to find out about the formalisation of roles and responsibilities and (2) to come to know about how these grade divisions work out in practice by talking with The British Red Cross Event First Aid Service volunteers.

The aim of studying individual careers is to understand the movement and organisation of volunteer's participation and to reveal the tensions between experience and training, and that the structure matters in these and other ways. There are three different types of grade divisions (e.g. Standard First Aider, Enhanced First Aider, Ambulance Crew). These divisions have different skill levels regarding training, skills and responsibility. For example, there are various training modules volunteers have to complete to become certified or to 'do' a skill which shows that volunteers careers are bounded by different sets of skills. To understand these thresholds and tensions between career structure and progression within the service, I collected Red Cross documents (e.g. training manuals and protocols) and conducted three oral history accounts with Red Cross volunteers about their experience in the service. The purpose of these interviews was to find out more about the limits of progression in the service and the tensions involved with participation; how volunteering fitted into other aspects of volunteer's lives; what experiences they built up and what training they did and how formal materials and structure of The British Red Cross (i.e., training courses and protocols such as NEWS2, Priority Guideline Tool and Patient Report Forms) are filtered into practice.

I selected three participants from a total of ten interviews with The British Red Cross volunteers I had met at events. The reason for selecting these three volunteers was because they had a mixture of experiences and roles within the service. The table below describes each of these three participants (for more details on the other Red Cross volunteers I interviewed, see Appendix 2). Interviews lasted from 45 to 90 minutes and were recorded on

a Homder 8GB USB Professional Dictaphone Voice Recorder. All interview recordings were stored in Lancaster Box immediately after the interview. All participants were given pseudonyms and recordings were deleted from the computer and recording device after they were transcribed and stored securely.

Participant	Role	Events I worked with	Reasons for interviewing	Location of interview
Anna	Ambulance Technician/ Event Duty Manager Level 3	Great North Run, Greendale Half-Marathon and Meadowhall Festival	Had been part of The British Red Cross since they were 5 (part of the youth groups); had a variety of different roles including Event Duty Officer, ambulance technician, training leader and equality committee member. Also, helped arrange for me to go to events. I built trust with this participant.	In participant's house and Skype
Eric	Enhanced First Aider	Great North Run and Greendale Half Marathon	Had been part of The British Red Cross for 20+ years; was part of the GNR 'finish line' team; worked as part of the ambulance service as a community responder	Over Skype
Andrea	Enhanced	Greendale Half	Had been part of The	In a café

	First Aider	Marathon	British Red Cross for 2+ years; joined the event first aid service as it would develop her community first aid response skills	

Table 2.1. Table of participants by role, the events worked, reasons for interviewing and location of interview.

These in-depth interviews provided insight into the different stages volunteers move through in terms of their progression, career and experience and being able to revisit situations that happened at the event, particularly in areas in which I could not access. I asked questions in terms of their roles and experiences with The British Red Cross.

I used a semi-structured interview guide to ask questions around certain topics. These questions were loosely based and when a volunteer pointed out something interesting, I asked them for more details. (see Appendix 3 for semi-structured interview guide). Interviews were conducted approximately a week after the event and were held in either a public setting (such as a café), in the volunteer's home or were carried out online using Skype, (a video calling software). In some cases, I followed up conversations with some volunteers after their initial interview. This was to clarify information surrounding the event or to ask for particular documents.

Different methods were needed to find out how first aid provision is organised at public events and to identify relevant spatial and temporal boundaries – as these relate to the organisational ones already described, and to strategies and categories that are enacted in 'action'. The next section discusses methods such as observation and secondary materials that were used to inform how first aid delivery was organised at public/temporary events.

Spatial and temporal boundaries: first aid in 'action'

The British Red Cross Event First Aid Service provides medical support at a range of events that vary in size: these include long-distance running events, sporting events (e.g., football

and ice hockey matches), festivals, illumination shows and indoor music concerts. At these events, Red Cross volunteers interact with non-Red Cross staff including NHS professionals (so those who work for the ambulance service staff and nurses and doctors), patients (and friends and family of patients), event organisers and employers and employees of the sites. One reason for attending events is that I could see how handovers were negotiated between different healthcare providers across different spaces and temporalities. There was a basic difference between the Great North Run and Westdale Arena, in terms of the size, scale, activity, audience and time. The next two chapters study the delivery of first aid and the configuration of responsibility at events.

The Great North Run: Spatial distinctions and the social organisation of patient treatment

At the Great North Run, I examined, the margins of responsibility between organisations and how they mapped on to different spatial areas and stage of treatment. The purpose of studying the spatial enactment of these distinctions was to understand the construction of first aid delivery across particular spaces and times. By shadowing first aiders at the Great North Run and conducting follow-up interviews, I was able to study the different temporal stages of the first aid delivery and on when and how patients move from one 'site' to another. I focus on three different classification schemes that are used to coordinate and arrange first aid delivery at different spaces and stages of patient treatment. These include: The Priority Guideline Tool, NEWS2 and Patient Report Forms. These classification schemes define the edges and stages of first aid delivery as well coordinate the journey of patient treatment.

To investigate stages of first aid delivery, I observed two multi-sited events: a small distance half marathon and the Great North Run. The first event Greendale city half marathon happened the weekend before the Great North Run and was located in a small-city in Northern England. There were approximately 1,000 participants at the event and the race was distributed across the city. The race was circular, as it started and ended at the same place. There was a team of eight first aiders working at the main medical tent and the finish line, two first aiders were positioned at a pub halfway through the race and two cycle respondents followed the participants.

The second multi-sited event I attended was the Great North Run, a multi-scale event with more than 50,000 participants and spectators. The race was linear and went from Newcastle City Centre to the coast in South Shields. There were 23 medical posts, a casualty retrieval service, and a temporary field hospital. Every half a mile was a medical post run by first aid volunteers either from St. John's Ambulance or British Red Cross. These medical posts were responsible for a particular area of the race. At the Great North Run, I positioned myself with The British Red Cross Event First Aid 'finish line' team and moved between the finish line and the temporary field hospital during the event. I was able to observe a range of first aid situations (e.g., blisters, collapses, hypothermia, ankle, and knee injuries) that offered insights into the different stages of providing help. For example, I got a clear idea of the distinctions of the different spaces and responsibilities of a patient's treatment. Overall, The Great North Run was 'a site' in which I could observe first aid incidents and understand the social organisation of first aid delivery. By carrying out observations and follow-up interviews it became clear that there were multiple classification schemes which were enacted at particular stages of first aid incidents which ordered the patient's pathway. See Chapter Five for analysis on the coordination of the patient journey. The next chapter studies the spatial distribution of responsibility across periods of time by analysing the configuration and the re-configuration of medical zones.

The arrangement and re-arrangement of medical zones at Meadowhall and Westdale arena

By contrast with multi-sited events, The British Red Cross Event First Aid Service provides support for singular event settings. The next site revealed the different areas of medical responsibilities that are enacted and rearranged in the same location. These 'zones' of responsibility are located in the same space but are managed differently across different times of the week. These intertwine with different kind of organisational structures: for example, Westdale Arena is a single location site but has different kinds of organisations entering the location that reassembles these zones. Therefore, temporal zones are constituted with action and organise the structure of first aid provision at events.

The rationale and logic of studying temporal zones was to understand how first aid provision was reconfigured in the same location but over time. These zones configure and re-configure at different periods: i.e., when a new event is set-up at the arena. To research the making

and remaking of temporal zones, I visited single location sites and followed their use over time. This involved drawing four different floorplans of the arrangement of medical zones across different time periods at these settings, studying official documents such as the Purple Guide and Red Cross documentation (i.e. briefing notes and risk assessments) and accessing event schedules.

The two sites were temporary events but had distinct features: (1) Meadowhall Festival (a 2-day outdoor festival located on the grounds of a hotel) (2) Westdale Arena (a multicomplex arena in the North East of England) was a fixed location site that had different types of events scheduled across a 7-day period. The third location: North Eastern Illumination Show (a light show located in the North East of England) was a mixture between these two sites and which in the end was not used as case study.

Meadowhall Festival was a 2-day outdoor festival in Northern England and was attended by approximately 10,000 people across the weekend. The festival was from Saturday to Sunday from 12noon – 12 am both days and was located in the grounds of a hotel. The event was distributed across one singular location and included three outdoor music stages/venues, an indoor music/dance tent, a fairground, a range of food and drink stalls, children's activities (e.g. face painting and balloon stalls) and a VIP area. The hotel was also open to the public and hosted a range of activities including raffles and tombola competitions. The main medical tent was positioned by the main entrance of the hotel. There was total of twenty-two volunteers working across the weekend including the Event Duty Officer: 10 volunteers who were working in the main medical tent while two pairs of volunteers had to walk around the site at all times. Another two volunteers were positioned at the front of the main stage while two ambulance crew volunteers worked in the ambulance behind the main stage. The space was structured as there were multiple medical zones (categories) that were provisioned by different responsibilities across different spaces and times (within and outside of The British Red Cross). Additionally, there was a clear pattern of injuries. Bee stings and blisters were common from 12noon until 5pm and afterwards there were many situations involving drugs and alcohol.

Westdale Arena was the second site I visited. The site was a multicomplex arena in Northern England and was a dual-setting, in the sense that it was both a workplace and a public event setting. Contrastingly, to the arena the event was temporary and more formalised. It had managers that would work in the arena on non-event days and contract employees (i.e. security staff, derigging teams, event guides) who would work at the arena every time an event was on. There were multiple different events across a 7-day period that ranged from music gigs, ice-skating shows, ice hockey games and concerts. All these different types of events ranged in size, audience type and activity. This meant that the organisation of first aid provision assembled and reassembled across different temporalities.

The British Red Cross Event First Aid Service had a contract with the arena to provide medical support for events: including private first aid companies, private 'event' doctors, Yorkshire Ambulance Service and employees at the arena when assisting first aid incidents. Studying the floorplans of the arena revealed that the zones of first aid provision are never fixed and constantly moving. Different arrangements of first aid organisation are assembled and reassembled across a 7-day period. By speaking to volunteers who had worked at the arena for over 7 years, I realised that first aid provision is not permanent and is constantly changing as different medical providers come and go.

The above section details the logic and rationale of my four empirical studies. The next section goes into more detail about each of these research methods and reflects on the methodological dilemmas I experienced and how I overcame these issues.

Reflecting on research methods: the processes of research

As mentioned before, I use four different types of methods to locate and identify boundaries involved in the social organisation of first aid provision. These data collection methods include participant observation, interviewing, working with secondary sources and collecting historical material. This next section reflects on the challenges that arose and how I addressed them.

The challenges of observation

I attended five different events that The British Red Cross Event First Aid Service provided medical support for to find out more about how boundaries were constituted and enacted across different spaces and times. There were two purposes for doing this kind of observation. Firstly, I observed 'first-hand' the management and handling of different first aid situations and learned more about the different kinds of protocols and guidelines of managing incidents. Secondly, I witnessed the relations between volunteers, their interactions between the public and patients and what volunteers did during quiet periods. At these events I was able to make connections with different Red Cross volunteers. Some volunteers sent me briefing notes, different types of protocols, event plans and schedules. These documents showed how first aid delivery was organised by different types of protocols. Additionally, by being on-site I was able to ask questions to make sense of how volunteer's careers, progression and experience were structured within the service. Overall, by 'being in the field' I was able to understand the spatial distribution of different stages of first aid delivery and the arrangement of medical zones. I could observe the changing boundaries of care and responsibility at the range of events The British Red Cross Event First Aid Service provided medical support for as each of these settings differed by size, audience type and medical provision.

All observation is partial depending on where you are physically standing (Spradley and Mann, 1975). One of the challenges I faced was knowing where to stand or what to observe. As Spradley and Mann's (1975) describe observers in different roles and locations 'see' different situations even if they are in the same setting. Deciding where to stand, and also what to occupy was also a concern.

Observation allows researchers to use creative methods or often thinking on the spot when on the field (Mason, 2018). Often when going to events, knowing where I would position myself happened in the moment. This resulted from having conversations with volunteers who helped me position myself in sites where the most activity is, it is impossible to know what will happen at an event and if I would observe any first aid situations at all. In this context, Goffman's (1969) ideas on strategic interaction are helpful for researchers in social situations where events can unfold in an unpredictable fashion. I used these ideas to think

about how I organised my observation because I was not able to anticipate what type of patients would arrive and where. I combined observation with methods such as interviews to elaborate on the details of each setting.

Because I was researching first aid situations, there was a chance I would witness serious injuries and illnesses. This entailed ethical implications such as not being allowed to interact with patients[9]. This was challenging during extremely busy periods, like at the Great North Run, in which athletes began to approach me asking if I was able to help them out. At this point, I was able to get volunteers to help with patients but then made the decision to go into the field hospital[10] so I was not getting in the way or being medically involved in any injuries. Cerwonka and Malikki (2007) make a case that ethnographic research is inseparable from theory, in the sense that theoretical framework shapes the sites visited and questions asked when doing fieldwork. One dilemma is looking too closely (i.e., ignoring the conversations around you might not address your theory or asking questions too specifically). Therefore, it was important for me to ask questions tailored to the changing boundaries, categories and spatial distinctions of care and responsibility.

I made an 'analytic summary' of each observation, even the smallest details when it came to making fieldwork notes (even if I did not select the site or participant) (Becker, 1998). Although some sites and participants were not used in my research, picking up on the small details (that were not considered completely relevant towards boundaries) was important to see other aspects of the organisational structure. I was able to notice the friendships between The British Red Cross first aiders and the community of The British Red Cross Event First Aid Service, particularly during quiet periods. This is when I formed relationships with The British Red Cross first aiders and had discussions on their roles and experiences in the service. I interviewed ten volunteers in total, but only three participants were selected for an oral history interview. This is because they were willing to provide me with more details about their lives and experiences as first aiders. The second research method I used in my study was collecting oral histories of first aiders.

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9 My ethics form was approved to only interact and shadow the Red Cross staff. I was not ethically allowed to interact with patients or get involved in any medical situations because of my role as observer

10 To enter the field hospital at the Great North Run, patients had to formally sign in and out. They could not enter without being passed by a Red Cross volunteer or other medical person.

The challenges of interviewing Red Cross Event First Aid Service volunteers

As mentioned above, during quiet periods, I got the opportunity to talk to volunteers about their lives and volunteering 'careers' with The British Red Cross. The purpose of collecting oral history accounts was to get access to other experiences; such as their own lives. I was interested to know the histories of volunteers and learn about what it is like to be a first aid person. The aim of this was to gain more insights on how their individual first aid histories meshed with the structure of the organisation.

The interviews were open-ended semi-structured (see Appendix 3 for the copy of the interview schedule). Questions were altered to specific moments of the event (e.g. specific incidents or casualties) or themes and topics that repeatedly came up when having casual conversations with volunteers at the event. When having conversations with volunteers I got a sense of their perceptions of the service. These accounts, even though not explicitly related to the organisation of first aid provision, gave me a useful source of what was currently happening with The British Red Cross Event First Aid Service. This was equally as important as it revealed there were tensions between the internal institutional structure and volunteer's progression and participation (see Chapter Four for more details).

I interviewed volunteers who I had met at events. This way I was able to revisit themes that came up in casual conversations and was able to view participants who I had already built up trust with. The advantages of interviewing people I'd already met were that they could give me information about areas I could not access. This was particularly beneficial for the multi-sited events like the runs, as I could ask different volunteers who were positioned at different first aid posts about their experiences and what was going on in their areas. According to Hammersley and Atkinson (2007:107) "Interviewing can be an extremely important source of data: it may allow one to generate information that it would be very difficult, if not impossible, to obtain otherwise… there are distinct advantages in *combining participation* observation with interviews: the data from each can be used to illuminate each other." As I conducted interviews after each event, it gave me an idea of what to observe at the following event. Doing interviews alongside observation helped identify the different boundaries (institutional, space and temporal) at each event.

It was by locating myself in the field with participants that I was able to tailor questions to specific moments of the event – learning about the careers of participants, some participants showed me photos when having conversations, while others were part of the same branch who worked together regularly, some participants expressed the same view and perception about the service (e.g., moments leading up to the eventual closure of the service). For oral historians, memory, and the processing of remembering invites methodological debate. Lummis suggests that memory ‘is a complex phenomenon which cannot be tested for truth by the application of a set of rules’ (Lummis: 1987, p. 130), while Abrams suggests memory always involves “a practical and active process of reconstruction” (2016, p.79). While I made clear that the interviewees knowledge should not necessarily “... be accepted at first value, any more than should that of information from other sources” (Hammersley and Atkinson, 2009: p. 98), I listened to each respondent about their experiences but was mindful that memory can fade over time.

Another dilemma was interviewing volunteers who thought I was assessing them on their first aid skills and felt at risk of being ‘caught out’ on how they handled certain situations. One way to resolve this was asking how and not why (Becker, 1998: p.59). I was not questioning Red Cross first aiders on how they handled different medical experiences but wanted to know more details about their careers and experiences. ‘How’ gives out detail, ‘why’ should not be used as it can be seen as requiring a good answer.

My interview technique developed over time I got a better sense of the arrangement of first aid provision at each event but also after I had formed relationships with respondents (Becker, 1998). Sometimes I would be at an event with volunteers who I previously met, and they offered to let me ‘observe’ beside them (e.g., Heather, Anna and Gary). I was able to attend socials and training courses or travel in The British Red Cross vehicles alongside participants.

The interviews were conducted in-person or online. In-person locations ranged from a café, participants homes and private rooms of event venues. Dilemmas about in-person location was the mixture of senses (Pink, 2013). For example, one interview, I sat in a café and the

noise blocked out some of the audio recording, or if I was at the participant's house late at night and would have to rush the interview to catch the last bus. Alternatively, I could have done interviews at the medical posts at the events, but this was not practical as first aiders were busy. My time here was better spent having informal conversations with volunteers. Those informal conversations provided valuable detail.

One methodological dilemma was that after finishing transcribing interviews, I noticed there were some missed opportunities for follow-up questions. Follow-up questions are used in response to oversimplified or nuanced answers from participants (Rubin and Rubin, 2011). For example, when talking to Anna and Eric about the service before the restructuring programme, I missed out on important details on how and why the service changed. There were opportunities in these interviews to get more detailed answers. Fortunately, I had good relationships with participants so was able to do follow-up questions to the interviews.

The challenges of working with secondary sources

In organisations it is common for staff to keep hold of record-logs such as routine forms, agendas and notes during meetings and files for individuals and customers (Smith and Turner, 2014). The British Red Cross Event First Aid Service was no different to these organisations, in the sense that when attending events and having conversations with different first aiders, they would often refer to certain kinds of documentation and protocols. I collected a mass of Red Cross documentation including training manuals, information about training courses, details regarding the events I attended (briefing sheets, risk assessments, event details), first aider codes and conduct on how to manage accidents and injuries. I made notes of these materials and asked first aiders if they had copies of official documentation that outlined requirements for training courses and protocols. Sometimes Red Cross volunteers and staff would provide me with types of documentation (such as Patient Report Forms, the Purple Guide, and other paraphernalia for first aid provision) without having to ask.

According to Hammersley and Atkinson (1995), several studies have benefitted from collecting official documents alongside interviews and observations. This is because documents can serve as the act of challenging authority to the researcher by using direct

extracts from written materials as data, rather than depending on interpretations for events (Clifford, 2005). This was relevant in my case, as secondary materials such as maps, protocols, briefing notes and guidelines further enhanced my understanding of the different spatial-temporalities of care and responsibility at events.

Documents are helpful in gaining information in situations or places I could not access (Hammersley and Atkinson, 1995; Atkinson and Coffey, 2010). In my case, documents were helpful in looking at the different spatial distinctions of care and responsibility. For example, maps of the arena outlined the different spaces of responsibility (i.e., what space was provisioned with for doctors) – while Patient Report Forms detailed incidents without me having to interact with patients[11]. In addition, NEWS2 is a national guidelines by healthcare professionals as important for seeing spatial distinctions of patient treatment (See Chapter Five). Other advantages of working with secondary materials is that they shaped interaction between people (Prior, 2003), particularly in interviews and observations when I could ask first aiders about how these formal materials were filtered into their first aid practices. This revealed more about how care and responsibility was structured into the first aid service.

There were some practical dilemmas of collecting secondary sources. First, I was not allowed access to certain documents such as Patient Report Forms or records of the number of accidents at events. This presented some challenges and difficulties as getting a historical record of accidents of each event would give provide me with a better insight to how incidents are structured at different events.

Other ideas were collecting photographic documentation (such as a visual research journal) (Mason, 2018; Pink, 2013) to inform and aid in clarifying spatial distinctions at events. I only had maps and fieldwork notes to remind me of each event and photographs would have supported the details in my fieldwork in defining the different spaces. But there were ethical implications involved with taking photographs. This is because I was mostly located at first aid posts where patients were entering and leaving all the time. Because of the sensitive

11 I was not ethically allowed to use individual Patient Report Forms in my research. Although I was consented to look at Patient Report Form by first aiders to explain how they manage incidents at events. Alternatively, I was given a copy of a blank Patient Report Form to inform my research (See Chapter 5).

situations that happened at the medical posts, it was not appropriate to use photographic evidence to support my fieldnotes.

The challenges of historical research

To document the history of The British Red Cross, alongside the history of ambulance provision and first aid, I gathered historical documents including policy reports from the NHS (and other public health organisations), medical journal articles, websites that included information about technological developments to ambulance transportation (i.e. London Air Ambulance Charity) and the Museum of the Order of St. John website to depict an accurate timeline of the development of the ambulance services between 1941-2020.

Although these materials were not directly about the history of The British Red Cross, they provided a detailed account of the professionalisation of the ambulance service (which was provisioned by Voluntary Aid Societies such as The British Red Cross and St. John's Ambulance) from 1941-2020. By collecting these materials, I was able to underpin particular time periods in which certain policies and technologies were introduced. It was through documenting these changes to UK ambulance provision that I was able to learn that the position of The British Red Cross depends on the structure of the ambulance service and vice versa.

Before deciding on collecting NHS and other healthcare policy reports (e.g., Care Quality Commission, Association of Ambulance Chief Executives etc.), there was the methodological challenge of working out which historical sources would provide detailed documentation of the history of The British Red Cross. Peter Knight (2002 p.162) states "data collection remains a time of uncertainty and improvisation". This relates to my experience of testing out different methods on how to document the history of The British Red Cross, which included analysing first aid manuals and gathering other materials such as books and articles relating to the development of other healthcare professions (such as nursing in the UK). Although these materials relate to the history of The British Red Cross, (e.g., Florence Nightingale and other nurses' work in the Crimean War influenced the work of The British

Red Cross and first aid manuals that were first published in the 1950's), they did not directly relate to the changes of first aid provision past the 1950's[12].

In accessing this sort of material, I used keyword searches (Brundage, 2008). My key words were history of the ambulance provision. I then created a spreadsheet of every policy and article I read relating to the professionalisation of the ambulance service and what were the implications for first aid provision.

One dilemma of gathering historical material was that sometimes documents were difficult to gain access to or were blocked. This was the case for earlier policy papers and reports (e.g., the Millar Report) that was only available on Google Books and not sourced in an official NHS online policy archive. Platt (1981) outlines five considerations that should be used when researching documents including: authenticity, availability of documents, sampling problems, whether the documents contain truth and what inferences can a researcher make. These considerations were applicable for my research, as I had to read each policy to check if their recommendations were proposed by a governing body or the NHS and to document any changes, they made to the ambulance services.

As will become clear in the chapters that follow, these four methodologies influence the way I study the position of first aid provision and how help is socially and spatially organised at events. The method for the next chapter is using historical documents to examine the ambulance service between 1941-2020.

12 My initial plan was to document the history of The British Red Cross by looking at first aid manuals. Although first aid manuals are updated every 5 years and provide instructions on how to handle and manage any illnesses or injuries, did they record changes about the organisation or structure of first aid provision.

Chapter Three: Providing First Aid: The Changing Relation between the UK Ambulance Service and First Aid Volunteers from 1941-2020

In 2015, The British Red Cross commissioned a team of researchers to lead an investigation into groups that could benefit from learning first aid as a means of limiting the number of people going to hospital (Mytton et al., 2017). The study found that NHS healthcare professionals felt that first aid was a 'lost skill' and that this was one reason for an increase in the number of people attending A&E for minor injuries. A 2017 report produced by The British Red Cross (2017) focused on these issues, echoing the conclusions of previous reports about A&E units being overwhelmed and about the importance of providing first aid outside the hospital (NHS England, 2014). These studies echo a focus on the public 'relearning' first aid.

In response, The British Red Cross has adopted various programmes and initiatives. These include workshops targeted at vulnerable groups who are likely to encounter a first aid situation; information on how to navigate the complex urgent care system, on when it is appropriate to call 999 and on how to administer over-the-counter medicines (Mytton et al. 2017). A year earlier, The British Red Cross launched the 'Don't Stop at 999' campaign to raise awareness of how basic first aid could help to reduce the number of people who die from injury before reaching the hospital (McNulty, 2016).

As detailed above, The British Red Cross aims to encourage the public to use first aid skills instead of, before and after calling 999. As these initiatives demonstrate, public provision of first aid, and the work of The British Red Cross is positioned alongside the work of the ambulance service and the NHS.

In taking up this theme, this chapter describes how first aid provision is historically situated and reproduced within and as part of this wider system of care. More specifically, I provide a detailed account of the history of emergency care and the changing rationale for first aid provision outside of the hospital between 1941-2020.

At different moments within this history, the status of first aid shifts in ways that mirror the changing boundaries of professional and lay medical expertise. I begin with a timeline that describes four key periods in this history. I refer to these as 1) scoop and run; 2) scoop and stabilise; 3) taking medical professionals to the emergency scene and 4) keeping the patients out of the hospital. There would be other possible starting points, but my timeline begins during the years of the Second World War[13] (1941) because this was when publicly provided ambulances were first used to take patients to hospital. The timeline finishes eighty years later, in 2020.

My method was to gather historical materials on the role of the ambulance service between 1941-2021. These documents include timelines and history of the ambulance service from The British Red Cross and St. John's Ambulance website, a journal article written by historians who have studied voluntary aid societies after the interwar period (Ramsden and Cresswell, 2019); information from the London's Air Ambulance Charity website and other articles about the development of the defibrillator and mobile coronary units in the UK; policy reports published by the NHS, Chief Executive of the Ambulance Committee, Care Quality Commission and articles produced by scholars who have studied the development of the paramedic profession (such as McCann, et al., 2013; Kilner, 2006; Mackenzie, 2008 and Givanti et al., 2018).

In making sense of these materials, I make use of Andrew Abbott's (1988) ideas about what he describes as 'the system of professions' and the changing boundaries of professional jurisdiction. Abbott describes professions as "…an exclusive occupational group applying somewhat abstract knowledge to particular cases… [they] are organised around the knowledge system it applies, hence status with the profession simply reflects a degree of involvement in organising knowledge" (1988: p.8; p.188). In the cases he describes (including medicine and law), professional occupations gain authority over other occupations by formalising specific tasks and skills and by requiring approved qualifications

13 Although The Second World War started in 1939, my timeline starts with 1941 because this is when voluntary aid societies used vehicles to transport patients to hospitals during the 'Blitz' attacks in the UK between 1941-42.

and certificates. This type of formalisation allows members of recognised professions to exclude others, and to maintain control over their area of expertise. The boundaries of their influence and 'jurisdiction' are "ever-changing" and are never fixed (Abbott, 1988: p.359). This is because expertise itself evolves as occupations gain, lose, and maintain power relative to each other across different periods of time.

Although I do not directly deal with the relation between different healthcare occupations (i.e., doctors, nurses, paramedics, ambulance technicians, community first aid responders), I use Abbott's (1988) ideas on the relative positioning of expertise to examine the relationship between voluntary healthcare organisations (i.e., The British Red Cross and St. John's Ambulance) and the NHS, including the ambulance service.

In detail, I work with Abbott's (1988) concepts of jurisdiction and bounding to show how these different organisations depend on, matter for, and shape one another within an 'ecology of care' and how the professionalising of one service matters for the shape and territory of other related organisations. I consequently examine the ways in which the changing nature of the ambulance service impacts the delivery of first aid training, as well as examine the structure of emergency care.

Other scholars have discussed the professionalisation of ambulance work and the changing spaces of healthcare, sometimes relating this to the introduction of specialist technology and equipment. In a study that also considers the impact of telecare, Oudshoorn et al., (2013) focus on the relation between new telecare equipment and technologies and the reconfigurations of non-hospital spaces of care. This research underlines the importance of specialist technology and the expertise needed to use it but as McCann et al. argue, these trends are complicated by others that value management above 'hands-on' expertise. For example, McCann et al., (2013: p.771) focus on the complexities professionalising the paramedic role given that managerial healthcare positions tend to be higher paid and have more authority.

In what follows I bring these lines of enquiry together, focusing on the sites in which healthcare is provided, and on the relation between this and the changing structures and

institutions involved, including professions and quasi-professions such as ambulance technicians/ drivers, paramedics, and emergency care technicians, all of which have evolved alongside the development of the UK ambulance service. Some of these developments are linked to technical expertise and equipment and to the consequences this has for first aid provided by The British Red Cross or by the public. More specifically, I argue that the development of technology, the professionalisation of ambulance services and the extension of health care outside the hospital has resulted in the shrinking space and territory of voluntary first aid provision.

The chapter consists of five sections: First, I introduce the 'scoop and run' approach to treatment and transport (1941-1966) which began during the Second World War - during this time, there were no formal distinctions between voluntary first aiders and the Ambulance Driver role. I then turn to the 'stabilise and deliver' approach (1966-1978). During this period, Ambulance Drivers were given extensive training including in resuscitation skills, in line with the recommendations of the Millar Programme (Kilner, 2004). The third section focuses on 'taking the expert to the medical scene' (1978-1998) and the rise of portable emergency care equipment and the medical benefits of rapid assessment and treatment, especially of trauma and acute incidents. The fourth section 'See and Treat' (1998-2020) describes the shift in which the ambulance service becomes an integral part of NHS provision. During this period, paramedics are classified as a profession and are trained to diagnose and treat the patient in the home. Finally, I offer conclusions about the relative positioning between the space for first aid activity and the ambulance service. As I show, the structure of the ambulance service matters for the position of first aid provision within the ecology of care.

1: 'Scoop and Run' (1941-1966)

The 'scoop and run' mentality originated during the Second World War[14]. A total of 15,000 volunteers provided nursing and military medical services during this time (Cambray and Briggs, 1949), while other first aid volunteering duties included organising and setting up

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14 The Second World War was the most devastating war in history and caused significant damage to hospitals in the UK (Verma, 2017). For example, the Blitz on London damaged 175 out of 296 hospitals and the ICRC had to establish hospital localities and safe zones for injured/ and ill patients away from military action (Macnulty and Mellor, 1968; Dunn, 1952).

first aid posts at underground stations and air-raid shelters (British Red Cross, 2020). Although first aid certificates were presented for those who completed first aid training, there were questions about the standards set for those who received these certificates (Edgar, 1940).

This was a time before the National Health Service (NHS) was formally set up in the UK and Voluntary Aid Detachments[15] (VADs) supplemented medical services to provide first aid care to patients. VADs offered services such as home nursing, loaning of equipment and ambulance transportation to carry and deliver patients to the nearest medical facility[16] (Ramsden and Wall, 2019). For volunteers who worked as 'Ambulance Men/ Women' during the second world war, general duties included driving ambulances, carrying stretchers, and rescuing patients from demolished buildings (British Red Cross, 2020). Only a driver's licence and basic first aid certificate was required for this role (Kilner, 2004).

According to Scott, there was considerable public interest in learning basic first aid during this period. For example, The First-Aid Journal (1945 to 1946) advertised different workshops for the public to learn first aid and reported VAD activity across the UK[17] (Scott, 1945). The British Medical Journal (1940) detailed treatments for wound shocks and non-haemorrhagic shock during the Second World War. During this time, the public were provided with information about how to treat different types of wounds and compared with the present there was much less of a distinction between common and specialist knowledge of first aid.

During the 1940s, first aid expertise was widely distributed, but there was a clear concentration of medical expertise *within* the hospital. Ambulance Drivers were, above all, drivers, aiming to transport the patient to 'proper' care as quickly as possible. On the one hand, (and again compared to the present) more was known and done locally, as Voluntary Aid Detachments were set up across the country. On the other hand, there were limitations

15 Voluntary Aid Detachment (VAD's) were formed in 1909 by The British Red Cross Society (and in later years the Order of St. John's Ambulance joined).
16 The earliest recording of medical transportation was during the Franco-Prussian war in 1892, in which British Red Cross volunteers use horse-drawn ambulances to transport the patient to the nearest field hospitals (The British Red Cross, 2020).
17 The Journal of First Aid (1945-46) was a collection of events and stories about ambulance personnel during wartime (see Scott, 1945 for more details)

on the clinical scope of first aid provision as formal first aid training of Ambulance Drivers was not introduced until 1966, and A&E departments (and A&E specialist roles) were not fully developed until the early 1970s (Sakr and Wardrope, 2000). As noted below, ambulances did not have mobile coronary care 'units' until the late 1970s (Pantridge and Gaddes, 1967).

The NHS came into existence on the 5th of July 1948 resulting in all healthcare services in the UK being free of charge. Voluntary Aid Societies such as British Red Cross, St. John's Ambulance in England and St. Andrew's Ambulance in Scotland continued to support the NHS for another twenty-six years, sometimes by acting as subcontractors delivering ambulance services for local health authorities (Ramsden and Wall, 2019). In this period, "some of the old rationale for the VAS disappeared in the era of the NHS, [but] there was still space within which VAS could operate, and a practical need for the kinds of training and emergency care that they had long experience in providing" (Ramsden and Wall, 2019: p.507). This symbiotic relation continued until the mid 1960s.

2: 'Stabilise and Deliver' (1966-1974)

The next part of the timeline begins with the introduction of the Millar Programme which proposed that Ambulance Drivers should have more advanced training and ends with The National Health Service Reorganisation Act 1973. This Act required all ambulance services to be provided by the NHS and no longer subcontracted to Voluntary Aid Societies (VAS).

The Millar Report, introduced in 1966, proposed a distinction between the roles of a First Aider and an Ambulance Technician. The Millar Programme was a 12-week (eight weeks of intensive first aid with emphasis on practical work and two weeks on civil defence training) in house formal training programme that involved teaching basic life skills and how to use specific equipment for ambulance staff (Kilner, 2004). The Millar report recommended that all ambulance staff should have formal training and qualifications and that drivers should be trained in three core elements 'First aid; Para-medical and Non-medical' (Ministry of Health, 1966; Kilner, 2004: 380). The Millar Report emphasised clinical resuscitation skills such as advanced airway skills, administration of drugs and the provision of advanced life support (Kilner, 2004: 379). The report officially came into practice in 1966 and all ambulance staff

were required to undertake a formal training programme. The report was produced at a time when clinical care was delivered by medical and nursing staff (in hospitals) but not outside them and not by ambulance staff (Kilner, 2004). Steps were being taken to reduce mortality rates from myocardial infarction in the community by taking coronary care units to the patient in the form of a specially equipped ambulance (Kilner, 2004). Other developments at this time included the first prehospital coronary care model in Belfast that paved the way for the modern ambulance service paramedic role (Pantridge, 1970).

Seven years after the Millar Report, the National Health Services Act 1973 (which replaced the National Health Services Act 1948) proposed that the NHS should take over full responsibility for providing all ambulance services in the UK. This decision "…enhanced medicalisation of ambulance work and the emergence of *paramedic practice,* which increasingly included medical intervention" (Givati et al., 2018: 355; College of Paramedics, 2014) and was seen as a key step in professionalising the ambulance service, creating a further cut between the ambulance driver and first aider role.

In essence, further training allowed drivers to put more advanced medical skills into practice on the scene. The aim was still to transport the patient to the nearest hospital but only after first aid treatment had been provided with the aim of preserving life. This upskilling was not immediately matched by higher pay and status (Kilner, 2004; Mackenzie, 2018), but it represented an important 'step-up' in terms of what ambulance crews were expected to do.

As ambulance drivers become more responsible for medical care as they acquired the skills to stabilise patients before transporting them to the hospital, the role of the first aider shifted. Following the National Health Service Act 1974 and the NHS provision of ambulance services certain voluntary aid societies turned their attention to first aid in other settings, and in particular in the workplace. This was in part related to the Health and Safety at Work Act 1974 which made it mandatory for all workplaces to have a named first aider and for on-site medical support to be provided at events such as sporting events, festivals etc. Employees who were nominated as the first aider for their workplace had to go on a 3-5-day first aid course.

At this stage, the role of volunteer first aiders and The British Red Cross shifted again. In this context new roles developed in training workplace ‘first aiders’ and in providing first aid provision at public events. Again, these moves modify the relation between first aiders and ambulance staff, the places in which each provides care, and how these systems of provision interact.

Some of these changes related to developments in medical knowledge. For example, the notion of the 'Golden Hour' was coined to reflect the beneficial effect of receiving medical treatment within, or under an hour – whether inside a hospital or in the wider environment (Lerner and Moscati, 2001). Research into treatment and outcomes (Anderson, et al., 1988; Cales, 1984; West et al., 1979; Pantridge and Geddes, 1967), informed the design of specialist trauma centres and the use of air ambulances and helicopters. This signals a further shift in which research was used to inform and shape emergency response.

3: Take the experts to the scene (1974-1998)

During the next stage, ambulance staff take on more responsibility not only for stabilising, but also diagnosing and treating outside of the hospital. During this period, the ambulance service was transformed from a patient transportation service into an increasingly professionalised and medicalised service. Healthcare professionals were taken direct to the scene and ambulances were designed to include more specialist and portable equipment such as mobile coronary units and automatic external defibrillators. Other pre-hospital care developments including flying squads, air ambulances, immediate care schemes and mobile coronary units (Mackenzie, 2018, p.146). These initiatives were informed by medical research and reports that aimed to reduce mortality rates and found evidence that lives could be saved if healthcare professionals were quickly at the scene (National Research Council, 1966; Pantridge and Geddes, 1967 (Anderson, et al., 1988; Cales, 1984; West et al., 1979; Pantridge, and Geddes, 1967).

This period also saw the emergence of new mobile medical technologies, equipment, and roles. In broad terms, the general duties of the Ambulance Staff were still to stabilise and transport the patient to the hospital, but advanced technology and basic life support equipment meant that the first aid role was increasingly marginalised by the use of mobile

coronary units, aeromedical transportation (such as London's Air Ambulance Charity) and hospital-based flying squads[18].

Frank Pantridge developed the mobile coronary unit in an attempt to improve mortality rates by bringing intensive care skills and equipment onto the emergency scene (Baskett and Baskett, 2001: 100) Mobile care coronary units were designed to fit inside ambulances and carried "routine monitoring and resuscitation equipment including a battery-operated D.C. defibrillator and bipolar pacing catheters" (Pantridge and Geddes, 1967). Although Ambulance Technicians were still mainly responsible for stabilising patients (with their skills used from the Millar programme training course) and transporting them to hospital, developments of this kind called for more training for ambulance crews, and a differentiation of skills, alongside and in relation to other specialist roles in the medical world (i.e., A&E specialist staff). At all levels, emergency medicine was emerging as a specialist clinical practice-based subject with qualifications of its own (Mackenzie, 2018).

Through the 1990s, ambulance crews began to provide cardiac defibrillation, nebulisation therapy and the administration of prescription-only medicines (Craggs and Blaber, 2008). Air ambulance charities[19] were formed during this time. These charities supported teams of professional paramedics (often volunteers) who could be flown to incidents that required a healthcare professional on the scene (London Air Ambulance, 2020). One of these services was the London Air Ambulance which was established in 1989 after a report of the Royal College of Surgeons documented unnecessary deaths from trauma and criticised the care that seriously injured patients in the UK received (London Air Ambulance, 2020). The effect of these services is contested. For example, the 1994 Sheffield Report concluded that the London Air Ambulance service saved something like twelve lives a year (London Air Ambulance, 2020). Other research suggests that mobile teams of specialists did not have much effect on mortality rates (Nicholl et al., 2003). Either way, what is important is that

[18] A flying squad is a division of an organisation which is able of reaching an incident quickly.

19 Air ambulance crews are charity organisations that rely on public donations and are therefore not funded by the NHS. However, the NHS provides clinical staff and equipment to these services. The decision on whether to fund Air Ambulance charities was debated in the UK Parliament on the 26th April 2021 – the decision was rejected. (Transcript of the full debate is available at https://hansard.parliament.uk/commons/2021-04-26/debates/A565C4C9-CBD0-4E7D-BCEC-2CAA706DA4F5/AirAmbulanceFunding)

research and evidence appears to be increasingly influential, even if that evidence changes or is later proved to be unfounded.

The strategy of taking even more highly skilled healthcare professionals, including trauma surgeons, to the scene had further consequences for the status and expertise of ambulance staff and voluntary 'first responders' (first aiders) some of whom were being trained in paramedic skills (Cusack et al., 1992). Over time, the prospect of training ambulance staff to the level of professionals in the hospital became more and more realistic.

The boundaries between care provided in a hospital and outside shifts. As a result, settings that were once the preserve of first aiders and Ambulance Drivers are redefined as places of 'work' for highly trained medical experts. This arguably reshapes the spatial distribution of professional dominance (Friedson, 1970), and with it, the place of everyday first aid. Throughout this period, The British Red Cross continues to run first aid courses for the public, but on a smaller scale than during the 1940s and 1950s. The meaning of first aid, and the knowledge required is also not the same. For example, some first aid courses now provide training on how to use automatic external defibrillators (AEDs).

4: 'See and treat' (1998-2020)

The final 'phase' is one in which skilled ambulance crews become part of the NHS service, re-defining regular call-outs as well as those involving trauma, resuscitation, and acute care. A key development during this period was the concept of the 'paramedic'. Paramedics were officially recognised as a profession in 2001[20] (College of Paramedics, 2014). At this point, the model of 'hear and treat' or 'see and treat' evidently replaces the method of 'scoop and run' (Department of Health, 2005). This is arguably part of a broader trend in which medical professionals delegate tasks to other healthcare workers i.e., allowing nurses to prescribe drugs and expecting paramedics to diagnose and treat patients on the scene (Appel and Malcolm, 2002; Ball, 2005).

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20 The paramedic role has been part of UK Ambulance Service since 1966 (Pantridge, 1970), but was not officially recognised as a formal professional until the College of Paramedics was formed in 2000 (College of Paramedics, 2014).

During this period a number of key reports map out a new direction for ambulance services in the UK. These include (1) The ‘New NHS: Modern and Dependable’ (1997), which was the first to propose the professionalisation of the paramedic role; (2) the 2005 ‘Taking healthcare to the patient: transforming NHS ambulance services’ report; (3) the 2015 Association of Ambulance Chief Executives: ‘A vision for the ambulance service: ‘2020 and beyond’ and the steps to its realisation’ report and (4) NHS England (2020) ‘Transformation of urgent and emergency care: models of care and measurement’. These are worth describing in some detail.

The ‘New NHS: Modern and Dependable’ (1997) focused on the potential for trained ambulance staff to treat patients on site and keep them out of hospital. These proposals were considered in the Audit Commission Report ‘A life in the fast lane: Value for money in emergency ambulance services’ (1998) that recommended that paramedics be recognised as a licensed profession and that training be delivered at universities. But it was not until ‘the NHS Plan’ (2000) and ‘Reforming Emergency Care’ (2001) that the NHS took these principles into account and announced a ten-year strategy to reform NHS healthcare education and to design training overtly centred around patient care. Following these reports, paramedics were to be trained to an advanced level (i.e., a Master’s degree level) and have clinical-based skills required to decide whether to transfer a patient to a hospital or treat on-site. As an outcome of these reports, the main training pathway to become a paramedic was the university route.

The ‘Taking healthcare to the patient: transforming NHS ambulance services’ (otherwise known as the Bradley report) report (2005) contributed to the redefinition of ambulances as mobile health care resources for the whole NHS (Department of Health, 2005), thus not limited to trauma, resuscitation, and acute care (Jenson et al., 2009). By 2015, paramedics were able to make decisions based on the patient’s condition and were able to initiate and evaluate actions and, in some situations (less serious cases) provide appropriate treatment and diagnosis in the patient’s home (Care Quality Commission, 2013; NHS England 2014).

The next report to be considered was commissioned in 2015 by the Association of Ambulances Chief Executives and entitled ‘A Vision for the ambulance service: 2020 and

beyond *and the steps to its realisation'*. The report outlined a five-year strategy to extend mobile health provider roles in diagnosis, transportation, treatment, navigation, and coordination, in a range of settings in which care is offered (AACE, 2015 p.2) and proposed to increase the numbers of advanced paramedics and urgent care activity depending on local services.

The final report that I want to mention was commissioned in 2020 by NHS England. The 'Transformation of Emergency Care Services' aims "to improve the offer for patients, delivering improved access and outcomes with a better experience of care, whether that be online or phone or from NHS 111, at home from a paramedic or when necessary, in an emergency department." (2020: p.7). As the report indicates online or phone services are increasingly used to deliver outside-of-hospital care. These developments augment and sometimes complicate the place of first aid and the expectations and experience of the public. In essence, members of the public are encouraged to administer first aid if they can, before visiting A&E, and to do so by calling NHS 111. The existence of this telephone service arguably deskills the public further, in that there is growing reliance on experts to provide guidance and instruction. On the other hand, these services may well be important in keeping people out of hospital, and in reducing the burden on the ambulance service.

The trends outlined above generate other tensions. For example, McCann et al., suggest that the formalisation of the paramedic profession has produced "multidirectional and somewhat contradictory outcomes for the profession as a whole" (2013: p. 751), and despite efforts to give "paramedics professional autonomy and discretionary decision making", they are still viewed as low paid and low status (Givati et al., 2018: p.367). As Granter explains, emotional exhaustion, high burnout rates and work strain are common (Granter et al., 2018: p. 281), Others such as Nancarrow and Borthwick (2005) suggest that neo-liberal management philosophies have resulted in more unskilled workers taking on more professional tasks. In the context of the present chapter, the more important point is that the developments outlined above are hugely important for the role of voluntary first aiders and for how they fit into this wider ecology of emergency care.

Discussion: Ambulance Services and the implications for first aid

The final part of the chapter draws out three different themes that relate to the changing place of public and/or voluntary first aid provision alongside and the NHS ambulance service.

First, there is a trajectory of what Abbott (1988) describes as 'professionalisation'. According to Abbott, professionalisation is a process in skills are formalised and in which qualifications are used to limit and restrict the potential to practice or perform that skill. The timeline described above suggests that the ambulance service, once provided by volunteers, is becoming increasingly professionalised. The upskilling and professionalisation of out-of-hospital care has arguably transformed and formalised the provision of first aid. In the early 1940s, first aid was part of a war relief effort with people volunteering as Ambulance Drivers (Ramsden and Cresswell, 2019). Aspects of this continued after the Second World War but became more specialised as the NHS developed, and as attention focused on rapid response and patient care. For various reasons, being a first aider became more complex across the board. As described in Chapter Four, there are now different grades of the Red Cross volunteers. For example, up until 2020 (when the events team was disbanded) specialist training was needed for those who wanted to volunteer as a member of The British Red Cross ambulance crew.

Second, the timeline also shows the transformation of first response as ambulances have become hubs for diagnosis, treatment, navigation, and coordination (AACE, 2015). This is evidence of the hospital moving beyond its walls and extending into territories and spaces that were once only occupied by first aiders. Although some have seen the professionalisation of ambulance work as "contradictory" and "multidirectional" (McCann et al., 2013), it can only be understood alongside other developments for instance in Accident and Emergency departments and in where valued skills are thought to lie. This is complex territory. Alongside evidence of 'de-skilling' (where technologies take over what were previously specialist roles), there is evidence of 'up-skilling' as Ambulance Drivers become qualified paramedics. This goes hand in hand with increasingly complex differentiation *within* the ambulance service and, ironically, with the re-introduction of the 'driver' role. This is evident in the creation of roles such as Emergency Medical Assistants whose duty is

to carry and transport the patient to hospital patient transportation (Dent 2008; McCann et al., 2013).[21]

Third, developments in medical knowledge are also relevant. These underpin and inform the substance of first aid training and the 'levels' involved. This is evident in the courses needed to provide first aid at work, and in the 'stages' through which Red Cross events volunteers progressed. In detail, The British Red Cross Event First Aid Service career ladder mirrored the hierarchal structure found in a hospital (see Chapter Four). As discussed later, individuals who are trained in first aid may have different roles, some within The British Red Cross, and some also as community first aid responders – training for which is provided by regional ambulance service branches.

To some extent, these trends are 'evidence based' meaning that they are informed by research showing that lives can be saved by fast local treatment. Equally, the decline in widespread knowledge of basic first aid (arguably related to these trends and to the delegation to trained professionals and equipment) undermines reliance on commonly or widely shared skills. In response, The British Red Cross (and other organisations) are providing courses not only on how to diagnose and treat, but on how to navigate the complex health system, and when and how to use different services (Mytton et al, 2017: 5).

In this chapter I have argued that the position of first aid is defined and bounded by what is happening within the ambulance service and that these two organisational structures depend on and co-exist alongside each other. The ecology of care is not fixed but rather reproduces new distinctions and divisions over time. Some of these changes relate to the introduction of new technology and equipment that requires specialist skills and to the impact this has on 'low technology' public and/or voluntary first aid provision. According to Mytton et al., 2017, these trends reflect the twin goals of keeping patients out of hospital

21 As of 2022, there are six different types of ambulance service roles within the NHS including Ambulance Care Assistant and Patient Transport Driver; Call handler/ emergency medical dispatcher; Emergency Care Assistant; Emergency Medical Technician; Patient Transport Service (PTS) Call Handler and Paramedic (NHS England, 2022)

and of encouraging self-care and basic first aid provision. Exactly how this works out depends on the delicate relation between expert and lay knowledge, and how the two interact. These interactions are in turn related to changing expectations of what the ambulance service is, how it relates to other services, such as NHS 111, or the work of pharmacies, and changing pressures on hospitals, ambulance crews and other parts of the health care system.

Chapter Four: Crossing Categories: Moving Up the Grades of The British Red Cross Event First Aid Service

This chapter makes the case that volunteer career pathways within The British Red Cross Event First Aid Service depend on the structure of progression which is itself on the move (as explained in Chapter Three, the definition and position of first aid fluctuates and changes over time). I do this by examining three volunteers' first-hand accounts of particular aspects of their careers, such as focusing on how they 'move through' different categories and stages when moving from novice to master, but also the different tensions and thresholds they must pass through to become a full participant.

The chapter builds on ideas introduced in Lave and Wenger's (1991) book 'Situated Learning: Legitimate Peripheral Participation' to study how first aiders acquire experience, and their careers evolve. In their text, Lave and Wenger work with several ethnographic accounts of apprentices, including tailoring, butchery, and midwifery, to describe how newcomers move through distinctive career stages to become a full participant or 'expert' of a given community of practice. I expand on Lave and Wenger's ideas on situated learning to be able to capture the multiple and changing career structures of The British Red Cross Event First Aid Service volunteers. While Lave and Wenger focus on one community at a time (butchers, tailors, midwives etc.), interviews with my respondents show how organisational structures matter for each other and where experience built up on one community or organisation can sometimes help and sometimes hinder careers, depending on the organisations strategies and priorities.

The empirical material I work with in this chapter includes interviews with three of the British Red Cross Event First Aid volunteers, an interview with a The British Red Cross training manager, attending sessions with a team of The British Red Cross volunteers belonging to a regional training branch based at North West England and secondary material from The British Red Cross Event First Aid Service (training documents, guidelines and

requirements for completing courses). For reasons described below, The British Red Cross First Aid Event First Aid Service closed in March 2020, just after I completed my interviews. The descriptions and analysis that follows relate to the period just prior to this closure.

The chapter is organised as follows: the next section introduces Lave and Wenger's ideas about how novices become full participants by acquiring and developing skills as they become part of a 'community of practice' and learn alongside more experienced members of that given practice. In this case, experience, participation, and movement through a set of distinctive stages of a practice are crucial for learning. It is by taking Lave and Wenger's ideas of learning as situated and that learning happens through participation, that I understand the constitution of volunteers first aid careers in The British Red Cross Event First Aid Service (for example, how they progress from novice to master but also how they zig-zag, and transition their skills to other organisations/ settings) .The second section describes The British Red Cross Event First Aid Service 'career ladder', which is the structure that defines the steps through which volunteers progress and advance. This career ladder sets out the fundamental 'architecture' of opportunity: it is the structure that volunteers 'join'; it is their 'career' ladder, and at the same time, a representation of how first aid provision is conceptualised and organised by The British Red Cross. Progression up the ladder generally requires a combination of completing formal training courses and acquiring experience by regularly attending events as part of The British Red Cross Event First Aid Service. The third section discusses three first-hand 'life course' stories as individuals move through this system. These three vignettes from volunteers are used to evidence and reflect on the tensions and thresholds between organisational changes to volunteer participation and formal training courses that come to light. The final part discusses these tensions and thresholds in more detail and reflects and revisits questions about how it is the interconnection of ladders for different groups and experiences that matters for how volunteers progress in the service.

The processes of 'becoming a full participant': Learning as participation

In their book 'Situated Learning: Legitimate Peripheral Participation', Lave and Wenger (1991) focus on learning as part of ongoing practices. Their argument is about how novice practitioners acquire more skill, experience, and recognition through interaction with

experienced practitioners. To become a full practitioner of a practice, newcomers must advance through a set of distinctive stages – it is the movement of novice to full participant in which apprentices 'master' a practice.

To describe the process of becoming a full practitioner, Lave and Wenger draw on five ethnographic accounts of apprenticeship, including Yucatec midwives, Vai and Gola tailors, U.S. naval quartermasters, butchers, and Alcohol Anonymous groups, to show how learning by participation is organised across different occupational structures. Each of these five cases shows how apprentices, or 'newcomers' in a 'community of practice', develop skills through the experiences of participation ('learning by doing'). Different practices or organisations have different features (stages) that help move novices to old hands.

Lave and Wenger's (1991) text has been influential in debates about learning. Their notion of 'situated learning' critiques didactic or 'textbook' cognitive forms of learning (such as classroom learning) (Lave, 1988) that conceptualise knowledge as abstract or fixed and transferred between teacher and learner. Cognitive theories take a view of "knowledge as a collection of real entities, located in heads, and of learning as a process of internalizing them" (Lave, 1993:112). These kinds of theories tend to focus on how people formulate and acquire knowledge – often by investigating aspects such as perception and memory.

By contrast, the situated learning approach supposes that learning occurs through "knowing and learning as engagement in changing processes of human activity" (Lave, 1993:12). In the words of Lave and Wenger (1991:24), it is "learning is a way of being in the social world, not a way of coming to know about it", and it is through participation alongside others, in activities, contexts and cultures, such that experience, and knowledge becomes an integral part of learning.

Lave and Wenger examine the detail of 'doing', that is, how practitioners move through a set of distinctive stages of a practice. In doing so, they show these stages are organised. Each ethnographic example of apprenticeship describes different unique features (different thresholds and tensions) that practitioners pass through when moving toward full participation in a given practice.

The length of time it takes to move from the position of a newcomer to full practitioner varies across the different cases of apprenticeships. For example, Vai and Gola tailors, Mayan midwives and junior butchers have relatively long trajectories compared to U.S. naval quartermasters (in which a complete journey from newcomer to master may take place every five or six years) (Lave and Wenger, 1991: p.99). The structure of 'moving up the ladder' varies depending on the organisation.

Another feature that varies across the practices that Lave and Wenger describe is the tasks from which novices begin. In the case of the Vai and Gola tailors, apprentices start from learning the final stages of producing the garment (i.e., ironing finished garments that teaches them a lot about cutting and sewing (Lave, 1988) before learning the first steps of cutting the garment (in which more complex and complicated cutting and sewing skills are required) (1991, p.72). The point is that novice tailors take on more complicated tasks in the process of becoming a full participant.

In a similar case, trainee Yucatec midwives begin by observing experienced midwives at the beginning of labour and learn the craft by having a more experienced midwife in the room who they can refer to when they are carrying out tasks. In this case, like the Vai and Gola tailor case, midwifery is structured towards the start of the birth. In the sense, the more experience midwives develop, the earlier in the process of pregnancy they supervise or assist with. For example, expert midwives talk to people and help them at the start of the pregnancy, while novices help at the end of the pregnancy. Again, the process here is that participants move relatively slowly when moving through the ranks. Here, learning by participation is in part structured by the tasks they carry out and how these are organised/sequenced (1991, p.68).

The organisation of access to becoming more experienced varies across ethnographic examples too. For example, to move up the ranks, junior butchers must learn a range of complex cuts and slices. The physical setting of the supermarket prevents peripheral participation as it separates them from working alongside more experienced butchers who work in front of house of the supermarket (1991: p.103). Additionally, in this case, "master

butchers often confined their apprentices to jobs that were removed from activities rather than peripheral to them" and novices only move up the ranks after experienced butchers leave (1991: p.103). Alongside work placements, the butchers that Lave and Wenger observed had to complete a series of examinations to be certified at different levels and to become a master in the practice. This is a case in which "legitimate peripherality is arranged/manipulated to prevent or circumscribe access to practices learners wanted to (learn to) participate in…" (Lave, 2019: p.137), as it shows how access can be denied to prevent legitimate peripheral participation.

The examples from Lave and Wenger's study show that moving towards 'full' participation is organised differently for different occupations and practices. What they share is various features including organisation of the workspace, how training happens, and forms of certification that structure learning and the careers of practitioners as they move from novices to masters.

The organisational aspects of 'Legitimate peripheral participation' and the process of moving from novice to old hand have been explored in other medical sociological research some of which also considers the changing relation between occupational groups within healthcare. For example, Goodwin et al., (2005) draw on the work of Lave and Wenger to show how boundaries are created and sustained in relation to anaesthetic practice.

This research focuses on how work and knowledge is distributed amongst anaesthetic teams and how these patterns and traditions may affect attempts to reshape anaesthetic services. As with Lave and Wenger's work, these authors pay particular attention to the ways in which newcomers gain access to 'higher' levels of knowledge and to how participation is structured. In expanding on these ideas, Goodwin et al. refer to the notion of "stratified legitimacy", a concept they use to describe the extent to which an individual's participation in the anaesthetic field is dependent upon their professional identity and how this is continually reaffirmed through participation itself.

The first aiders included in my own research were also 'positioned' at different points on what was represented as a 'ladder' of experience and expertise. Exactly what was required

to move up from one stage to the next is discussed in detail in Table 4.1. But as Goodwin et al. also explain, positions are not to be taken for granted. As in anaesthetic practice, expertise needs to be continually enacted and reaffirmed.

Other writing about the organisation of healthcare has developed and worked with notions of practice and community. For example, Ranmuthagala et al., (2011) conducted a systematic literature search and review on how ‘communities of practices’ were being used as an effective organisational and management tool in the healthcare sector. Many of literature which was reviewed (Lesser and Storck, 2001; Braithwaite, et al., 2009; Ranmuthugala, 2011; Wenger and Snyder, 2000; Leavitt, 2001) appropriated Lave and Wenger’s notion of ‘communities of practice’ (Lave and Wenger 1991; Wenger, 1998) and used this term to describe specific techniques that are intended to improve organisational performance. These include, but are not limited to, promoting of knowledge management, sharing tacit knowledge, sparking innovation, reducing the learning curve for new staff, creating social capital, and adding organisational value). According to le May (2009), what are referred to as ‘communities of practices’ are treated as some kind of management tool – as if such communities can be deliberately established and as if they represent a means of enhancing knowledge and practice within UK healthcare services such as the NHS (le May, 2009).

It is important to be clear that this is not how I interpret Lave and Wenger’s work. Instead, and as will become clear, I am interested in how organisational boundaries and distinctions ‘carve out’ roles and structure occupational and professional groups, creating variously accessible career ladders and opportunities that are in turn important both for the lives of the individuals involved, and for the sort of first aid service that they provide.

In the next section, I consider the parallels between these ethnographic accounts of situated learning and how volunteers move towards full participation in The British Red Cross Event First Aid Service.

Becoming experienced: how progression was organised in The British Red Cross Event First Aid Service

Until 2020, The British Red Cross offered an event first aid volunteering service. The service provided emergency response services at public events across the UK (ranging from football matches, music concerts, long-distance running events, country shows and school fetes). As part of the service, volunteers were trained and worked as part of regional teams (e.g., Cumbria region, Newcastle region etc.) and were able to take different possible pathways to progress or advance their first aid volunteering 'careers'.

Within the service, there is a 'career structure' which defines the steps a volunteer needs to progress from one category to the next. To understand how this works out in practice, it is crucial to recognise that The British Red Cross Event First Aid Service 'career ladder' represents different steps and stages in which first aid volunteers can gain experience by offering medical support at events. To advance through the grade divisions, first aiders must regularly attend events (by working at a first aid post as part of The British Red Cross Event First Aid team) and do several modules and courses. It is crucial to pay attention to how experience is organised and how it plays out in divisions and roles to progress 'up' the ranks. The table below details the possible pathways of volunteering roles in The British Red Cross Event First Aid Service in 2020: Standard First Aider, Enhanced First Aider and Ambulance Crew and alternative managerial positions such as Event Duty Officer[22]. The table is compiled from speaking with Red Cross Event First Aiders[23] and the Event First Aid and Ambulance Support: Clinical Skills and Standards Pocket Book (British Red Cross, 2015). All volunteers start from a standard first aider level of training, and those who wish to advance to more responsible roles can take courses to become an Enhanced First Aider and Ambulance Crew.

22 The British Red Cross employs paramedics but does not train them. To become a paramedic for The British Red Cross, candidates must undergo national standard training and examination separate from The British Red Cross

23 I could not retrieve a copy of the official ladder/ role descriptions because the charity would not furnish. However, the 'Event First Aid and Ambulance Support: Clinical Skills and Standards Pocket Book' provided information about which personnel could do what in terms of clinical skills. For example, first aiders who completed Pain Management course could administer levels of supplemental oxygen using a non-re-breathing mask, while Entonox could only be administered by those who have completed the Trauma course.

Grade division titles	Roles and responsibilities	Modules and training courses	Other variants	Other requirements/ additional information
Standard First Aider	Volunteers start their career within The British Red Cross as a standard first aider.	• Standard First Aid Training course that lasts approximately 3-4 weekends • This course covers standard first aid (4-day course) • Safer handling A and B (6-8-hour long course). This includes training on filling out Patient Report Forms, using equipment and setting up Red Cross first aid posts.	Other roles include administrative roles. This type of role involves only administrative duties (e.g., completing Patient Report Forms or discharging patients from the field hospital (if there is one on-site)). Volunteers doing admin roles will not usually do any clinical duties (e.g. treating and managing patients).	No minimum hours to progress onto next role (Enhanced First Aider)
Enhanced First	Enhanced first aiders can	• Core modules include:	Other roles include	

Aider	take on more responsibility than those who are standard first aiders. For example, they can administer oxygen and certain types of drugs (i.e. paracetamol, aspirin, ranitidine) and use cervical collars for shock incidents.	Resuscitation support (1-day course); body works (4-hour course); medical (2-day course); safer handling C (6-hours) and safer handling D and E (2-hour course for wheelchair and carry chair). These courses vary from 1-2 days in length. • Optional modules include trauma management (2-day course) and working with other services (2-hour course).	bicycle first aid responder. The cycle responder course usually takes 4-6 hours, and volunteers must have good physical fitness. This role is specialised in that bicycle first aiders are only used for long-distance running events and events with big crowds that vehicles have difficulty accessing.	

Red Cross Ambulance Crew	These volunteers work inside The British Red Cross ambulance at events. This involves setting up the ambulance, auditing equipment and transporting patients to hospital.	• First aiders who have completed these seven modules: resuscitation management, standard first aid, body works, medical, trauma management, working with other services, safer handling (A-E) and ambulance orientation are entitled to sit an examination which is 1-day. • Alternatively, The British Red Cross offers a one-week condensed course which includes all seven courses. This course excludes the exam and is offered to current	Other variant roles include blue light driver. For this role, volunteers have to be 'active', meaning they should be attending events regularly as part of the ambulance crew. To become a blue blight driver, volunteers have to go on a further four-week (full time) course, three of these weeks would be training and assessment on advanced driving.	Good levels of physical strength are required for this role as it requires patient handling. This is evaluated through a practical assessment which involves lifting up certain equipment.

		ambulance crew for when they are due to requalify (every 3 years)		

Event Duty Officer	This role requires some experience providing first aid at public events and management and organisation skills. Event Duty Officers manage the welfare of Red Cross Event team and do not treat	There are no official training courses for Event Duty Officers. This position requires the experience of working at events plus management and organisational skills from other experience and also knowledge of the event and	There are three variants or 'levels' for volunteers to progress as Event Duty Officers. These are outlined in detail below.	Standard first aiders can become Event Duty Officers as this role does not require clinical skills. Instead, they have to be trained in decision-making at events. Volunteers with five years' experience or less would not be assigned this role.

	patients. The main duties involve doing the briefings and debriefings of events, negotiating and communicating with the external teams/ organisers and ensuring that The British Red Cross first aid team is carrying out their duties appropriately. Duty officers usually stand outside the medical post at an event allowing only patients, friends or family members of the patient or Red Cross Event First Aid first aiders to enter.	the area. This is determined by a senior member of The British Red Cross Event First Aid Service (e.g. Red Cross event training manager)		
Level 1 Event	All Event Duty Officers start	The process of becoming a		After completing the module,

Duty Officer	from Level 1. This level manages small events i.e., pony clubs and school fates. There are up to 8 Red Cross personnel at smaller events	Level 1 Event Duty Officer is completing a form and submitting to a senior British Red Cross staff who will then assess if you are suitable. Additionally, there is an Event Duty Officer online learning module for Event Duty Officer’s to complete before they work at events.		volunteers then shadow an Event Duty Officer at an event, and then a staff member will assess the volunteer at a different event. If the observer is satisfied with the trainee Event Duty Officer, they can manage small events.
Level 2 Event Duty Officer	Level 2 Event Duty Officers manage medium to large events. Usually, those that require up to 20 Red Cross personnel.	To reach Level 2, duty officers must take a 2-day classroom course involving decision-making and simulation activities. One activity is a giant map of a fake event in which the volunteers get tested on their decision-making skills with different		Volunteers will shadow an Event Duty Officer at a medium-large event and then a senior staff member (e.g., head of the logistics of Red Cross Event First Aid) to assess that volunteer.

		scenarios, i.e., explosions and terrorist threats.		
Level 3 Event Duty Officer	This is for events which The British Red Cross classifies as 'supersize', i.e., the Great North Run. Not many volunteers progress to become Level 3 Event Duty Officers because it is a long process (can take up to a year) and involves paperwork.	Volunteers have to complete a preceptorship document, a set of papers outlining the transition of level 2 Event Duty Officers to Level 3. These documents provide structured support for Event Duty Officers and the opportunity to reflect and self-identify areas to develop. All Event Duty Officers must complete these documents before becoming a Level 3. In addition to these documents,		The British Red Cross Event First Aid logistic manager would have to approve of the preceptorship document before it is sent off. The role is similar to Level 2, it just has more responsibility because of the size and amount of personnel at events.

		Event Duty Officers must attend a 2-day training course on managing events and decision-making during crises with the national training team.		

Table 4.1: The British Red Cross Event First Aid Service career ladder in 2020

Although the career ladder details a structure of volunteer pathways within The British Red Cross Event First Aid Service, progression also comes from acquiring more experience in managing and treating injuries. In The British Red Cross, triage determines who treats an injury. The Priority Guideline Tool is a structure of responsibility designed by The British Red Cross Event First Aid Service that supposes that every First Aider can use and judge when dealing with an illness/ injury. In essence, the tool determines the 'seriousness'[24] of injury (see chapter 5 for more details on how this tool organises first aid in a real-life situation). It guides first aiders on what to do during an incident. The triage guideline tool categorises four divisions of incidents: Priority 1 Alpha, Priority 1, Priority 2, and Priority 3. Priority 1 Alpha involves a respiratory incident or cardiac arrest and urges immediate action, while Priority 2 signals incidents such as dehydration, low blood sugar and hypothermia and signals urgent action.

24 By serious I mean the injury has a notion of complexity and difficulty.

Immediate PRIORITY1 ALPHA	Respiratory or Cardiac Arrest
Immediate PRIORITY 1	Respiratory rate below 10 above 29, Pulse rate greater than 120
Examples: Collapse with unconsciousness, severe-breathing difficulties, trauma, chest pains, severe dehydration. These casualties should be taken at once by ambulance to the nearest A&E Department or the Field Hospital	
Urgent PRIORITY 2	Respiratory rate from 10 to 29. Pulse rate 120 or less
Examples: Dehydration, hypothermia, hyperthermia, low blood sugar. It may not be possible simply by looking at the casualty to decide what the exact problem is, but look out for: Confusion, diarrhoea, vomiting, shivering, severe and extensive muscle cramps, headaches, dizziness, weakness, casualty feels hot, but is not sweating. These casualties should be taken at once by ambulance to the nearest A&E Department or the Field Hospital	
Delayed PRIORITY 3	All walking Patients
Examples: Isolated muscle cramps, blisters, foot and ankle strains and rashes. These casualties may be treated at the nearest Route Emergency Medical Facility or Field Hospital.	

Figure 4.1. The Priority Guideline Tool (copied from the Great North Run briefing document) (The British Red Cross, 2019b).

Part of the initial training is to teach volunteers how to assess injuries and decide what to do next, i.e., is it something they can handle, or should they call for more experienced help? From the start, the organisation of 'expertise' is linked to the seriousness of injuries. So, for example, a standard first aider can treat a patient with a minor injury (i.e., a bee-sting or cut finger). However, more severe injuries (like a broken leg or a shock-related injury) are likely to be handled by someone in a more experienced role (i.e., enhanced first aider or ambulance crew). This is because they have taken advanced courses that allow them to use Entonox (if completed the Pain Management module) or

other drug therapies such as glucagon injection that are usually required in such circumstances involving an unconscious patient (British Red Cross, 2015: p.49).

Here, progression is bounded by responsibility. For first aiders to 'grow' in experience, they need access to more serious cases (but also have completed courses in Trauma, Pain Management, Resuscitation Support to be able to treat these cases). But as The British Red Cross Event First Aid Service volunteers know, serious cases do not regularly occur at events. There is a funnelling of opportunity at events as there are more cut fingers and bee stings than broken bones and head injuries.

The structure of funnelling depends on the type of event. High-risk events like the Great North Run or Great North Swim have a high potential for complicated cases, so healthcare professionals (e.g., NHS doctors and nurses) are required by law to assist first aiders with injuries. However, joining up with the ambulance service prevents first aiders from access to those complicated cases. What is critical here is that there are plenty of opportunities to do low-level first aid, but there is a lack of events that offer opportunities to practice high-level first aid. This is relevant in that experience with these kinds of injuries is part of moving up the ladder.

The British Red Cross used to provide medical support for small-scale events. These events tended to be local (fetes) and gave full responsibility to The British Red Cross volunteers. However, in 2017 The British Red Cross underwent a restructuring programme of the Event First Aid Service. The programme shifted the emphasis to offering services to larger and higher cost events. Although larger events have potentially more chances for first aiders to encounter and handle more serious injuries, there are also fewer of these types of events each year. Even more, opportunities to practice depend on how the event is managed (e.g., will there be professional healthcare assistants at these events that cut off first aiders from treating injuries/ and incidents?). The point here is that The British Red Cross decision to target larger events

has changed the opportunity for learning and progression, resulting in less trained and experienced first aiders.

More recently, all these routes have been closed off. The British Red Cross events team has been a vital part of The British Red Cross since 1870. It became more commercialised after the Health and Safety at Work Act 1974 made medical support at certain kinds of events mandatory. However, in March 2020, the Chief Executive of The British Red Cross, Michael Adamson, released a statement on October 23rd, 2019, to announce the closure of the service:

> “In recent years, we have seen increasing pressures on both our income and the demands for our assistance, which means we must prioritise how we use every pound donated to us. The British Red Cross has a proud history of providing first aid at events and we are extremely grateful to all our passionate and committed volunteers and staff who have dedicated so much time and energy to providing a first-class service to our clients. Unfortunately, our work providing first aid at events has been running at a financial loss for some time - the service still requires £1.8 million of donations annually to cover the shortfall between income and costs - and this is diverting vital funds from our efforts to provide emergency support for major domestic and global crisis.
>
> “So, it is with real sadness that we have taken the very difficult decision to close our event first aid service by 31 March 2020. This is not a decision our trustees have taken lightly. We are acutely aware of the impact this will have on our valued British Red Cross staff and volunteers. We sincerely hope our volunteers will consider continuing their journey with us in other ways. We have also agreed a streamlined transfer process with St John Ambulance and St Andrew’s First Aid for those volunteers who wish to continue providing first aid at events with another organisation.

> "Delivering first aid education and promoting first aid as a vital skill is still fundamental to The British Red Cross. Last year, we trained over 275,000 people in first aid and we will continue…"

(British Red Cross, 2019a)

The British Red Cross is now not providing medical support at events. This means that there are less opportunities for volunteers to acquire experience. Volunteers continue to participate in ambulance support, wheelchair hire, and charity shop roles (British Red Cross, 2022b), but there is no longer a specialist service for volunteers to join and progress their first aid skills at public events. With fewer opportunities for developing experience, there is no longer a clear trajectory for becoming a skilled first aider in The British Red Cross Event First Aid Service, but there are other routes: St John's Ambulance etc.

This is the context in which the following individual experiences unfold in working through volunteers' accounts. I reflect on how the organisational boundaries, i.e., the tensions, thresholds, and access to first-aid situations, organise the participation and careers of three volunteers, up to the closure of The British Red Cross events team. In the following section, I discuss the lives of three Red Cross volunteers all of whom have relatively long careers as first aiders, to show how progression works. I am telling these stories to describe their accounts in Lave and Wenger terms (e.g., transitioning to other first aid services, clash of accreditation and loss of opportunity).

The chosen respondents were selected because they illustrate three different trajectories of becoming an experienced first aider within The British Red Cross Event First Aid Service. These first-hand stories provide material on the process of becoming a full participant and detail different tensions that occur during progression.

Volunteers' experiences of becoming a first aider

Anna: careers developing within and outside of the service

Anna is 35 and has lived in the North East of England for more than ten years. She is originally from Cambridgeshire but moved to the North East of England to attend university when she was 18. She now works as a maths tutor at a night school. Anna is a member of The British Red Cross Ambulance Crew and regularly acts as an Event Duty Officer (see Table 2, p.69). The British Red Cross is a big part of her life. As Anna describes it, she has been part of The British Red Cross Event First Aid team since she was a child. She refers to The British Red Cross as her family away from home.

Anna began attending First Aid courses when she was five. As her brother was part of The British Red Cross youth groups, Anna's mother would take her to these sessions. They would help out by making squash and snacks. After a few months, her mum qualified as a first aid trainer, and Anna remembers assisting at these courses by rolling up bandages and taking apart the 'Annies' (which is the name given to the dummies used in training), so they could be put away at the end of sessions.

Anna joined a Red Cross youth group herself in 1999[25]. During this time, youth members were allowed to go to events but were not allowed to assist patients clinically. Instead, their typical duties included holding and carrying equipment. Anna says her main jobs at that time were handling and managing the radios. Youth first aiders were allowed to take the radios out of the boxes and were assigned a radio with which they would be able to communicate with senior first aiders during an emergency.

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25 No official document that states the reasons why the youth groups closed, but according to Anna, youth groups closed down in 2004. This was because of new safeguarding laws and because of the size and types of events which The British Red Cross was targeting added complications for having younger volunteers at events.

In 2002, when Anna went to university, she switched volunteering groups to the branch closest to her university town. She used The British Red Cross Event First Aid Service to meet new groups of people, as she was new to the area and did not have many friends. The group she joined was much more active compared to the branch in her local hometown. During her years at university, she would assist at events multiple times a week. She recalls that one year she did '400' hours of events.

Anna thought she would always be in The British Red Cross unless something dramatic happened. She grew up as part of the service and gradually acquired more advanced roles and training. She has been Ambulance Crew since 2002, but in the last 5-7 years has rarely done any clinical first aid roles because she is usually assigned as a Level 2 Event Duty Officer. This means she manages the team's welfare and handles any issues involving the event organisers or other external partners at events. She also does paid work as part of Red Cross Ambulance Support. She answers to 999 calls in her local area, attending to injuries and caring for the patient prior to the arrival of a paramedic.

She had previous experience of working with The British Red Cross logistics team putting together equipment kits for the Red Cross ambulances. She is also part of the national gender equality network and co-chair of the disability network. Anna volunteers as a trainer team leader (now also for St. John’s Ambulance) and contributes to courses for groups in Northern England as part of the national training team. Anna not only has clinical skills but also has management, leadership, mentoring and training skills from these different types of roles.

Since the closure to The British Red Cross Event First Aid Service in 2020, Anna has decided to maintain hands on first aid work by joining St. John’s Ambulance as a training leader. She still volunteers to provide ambulance support for The British Red Cross, but in the last 5 months (from interviewing in June 2020) has done no first aid work because of COVID-19. At home, she still stays in contact with her training branch.

The key insight is that Anna is a full participant, but the changes to The British Red Cross service has always structured her experience and opportunities. For example, the closure of youth groups in 2004 and the funnelling out of event opportunities by The British Red Cross towards the services closure both shaped her career trajectory. Additionally, Anna has taken up a number of different roles, within the Red Cross Event First Aid Service, but also outside of the service. Her story shows the trajectory of novice to master involves zigzagging from a number of different The British Red Cross roles including working as a Level 2 Event Duty Officer, Co-Chair of the disability network and also assisting with ambulance support.

Eric: a case of clash of accreditation

Eric is 55 and lives in the North West of England. In his professional career, he is a consultant for a business firm. He has done this job for many years and regularly travels up and down the country to meet clients. In his spare time, he volunteers as an Enhanced Skill First Aider for The British Red Cross Event First Aid Service and Red Cross Emergency Response team. He also works part-time for the North West Ambulance Service as a Community First aid Responder[26]. He also sometimes sells his skills/services to Moorhead* First Aid organisation – a private first aid organisation based in Shoredale, Cumbria, that provides medical support at events and first aid courses for workplaces and public members.

Eric joined The British Red Cross Event First Aid service when he was 35, after attending an adult first aid course in 1993. During the 1990s to the late 2000s, he regularly attended events with The British Red Cross Event First Aid Service in his local community.

26 Community First Aid responder is an external role and usually work with as part of the ambulance service support programmes. These roles support the local ambulance services by responding to 999 calls and providing first aid treatment before a paramedic arrives at the scene. Community first aid responders have a separate training process than to that of The British Red Cross. Therefore, volunteers might do similar training courses and assessments for both organisations.

He has not become a member of the Ambulance Crew (the highest rank in The British Red Cross Event First Aid Service). In our interview, he explained that the reason for this is that he does not have time to complete the required regular training courses and assessments. (Each Ambulance Crew member has to requalify every 3 years, and this takes 1-2 days, depending on the module they are retraining for). Eric enjoys being able to provide help for those in need in his local community. He has attended some courses required for ambulance crew such as trauma and manual handling. However, he now dedicates much of his time to first aider roles outside of The British Red Cross. In his community first aid responder role (a volunteer first aid role for North West Ambulance Service), he treats any injured or ill residents in his village before a paramedic arrives. As a community responder, he has the certification to be able to give oxygen to treat patients who need it. However, he cannot do this in his Red Cross role since he has not completed the required modules.

During our interview, Eric reflected back on his career as a volunteer first aider and how changes to The British Red Cross services shaped his experiences. Between 2000 and 2012, he explained that there were around sixty active volunteers in Cumbria - ten times more than in 2019. This regional Red Cross Events Team would cover approximately 100 events annually, and he would typically volunteer at two weekly events. Events included pony club events, charity fundraising events, local concerts and school fetes.

As a result of the changes to The British Red Cross strategy in 2017 (to focus on large events), the number of events in Eric's local area that The British Red Cross provided services for decreased to 5 per year. Because of this change, he decided to take up new volunteering roles within and outside The British Red Cross and he now volunteers for other services in The British Red Cross - not only the Events team, but also the emergency response division. This service supports local authorities during times of

crisis (e.g. floods) by providing patients and victims with welfare and other support services.

In 2019, Eric did his five events per year with The British Red Cross Event First Aid Service but prioritised his emergency response and Community First Aider role with North West Ambulance Service. He says that he enjoys working for North West Ambulance Service because he gets to use his first aid skills in addition to providing welfare and support to patients.

The changes to the service and cut-off local events in his region mean that Eric has had to volunteer for other divisions and move to other areas of first aid work, i.e., community first aid response and private first aid organisations. His case also demonstrates tensions between the demands of different first aid providers and their rules regarding accreditation - all discussed later in this chapter.

The key story here is about Eric's diversification in his first aid career because of changes in The British Red Cross. It is also worth noting there is a clash of accreditation because of different requirements in different services. For example, he cannot use his Community First Aider skills in his Red Cross Enhanced First Aider Role. In addition, he has become a full participant of the practice without being a member of the Ambulance Crew. This shows The British Red Cross career ladder is different to the ethnographic cases of apprenticeship in Lave and Wenger's study, as the participants do not have to have 'mastered' every first aider role when transitioning to full participant (elaborated further in the analysis below).

Andrea: a story of loss of opportunity

Andrea is in her mid-fifties and lives in a small village in the North West of England. She has been part of The British Red Cross Event First Aid Service since 2015 and is an Enhanced Skill Level First Aider.

Andrea joined The British Red Cross Event First Aid Service when a colleague from her North West Ambulance Service role persuaded her to join as a way to do first aid training since her community first aid response role did not offer a lot of first aid training opportunities. She has taken the medical and trauma courses and attends monthly training sessions at her regional Red Cross branch.

> Andrea: "[I joined] basically to enhance my first aid skills and to develop more training, I was using it as a piggyback to the community responding that I do. We [in the North West Ambulance Service] don't really do much training… um… and my colleague who was also a responder, he was in The British Red Cross. He was telling me about the different training scenarios and what not, that they do…. And he thought that something like that joining for that for the training modules and anything else would be a good idea… um I actually quite enjoyed doing the activities that they were managing. Do you know what I mean? The different events, so I quite enjoyed it doing it, do you know what I mean?

As much as Andrea enjoys volunteering with The British Red Cross, she is sometimes frustrated with the management and organisation of training courses. She comments that The British Red Cross are rigid and inflexible when training and requalifying volunteers, as she once had to travel to the South of England to attend a 4-day requalification course.

In 2018, Andrea volunteered at 25 events. Her favourite event was Pretwick* Night Safe, a charity event where fundraisers sleep on the main streets of Pretwick to raise money for homeless and vulnerable groups. However, since 2019, because of the events service closure, The British Red Cross no longer provides medical services for Pretwick Night Safe. This is now the case for many other events she has previously volunteered for. In our interview, Andrea described that she is particular about what events she helps at

since she does not like big crowds and usually volunteers at events like flower shows and school fetes. In her experience as a first aider, she has never had to deal with a traumatic injury and usually deals with patients who have had minor injuries. Andrea said that what she finds rewarding about the role is talking with patients and reassuring them. In addition, she believes that working in a smaller team has its benefits, including getting to know volunteers, more opportunities to promote The British Red Cross to the public, and spending more time with patients. She explains,

> "Working in a smaller team getting to know the people on the post. You know like Sunday… I met a few faces that I had not seen before… So, you know it is nice to sit and catch up to see how they get along with them and learn about their history with The British Red Cross, you know what I mean? How long have they been in it and what changes have they seen? You know what I mean?"

Another reason Andrea avoided 'supersize' events is because of the time she spent travelling. She only volunteers at events which are local to her. She does not like spending the night away, as she has family commitments.

In 2019, she signed up to any small event that was local to her but mainly focused on her community first responder volunteering role. She lives beside a university campus and often responds to 999 calls during events such as freshers' week and sporting events to provide medical care before paramedics arrive.

The main story here is that the change in The British Red Cross Event First Aid Service structure effected volunteering experience. The 2017 restructuring programme that changed The British Red Cross strategy to target larger events rather than smaller ones meant volunteers had to dedicate more time and commitment when volunteering for the service. Here, Andrea's story is an example of how changes to the service prevented access to becoming a full participant.

Tensions and thresholds: implications for becoming a first aider

The vignettes show some examples of kinds of volunteer careers in The British Red Cross Event First Aid Service. Each first-hand story reveals different tensions and thresholds encountered as volunteers try to move up the grade divisions (if they wanted to). The reason for drawing attention to these vignettes is that they emphasise aspects of Lave and Wenger's (1991) account that do not quite match the structure of progression within The British Red Cross Event First Aid Service and calls for further discussion and elaboration.

The ladder and its opportunities change

The first theme is about the 'career' ladder and how opportunities change. Although the career ladder represents an 'easy' step-by-step guide to how volunteers can advance through different roles, volunteers must show their dedication and commitment to the service by regularly attending events and training sessions. In addition, volunteers must demonstrate to the regional training manager that they are willing to progress their first aid career in The British Red Cross Event First Aid Service.

The 2017 restructuring programme altered the strategy of The British Red Cross Event First Aid Service. The programme redirected its focus on bidding for contracts with organisations running large, 'national' events, i.e., the Great North Run and Silverstone while contracts for smaller 'regional' events like school fetes and smaller running competitions decreased[27]. This change created unintentional thresholds to some volunteers' progression within the service.

For example, Eric recalls that compared with attending events almost every week, some regions dropped to only five events per year. Of course, some regions are still more

27 Smaller events have a lower cost compared to medium or large events. The average price for a small event is approximately between £1000-£5000, and less than £1000 for very small events with fewer than four first aiders. Supersize events can cost up to £25,000. (Fraser et al., 2015).

active than others. Anna explains that her region, in the North East of England, has more events than any other in the UK, making it easier for volunteers to develop and sustain their first aid skills (but still has seen a significant decrease of working at events when compared to 10 years ago). By contrast, Andrea and Eric live in the North West region, and since the number of events in the areas has reduced significantly over the last decade, they can only participate at events regularly if they are willing to travel a long distance or stay overnight. The British Red Cross covers travel costs for volunteers, but even so it makes it difficult for those with other commitments (i.e., family or professional). Finding events to help at is not the only challenge volunteers face when hoping to advance in their first aid career. According to Andrew, a Red Cross training course delivery manager, there is also a decrease in Event First Aid Service staff compared to ten years ago.

These experiences of travelling further to events and attending requalification assessments suggest that The British Red Cross unintentionally thwarts those it wants to develop. As in the butchery case described by Lave and Wenger, "organisational structures do not always facilitate learning; they can also prevent it" (1991: 76). The structure of the organisation of learning is blocking volunteers' progression as they lack the opportunities they need to practice.

The British Red Cross retreat from small events was not an accident, nor is how the organisation delivers and structures training. From The British Red Cross point of view, each course represents an investment of time and resources in volunteers who may not participate for long. Judgements about what strategy to follow (which events to service, for what fee, and or at what cost), and about which individuals to 'invest in' are also key. But what is important is that not everyone wants to follow The British Red Cross structure, as mentioned in the life stories of Anna, Eric and Andrea, who all have careers that exist outside The British Red Cross.

What Lave and Wenger do not capture in their ethnographic studies of apprenticeships is how the organisation of learning changes throughout time – what happens in one moment of a participant's career, or trajectory of becoming a master, might change in the next couple of years. For example, Eric used to attend 100 events annually, but only a few years later this significantly decreased to 5 events because of changes to The British Red Cross strategy and priorities. Meanwhile Anna, used to commit 400 hours to attending events with The British Red Cross but now makes up these hours by transitioning to different roles including working as a first aid trainer for St. John's Ambulance or working in a paid-role for The British Red Cross Ambulance Support division (the section below elaborates on transitioning between services).

Both Eric and Anna are 'full participants', in which they have gathered years of expertise and moved through the distinctive stages of transitioning from novice to master (both have been in the service for more than 20 years and have completed the various training courses and qualifications for the grade level). But their volunteer experiences post 2017 are much different to when they first started and have resulted in them switching to other organisations to maintain their first aid skill. These vignettes capture an ongoing story of first aid provision and shows how volunteers' careers and experience are relational to changes in the strategy of the service (to go for large events rather than small events).

The next part elaborates on how first aid careers develop between organisations. This is part of the ongoing story after The British Red Cross Event First Aid Service closes and volunteers move to St. John's Ambulance or other first aid providers.

Careers develop between organisations: not everyone wants to 'climb' The British Red Cross ladder

The second point is about the multiple careers that develop outside of The British Red Cross Event First Aid Service. This is different to Lave and Wenger's five cases of apprenticeship that describe career progression that only happens in one setting (i.e.,

the midwifery case only focuses on Yucatec midwives and the tailor example only tells the trajectory of Vai and Gola tailors). In these cases, careers do not expand across multiple organisations or settings. But first aid is not quite like that. Instead, volunteers move across or transition to other services (e.g., switch to St. John's Ambulance from The British Red Cross) or have multiple first aid careers all at once (i.e., volunteering with The British Red Cross event first aid service alongside community first aid and ambulance support roles etc.). For example, Eric and Andrea volunteer as community first responders for the North West Ambulance Service (NWAS), while Eric also works for a private first aid organisation. Whereas Anna uses her first aid skills developed from participation and training at event first aid in other Red Cross divisions (ambulance support, emergency response, and Red Cross training team leader).

The vignettes illustrate that all volunteers have been able to use their first aid skills and experience acquired from The British Red Cross Event First Aid Service with other providers/ organisations. For example, Anna transferred to St. John's Ambulance, as a training leader, without retraining for selected medical courses because of her experience with Red Cross Event First Aid. However, there has also been times that accreditation has clashed between organisations. For example, Eric cannot use his Community First Aider skill in his Red Cross Enhanced First Aider Role because he has not completed The British Red Cross Pain Management course. This shows how skills acquired from one organisation can be blocked by a different organisation, preventing first aiders from using their skills to
their full potential when on the job due to accreditation not matching.

There are multiple parallel career ladders, with experience across sectors and training. The zig-zag metaphor captures this. The process cannot be accounted for by focusing on one career ladder at a time. The point is that volunteers can zig-zag to other first aid organisations. This zig-zagging is not seen by The British Red Cross, which focuses on its own role. Lave and Wenger do not account for career trajectory across multiple different

organisations. These ideas show that 'becoming' does not have to follow a linear form through one organisation but shows careers cross between multiple organisations. The implications of this are that learning first aid does not happen in one organisation/setting. The closure of the organisation does not stop volunteers from furthering their first aid careers since volunteers have the opportunity to transfer their skills to other services and providers. Volunteers switching to other first aid providers shows that first aid boundaries are on the move: skills can cut across to other settings and organisations. In this case, the closure of The British Red Cross Event First Aid Service is just one moment in the broader story of first aid provision across time. The collapse of the service and volunteers moving to other organisations is an ongoing shift in first aid practice and training.

The third and final analytical discussion point draws on how becoming a full participant in The British Red Cross Event First Aid Service is different to the ethnographic examples set out in Lave and Wenger. This is because volunteers can become full participants without being part of the ambulance crew (the highest-grade division).

To become a full participant, first aiders do not have to move through every grade division

First aiders can become a full participant of the practice without moving through every grade division. Often volunteers remain at the same grade division throughout their career. This is the case for Eric who has become a full participant of first aid without being a member of the Ambulance Crew. Instead, Eric has developed skills outside of the service in other roles (e.g., as a Community First Aid Responder and as a member of The British Red Cross Emergency Response team). He has also completed some Red Cross training courses (trauma and manual handling). This shows The British Red Cross career ladder is different to the ethnographic cases of apprenticeship presented in Lave and Wenger's study, as participants are not required to complete every stage of the sequence to become a full participant.

The case of The British Red Cross Event First Aid Service demonstrates the tensions between experience and training structures volunteer progression. In this case, first aid is not discrete and the structure of the learning in the organisation is constantly changing. In the next part, I discuss why these tensions of volunteer progression and structure of event first aid matter for the organisation of first aid practice.

Conclusion

In The British Red Cross Event First Aid Service context, experience and formal training are linked in the way that the 'career' is organised. For example, to advance, volunteers have to dedicate time to the service by undertaking various courses and modules (gaining qualifications), as well as acquiring first-hand experience (by regularly attending events). As described above, the structure (grades, training) does not match perfectly with the provision of opportunity and experience within The British Red Cross. Second, there are other ways of gaining experience and developing a career as a first-aid person outside The British Red Cross, as volunteers 'zig zag' through other career paths: formal medical training and with other first aid providers (e.g., private first aid companies or St John's Ambulance).

This chapter has been about the structure of volunteer pathways in The British Red Cross Event First Aid Service and how this links with the strategies and priorities of the service. There are clear parallels to Lave and Wenger's ethnographic examples. There is a structure for volunteers to follow and progress up the ranks. There are different tensions and thresholds of moving towards full participation that "arrange/ manipulate legitimate peripherality to prevent or circumscribe access to practices learners wanted to participate in… (Lave 2019, p.137). However, I argue that what we learn from Andrea, Eric, and Anna is that first aid careers are much more complex and varied. Volunteers don't just stick to one ladder but move and transfer their skills to other organisations and providers. They negotiate this in line with and in response to changes in the structure of the event service organisation and presentation of opportunities to practice.

This chapter contributes two ideas: (1) that volunteer careers are organised and cross through multiple settings and organisations - these boundaries are themselves ‘on the move’; (2) that the structure of the service and the organisation of volunteer participation work hand-in-hand, e.g., if the service does not provide opportunities for volunteers to progress it will eventually close down.

The closure of the service is part of the ongoing story of first aid provision in the sense that it captures one moment of the changing position of first aid within the ecology of care. However, the careers of first aiders do not stop with the service but extend to other organisations e.g., St. John’s Ambulance or private first aid companies, community first aid response roles etc. My argument here is that progression does not happen in one institution but cuts across to multiple organisations in the system of care.

This chapter follows on from the previous chapter about The British Red Cross Event First Aid Service being situated in a wider ecology of care. By bringing Abbott’s (1988) concepts on the system of professions and jurisdictional boundaries into dialogue with Lave and Wenger’s (1991) ideas on situated learning, I argue that changes happening on a macro level (professionalisation of the ambulance service and growth in private first aid companies) matter for what is happening on a micro level within the ecology of care (internal organisational structures and volunteer careers.

The following chapter follows a different type of career: the patient’s career. It does so by detailing the structure of different types of first aid roles within The British Red Cross Event First Aid Service and studies how these roles are structured, coordinated and enacted during a real-life medical situation.

Chapter Five: The Arrangement of Categories: The Multiplicity of Classifications at the Great North Run

Having seen how training and provision in The British Red Cross Event First Aid Service is structured and how this relates to volunteers' progression and experience, in this chapter I focus on how first aid is organised 'on the ground'. I do so by following moments of intervention during one patient's journey through first aid treatment. This allows me to show how the social organisation of first aid delivery is guided and arranged by multiple classification schemes including The British Red Cross Priority Guideline Tool, the National Early Warning Score system and The British Red Cross Patient Report Form.

The chapter describes first aid provision at a mass-participation long distance running event in England, the Great North Run. The Great North Run is the largest half marathon event in Europe and began back in 1981 (Great North Run, 2022). Each year the event welcomes more than 50,000 participants alongside thousands of spectators (Great North Run, 2022). The race follows a 13.6-mile-long linear route that takes runners along the centre of Newcastle to the coast in South Shields. In September 2019, I spent a day carrying out observations and talking to The British Red Cross Event First Aid Service volunteers (from a wide range of roles including standard and enhanced first aider, ambulance crew and technicians, paramedics, Event Duty Officers, admin staff, etc.) at this event.

My aim was to better understand the social organisation of first aid provision at a large, and also geographically distributed 'event'. In this case, first aid is provided by a range of different organisations. The British Red Cross provided medical care alongside others involved in responding to emergencies. These other organisations include the NHS healthcare professionals, St. John's Ambulance volunteers and staff, members of The British Armed Forces, senior and junior police cadets, event coordination and private

security teams. Together, these organisations work to reduce the strain on local hospitals during the Great North Run. The roles and responsibilities of these multiple organisations varied across the space and time of the event, e.g., first aiders at the finish line did less clinical treatment (e.g., treating patients) than those in the main medical centre or at other medical posts.

For the most part, I observed the area between the finish line and the main medical facility. To understand how first aid was provided in this location, it is useful to have a sense of the spatial distribution of first aid provision at the Great North Run.

Medical posts at the Great North Run

In total, there were twenty-six medical posts at the Great North Run, which were placed approximately every half mile. St. John's Ambulance provided medical care up to the six-mile mark, while The British Red Cross volunteers and staff managed medical posts beyond that point. St. John's Ambulance is a separate first aid and emergency response charity-based organisation but is similar to The British Red Cross Event First Aid services, in the sense that this organisation also provides medical care at public events. At the Great North Run, the main duties of St. John's Ambulance staff were to hand out Vaseline and bandages to athletes passing by. Of course, injuries and illnesses can happen anywhere, at any time across the race, but the first ten miles tends to have a low frequency of incidents compared to the last three miles. This is because participants are more likely to become exhausted after the ten-mile point.

The casualty retrieval service, based at the ten-mile mark, was managed by multiple organisations. St. John's Ambulance provided one first aid team, the NHS offered healthcare professional support, while The British Red Cross provided ambulance services. Although members of The British Red Cross Ambulance Team were able to move from post to post, Standard and Enhanced First Aiders worked at the post/location to which they were assigned.

As I was able to observe, professional roles at these medical posts varied. The mixture of expertise was greater at posts located closer to the finish line. For example, most of the professionals from the North East Regional Ambulance Service were stationed at the main medical facility – a field hospital - rather than along the course of the race. This was partly because the facility included equipment used to treat patients suffering from severe injuries/ and illnesses. This field hospital was set-up near the finish line (approximately 200m away) because this is where the most casualties occur. The hospital was split into two main divisions: a minor casualty area managed by The British Red Cross Event First Aid Service and a High Dependency Unit organised by the NHS healthcare professional staff. The facility had a welfare room for friends and family of patients, an admin area for admin staff, and a resting room for patients. The facility had 70 beds. Patients were constantly coming in and out of the hospital during 10am-4pm of the event with the peak being between the hours of 12-3pm. At the time of the event, the hospital was the largest operational A&E facility in Europe. As this suggests, the event is managed like a mass casualty incident (NHS England, 2018a).

Although the field hospital is where most of The British Red Cross team and North East Ambulance Service (NEAS) were based, some volunteers moved around this area. At the finish line, there were four separate tunnels. At the top and at the bottom of each tunnel was a first aider and two junior police cadets, alongside two stretchers and four wheelchairs. All athletes who became ill or injured on the finish line were immediately transported to the field hospital by a British Red Cross first aider and two junior police cadets. As one member of The British Red Cross Event team explained, the finish line area usually has a high frequency of casualties meaning that this is where I would be likely to observe more injuries/ illnesses than anywhere else on the track.

Predicted types of injuries included athletes collapsing or becoming hypothermic because of heart and temperature changes after they had stopped running. It was

because of the predicted high frequency of these types of incidents that first aiders at this post had specific roles not replicated in other medical posts along the route.

In detail, the job of the twelve British Red Cross first aiders I studied at this post was to carefully observe all athletes coming through and encourage them to continue moving into the medal station area, so as not to block the finish line. In the case of a medical emergency, first aiders would immediately triage and transport the patient to the field hospital. These first aiders did not perform any clinical treatment because they were in such close proximity to healthcare professionals who had the appropriate medical equipment and skills to treat patients in the field hospital.

During my observations at the finish line and in the field hospital, it became clear that multiple classification schemes were enacted at different stages of first aid incidents and that these were important for the patient pathway. This chapter details three different kinds of classification schemes in order to show how they overlap and intertwine with each other in ways that influence first aid delivery at the Great North Run.

In terms of method, I follow one particular incident which begins when an athlete collapses at the finish line and ends when this person (now a patient) is discharged from the main medical facility. Through following this incident, I unpack the multiple types of classification systems that are in play during this sequence. As this method shows, the effects of different types of classification depend on when and where they are put into practice, and by whom. In what follows, classification schemes are conceptualised as 'multiple objects' the features of which change between spaces and times and when being mobilised by different practitioners.

Classification schemes and standards

My understanding of the notion of classifications comes from the work of Bowker and Star (1999) who are concerned with classifications, categories, infrastructures, and standards.

In their words, a classification is,

> "a spatial, temporal, or spatiotemporal segmentation of the world. A *classification system* is a set of boxes, metaphorical or not, into which things can be put in order to then do some kind of work—bureaucratic or knowledge production… Classifications arise from systems of activity and, as such, are situated historically and temporally… Categories—our own and those of others—come from action, and in turn from relationships. Everyday categories are precisely those that have disappeared—into infrastructure, into habit, into the taken for granted. These everyday categories are seamlessly interwoven with formal, technical categories and specifications" (Bowker and Star, 2000: p.149).

With this understanding, classifications are historically situated and are "silently" embedded into working infrastructures (Bowker and Star, 1999: p.17). They often become naturalised over time, becoming taken for granted in communities of practices (Bowker and Star, 1999). These ideas on classifications are relevant in thinking about how medical procedures and responses are organised and in the rest of the chapter I work with these ideas to learn more about how treatments are defined and bounded at the Great North Run.

In addition to classifications, Bowker and Star are also interested in the reproduction of standards. They understand standards as,

> "any set of agreed upon rules for the production of (textual and material) objects… A standard spans more than one community of practice (or site of activity)… Standards are deployed in making things work together over distance and heterogeneous metrics…" (Bowker and Star, 1999: p.13-14).

In my understanding standards often arise when classifications become formalised. “Every successful standard imposes a classification system, in the sense that it forms boundaries around objects and activities.” (Bowker and Star, 2000: p.151). This suggests that the process of standardisation also bounds activities – it defines the activity and its performance, for example with reference to instructions, guidelines, algorithms, protocols (Berg, 1997).

According to Timmermans and Berg standardisation has been a “focal point of interest in the health care field” (Timmermans and Berg, 2003: p.6) exemplified by the introduction of clinical guidelines in a range of healthcare settings including front line nursing work (Johannesson, 2017) and medical call centre services (i.e., telenursing and NHS Direct) (Russell, 2012; Ruston, 2006, Greatbatch et al, 2012). This is no different to the Great North Run in that standardised tools and procedures enable multiple healthcare organisers to coordinate the delivery of first aid. In this setting, classification tools are used to guide healthcare professionals and first aiders decisions when treating patients. Since these standards and categories have histories of their own, the organisation of help is not “individual, mental and non-social” but rather “situated, collective and historical” (Bowker and Star, 1999: p.288).

Various authors have examined the role of classification systems such as triage and shown how they structure and standardise medical work. For example, Greatbatch et al., (2005) describe the use of an expert system developed for the British telephone triage service NHS direct and show how protocols are embedded into everyday medical practices as these are mediated through computer systems. This research shows how specific protocols, guidelines and triage systems help co-ordinate everyday care practices, but in this case the NHS direct service is considered in isolation. What is missing here is a more extensive account of how different agencies, and multiple guidelines have effect in concert with one another.

Other authors consider the part that standards and classifications can play as 'tools' with which to configure provision. For example, van Pijkeren (2021) writes about how a new triage system was used as an instrument to reorganise medical and care work in nursing homes. Van Pijkeren concentrate on the work that goes into the development of protocols, flowcharts, training systems and the extent to which these systems redistribute medical work between practitioners and how far they do or do not allow physicians to work remotely. Again, this study examines the functioning of a triage system as if that had effect in isolation and aside from other co-existing protocols and procedures.

This chapter is informed by some of this work (for example ideas about how triage systems arrange and distribute medical work) but it goes further in that it examines the coordination and intersection of multiple classification tools. It does so in order to show how the conjunction of separate but coexisting protocols matter for first aid provision.

In taking up this topic, and in thinking about how coexisting guidelines shape each other I suggest that the overlap and interplay between multiple classifications is important in that it is these which structures the boundaries of first aid and the care provided by different agencies.

The importance of understanding how multiple classification systems combine became clear when talking with volunteers from The British Red Cross Event First Aid team, and when following the career of a patient at the Great North Run. In order to make sense of this case, I needed to understand how three different classification systems (the Priority Guideline Tool; the National Early Warning Score (NEWS2)' the Patient Report Form), organise and structure the care that I observed.

As this one case reminds us, it is often the *intersection* of overlapping protocols and procedures that matters, not the qualities and characteristics of any one of them,

treated in isolation. This is an important insight and one that is of relevance to debates beyond those relating to first aid.

This chapter is informed by some of these ideas (such as how triage systems arrange and distribute spatial-temporal orders for medical work) but goes further by examining the coordination and intersection of multiple classification tools across particular and how these matter for the sequence of first aid delivery.

The following account of one first aid incident is based on my fieldnotes and conversations I had with volunteers from The British Red Cross Event First Aid team. In recording the 'career' of this one patient my aim is to show how three different, but interlinked, classifications (the Priority Guideline Tool; the National Early Warning Score (NEWS2)' the Patient Report Form), organise and structure the care that I observed. This study will help fill the gap in research surrounding classification and standardisation tools as this study focuses on the organisation and intersection of multiple protocols and standardisation tools that work together to organise effective medical practice.

The chapter is organised in the following way: First I introduce The British Red Cross Priority Guideline Tool and how roles on the finish line interact with this. Second, I discuss a national system, NEWS2, and show how this figures in first aid treatment in the main medical facility at the Great North Run. Third, I study the role of The British Red Cross 'Patient Report Form' in recording and categorising patients. Fourth, I argue that it is the work of these multiple classification schemes that bound and define the patient across different stages of the first aid sequence.

Introducing The British Red Cross' Priority Guideline Tool

The first classification system that organises first aid delivery at the Great North Run is The British Red Cross' Priority Guideline Tool. The Priority Guideline Tool is used by volunteers and staff at every public event that The British Red Cross Event First Aid Service provides medical care for and is a clinical decision-making tool developed by The

British Red Cross Event First Aid service to guide first aiders' responses when faced with a person who might require medical attention[28]. Like some clinical decision-making tools, the Priority Guideline Tool is a triage system, the purpose of which is to "prioritise care demands … to make more efficient use of scarce regional medical resources…" (van Pijkeren, et al., 2021: p. 1683).

The Priority Guideline Tool is divided into four key parts to guide first aiders' responses when they observe an incident. The divisions include two which are colour coded red and the other two which are colour coded amber and green. These four categories include: cardiac arrest (P1Alpha); altered levels of consciousness, chest pains or breathing difficulties (P1); none of the above but unable to walk (P2), and walking wounded (P3).

P3 casualties are recognised as walking wounded patients, for example, someone who has a cramp, stitch, or blister. These patients are encouraged to continue walking by event organisers and advised to visit the main medical centre. They do not require wheelchair or stretcher assistance. In other words, they do not require immediate or urgent response; these patients are prioritised last.

Finish line team first aiders' main duties are to assist patients categorised as P2, P1, or P1Alpha. Priority 2 casualties are colour coded amber (on the guideline chart) suggesting

28 Although the Priority Guideline Tool is developed by The British Red Cross, there are similar prioritisation frameworks developed by the NHS other emergency response situations. These include The Clinical Guidelines for use in a Major Incident and Mass Casualty Events which follows a similar categorisation framework to the Priority Guideline Tool that guides emergency response workers how to treat and where to deliver patients in a major response incident e.g., P1 patients (marked as severe and coded red) are required to have immediate lifesaving intervention and should be delivered to a Major Trauma Centres; P2 patients (marked as moderate and coded yellow) require intervention that can be delayed and should be delivered to Trauma Units and P3 patients (marked as mild and coded green) are walking wounded or have minor injuries should be transferred to local emergency hospitals, walk in centres, treatment on scene or GP. For more details, see Clinical Judgement Guidelines for use in a Major Incident report, available at https://www.england.nhs.uk/wp-content/uploads/2018/12/B0128-clinical-guidelines-for-use-in-a-major-incident-v2-2020.pdf).

these patients require more urgent care. Patients are categorised as P2's when they appear dizzy, confused, shivering, have extensive muscle cramps, headaches or feel hot but not sweating or vice versa. In addition, their pulse rate might be lower than 120. The Priority Guideline Tool instructs that first aiders should take these patients to the main medical facility urgently. All Priority 2 patients at the finish line are taken to the field hospital by either a wheelchair or stretcher.

Meanwhile, the colour red on the Priority Guideline Tool signals casualties that require immediate first aid response. Priority 1 cases include: collapse with unconsciousness, chest pains, severe breathing difficulties or severe dehydration. In addition, their pulse rate is greater than 120 (Great North Run First Aid Briefing, 2018). Like P2's, patients categorised under P1's require first aid assistance and need to be transported to the field hospital via a trolley or a stretcher. These are the patients of high priority.

The final category is Priority 1 Alpha which is for patients who are displaying signs of cardiac arrest. Like P1's, these are also coloured red on the Priority Guideline Tool and therefore require immediate action. P1Alpha's are the only circumstance where first aiders would do clinical treatment at the finish line. In the scenario of a P1Alpha, the finish line team leader immediately alerts the field hospital, and an alarm will ring to alert professional medical staff to prepare for the patient. Although P1Alpha is the rarest classification, they still have the potential to happen and therefore first aiders need guidance on how to respond properly.

The purpose of the Priority Guideline Tool is to standardise and organise first aiders' initial responses. It is for all the Briitsh Red Cross first aiders to follow and does not exclude or imply that the first aider has any special role or experience. The next section studies how roles on the finish line interact with the Priority Guideline Tool. It does this by following one particular incident that started at the finish line. Gary, a paramedic who

volunteers for The British Red Cross explains how this classification schemes organises and guides first aiders response, particularly those working at the finish line

The Priority Guideline Tool: a multiple object

We are stood at the finish line, and I am asking Gary how first aiders know when a person requires medical attention at The Great North Run. He explains this further,

> "Um… we have developed this system over the years where we sit in tunnels, so I act as a triage at the main finish line, so I spot them coming in and try do a triage that will pre-determine their collapse. Either side of the finish line you will always have a defib[rilator], oxygen, and a stretcher (if we can)…And we have a team of two either side who are resus[citation] trained and defib[rilator] trained, so there the priority [is] that we keep at the top end. Walking wounded, we try and encourage the marshals to keep them walking through, so they are P3'. P2's need a wheelchair, so we try have a couple of [first aiders] floating who will push wheelchairs through the funnels. And at the end of the funnels, [we have] a Red Cross person who is usually very experienced at ambulance level and we get them to do a secondary triage because P1's can go off and P2's can go off between the start and finish of the funnels. So, we always do a secondary triage there, so again we try and keep at least an oxygen and resource there [a group of first aiders] and then only perhaps a 100m from the hospital centre. We never had a cardiac arrest at that point. They have always been at the start of the funnel. And if we had a cardiac arrest there it would only be basic CPR, not AED. We will get them into a hospital tent. It is only about a 100m away." Gary.

What we see here is that the Priority Guideline Tool organises the operation of the first aid team working at the finish line. The Priority Guideline Tool is an example of what Bowker and Star (1999) describe as a standardised tool. Like other standardised forms of classification, the Priority Guideline Tool is used to group casualties into categories.

In this case, when someone falls ill, and when they are defined as such by the first aid team that I observed, athletes turn into patients, and then, quickly, into one or another of these categories of P1, P2 or P3. These categories, in turn, define and structure what happens next, and the actions of The British Red Cross teams. For example, The British Red Cross Event first aiders main duty is to triage and transport P1's and P2's, while event assistants encourage P3's to continue walking.

It is only a few moments after I finish speaking to Gary that I witness the first casualty at the finish line. Below is an extract from my field notes that explains the start of process of providing medical help for this particular incident.

> "A senior police cadet and three event officers crowd round an injured athlete, while two first aiders are on the ground 'working' on the patient. The tunnel is closed off, so first aiders have space to work on the patient. Thirty seconds later, the casualty is moved onto a stretcher and is transported to the field hospital by a first aider and two police cadets…."

Gary does not move when this was happening. He emphasises his role is all about triaging and getting the appropriate members to transport the patient to the field hospital. He is able to spot injured or ill athletes more quickly because his role of as a paramedic. He explains,

> "It is quite unique on the finish line because a number of years ago we decided we could not treat, and we could only do immediate, rapid treatment on the scene because the medical centre was only 200m away. So, the decision there that was made was that I would only… because of my work experience, I was able to recognise poorly people put them into P1 category or a P2 category, probably a lot quicker and more efficiently than some of The British Red Cross people…"

Here Gary is working with other categories too: including those born of his own experience (i.e. NHS medical staff) and those of other Red Cross volunteers. Gary's duty is to triage patients and ensure all those around him are carrying out first aid appropriately. He only steps in if he needs to.

Gary's role and experience reflects some of the tensions and conflicts that can arise when using the Priority Guideline Tool. In contrast to the official position: it turns out the 'priority guidelines' need local interpretation. Gary suggests he can use the tool more effectively than any other first aider because of his role and experience as a paramedic. In effect, professional knowledge interferes or cuts across how different individuals use the Priority Guideline Tool.

These observations complicate the view that the categories are simply or directly enacted. Gary's experience shows that interpretation is also involved and that some professional skill is needed to interpret the situation and that this is not a matter of simply applying these categories. This is not unusual. Medical professionals frequently make judgements about categories when using triage systems. According to Russell, professionals often take an active approach to face-to-face triage (Russell, 2012) and often interpret categories with reference to their personal judgment - using tacit knowledge alongside guidelines when assessing patients (Johannesson, 2017; Ruston, 2006).

Although this is just one case, I observed other situations in which professional expertise interplays with the literal application of standardised categories. For example: when patients categorised as P1s reach the field hospital they are immediately sent to NHS staff rather than being treated by Red Cross volunteers.

As Darren the field hospital manager explains, capacity and space are also relevant.

> “Yeah… um… yeah so there is a triage category, so the people at the finish... There is a team on the finish line, The British Red Cross team on the finish line who are very experienced, and they will have a look at the patients themselves and they will decide what the heck is going on but also there is a triage at the bottom of the tent, there is a paramedic there. So again, they will triage them and say yeah definitely the doctors or send them to my end and if there’s a problem and we can move patients between the hospital. If someone is really ill at my end, I can move them up. Meanwhile, if there are getting a bit busy and I have a bit of space and not many people down at my end… I’ll check with the doctors… they will check with me for the overall numbers and what the balance is.” Darren

Adjustments are made in ‘real time’ depending on the pressures involved. To return to the case that I decided to follow, the first aider and two police cadets transported the patient to the main medical facility. Just before they entered the hospital, an NHS medical practitioner used the priority guideline tool to carry out a secondary triage. Rather than using the tool to decide if the patient needs CPR or to choose the most suitable vehicle for transportation (as was the case on the finish line), at this point the priority system is used to determine which area the patient should go to within the field hospital.

Here, space, time and professional responsibility all intersect with each other as the sequence of the first aid delivery progresses. This is important in that what starts off as a ‘single’ classification scheme, the Priority Guideline Tool, changes its role as the patient enters the hospital. As illustrated here, it has different roles depending on the part of the first aid sequence in which it is used - when a patient is first identified, and later at a secondary triage point. In both cases, judgements and interpretations are critical: but in

somewhat different ways and are often negotiated by professional expertise. As described below, this is not the only system of classification in place.

NEWS2: intertwining categories

So far, I have discussed the Priority Guideline Tool. The second classification scheme I explore is NEWS2 which is used to organise first aid delivery inside the field hospital NEWS2 is a classification scheme made up of six different physiological parameters that first aiders and healthcare professionals refer to in determining the clinical state of a patient.

At the Great North Run, NEWS2 is entangled with other classification schemes, like the priority guideline tool. NEWS2 was developed to improve recognition of clinical deterioration in hospital settings and according to the Royal College of Physicians it has multiple benefits including,

- "a single EWS [Early Warning System] system for early detection of acute illness by measurement of specific physiological parameters in a standardised format.
- a standardised scoring system to determine illness severity to support consistent clinical decision making and an appropriate clinical response.
- the standardisation of training in the detection of acute illness and management…
- an adoption of a standardised scoring system throughout hospitals, not solely in the context of acute clinical deterioration but for also continuous monitoring of all patients" (Royal College of Physicians, 2017: p. 5)

It is mandatory for all NHS healthcare practitioners to carry out NEWS2 in hospital settings and is increasingly recommended for use at a national level outside NHS settings (Royal College of Physicians, 2017). The British Red Cross Event First Aid Service also

adopted NEWS2 when treating patients at events. NEWS2 is standardised and is used by multiple different types of practitioners and mandated by professional organisations (i.e., the NHS).

To reiterate, NEWS2 is a method of determining the degree of illness of a patient by recording six physiological parameters (Royal College of Physicians, 2017). These measures include the respiratory rate, oxygen saturation, temperature, systolic blood pressure, level of consciousness and heart rate. Each of these measurements are scored between 0-3 and are added together to generate a total score. These measures are repeated and if they are increasing, or if the score is high, this points to the need for more intensive medical attention. An extra two points are added if the patient is receiving oxygen therapy. Although these NEWS2 scores give an appropriate indication if a patient needs more intensive care, the guidance is that they should not be used to substitute for clinical judgment. According to the Royal College of Physicians, any concern about a patient's clinical condition should prompt urgent care regardless of NEWS2 (Royal College of Physicians, 2017).

At all events that The British Red Cross Event First Aid Service provide medical care for, all volunteers and staff are required to carry out NEWS2 when treating a patient at a medical post. It is the NEWS2 score and clinical judgment (including the Priority Guideline Tool), which determines the later sequence of first aid delivery. For example, if the patient has a high NEWS2 but is only categorised as a P3, they are moved to the High Dependency Unit (which is located inside the field hospital at the Great North Run) for more intensive care. In this incident, the patient is triaged as a P1 but after medical treatment in the High Dependency Unit, a secondary NEWS2 test is carried out and suggests the patient's condition has improved. The patient is then moved to the resting area and is then seen by two Red Cross Event First Aid volunteers in the minor casualty area. In this situation, the patient moves through every area of the field hospital and is

treated by different kinds of healthcare providers from professional medical staff to Red Cross Event First Aid volunteers.

The NEWS2 scores are also recorded on what is known as the Patient Report Form – discussed below. In taking on the NEWS2 method of recording and classification (adopted in 2018) The British Red Cross Event First Aid team followed NHS recommendations. This is important in that the metrics used, and the scoring system has, to some degree, altered the way first aid is organised at events. Before each event, first aiders are reminded that they have to carry out NEWS2 and record every detail onto the Patient Report Form and that failure to do so might mean volunteers are suspended from the service.

As with other standardised classification schemes, NEWS2 that becomes entangled with existing arrangements, including the Patient Report Form and related procedures and processes.

Patient Report Forms – a different type of classification scheme

When the patient enters the field hospital at the Great North Run, all details of the incident have to be recorded on a Patient Report Form. This section describes the role of the Patient Report Form in organising first aid delivery and record keeping as the patient's career unfolds. In the incident I followed, the patient is directed to the High Dependency Unit because they are recognised as a P1 by the finish line team and the paramedic on the gateway of the field hospital. The patient is transported by trolley by the finish team staff and The British Red Cross administration team start filling out a Patient Report Form.

The Patient Report Form is a paper document that has several sections that first aiders or NHS staff fill in when they are clinically treating a patient. The form is divided into several sub-sections, some of which are retrospective such as the incident date and

time; patient details such as name, age, gender and ethnicity, alongside the name of their GP and next of kin.

Other parts of the form are completed as treatment progresses. These sections include information about mental capacity; observations and NEWS2 findings; airway management; cardiac arrest, CPR and defib; FAST; 12 Lead ECG; cardiac symptoms; patient mobility; refused (if the patient refused treatment or transport); injury code (priority category). It does not include factors such as how the patient was feeling or who was with them at the time of the emergency – instead the purpose is to record what are taken to be medically significant details.

The form is standardised, in the sense that entries ensure that every first aider or NHS worker is following the guideline for appropriate first aid treatment (i.e., carrying out measurement of the six physiological parameters). The form serves a number of different roles, including constructing a narrative for every patient pathway; acting as evidence (in case a patient decides to take legal action after treatment), recording NEWS2 and observation scores and acting as a means of ensuring every first aider is complying with the national standardised clinical practice. Every patient, no matter how minor their injury is, has to have their details recorded on a Patient Report Form.

Depending on the type of incident, several volunteers or healthcare professionals might complete different parts of the form at different stages of the treatment. During the incident I followed, the patient moved from the High Dependency Unit to The British Red Cross area. This is because the patient's condition improved from a P1 to a P3 as indicated by a low NEWS2 score when in the High Dependency Unit. These scores were noted on the Patient Report Form. Clinical judgment and NEWS2 matters for how the person moves when inside the field hospital. It is the interaction between these two classification schemes which organise the patient's movement when inside the main medical centre.

Each practitioner who treats the patient carries out a separate NEWS2 and related set of observations. These multiple scores, alongside other categories, such as if the patient needs to go to the local hospital, are recorded on the form. It is only when the patient is discharged that the form is handed back to Red Cross administrative staff. This team stores and delivers all the forms to The British Red Cross admin office in the South of England. In this office, there is a team of first aid volunteers who manage and handle forms from every event at which The British Red Cross provides Event first aid services.

Although the Patient Report Form does not necessarily determine the response of first aiders e.g., what equipment they should use to transport someone or in which space the patient should be treated, the Patient Report Form produces a narrative that records medical action from start to finish. Without it, healthcare professionals and first aiders would not have any record of the incident.

Darren, the field hospital manager, explains Patient Report Forms and the role of the admin team at the Great North Run,

> "The main difference with the field hospital is that we have admin staff. So, at any normal event you do your own paperwork and PRF's [Patient Report Form]. There [at the field hospital] we have our own admin team and we sign the paper and get the runner number and give that to the discharge team. We have a full team of people who start the PRF and sign… we don't do that at any other event. It's just that our first aiders can concentrate on first aid rather than worrying about paper work and that sort of thing that allows to take the pressure [off]."

Because of the expected high frequency of incidents at the Great North Run, a team of admin volunteers from The British Red Cross Event First Aid service are responsible for starting all Patient Report Forms. These volunteers do not clinically treat patients. This is

unusual because at any other event The British Red Cross provides medical care for, first aiders are responsible for completing paperwork *and* clinically treating patients. With an admin team responsible to begin and complete forms, clinical first aiders can spend time giving treatment, without having to worry about paperwork.

As described above, the Patient Report Form overlaps with NEWS2. In the particular incident that I followed, the patient is treated by both senior healthcare professionals and The British Red Cross Event Service first aiders. These groups carry out identical tests and come to the same conclusions, both of which are recorded on the form.

Here we see that the layering of record keeping is important. The Patient Report Form is filled in as the first aid sequence progresses. First aiders fill in the form while they work with the patients. They do not wait until after the incident to fill in the form. The admin staff check forms thoroughly and properly when patients are discharged. This is to ensure all standard guidelines have been followed.

Patient Report Forms left uncompleted can result in damaging consequences for organisations such as The British Red Cross, The Great North Run or the NHS. If a patient dies or their illness/ injury worsens after treatment, the Patient Report Form acts as evidence that first aiders and health professionals followed the national standard guidelines when treating a patient.

Anna, from The British Red Cross, confirms this,

> "They are vitally important. These things can come back on us. Since we are a registered organisation that should know better but if the treatment is incorrect and the patient then becomes seriously ill and then passes away… it comes back to us, they can also sue the venue. This has happened to me. I had a patient sue the venue for slipping over and I was called as a witness, but the PRF was called

as evidence in this case. I was thoroughly examined because they had to ask me lots of questions. This was two and a half years ago. One patient at the arena two and a half years ago and I had to answer these questions, thank God my PRF was pretty good but if I hadn't remembered, like at GNR, I wouldn't remember any of the patients really except one or two. If you then asked me questions and it was not on the PRF it didn't happen. If I didn't write that I asked the patient, have you hit your head and the patient had a serious head injury… If I did ask and I had not written it down, it is as good as it did not happen… So it is hugely important. it is official legal document, it gets kept for eight years, longer if it is a pregnant woman or a child. Massively important." Anna

As well as being a record of events (used retrospectively), the Patient Report Form is passed between different people involved, and acts as a bridge between their roles and responsibilities. For example, the admin team manage the biographical details (categories that do not change), while the clinical first aiders complete the categories surrounding the pathway, i.e., NEWS2 findings and observations. The admin team at the end have a responsibility of checking all forms are completed, storing the forms safely and ensuring they are sent to The British Red Cross admin office at the end of the event.

In the case I followed I spent two hours shadowing Red Cross volunteers and NHS medical staff in the main medical facility in which the patient received such a low NEWS2 score that they no longer required medical attention. The British Red Cross team gave the patient appropriate medical advice and guided them to the admin desk near the exit of the hospital. The first aider handed the PRF to the admin team and the admin staff asked for the patient number. The patient was reunited with their family and left the field hospital.

From this point on, they are no longer a patient. This is because they are no longer triaged as a P1, or P3 category and have received a low NEWS2 score that indicates they

no longer need clinical treatment. These classifications schemes, separately and in combination, hold the patient to the practice of first aid.

Patient pathway: a landscape of categories

This chapter has described three classification schemes that work independently and overlap with each other at different parts of the first aid sequence. There are three main ideas to take away from this discussion.

The first has to do with the patient's changing status as they move from being an athlete to a casualty, and as they fall ill – collapsing on the finish line - and as they then recover. In this sense, the patient is not a fixed object: their condition changes during this period. For example, though they are assessed and triaged at one moment, the whole NEWS2 process is about following change through repeated measurement. It is only when the patient receives a low NEWS2 and clinical judgment that supports that score (that is then recorded on the Patient Report Form) that they can be discharged from the main medical centre. During first aid sequence, different classifications are mobilised. First the Priority Guideline Tool is used at the site of the incident and later it is used again when the patient is inside the field hospital. The Patient Report Form is started in the admin area at the field hospital and travels with the patient when they are being treated. Finally, the NEWS2 scores are repeated, and again within the treatment facility. Once the patient is in the field hospital, both first aiders and NHS staff work to improve the condition of the patient. If the patient's condition continues to worsen, they would be transferred to the local hospital, if they improve, they move towards being discharged. Different classifications schemes work together as the patient moves through the system and as their condition changes.

Secondly, three classification schemes interact with each other to define and record the condition of the patient. Here, different stages of the first aid sequence matter for how multiple classification schemes intersect and operate. For example, NEWS2 does not

work by itself – its use depends on other classification schemes like the priority guideline tool to organise first aid delivery when inside the field hospital. In the context of the Great North Run, NEWS2 measurements can only be carried out in the field hospital because that is where first aiders and relevant healthcare professionals are situated.

A third related observation is that there is a spatial and temporal aspect to when and how classifications are mobilised.

Steve elaborates on this point,

> "Yes, we do have NEWS2. But as I said, we are unique… as on the finish line we are primarily there just to scoop and run… we don't mess about. We don't do PRF's because why would you when you got a medical facility? We don't have the time to fill those in. So obviously we are trained in NEWS2, …, but for us we don't do it." Steve

Which categories are mobilised and when is important for how these co-existing systems interact. For example, in the field hospital NEWS2 overlaps the Priority Guideline Tool while at the end of the treatment the Patient Report Form overlaps and in effect takes over from NEWS2. In summary, the use of these three classificatory systems has both a spatial and a temporal aspect. These spatial and temporal distinctions map on to areas of professional responsibility and hand-over. For example, record keeping is part of making and reproducing differences between administrative and clinical roles and between services provided by volunteers and experts. As van Pijkeren et al., point out "triage as an infrastructure and a socio-spatial practice of reorganizing medical care provision… both professionally and geographically" (2021: p.1686).

In conclusion, the Priority Guideline Tool, Patient Report Form and NEWS2 are enacted as and when the patient crosses through different spaces and stages of first aid

treatment. Each of these schemes are entangled and interplay with each other to organise treatment and the patient ‘journey’, but not in the same way and not with the same history or purpose. Here, the social organisation of first aid provision is “situated” and “collective”. As Bowker and Star remind us, classifications and standards have an active role in organising everyday activities and practices. What this chapter has added is an account of how the multiplicity of categories structure the patient career through the different spaces and moments of first aid treatment.

The next chapter elaborates on the spatial-temporal organisation of first aid provision. It does so with reference to the ways in which first aid zones are configured and reconfigured in the course of public events held at a single location. As this analysis shows, boundaries of responsibility and forms of first aid provision are structured in these spaces before an incident even happens.

Chapter Six: The Making and Remaking of Medical Zones: The Shifting Spatial Organisation of First Aid Provision at Indoor and Outdoor Events

When people visit different places and attend public events, one might assume that the provision of medical support is fixed and consistent. That is, that any first aid cover would be organised in such a way as to provide comparable levels of cover in different settings and regardless of the time. However, first aid provision depends on different ways of zoning. That is of categorising risk and response in space and time. These zones are planned and regulated and at the same time they are enacted and adjusted, made, and remade during the immediacy of events.

Consider this account of the Manchester Arena Attack of 2017 by Lord Kerslake, who wrote the review of the preparedness for and emergency response to the attack. On the evening of 22nd May, a bomb exploded in the foyer of Manchester Arena following an Ariana Grande pop music concert that had an audience of young children and their parents and guardians. The explosion happened when people were leaving the foyer, killing 22 people and injuring 115 more[29] (Kerslake, 2018). There was first aid provision on-site but in response to the extremity of the incident[30], local and national authorities deployed teams from multiple agencies, including: firearm officers, firefighters, NHS healthcare professionals and the regional police force to assist, treat and respond to casualties (Kerslake, 2018).

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29 800 other injuries such as psychological trauma was also reported (Kerslake, 2018)

30 The incident was categorised as a Marauding Terrorist Firearms Attack (MTFA) (Kerslake, 2008)

On arrival, a senior paramedic from the ambulance service assessed the damage and announced the situation as a major casualty incident[31]. According to Kerslake, this paramedic mentally divided the foyer into separate 'virtual' zones, in which he identified first aiders (public or responder) who appeared to be managing the casualties around them (Kerslake, 2018: p.46) and then made sure that all responders understood that all casualties should be evacuated from the foyer. The zones that were made in this situation were temporary spaces that were formed due to the ongoing situation (an explosion attack). The zones were not made randomly but were formed because of the advanced paramedic's experience in training in handling such situations.

On top of these X, Y, and Z 'virtual' zones, other agencies designated related medical zones. These were hot, warm, and cold, and were used to signal which other services could 'safely' access specific parts of the arena. Hot zones were the spaces closest to where the explosion happened and could only be accessed by armed police. Warm zones were for multi-agency specialist teams[32] deployed to treat casualties and manage fire hazards. Cold zones were forward command posts (management post for incident manager). What this example shows clearly, is how zones are made and remade, established and then modified to enable collaboration between different organisations and services. In this case, the zoning of senior paramedics and that of the firearms teams enabled a coordinated response that allowed medical practitioners to more safely attend to patients. This example shows that during the immediacy of the event (after the explosion) invisible zones were formalised into the arena to coordinate help and response.

31 A major casualty incident is an event that puts strain on the local healthcare authorities (i.e., the NHS). During these events, public settings (i.e., hotels, football stadiums, arenas) might turn into casualty retrieval zones to provide medical care to patients before the ambulance arrives. In the Manchester Arena Attack the Etihad Stadium. (Kerslake, 2018)

32 Multiple agency specialist teams like the national inter-agency liaison fire officer are specifically trained in managing Marauding Terrorist Firearms Attack (see Kerslake, 2018: 161-66 for more detail)

The spatial organising or zoning of first aid and response is not so unusual. The zoning process is part of first aid provision in many other contexts and has a history dating back to the earliest days of The British Red Cross. For example, during the Crimean war (1854-1856) medical zones were organised by the distribution of field hospitals. These were built 100 miles from each other in Turkey and Crimea and were constantly reopening and closing with nurses moving between them (Herlmstedtar and Godden, 2011: p.85-86). The point is these zones of medical provision were not fixed to a particular setting (e.g., a hospital building) but rather were configured because of activity happening around the site (e.g., where the nearest battlefields were).

Even though zones might seem to be enacted and adjusted on the 'spot' during medical emergency events, they depend on this history. Over time they have been formalised as they have been written down in training manuals, Health and Safety England guidelines and government legislation (see the Purple Guide to Health, Safety and Welfare at Music and Other Events, the Civil Contingencies Act 2004, First Aid manuals etc.). Ideas around spatial organisation and the zoning of first aid provision in extreme events are often overlooked in crisis management literature, which instead focuses on the coordination and embodied actions between emergency response teams (Peterson and Büscher, 2016; Geiger et al., 2020) and decision-making technologies in crisis' (Mendonca, 2016).

This research takes a different approach to studying emergency response at events by studying the making and remaking of medical zones. In this case, medical zones are carved into a setting before an event takes place and can be adjusted and reconfigured during the event (depending on any medical situation or other incident that takes place). As mentioned before, these zones are formalised through various guidelines, protocols and standards including Health and Safety guidelines, legislations and contracts between events and service providers that give guidance to first aiders and other medical roles on how to respond during a medical situation. To study the configuration and reconfiguration of medical zones, I build upon ideas around temporal structuring – which is an approach used by Orlikowski and Yates (2002) to study the construction of

time across organisational settings. I use these ideas from Orlikowski and Yates (2002) to conceptualise medical zones as constructed by on-going human activity when making and staging events across event settings.

Their term, ‘temporal structuring’, is used to explain how participants in organisations use time to organise activities. Their focus is on how daily lives and people’s schedules within an organisation are configured through the bridging between clock time (which is understood as abstract, quantitative, and linear) and event time (which constituted by the time between before and after an event). Temporal structuring overpowers this dichotomy as temporal structures are not dependent or independent from human action and guides ongoing activities as “people enact multiple heterogeneous and shifting temporal structures in all aspects of their lives” (2002: p.697). Instead of using ideas to identify how people enact temporal structures in their organisational/ workplace routines, I use their ideas to examine how medical zones are carved and shaped across two settings in which The British Red Cross Event First Aid Service provides medical support. Within these settings, medical zones are made and remade. This is during the event (e.g., when public audiences are on-site), but also across a wider schedule of the setting (e.g., when non-public audiences are on-site). I therefore use these ideas on temporal structuring to study the temporal patterns around how responsibility is established and configured.

Multiple materialities are required to make and stage events. ‘Scaffolding’ is a term used by Orlikowski (2006) to describe how material objects are temporarily mobilised in certain workplace practices (i.e., a desktop, or Wifi, or headset) but are essential in making the practice work, even though they are only used occasionally. I draw upon these ideas to understand how responsibility is configured at events. This is because multiple materialities including guidelines, legislations, contracts, classifications of injuries, physical spaces (e.g., main medical rooms, equipment etc.) and previous event history all matter for carving up divisions of responsibility across different kind of event settings.

However, these making and staging of multiple materialities are not always even but can cause tensions and overlaps – reproducing organisational distinctions and boundaries. In their study on an interactive web company that is rapidly growing, Kellogg and Orlikowski (2006) reflect on the challenges of boundary coordination and suggest it does not solve jurisdictional differences across organisations and privileges some practices more than others. In a similar study, Mork et al., (2012) suggests how new practices often fail because of established boundaries and power relations. Their study provides ideas on the destabilisation and the remaking of multiple boundaries within the same setting but offers insights to how boundaries might be hindered or struggle to be established. These ideas are useful in understanding tensions between multiple organisations when establishing new or adjusting practices within an organisation. I use these ideas to understand the collaborative work between different service providers of making and remaking zones across different temporal patterns in the same setting. As often, zones are often situated and uneven.

In this chapter, I examine the spatial organisation of first aid provision, how it is made – set out in formalised training and guidelines and enacted in the situation – and how it is remade – adjusted in the moment as multiple organisations negotiate responsibilities for different spaces and zones and at different times. The chapter deals with the making and remaking of spatial distinctions and zones of first aid provision to examine how responsibility is organised and shaped at 'events'. I understand events as temporary spaces that host a range of different activities for multiple kinds of audiences i.e., public audiences or private members like staff and employees. These events happen across outdoor and indoor spaces.

These types of situations are interesting in that zones of medical provision have to be made and remade, in ways that are less obvious in something more fixed like a workplace. Temporary events tend to move around and are not always fixed to the location. They might be set-up in a location once a year (e.g., a pantomime) or week (e.g., an ice hockey match). During the times when there are no events being staged, the

event location is used for other purposes like a workplace, or agriculture, as in the case of outdoor festivals. My questions centre on understanding how temporary first aid zones and spaces are made and adjusted. This plays out differently, for example, in large arenas that are regularly hosting events compared to sites that might hold an event once a year.

To describe how this works, I draw on observations and interviews from two events I attended with The British Red Cross Event First Aid Service in the months between August-November-2019. These included a 2-day outdoor event, Meadowhall Festival* and three events across a 7-day time frame at Westdale Arena*: Disney on Ice (an ice-skating show); a Liam Gallagher concert (an indie-rock concert) and a 'de-rig' day when the arena is closed to public audiences and operates as a workplace to arena for employees and building contractors to set up the next performance. Each case has been selected because first aid provision is configured in a different way.

Alongside attending these events and mapping out the areas (which are represented as floorplans in the analysis below) I draw on interviews with three members of The British Red Cross Event First Aid Service who worked at these events, including Heather*, the Event Duty Officer, and Kyle* a standard first aider both at the Westdale Arena and Darren*– the Event Duty Officer at Meadowhall Festival. From these interviews, I learned about different kinds of events and situations, specifically what was happening in the arena that week. I use these materials to inform what is at stake in making zones, temporally, socially – and enacted in the moment.

The chapter is structured as follows: First, I introduce the Purple Guide – a legal document that provides a framework for event organisers (including guidance for medical support). In this section, I explain how the Purple Guide is used by event organisers to plan for medical provision at outdoor and indoor events. Next, I study the making of medical zones at an outdoor temporary event – Meadowhall Festival. This event only happens once a year and is different in relation to indoor events as outdoor

events need to consider factors including weather, camping facilities and fireworks. I then analyse the making and remaking of medical zones across a 7-day time-period at Westdale Arena. This section is divided into three key case studies and analyses the layering of these zones as 'events' arrive and exit the arena. Finally, I do all the above to argue that the spatial organisation of first aid cover is always organised and negotiated in relation to multiple different factors including certifications, contracts, the Purple Guide, physical spaces and history and knowledge of events.

The Purple Guide: the difference between indoor and outdoor events

There are several documents that describe, and to some extent formalise, the spatial organisation of medical provision. The guidelines that matter the most for public/temporary events are the ones that are set out in the Purple Guide to Health, Safety and Welfare at Music and Other Events[33]. The guide was developed in 1992 and was written in consultation with the UK events industry. The purpose of the Purple Guide is to advise event organisers on what they need to consider when planning for medical provision at events. The Purple Guide "covers not only legislation and good practice for Health and Safety, but other legislation and good practice across the industry including the Licensing Act 2003, the Civil Contingencies Act 2004 the Regulatory Reform (Fire Safety) Order 2005 and others" (Purple Guide, 2014: np).

While it is not a legal requirement for event organisers to follow the guidelines set out in the Purple Guide, it instead works as a common point of reference to commission first aid services. It is used by providers too. Relevant considerations when organising first aid provision for an event include the following:

> "numbers expected (staff, audience, participants); the nature of the event (music festival with a young audience, alcohol, overnight camping etc.); history of the event; what safeguarding is in place; what welfare facilities are being provided

33 A similar guide is used for sporting events called the Green Guide (see https://sgsa.org.uk/greenguide/ for more details).

and by whom; hazards - what may cause injury or illness (from severe weather to participation in extreme activities); likelihood of high acuity presentation" (Purple Guide, 2014: np).

In addition to this, the guide outlines a number of factors that event organisers should consider when planning for medical provision at different size events. These include assessment guidance on who and the amount of clinical staff should provide medical provision at events are provided in the table below:

		Very low	Low	Medium	High	Very high
Clinical activity	Expected number of patient presentations	1	2	3	4	5
	Expected level of patient acuity	1	2	3	4	5
Event characteristics	Expected levels of drug & alcohol problems	1	2	3	4	5
	Expected levels of violence and disorder	1	2	3	4	5

No individual
No individual
No individual
Any individua

First Responder-led service		
Description: Small event, typically fewer than 2000 attenders No significant problems expected	**Minimum crew:** 2 first responders for up to 500 attenders 4 first responders for up to 2000 attenders 1 manager	**Consider:** Paramedics, ECPs or ENPs to increase casualty assessment and stabilisation capability where circumstances dictate Site ambulance and crew if event held across a large area
Paramedic or Nurse-led service		
Description: Small event, typically 2000 to 10,000 attenders Low risk of significant problems	**Minimum crew:** 1-2 paramedics 2-4 nurses 2 first responders/4000 attenders 1 manager	**Consider:** Doctor Site ambulance(s) and crew(s) Rapid Responder Vehicle

Figure 6.1. Image of the assessment guidelines used by event organisers to measure the number of medical staff for events. (Copied from the Purple Guide (2014: np.)

Doctor-led service		
Description:	**Minimum crew:**	**Consider:**
Medium-sized event, typically 10,000 to 20,000 attenders Moderate risk of high acuity presentations	1-2 doctors 2-4 nurses or ENPs 1-2 paramedics or ECPs 2 first responders/ 5000 attenders 1 site ambulance and crew 1 Rapid Response Vehicle 1 road ambulance and crew for off-site transfers only 1 manager	On-site liaison and control facility Second road ambulance if transfer times prolonged

Emergency Medicine doctor-led cover with specialised support		
Description:	**Minimum crew:**	**Consider providing on site:**
Large, often complex event, typically 20,000 to 100,000 attenders – maybe many more Significant risk of high acuity presentations, substance misuse and disorderly behavior	2 doctors/25,000 attenders 4 nurses/25,000 attenders 2 paramedics/25,000 attenders 2-4 first responders/25,000 attenders 1-2 site ambulances and crew/50,000 attenders 1-2 road ambulances and crew/ 100,000 attenders for off-site transfers only 1-2 Rapid Response Vehicles On-site liaison and control facility Management team	Emergency department Advanced wound care Stage crews Mental Health Team Pharmacy X-ray Physiotherapy, podiatry, dentistry etc. Further road ambulances if transfer times prolonged

Figure 6.2. A scoring system that determines what type of medical cover is recommended, based on: clinical activity; event characteristics; numbers attending and risk of problems. (Figure is copied from The Purple Guide, 2022: np)

Other factors set out in the Purple Guide that should be included in the risk assessment when planning the type of medical cover recommended include "audience profile; activities on site; location and access; distance from definitive care; time of year; overnight camping; specific hazard; past experience of event and local knowledge" (Purple Guide, 2014: np).

It is clear already, that there are many factors that go into planning for first aid cover when organising an event. The events I observed with The British Red Cross Event First Aid Service varied in size, activity, and audience profile. A critical distinction which I identified when observing The British Red Cross Event First Aid Service was the difference in first aid cover between outdoor and indoor events. While outdoor and indoor events can have many similar features, including audience size and type and timings of the event, significant differences include venue and site design, location and access, environmental conditions, overnight camping, and distance from definitive care (the event I attended was far away from a nearby medical facility). In addition, some factors (such as environmental conditions and overnight camping) are exclusive to outdoor events.

The recommendations in the Purple Guide differ for outdoor events in comparison to indoor events. This is because they are not fixed to one location (e.g., an arena) but are often used for other purposes (e.g., agriculture). Here, medical zones are not fixed to a site but are provisionally assembled during the duration of the event. They take the form of temporary medical posts (including marquees, tents, on-site ambulances, field hospitals etc.) and are often spread across different areas of the site (depending on the size and scale). The point is outdoor sites are temporary because of these specific features. They do not have a fixed medical room on-site or the same medical team that regularly work at the site. Instead, medical zones are made from scratch at the event i.e., the main medical post is located at a marquee beside the hotel and other medical points are in front of the stage while two pairs of first aiders hover around the-site on a regular basis.

There are two issues that matter for planning medical cover at outdoor events: weather and physical boundaries of the location. Medical risks associated with the weather include those caused by wind, lightning, excessive wet and cold (e.g., hypothermia) and exposure to the sun (e.g., sunburn and dehydration). In terms of location, physical boundaries are not always so formally demarcated, outdoors. For instance, outdoor events might be spread across a city or town centre (e.g., long-distance running events like the Great North Run) or in an open space like a field/ park (e.g., festivals like Meadowhall). When planning for these events, organisers need to consider the physical geography and terrain and take into account potentially risky features such as roads, fences, lakes, and rivers.

The risks associated with outdoor events including weather and location are described by Polkinghorne et al., (2013). In their study, they focus on public health consequences of an outdoor rural festival in Australia. At this event, the medical team quickly became overwhelmed by patients with heat-ailment issues (i.e., sunstroke and sunburn) and arboviral disease (there was a mosquito outbreak). Here, the weather (the excessive heat) and the non-defined space of the event (an agricultural farm) produced different risks that would not have occurred if the event was indoors.

Although there are objective reasons for studying the differences between outdoor and indoor events including some of the factors pointed out in the Purple Guide (e.g., fireworks, campsite management, weather, and location), there are also methodological reasons for studying these two different types of events. This is because medical zones are made differently at both settings. At indoor events (e.g., in venues and stadiums), the setting remains the same (as the set-up is not built from scratch) and zones get carved up and are rearranged across times. Additionally, different organisations are responsible for first aid and medical cover at different times. Sometimes several at once. This is different at outdoor events, in which the space itself is made and medical zones are made from scratch. There tends be one organisation that services outdoor events,

because the spaces are not designed for, or used regularly for, events (unless at a multi-scale operation like the Great North Run, in which multiple providers, including the NHS senior healthcare professionals, will be providing medical care at the event). This is the case at Meadowhall Festival, a country estate turned festival venue for one weekend of the year.

Going outdoors: Meadowhall Festival

Meadowhall festival is a 2-day music festival that caters to a family audience and takes place each year in the North of England. It is held in the grounds of a country hall, Meadowhall Estate, that hosted the event over the weekend. At the time of the event, it had approximately 8,000 attendees on-site (although the festival had a capacity of 10,000). There were four stages, including a main stage, a smaller stage, a dance tent, and a DJ tent. The hotel still operated as it would on a regular basis (it had full reservations and restaurants/ and bars were open to residents and festival guests).

In terms of the organisation of first aid provision there were multiple zones of responsibility. These zones were based on the event risk assessment and are outlined in The British Red Cross Meadowhall Festival operation plan[34]. This document included a general map of the area (see Figure 4) and the timings, locations, and amount of first aid personnel needed at the event (see Figure 5). According to the operation plan, there were four main zones of responsibility that were always covered by The British Red Cross Event First Aid Service. These included the main medical marquee (which was located at the rear of the hotel car park) in which the first aid and paramedic support were stationed; the area at the front of the main stage; the lost persons tent (which was beside the main medical marquee) and two first aiders always patrolling the general

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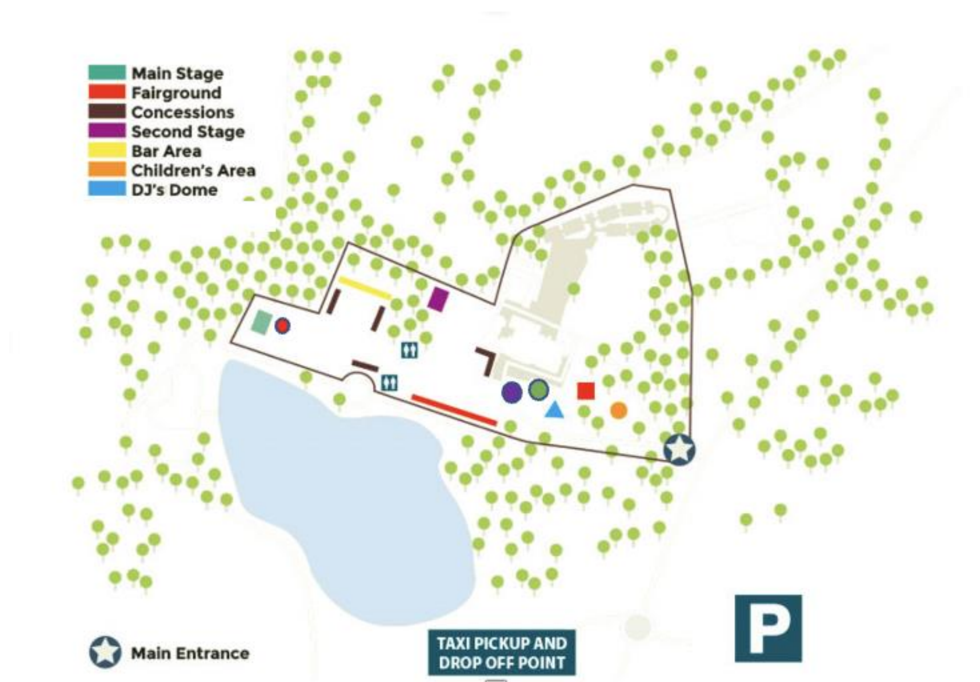
When preparing for an event, The British Red Cross Event First Aid Service prepare a document that includes information for Event Duty Officers. These include Event information and overview; Risk and resource assessment; Location, timings, and map; Press and media; British Red Cross resources provision; Event command and control; British Red Cross communications; Event officer briefing; Triage guidelines; Safeguarding reporting procedures; Sudden Death Procedures; HCP and clinical support; Staff welfare; Major incident planning and Major incident handover of responsibility.

area. Any person on-site that required medical support visited The British Red Cross First Aid Event Service team. This included any staff employed by Meadowhall Hotel (who during non-event days would be treated by Meadowhall trained first aider at work). As the Event Duty Officer, Darren, explained to me, this was common practice because the first aiders in this tent had a higher first aid qualification than first aid at work.

Other organisations at the festival (in the grounds of the festival, but not in the hotel or wider area) include show security, catering teams, entertainment workers (i.e., fairground staff) and the production team (i.e., the artists and bands). The British Red Cross Event First Aid provided paramedic cover and ambulance crew support for all these groups, and for the public in the enclosed event space. Injuries or accidents that happened outside of the event perimeter were treated by the local ambulance service (Alexander, 2019).



Map 6.1. Map of Meadowhall Festival.

Map scale: the distance from the first aid ambulance crew station to the lake (blue circle) is approximately 100 yards. (Map is reproduced from The British Red Cross debriefing pack) [35]

Key

Green circle – Red Cross Event First Aid Service main medical post (this was a marquee) and was located in the rear of Hotel Car Park.

Red Circle – A pair of Red Cross Event First Aiders who were stationed in front of the main stage

Purple circle – Red Cross Event First Aid Service lost-persons tent

Resource provision

12:00 – 00:00	Paramedic	1	Located in rear Hotel Car Park
12:00 – 00:00	Ambulance Crew - Emergency Driver	1	Located in rear Hotel Car Park
12:00 – 00:00	Enhanced Skills First Aider	3	Adjacent to Stage
12:00 – 00:00	Event Officer - Silver/Tactical - Level 2	1	Adjacent to Stage
12:00 – 00:00	First Aider	3	Adjacent to Stage
12:00 – 00:00	First Aider	2	Lost Persons Tent
18:30 – 00:30	Ambulance Crew - Attendant	1	Located in rear Hotel Car Park
18:30 – 00:30	Ambulance Crew - Emergency Driver	1	Located in rear Hotel Car Park
18:30 – 00:30	First Aider	2	

12:00 – 00:00	Paramedic	1	Located in rear Hotel Car Park
12:00 – 00:00	Ambulance Crew - Emergency Driver	1	Located in rear Hotel Car Park
12:00 – 00:00	Enhanced Skills First Aider	3	Adjacent to Stage
12:00 – 00:00	Event Officer - Silver/Tactical - Level 2	1	Adjacent to Stage
12:00 – 00:00	First Aider	3	Adjacent to Stage
12:00 – 00:00	First Aider	2	Lost Persons Tent
18:30 – 00:30	Ambulance Crew - Attendant	1	Located in rear Hotel Car Park
18:30 – 00:30	Ambulance Crew - Emergency Driver	1	Located in rear Hotel Car Park
18:30 – 00:30	First Aider	2	

Figure 6.3. The British Red Cross Event First Aid resource provision for Meadowhall Festival for both days. (Figure is copied from The British Red Cross Operations Plan for Meadowhall Festival (Alexander, 2019: np) and is anonymised to prevent identification.)

35 I am unable to give further details about the map for anonymity reasons.

The festival is a temporary event, as it only happens on one weekend every year. Therefore, provision is customised to the location. For example, the festival is spaced out and it takes around five to ten minutes for first aiders to go from one end of the festival to the other. That is why they have two pairs of Red Cross first aiders always circulating round the event. Meadowhall Festival closes at midnight both Saturday and Sunday and the first aiders are required to stay until everyone is off the grounds. There are no campsite facilities (and no fireworks) at this event, so first aiders are not required to stay overnight. Instead, they stay in a hotel close to the festival if they are working both Saturday and Sunday.

The next section goes 'indoors' to a multi-purpose arena in Northern England, Westdale Arena. This is different to Meadowhall Festival as different organisations are responsible for first aid provision across a 7-day period at the arena. I explore questions such as how responsibility is positioned in space and how the Purple Guide is enacted across different events in the same fixed physical location. It is divided into four parts. First, I describe the function of the arena and the main medical room. Second, I detail three events across a 7-day period at the arena. The first is *Disney on Ice* (an ice-skating show), the second is Liam Gallagher (a music concert), and third is a non-event 'event' (a de-rig day which involves taking down and setting up of equipment). Describing and comparing these three cases shows how medical zones are managed in the space, as well as how the space itself is adapted and reconfigured.

Going indoors: Westdale Arena

Westdale Arena is part of a multi-purpose complex, connected to an indoor shopping centre, as well as a hotel, an ice rink, bowling alley and a green bowling field[36]. To get to the arena, visitors can either arrive by car, walk, cycle, bus, or tram. The arena has capacity for 13,600 and hosts a variety of events including concerts, musicals, opera

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The British Red Cross Event First Aid Teams cover the margins of the arena up until the car park boundary to the grass bowl green.

shows, ice skating shows, ice hockey games, exhibitions, and pantomimes. The building is an oval shape, divided by separate entrance blocks (i.e., entrance A, B, C, D and so on). These entrance blocks are for regular visitors and are supervised by security guards (who check tickets and bags before guests enter) on event days. Employees, medical teams, production cast and VIP guests enter through the main entrance. At the main entrance, there is always a receptionist (who is first aid at work trained) and approximately 2-3 security guards who check tickets, bags and offer guidance for visitors at the start of and during an event. Behind the front desk is arena control which has all the CCTV cameras. The arena control is the one of the ways in which the first aid team is alerted to an incident. Inside the arena, there are flights of stairs and elevators, leading to different seating tiers. There is a concourse that goes from the entrance blocks that lead into the main arena. When events are on, these concourses are filled with different stalls selling merchandise, food and drinks and event programmes. There are multiple corridors and doors that lead in and out of the main arena, and then back into the concourse.

There is a team of approximately 30 employees and staff who work and volunteer at Westdale Arena. The arena employees work 9-5 shifts at the arena every Monday to Friday. The admin team organises contracts with event organisers and looks after the managerial/ account side of the arena. Additionally, the receptionist and arena control team will work when there is an event on but only some days when there is equipment or events being set-up.

The arena employers hire external services to look after security issues and medical provision during events. Security Ltd. is an external company that offers security support for different types of events. Security Ltd staff are stationed around the concourse when guests are entering and inside the main arena when events are on. The security guards do not treat any injury or accident but alert the first aid team when required. For example, in case of a crime related incident (fight or alcohol/ drug-related incident), the

security staff will escort the patient to the first aid room if needed. This room is where patients are treated by on-site first aiders or medical staff.

Before describing the function of that main medical room, it is important to say something about the history of medical provision at the Westdale Arena. The British Red Cross Event First Aid Service was contracted to provide first aid support at the arena when it opened in 1991 – until 1995. They won the contract back in 2010 from the regional ambulance service. The British Red Cross Event First Aid Service used to provide doctors (when required for specific events) up until 1995 when the service stopped licencing doctors to volunteer. In lieu, the Westdale Arena contracted the regional ambulance service to provide professional healthcare when registered healthcare professionals were required for events (following recommendations in the Purple Guide).

The regional ambulance service provided cover in the arena until 2010, at which point the venue contracted a private paramedic company: Medicompany* that offers ambulance and paramedic support to a range of sites (including concerts and festivals) paramedic crew. The British Red Cross Event First Aid Service provided first aid cover for events at Westdale Arena until the service closed in 2020. Every one of these first aid providers (depending on who has the contact) are based in the main medical room.

Main medical room

At all events, members of The British Red Cross Event First Aid Service sign in at the main medical room at the start of their shift. This room is where the Event Duty Officer is stationed and where they brief the team at the start of every event and debrief afterwards. This room is hidden from the main facilities in the concourse (where all the food, drink and merchandise stalls stand). The main medical room is 11ft x 14ft and is located beside the entrance to seat 114. This place is significant because it gives first aiders a view of the entire stage. The room holds two stretcher beds that are hidden behind screens. There are cupboards that hold medical equipment and on the doors of

these cupboards are lists of what each contains, with an arena casualty policy alongside two big plans of the arena.

The lower medical room is directly beneath the main medical room and is joined onto the backstage and the employee staff room downstairs. This medical room is a bit larger than the main medical room (approximately 11ft x 18ft) and is connected to the employee staff room. It is next to the backstage area and therefore more accessible to people who might be injured on the stage or front of the stage. Opposite the lower medical room is an office space for arena employees. On Monday- Friday these offices are full of employees, but on weekends and events in the evening, there might only be 2-3 people working in these offices.

The British Red Cross Event First Aid Service are the only medical team at the arena that is authorised to use the equipment inside the main medical room. This is where The British Red Cross official equipment (e.g., bandages, face shields, eye gels) is kept. Meanwhile, the Medicompany crew keep their own medical equipment[37] and work in the lower medical room or backstage at events. Their equipment is transportable and includes an ECG monitor (a device that The British Red Cross volunteers are not trained to use). This is a team of usually 2 paramedics (but that depends on the size and risk of the event) that have a similar duty to first aiders, except they treat injuries that are P2 or above (e.g., patients with dehydration, vomiting or diarrhoea, or have a respiratory rate from 10-29 and have a pulse rate of 120 or less). At some events, Medicompany paramedics (or in some cases Red Cross first aiders) assist the doctor for the production team in case of any injuries involving the production team).

In order to plan for an event, event organisers (who hire out the arena to put on a show) will refer to the Purple Guide to determine what type of risks there might be at the

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The medical equipment for Medicompany paramedics is portable, and does not stay permanently in the lower medical room unlike The British Red Cross equipment in main medical room.

events. After they create a preliminary risk assessment based on the Purple Guide, they will contact staff who work at the arena who will assess the risk and then contact a first aid provider (e.g., Red Cross Event First Aid Service; or Medicompany). That provider then creates their own risk assessment to determine what type of medical cover is needed for that event and quotes the arena, which they pass on to the event organisers. All these teams work together to plan for medical provision at events in Westdale Arena.

As the above descriptions make clear, different levels of cover are needed for different events. The questions this raises then is how does this work in practice? How is first aid provision arranged across different times but in the same space? The following three cases address and explore these questions.

Case 1: Disney on Ice: following the Purple Guide

Disney on ice an ice-skating show for families and young children[38]. In the UK, the event tours from September- January every year. It is a seating-only event and runs over a 3-day period with three shows scheduled on weekends (e.g., 10:00-12:00; 14:00-16:00 and 18:00-20:00) and one show on a Friday evening.

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38 Disney on Ice is an international production owned by The Walt Disney Company and tours globally. See more details about the event at (https://www.disneyonice.com/en-gb)

Map 6.2. Floorplan from provision for the Disney on Ice event. (Copied from www.seatingplan.net, 2020)

Key

- **Red Cross First Aiders and Ambulance Crew** – stationed in main medical room and main arena. When on shift, they cover all accidents including those on the margins of the arena and the green bowl
- **Medicompany Paramedics** – stationed in the lower medical room as they can easily access any injuries that happen on the cast.
- Security Ltd.– do not get involved in first aid situations but alert first aiders when required. Based in the concourse and main arena.
- **Arena employees** – do not move from their positions.
- **Private doctor** – based backstage only for illnesses/ injuries with casting crew

There are approximately 8,000 guests at each show but because of the nature of activity (seating event with no drink-related activity) and audience profile (family audience), the Purple Guide identifies Disney on Ice as a small-sized event. Small-sized events are advised to have an Event Duty Officer, 4 first aid responders, 2-4 nurses and 1-2 paramedics.

The Purple Guide has a traffic light guide on how 'small' events should be defined depending on the number of attenders and the types of risks expected. For example: 'small' events can be anywhere between 0-10,000 attendees, but events that have more than 2,000 attendees and have more expected risks (i.e., a long-distance running event) are required to have more medical provision in terms of first aiders, as well as registered healthcare professionals and paramedics on-site compared to those with fewer than 2,000 attendees and no expected risks (like school fetes). The Purple Guide does not suggest an ambulance crew for this event because it is categorised as low risk.

There is a mix of first aid provision at Disney on Ice including six Red Cross Event First Aiders (one enhanced and five standard) (the arena does not have contracts for nurses and therefore uses extra enhanced first aiders instead); an Event Duty Officer; two paramedics from the Medicompany team and a private medical doctor that tours with the cast.

Red Cross Event First Aiders are either stationed in the main medical room or at the bottom of the upper seating tier. The Event Duty Officer[39] is stationed in the main medical room and does a circuit of the arena each hour to check on the first aiders in the main arena. The Event Duty Officer for this event has supervised Disney on Ice for five

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39 Each event is required to have an Event Duty Officer who is responsible for the management and welfare of the volunteers.

years in a row and described to me that the previous experiences for working at this event includes unwell patients and slips, trips and falls.

The lower medical room is not open to The British Red Cross volunteers because of the low likelihood of onstage injury. For this event, any injury/ illness (P3) is treated in the main medical facility upstairs. The lower medical room is only used by the two paramedics from the Medicompany team (who only deal with P1 or higher injuries or any injuries involving the production cast). For this event, the paramedic team are using the lower medical room as it is in close proximity to the backstage area, and therefore if they are any injuries involving the production cast, they can access the area more quickly.

At the event I observed, fifteen minutes before the afternoon show began, a child fell through a chair on one of the upper tier seating rows. A Red Cross Event Standard First Aider who was stationed in the main medical room was alerted, by arena control at the time of the incident and immediately went to assist the patient.

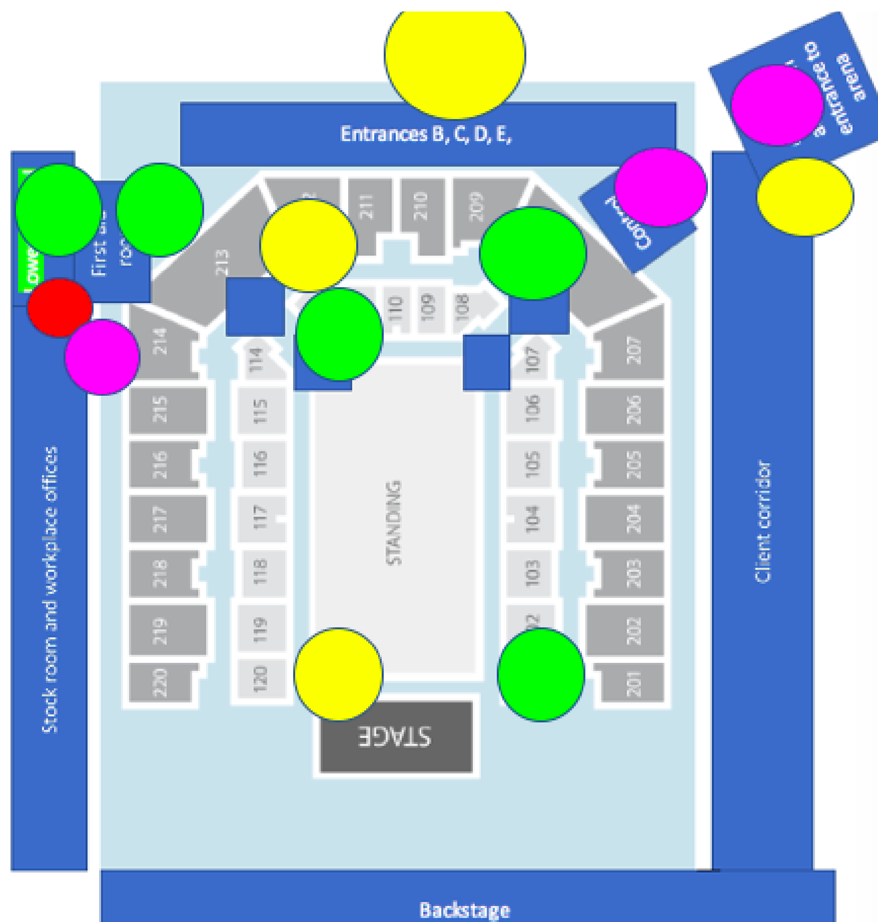
Because this injury involved the arena's equipment, it was reported on the arena casualty form, as well as The British Red Cross patient report form. This form is given to the arena first aid at work trainer who will then assess the piece of equipment or infrastructure. In this case, the child did not need further medical intervention and could go back to the seating area after treatment by the first aider. If the injury was more severe (i.e., a P2 or above), the arena first aid at work trainer would have had to complete a Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) form; a reporting requirement that is part of Health and Safety at Work Act 1974 (see Health and Safety for more details).

At this event, zones are mostly adjusted and established according to the Purple Guide. The next case is different, in the sense that there is a different configuration of people,

roles and services. This is because the event is categorised as a medium sized event and has a moderate risk of high acuity presentations according to the Purple Guide.

Case 2: Liam Gallagher concert: A mix of first aid provision

The next event is a music concert that took place at Westdale Arena. The event had an audience size of 13,000 attendees with a young adult audience profile. There is an increase of risk associated at this event because of the size, type, and audience profile.



Map 6.3. Floorplan from the Liam Gallagher concert.

(Copied from www.seatingplan.net, 2020)

Key

- **Red Cross First Aiders and Ambulance Crew** - (stationed in the medical room/ at the main arena) – covers the entire site.
- **Medicompany Paramedics** – stationed in the lower medical room and provides medical care to any injury on site at the time of event
- **Security Ltd.** – stationed in the main arena, concourse and outside the arena, does not access medical rooms or get involved in first aid situations
- **Arena Employees** - remains in the same position for duration of event

The event took place on a Sunday evening with entrances opening at 18:00 and closing at 22:00. First aiders and other medical staff stay on site till the last guest exits the arena.

According to the Purple Guide this is a medium-sized event because it has an audience of 13,000. In that case, the guide recommends six first aiders with first aid qualifications of standard, enhanced and ambulance crew; two registered healthcare professionals (i.e., doctors and nurses); one site ambulance with crew; one road ambulance and crew for off-site transfers; one Event Duty Officer; one rapid response vehicle and two paramedics to provide first aid. At the event there were four extra first aiders and two additional paramedics (from the Medicompany team) as the arena does not have contracts for private doctors and nurses[40].

There was only one on-site ambulance and an ambulance that is used to transfer patients to the local hospital if required and no rapid response vehicle. The event has a "moderate risk of high acuity presentations", meaning there is a likelihood of alcohol and drug injuries and therefore requires more first aid provision compared to the Disney on Ice event.

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40 Doctors and nurses only provide medical provision at the arena if they are part of the production cast (for example, productions specialist doctor/ nurse).

The floorplan shows that both medical rooms are open. Two paramedics are present, alongside a member of The British Red Cross ambulance crew. There are four pairs of first aiders which are spaced across the arena. These pairs do not always stay in the same place and move every time they are alerted to an incident that happens in the main arena. The Event Duty Officer works in the main medical room alongside another two first aiders.

There are more enhanced first aiders at this event than the Disney on Ice show because previous event records suggest it usually has a high number of incidents due to alcohol-related incidents. Heather recalls that one-year at the Liam Gallagher concert, audience members were tripping and falling, in the foyer, as they were leaving the main area and The British Red Cross Event First Aid staff did not have enough staff to attend the injuries. After the event, Heather recorded the total number of falls and advised the arena staff to have more first aiders for next year - when the event happens again. This is a decision based on previous events.

In this case it is the venue owner that decides on the level of first aid cover, and thus on the cost which is passed on to the organisation running the event. The arena pays for The British Red Cross Event First Aid Service and might go for a lower package that might not exactly meet the guidelines of the Purple Guide (with agreement of the event organisers). This is an example in which first aid provision changes structure to adapt to the Purple Guide guidance, but also previous event history.

Case 3: 'De-rig' days

'De-rig' days are days when there is no public audience visiting the arena for shows or displays. In other words, this could be viewed as when the arena is 'backstage', as it is closed to public audiences (Goffman, 1959). During the 'De-rig' day that I observed, the production crew were taking down the Disney on Ice show the day after the last

performance and the only people at the arena are the de-rigging crew and arena employees.

Map 6.4. Floorplan from 'De-rig day' (Copied from www.seatingplan.net, 2020)

Key

- **Production Team first aid at work trainer** – covers the main stage and any injury that happens on the production part of the arena
- **Arena employee staff** – covers any accident that happens in the workplace parts of the arena (offices and admin areas)

At this time, all injuries that happen in the offices and corridors are reported to an arena employee who is first aid at work trained, while any incident involving the construction team will be reported to the member of the de-rigging crew who is first aid at work trained. Although the arena staff and building contractors are both trained in first aid at work the production team's first aider will have taken an additional first aid at work course, specifically for injuries involving heavy equipment. Just like Red Cross Event First Aid qualifications (i.e., standard and enhanced first aiders), there are also distinctions within first aid at work courses.

The Purple Guide offers guidance on workplace settings and provides information on what to do during 'de-rig' days:

> "At larger events, there may be thousands of pre and post site workers living and working on-site, and the area should therefore be considered as a place of work. HSE regulations for working at height and hard hat zones therefore apply. Medical Providers may need to recommend some pre and post cover, as part of their medical provision". (The Purple Guide, 2020: np)

For this particular event, the building contractors are only working on-site for eight hours (9:00-17:00), which means it is not necessary for workers to live on-site. But what is important from this case is that the arena has switched from public event space to a workplace setting. Because the setting is now a workplace, all medical providers are required to follow The Health and Safety at Work Act 1974.

As all three examples show, the arena is a physical space that hosts multiple events that configure and reconfigure medical zones across particular times of the week. The rotation of workplace to event illustrates there is a sequence of the medical provision at Westdale Arena and that the zones of first aid provision – in terms of scale and exact location, change accordingly.

Discussion: carving up spaces, divisions and distinctions

The final part of this chapter draws out five key insights that matter for defining and shaping boundaries of responsibility at temporary events.

The Purple Guide

Medical zones at Westdale Arena are partly informed by recommendations outlined in the Purple Guide. For events such as The Disney on Ice (which has a history of fewer accidents) medical zones are formed and shaped in accordance with the Purple Guide advice (e.g., five Red Cross Event First Aiders and two paramedics are employed to deal with any injuries at the event). This is different compared to a larger outdoor event that has a history of higher risk of injury such as Meadowhall Festival (e.g., the event had an audience of 8,000 members and is categorised as low risk because of low expected levels of drug and alcohol problems and low expected levels of violence and disorder). The spatial organisation of first aid cover is shaped by previous enactments of various sets of guidance such as the Purple Guide.

The History of Medical Provision and the Corporatisation/Privatisation of Health and Care

Every time a new event enters and exits the arena, medical zones are made and remade. These zones act as temporary structures (Orlikowski and Yates, 2002), in the sense that zones are configured and reconfigured in response to the specific type of activity. As we can see from both the history of medical provision at Westdale Arena and the three floorplans, medical zones are occupied by different healthcare providers who have won contracts to provide medical support at the arena. But the institutional boundaries of

responsibility are not fixed. Instead, different medical providers have occupied the main medical room at the arena over a longer history, e.g., from the regional Ambulance Service to Medicompany, or from Red Cross Event First Aid Service to a private first aid provider. This shows that sometimes the 'edges' of service and responsibility change as well, which depends on and matters for the landscape of healthcare which is happening outside of the arena. E.g., in 2020, private first aid companies replaced The British Red Cross Event First Aid Service because of cuts and closures to the service (see Chapter 4 for more details about the closing of the service).

The Physical Space

Third, changes to zones over time relate to the physical spaces of responsibility including the main medical room which is specific to the main service provider and is not shared between organisations. This room and equipment can only be used by the first aid provider contracted by the arena (in this case would be The British Red Cross Event First Aid Service) and no other organisation such as Medicompany or arena first aid at work trained staff can use the equipment in this room. This space of responsibility is only made whenever The British Red Cross Event First Aid Service is on-site, and therefore on 'non-event' days (see Case 3) the main medical room is not a formal space of responsibility. This further illustrates the layering of institutional and spatial organisation responsibility, as this zone is only made when a specific organisation is on-site.

Certifications

Fourth, there are distinctions of different types of certifications that matter for who can deal with particular classes of injury. In this sense, medical zones are bounded and limited by formal credentials. For example, Medicompany paramedics treat injuries classified as P1 and above and The British Red Cross Event First Aid Service manage injuries categorised as P2 and below. This suggests there are specific skills and qualifications related to who can 'commission' medical zones. For example, at events with higher risk of injury (e.g., see Case 2: the Liam Gallagher concert) different grade divisions of The British Red Cross Event First Aid Service cover the event, but paramedics

(operating in the lower medical room) are only alerted when there is an injury P1 or higher. Here, medical zones are limited and bounded by type of injury, and the formal skills and certificates that are required to commission a medical zone at Westdale Arena.

Contracts and negotiations

Fifth, there are more 'guidance'/regulations/health and safety laws beyond the Purple Guide and classifications of different types of injuries, that contribute to this organisation of responsibility– but they are adapted and negotiated in particular settings. These include event contracts (in which an event organiser will want to hire x amount of medical support for an event), but the medical provider and the arena might have to negotiate with the event organiser because of previous event history. This is shown at Meadowhall Festival and the Liam Gallagher concert in which more first aiders were working at the event than advised in the Purple Guide because of previous event history. In this case, first aid teams had to negotiate between multiple documentations including the Purple Guide, the event contract and previous event history (documented through arena accident logs and Health and Safety documentations such as RIDDOR) to encourage event organisers to increase the amount of medical support for the event. This is an example of how boundaries of responsibility are structured by contracts and negotiations - which have a history. This is a case in which there are tensions, overlaps, doubling up, or types of injury where provision set out in the Purple Guide is not as effective and can be problematic if not considering previous event history. The contract negotiations are one of these kinds of overlaps and is explicitly about negotiating the cover required for the zones. This shows that guides, rules, and laws are adapted and enacted depending on the space, the access to providers and the event. The overall point is that cover is not determined by the guide, or the physical space but by the intersection or negotiation of these.

What is shown here is that there is an ecology of care beyond these events (organisations, certifications, experiences, history) that has to align, cover, or work with the 'zones' of responsibility at events. This is a form of boundary-spanning (Mørk, et al.,

2012). Depending on the activity the way these ‘zones’ are filled out, aligned, or covered is different, and that is also mediated by contract negotiations and various health and safety laws and guidelines.

This kind of spatial organisation of responsibility is not structured randomly (e.g., made during the immediacy of an accident) but is made up of formal frameworks such as the Purple Guide and by contracts and negotiations (which have a history and involves different organisations), but are limited and bounded by specifications of types of injury. What is important here is these zones are layered and structured before an accident even happens. It is the backstage work of these formal frameworks (Bowker and Star, 1999) that matter for the structure of responsibility, and the coordination of emergency response at temporary events. These formal frameworks are structured and not homogenous. This shows responsibility is always situated but uneven– in the sense that it is structured by these formal frameworks, legislation, contracts, and negotiation that are in place to coordinate emergency response at temporary events. The spatial organisation of responsibility is structured– in the sense the arena acts like a shell for different spatial organisation of first aid cover to play out over time.

This chapter shows the shifting spatial organisation of responsibility and outlines the multiple boundaries that structure medical zones at temporary events. In the case of the Manchester Arena Attack categorisation plays out in the immediacy of the event, but at Meadowhall Festival and Westdale Arena categorisation plays out over time. The difference between zoning at both events is nothing, they are basically the same. These categories and zoning of spaces are always happening where first aid happens. The conclusion is that the spatial organisation of first aid cover is always organised and negotiated in relation to certifications, contracts, established guidelines, such as the Purple Guide, physical spaces and history and knowledge of events.

Chapter Seven: Discussion: Situating First Aid Provision within the Ecology of Care

The arguments and insights from the previous chapters describe how first aid provision is made up of a richly textured and multiple layered system – in what I describe as 'the ecology of care'. In this last chapter, I bring together arguments from these previous chapters including the paths and careers that first aiders carve in developing the skills that they apply in the situation and the limits and connections of The British Red Cross itself as an organisation as it negotiates its position in a field of healthcare provision. By bringing these ideas together, my research shows how relations between organisations, mediated by medical categories and reporting, play out on the ground as the dynamics and requirements of particular events and spaces circumscribe who provides help, and when and where they provide it. This final chapter demonstrates that you cannot understand the social organisation of first aid provision without understanding the ecology of care.

The social organisation of first aid depends on multiple classification schemes and the overlaying of various kinds of limits and boundaries (e.g., organisational, spatial, and temporal) that structure first aid provision in specific spaces and times. These boundaries and limits are historically made. That is to say that the professional knowledge structure and 'career ladder' of first aid is not fixed but changes and evolves over time in response and as part of an ecology of healthcare that is on the move. One example of this is the changing categories of skill and volunteering. As described in Chapter Four, the trajectory of becoming a full participant is not straightforward. Rather, there are multiple tensions and thresholds that are shaped by on-going changes happening outside of the Red Cross Event First Aid Service including the changing space and territory of first aid (see Chapter Three). Another example is the closure of the first aid event service itself and how this correlates with the growth of private first aid markets occupying spaces owned by voluntary aid providers (see Chapter Six) or the

long-term development of the NHS ambulance service which shapes the space of first aid, but also that these services mirror the processes and structures of the ambulance service (see Chapter Three).

The ambition of this thesis was to use Bowker and Star's ideas around the performative work of boundaries, categories and distinctions to investigate how the position and character of first aid provision is made-up of a combination of organisational, professional, spatial and temporal boundaries to examine how this arranges and enacts the provision of help in situ. It was by taking these ideas further and combining them with Abbott's (1989) work on the system of professions and jurisdictional boundaries (1989), Lave and Wenger's (1991) approach to situated learning, and Orlikowski and Yates (2002) and other related scholars work around temporal structuring that I show how the boundaries of first aid and help are constituted and enacted and how expertise is distributed between professionals and practitioners – this is significant for the spatial and temporal organisation of first aid and potential patients and the careers of The British Red Cross volunteers.

Instead of focusing on one professional structure at a time (for example only studying the ambulance service), to understand how first aid provision is set-up, I have shown how it is necessary to take a broader view and consider the multiple disciplines/healthcare organisations to really understand what is going on in the development and structure of first aid provision. While Lave and Wenger take one career or practice at a time to show how learning is situated and organised within a particular community and in a particular moment. This research shows how volunteer careers combine and connect as they span multiple communities of practice jostling for position and space within an ecology of healthcare. Together, what this makes clear, is that other healthcare organisations depend on the structure and shape of the Red Cross Event First Aid Service and vice-versa. I have arrived at this conclusion through working with the concept of boundaries and looking at the edges and intersections in space and time.

Bringing together the arguments from across the thesis leads me to argue that (1) first aid provision is part of a wider ‘ecology’ of care and that this ecology is on the move. It is by tracing the historical changes of these organisations that it is possible to ‘see’ the limits and edges of voluntary first aid organisations and therefore of first aid provision. (2) The structure of the ecology of care matters for the day-to-day experience of volunteers, what they do, how they progress, and how their careers are organised. (3) The above points are relevant for the micro-organisation of provision in space and time. In this context, I argue that these two points matter for the delivery of first aid on the ground.

1. First aid is part of a wider ‘ecology’ of care and this changes over spaces and times

The first contribution is about situating first aid provision within the ecology of care, and how the system of care is provisional as it changes over time. The thesis brings Abbott’s (1989) ideas of the organisation of professionalism and the control and bounding of professions through expert knowledge into dialogue with Lave and Wenger’s ideas around situated learning. Chapter Three demonstrates that the jurisdiction of first aid (as a part of the healthcare system) is on the move, but these movements are organised beyond just connections between professions. They are dependent on other boundaries including the making of and there being enough skilled practitioners, to practice at particular events (circumscribed in space and time). That is, the division of labour is never only about the structure of professions outside of the times and places but also where that labour is required. For example, within organisations like The British Red Cross.

I have shown how historical changes happening across other organisations such as the ambulance service matter for the definition and position of first aid and that these matter for structures of service providers such as the Red Cross Event First Aid Service. What first aid ‘is’ depends on what others are doing. Because of this, the structure of service (first aid) provision is never fixed. This is because the organisation of professional

knowledge of first aid provision is continually rearranging. In Chapter Three I showed that the position of first aid changes in conjunction with new medical advancements i.e., equipment, technology and drugs, evidence-based research, and shifting jurisdictional boundaries between professions.

The professional knowledge structure can be traced through other histories, including the history of manuals, guidelines, and protocols (i.e., the Purple Guide) and event locations (e.g., the Great North Run and Westdale Arena). As described in Chapter Six, the Purple Guide is used to structure and formalise help before an incident happens at an event. These guidelines are not fixed but change in relation to contracts and negotiations, previous event histories, classification of injuries and physical spaces. Formal guidelines also have a history and change in relation with other boundaries when planning for provision across events.

The key insight is the professional knowledge structure of first aid is situated in multiple different kinds of histories and that by tracing these histories it is possible to see that the position of first aid constantly fluctuates as it is enacted differently in specific moments and places. The ecology of care metaphor helps to understand this as it shows the organisation of health, care and help are all structured by the divisions of labour and multiple organisations and that the provisional structure of first aid depends on what other systems of care are doing. By turning it over and understanding the ecology of care from the organisational side, it is possible to see the zigzagging of volunteer pathways and careers, at the Great North Run where the skills are utilised, and then with the closure, we see the boundaries and limits of the preparation of skills.

2. First Aid matters for the day-to-day experience and careers of volunteers: what they do and how they progress

The social organisation of first aid provision is not independent but bound together by different organisations. These developments play out on the ground – as my interviews with Red Cross first aiders helped to demonstrate, the changes to the organisation of

service provision shapes their first aid careers and their journey of becoming a full participant. The second contribution is about how the ecology of care matters for those living within these structures. At the same time, this relation works in both directions, e.g., the trajectories and careers matter for the position of the Red Cross within the ecology of care.

For example, there are different roles, levels, and experiences needed to carry out medical support at events. Sometimes these are provided by one organisation (e.g., the Red Cross Event First Aid Service) but medium and larger events (like the Great North Run) often require medical support roles from multiple organisations. These institutions facilitate opportunities to practice and carry out first aid - but not every organisation provides the same opportunities. This is because the structure of provision of first aid is constantly reproducing/re-emerging and therefore opportunities to advance what have previously been required skills become difficult or inaccessible (as detailed in Chapter Four). When this happens, volunteers move to different organisations/service providers to carry out first aid practice. This shows that first aid careers intersect and are not just fixed to one institution, as there are opportunities to continue practising first aid across many different organisations. The ecology of care allows this to happen. This is not the only outcome. Additionally, when volunteers cannot get the training, they need, there can be other consequences, including a lack of recruitment and a reduction of skills in the organisation. In this case, training and skill development offered by other organisations can attract volunteers to them.

The idea is that social organisation of first aid provision is relational as opportunities are produced by the intersection of multiple organisations, training, and requirements. It is the experience of working at a medical post/ and delivering first aid treatment which allows first aiders to progress and move through the career stages. Therefore, when one organisation closes, the system of care reproduces other ways in which skills and experience are acquired e.g., moving, and transferring to other organisations.

The key insight here is that when volunteers lose their roles/chance to practice first aid, to develop skills, and to train and be certified in particular medical practices, it impacts both the resources available to, and the structure of, the organisation. Organisations facilitate opportunities to do first aid, but volunteer progression and activity is crucial to keep institutions active. The act of doing first aid is critical to holding the professional knowledge structure of first aid intact (e.g., the trajectory of newcomers becoming experts).

So far, I have described how the ecology of care is important for the shape and structure of volunteer pathways and how the system of care (which is on the move) constitutes the landscape of help. This organisational landscape of training and provision matters for the doing and delivery of first aid in the present

3. By understanding the structure vs. organisation within the ecology of care is relevant for the micro-organisation of provision in space and time

The final point is how this organisational landscape of training and provision matters for how first aid is enacted on the ground. This third contribution is about the experience of first aid in situ and how this is organised in multiple ways. It is 'zooming in' (Nicolini, 2009) that provides insights to how help is organised in everyday life: for example, the intersections of different spaces and times like the Great North Run (see Chapter Five) or the different configurations of medical zones at Westdale Arena (refer to Chapter Six).

One method of zooming in to see how overlapping boundaries matter for first aid in practice, is to focus on the work of categorisation tools, as I did in Chapter Five and Six. Tools like NEW2 and the Purple Guide are structured by historical, professional, and organisational boundaries that are negotiated and enacted by multiple organisations (e.g., the Red Cross Event First Aid Service, Health and Safety England, the NHS ambulance service, and event settings such as Westdale Arena or the Great North Run etc). In Chapter Five I showed that Red Cross first aiders and other medical staff follow

different protocols and procedures (e.g., NEWS2; Priority Guideline Tool; Patient Report Form) to carry out first aid delivery when an incident occurs. These protocols are designed to be enacted at any space (e.g., event) at any time and involve a variety of roles and experiences. There are many histories and organisational distinctions built into these tools and these are negotiated in practice as they are enacted in specific sites and moments. This builds on Bowker and Star's (1999) ideas but instead of focusing on one classification system, I focus on the multiplicity and intersection of categories to study the organisation of a patient's journey (refer to Chapter Five) and the configuration of medical zones across seven days at a single event location (refer to Chapter Six). The key point is first aid is already structured before it is enacted on the ground, but only becomes mobile where there is action i.e., a patient collapsing (see Chapter Five), or the beginning of an event (see Chapter Six). This shows the organisation of first aid treatment is part of a global structure of categories and boundaries.

In summary, this thesis emphasises that by working with the concept of boundaries and drawing on authors like Abbott (1989) and Lave and Wenger (1991) reveals that help can be only understood when looking at the wider system of care. In this case, it is zooming out and (…[which] is fundamental for gaining an in-depth understanding of the practice… which is enabled and constrained by events, systems and structures taking place elsewhere" (Nicolini, 2009: p.1410). I explain that the organisation of first aid provision is bounded by multiple professional disciplines that matter for shaping institutional structures that organise careers. This matters for understanding the details of first aid practice in everyday life. By using the metaphor of the ecology of care helps understand the relation between the organisation of help, response and first aid skill and the changing landscape of care and provision. This thesis shows the significance of the ecology of care in understanding the shape and form of institutions such as the Red Cross Event First Aid Service which facilitate opportunities for volunteers to gain first aid skills – these skills are then enacted in the moment, at events, to deliver first aid treatment.

Implications for The British Red Cross

My research draws attention to the ways in which first aid continues to evolve within an ecology of care and how this structure matters for the day-to-day experience of volunteers and for how help is delivered in space and time. As this thesis shows first aid is not fixed, abstract or polarised (between non-hospital vs hospital settings): rather it is situated, relational and dynamic.

These ideas have the potential to inform the provision of first aid, and the direction of future research. For example, rather than focusing on bystanders and/or knowledge of first aid, it would make sense to consider the multiple situations (organisations, space, and times) in which first aid is provided.

This thesis concentrates on the work of The British Red Cross Event First Aid Service in Northern England, but other spaces, histories and organisations could be explored in similar terms. One such question would be how first aid provision has changed since the closure of The British Red Cross Event First Aid Service. Which other organisations have filled this gap? What does this mean for the types of expertise involved, for individual careers, and for the relation between first aid providers (including private organisations); NHS paramedics, and community first aiders?

Taking a broader view, there is scope for studying the organisation of first aid provision in different settings, including the workplace. Although outside the remit of this thesis, concepts of boundaries, categories and professionalisation could be mobilised in analysing and following the changing provision of first aid at work, showing how responsibility is configured across different workplace sites and times. Standing even further back, the ideas I have worked with provide a means of conceptualising the situated evolution of expertise within health care and beyond.

Appendices

Appendix 1: Table of historical materials that document the development of the ambulance service from 1936-2021.

Reports	Year	What the report recommended?	The outcomes of the report
The National Health Services Act	1946	Introduced plans to develop healthcare services in the UK into a nationalised public service (known as the NHS).	All hospitals in the UK were now publicly owned. Although ambulance provision was provided by Voluntary Aid Societies.
Ministry of Health, Scottish Home and Health Department 'The Millar	1966	The programme aimed to provide ambulance staff with necessary skills and qualifications for working on an ambulance.	All ambulance staff were required to have basic and advanced skills before working on an ambulance and for all new ambulance service recruits to complete a 10-week in-house training under the Institute of

Report'			Health and Care Development. This later involved into the IHCD Ambulance Technician programme.
The Pantridge plan	1967	For all emergency response services to be fitted with an Automatic External Defibrillator.	Automatic External Defibrillator became recognised as a key tool in first aid and could be used safely by members of the public.
The NHS Reorganisation Act	1973	The legislation reorganised the National Health Services in England. All ambulance services became provisioned by the National Health Service.	Ambulances services are part of the NHS. Voluntary Aid Societies no longer funded to provision ambulance support to the public.
The Royal College of Surgeons 'the Medical Commission on Accident	1970	Findings from this report found that emergency response could be improved for patients with trauma injuries in the UK.	All ambulance life support skilled clinicians to manage and treat patients with trauma.

Prevention'			
London's Air Ambulance Charity was formed	1989	The service provided paid paramedics to respond to critically ill patients in London and employed an advanced trauma paramedics who operated from an emergency operating centre and was responsible for dispatching air ambulances.	Air ambulances to be introduced as a key emergency response transportation for critically ill patients in London.
'The Sheffield report'[41]	1994	A pilot scheme designed to evaluate the efficiency of London's Air Ambulance and its model of pre-hospital.	One patient with major trauma survived each month because of the London Air Ambulance Service. The report influenced funding decisions which resulted to the use of helicopters towards becoming part of medical and trauma systems.
The Department of Health 'The new	1997	Aimed to introduce health improvement programmes that increase coordination between services and providers rather than competition. The programme also aimed to get rid of internal markets in the NHS;	Introduction of NHS Direct; fast-track cancer services; internal market to be replaced by 'integrated care'; focusing on the

[41] I am unable to source the original copy of this report, however, the timeline on the London Air Ambulance website states how this report was a key step in funding using helicopters as emergency response transportation for trauma incidents. (see https://www.londonsairambulance.org.uk/about-us/our-history)

NHS: modern and dependable' the White Paper		and a focus on patient needs.	needs of patients and coordination rather than competition between services.
Audit Commission for Local Authorities and the National Health Service: Life in the fast lane, value for money in emergency ambulance services	1998	To change the operations of ambulance services (i.e., how crews and vehicles can be deployed and what local management can do to ensure high quality of care for patients) and for paramedics to be given a licence to clinically treat patients in their home.	The report was a turning point for the integration of ambulance services as a key part of emergency healthcare and the introduction of paramedics being taught at university degree level.

Meeting the challenge: a Strategy for the Allied Health Professions	2000	To support change to health workforce education and expand roles from healthcare professionals.	Broadened the roles of paramedic as 'advanced practitioners' in emergency departments, hospitals, and other primary care settings.
the NHS plan	2000	To reform NHS healthcare education and training to reshape care around the patient. This programme intended to modernise healthcare services in the UK.	The report set target for a 4-hour maximum waiting-time for A&E; 8-minute ambulance response time and establishing closer relationships between the NHS and the private sector. Additionally, the report destabilised the barriers between private and public healthcare providers; and more NHS services were working with private providers on diagnosis and treatment centres and other facilities and services.

Department of Health ‘Reforming Emergency Care’	2001	A ten-year strategy to improve patents experience with emergency care in the UK. The report recommended ambulance services to be designed from a patient's point of view; ensuring patients were given consistent responses; information to be obtained at each stage of the patients journey and to be shared with other professionals.	The report set targets to increase capacity; reduce divisions, widen access and consistency of emergency services, as well as new professional roles and ways of working.
Department of Health ‘Raising Standards for Patients New Partnerships in Out-of-Hours Care’	2001	The report identified a future model of out-of-hours care in which Primary Care Trusts (PCTs) would develop an integrated network of unscheduled care provision, bringing together providers of out-of-hours services to work collaboratively with other health and social care providers such as A&E and ambulance services.	The report set targets for healthcare professionals to provide prompt response for any patient needing services; ensuring consistent professional handling of calls; further integration between GP out of hours services including NHS direct and A&E departments.
NHS England ‘Transformin g emergency	2003	To modernise A&E departments across the UK including reducing waiting times and improving communication between different healthcare	To continue improving A&E facilities; improving the wait time (the guideline was no

care in England’		providers.	patient to be waiting longer than 4 hours).
The Civil Contingencies Act	2004		All ambulances to have an emergency plan for each type of major casualty incident (i.e., train crash, explosion, fire etc.)
Taking healthcare to the patient: transforming NHS ambulance services (known as Bradley review)	2005	The purpose of the report was to change the direction from ambulance services that once focused on trauma, resuscitation, and acute care towards becoming the mobile health resource for the whole NHS.	The programme aimed to introduce health improvement programmes that focused on the coordination rather than competition; a focus on patients’ needs; improve the speed and quality of handling calls; the introduction of 'hear and treat'; work with partner organisations to ensure consistent calls to patients; to provide, improve and coordinate a range of mobile healthcare for patients in urgent

			care ('see and treat'); the broadening of healthcare professional roles to encompass more community-based health promotion and primary care; new dispatcher decision support software; and diploma/foundation degree level offered to paramedics from 2013, (HCPC no longer recognised IHCD certificates from that date)
College of Paramedics ‘Paramedic Curriculum Guidance’	2006 – present	This handbook was introduced and is regularly updated with appropriate guidance for paramedics.	The handbook standardised guidelines for paramedics (i.e., how crews and vehicles can be deployed and what local management can do to ensure high quality of care for patients) Provides standard guidance on paramedic practice (e.g., how

			clinical practice should be delivered).
Curriculum Framework for Ambulance Education	2006	To train graduates in critical thinking; critical reasoning; problem solving and to ensure they could manage patients with emergency and non-life-threatening conditions.	The programme supported changes to healthcare workforce education and aimed to expand roles for healthcare professionals and supported foundation degrees to prepare paramedics for when they undertake their degree course. This came into place in 2013.
ECP Teams, Skills for Health 'The Competence and Curriculum Framework for the Emergency	2007	The vision of the report was to change the role of the Emergency Care Practitioner towards becoming more flexible in paramedic practice (e.g., having more clinical-based decision autonomy) and shifting away from traditional roles. The programme cross referenced the 'taking healthcare to the patient' (2005) report.	To reform NHS healthcare education and training to reshape care around the patient. The programme planned to broaden the ECP role to encompass patient care, diagnosis and treatment in the home, general practice, minor injury clinics, emergency

Care Practitioner.'			departments and rapid response vehicles.
AACE 'A vision for emergency care and urgent care: the role of ambulance service'	2011	The visions of the report were to provide a single point of access for emergency and urgent care, linked to the appropriate service response; delivering services nationwide for patients with life threatening and major trauma conditions and to integrate and services across primary, secondary and community care, including a range of urgent care services available 24 hours a day, seven days a week.	The programme introduced foundation entry level for paramedics; specialist centres in local communities; primary, secondary and community care including a range of urgent care services which were to be available 24 hours a day, seven days to work.
Healthcare Commission 'Not just a matter of time. A	2008	The findings of this report shown that urgent and emergency care services needed to improve the awareness of new services; there were problems occurring where patients were transferred between different services and more attention was needed for	To improve the awareness of new urgent and emergency care services.

review of urgent and emergency care services in England’		patients with individual needs.	
AACE ‘Taking healthcare to the patient 2: a review of 6 years progress and recommendations for the future’	2011	To review the changes and impact from over six years since the initial report. The findings of the report shown there was key challenges in the ambulance service becoming a mobile healthcare provider for the whole NHS. These included clinical leadership was difficult to implement and staff satisfaction remained low across the NHS; issues with allowing time to gather patient condition information before dispatching a resource; implementing clear clinical career structures and impacting and valuing the education of staff.	To continue working with the initial paper.
Allied Health Solutions and Buckinghamshire New University	2013	To provide a new direction for paramedic education and training.	Standardised the paramedic degree pathway to be aligned with other healthcare professions.

'Paramedic Evidence-Based Education Project – end of study'			
National Ambulance Service Medical Directors ' Future national clinical priorities for Ambulance Services in England'	2014		More attention in areas such as public health and prevention, emergency, and urgent care, falls in elderly and chronic care, mental health and end of life care to influence paramedic practice.
Care Quality Commission	2014	To make sure ambulance services provide safe, effective, compassionate, and high-quality care and	To monitor and regulate ambulances, by measuring are

'A Fresh Start for the Regulation of Ambulance Services'		encourage services to improve.	they safe, caring, and responsive. This is for both patient care and for patient relative's care; to ensure efficient response times and for ambulances to have appropriate equipment.
AACE 'A vision for the ambulance service: '2020 and beyond' and the steps to its realisation'	2015	The report outlined the 2020 vision for ambulance sector in the UK.	Mobile healthcare providers with a range of roles (navigation, coordination, diagnostics, treatment and transport); extended range of settings in which care is offered; increasing use of tele-healthcare; urgent care activity depending on local circumstances; ambulance as a technical hub for diagnosis services and treatment; increased number of advanced paramedics working alongside paramedics; increasing role of

			health promotion.
NHS England 'Ambulance Response Programme'	2017	To review strategies that have the potential to reduce operational inefficiencies and to improve the quality of care for patients, their relatives, and casers.	Introduced a new dispatching system for 999 calls (Advanced Medical Priority Dispatch System) with four call handling categories (Category 1 - Life-Threatening illnesses; Category 2 – emergency calls; and Category 3 - Urgent calls and Category 4 – for less serious calls). Ambulance response crews were

			now dispatched on efficiency measures rather than time. Paramedics to diagnose and treat patients on the scene and to reduce the waiting time for patients entering A&E.

Appendix 2: Table of participants

Event name	Volunteer's name	Volunteer grade division	In-person or online
Meadowhall Festival/Great North Run	Darren	Event Duty Officer Level 3	In-person
Meadowhall Festival/ Northern City Half Marathon/ Great North Run	Peter	Ambulance Crew	In-person
Great North Run/ Northern City Half Marathon	Steve	Enhanced First Aider/ Finish Line Team leader	In-person
Great North Run/ Northern City Half Marathon/ North Eastern Light Show	Anna	Event Duty Officer Level 2	In-person/ online
Great North Run/ Northern City Half Marathon	Gary	Paramedic/ Finish Line Team leader	In-person/ online
Northern City Half Marathon	Andrea	Enhanced First Aider	In- person
Great North Run/ Northern City Half Marathon	Eric	Enhanced First Aider	In-person
Westdale Arena/ Great North Run	Heather	Event Duty Officer	In-person/ online
Westdale Arena	Kyle	Standard First Aider	In-person

No event	Andrew	Training manager	

I recruited participants based on different criteria. Sam and Kyle were recruited because they were working in spaces, I did not have access to at events. For example, Sam was working at the Casualty Retrieval Post at the Great North Run, while Kyle who was working in the seating area at Westdale Arena. Anna, Eric, Peter and Darren were selected because I had attended two or more events and had built up relationships with them. Meanwhile, Eric, Gary, Darren and Steve had a ‘vast’ career with The British Red Cross Event First Aid Service and therefore had a large amount of experience of doing events. Other members such as Kyle and Andrea had joined The British Red Cross in the past 3 and therefore were new to the organisation. Interviewing both senior and new volunteers provided insights to how the organisation has developed and changed overtime. Different to other volunteers who I interviewed, Andrew was a paid-staff member of The British Red Cross and was able to validate how training and progression was organised in the service.

Appendix 3: Semi-structured interview guide

Questions to explore with event first aid volunteers

In order to learn how first aid is organised and structured, I will observe and talk to volunteers about their experiences of working at events. Below, I have provided an example interview schedule. Each interview will last approximately 45-90 minutes.

First aid practitioners

<u>Who are these people? What are their experiences?</u>

I want to learn who these people are. I want to know their volunteering roles, experiences, and background. Why do they volunteer and how did they become drawn to volunteering? I want to find out what parts of volunteering they enjoy the most. Do they have other types of background relevant to first aid, i.e., paramedic or a qualified first aider in the workplace?

First aid teams

I want to know how an 'Event First Aid' team operates. How often do they meet for group training sessions and where? Do they always work with the same team or do teams differ? I want to know how first aid volunteer teams plan for different size and types of events. I want to learn how volunteers pick what types of events they go to.

<u>Preparing for events</u>

I want to understand the training involved, particularly the first month, when becoming a first volunteer. I want to learn about the different types of training activities that

volunteers participate in before going to events. I want to know how regular volunteers meet up, beside from events. I am interested in how experience and knowledge develop, are there definite levels of skill – e.g., training before going to events. I will ask about the kind of specialism involve in volunteer training i.e., ambulance or paramedic work.

Working at events

I want to learn the kinds of events do volunteers go to, and how they are different. This will lead to conversations such as how different kinds of events affect first aid e.g., types of incidents and types of responses. How do different temporalities of events affect first aid response, i.e., an overnight event compared to a 5-hour day event. This will then lead to conversations about how weather and seasons affect first aid responses.

Strategic planning (to be asked for volunteer training leaders)

Are there standard plans and strategies for events? If so, from whom?
Who decides about how many volunteers, their experience, where they should be located and what support they can call on during events?

End of interview

(If experienced volunteer) Has medical advice and practice changed over time? If so, why? Has your volunteering experience changed overtime? If so, how? What's next for you as a first aider?

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