NIHR | Policy Research Unit in Health and Social Care Workforce

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Community First Responders and the ambulance service

'How can we better demonstrate the impact of Community First Responder volunteers on the ambulance service, and what policy recommendations can we make based on this analysis?'

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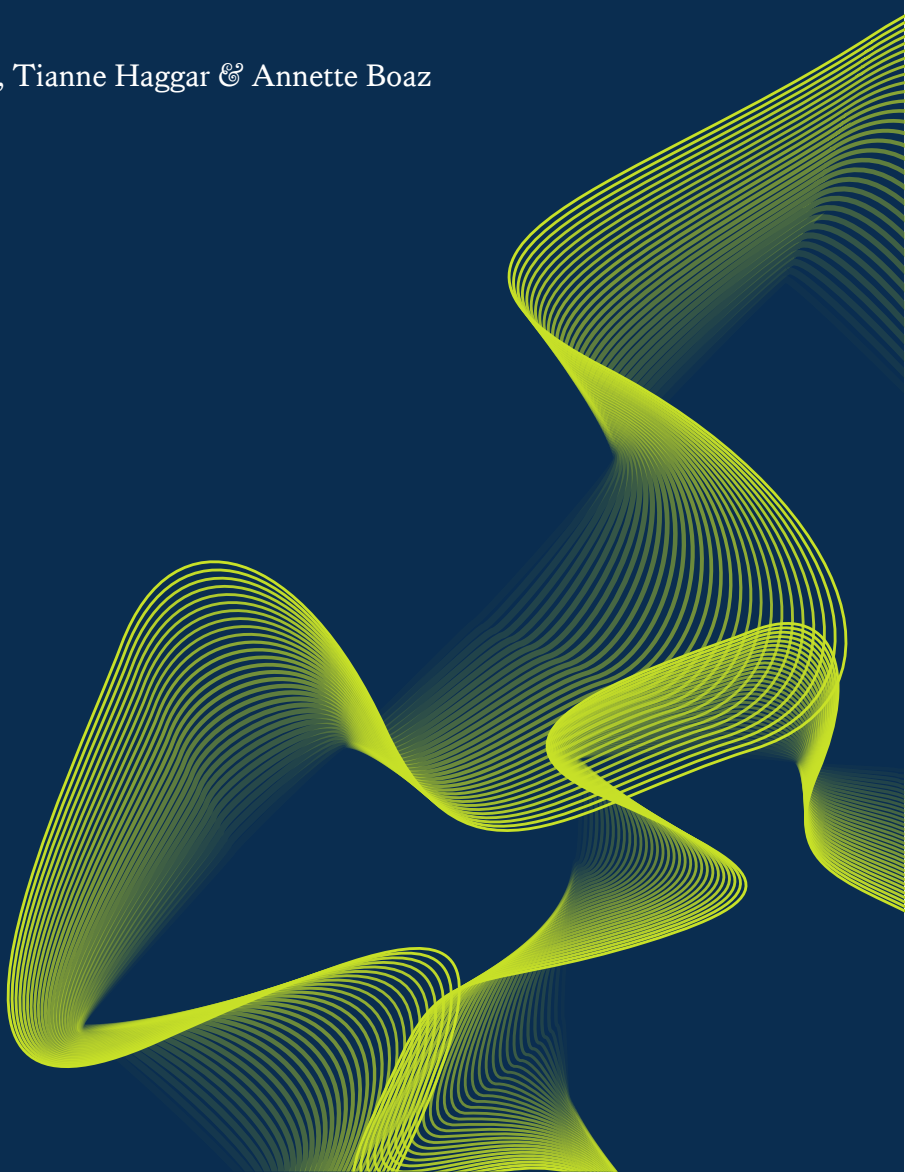

September 2025

Faculty of Social Science and Public Policy

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Acknowledgements & Disclaimer

We are grateful to Joe Crook at the Association of Ambulance Chief Executives for his help and guidance over the past few months with this project, as well as Lauren Arnold at the KCL Research Governance Office for her patient advice as we navigated the NHS ethics application process. Also the Public Contributors Involvement and Engagement Group at HSCWRU who reviewed and commented on our study protocol.

We would like to thank those people who gave up their time and participated in the research as qualitative research participants, quantitative data suppliers and wider supporters helping to facilitate this work across the five NHS Ambulance Trusts involved in this project.

This research is funded by the National Institute for Health and Care Research (NIHR) Policy Research Programme (NIHR206121 – NIHR Policy Research Unit in Health and Social Care Workforce). The views expressed here are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

To cite this report:

Fraser, A., Hickman, B., Regal, B., Haggar, T., & Boaz, A. (2025) Community First Responders and the ambulance service: 'How can we better demonstrate the impact of Community First Responder volunteers on the ambulance service, and what policy recommendations can we make based on this analysis?', London: NIHR Policy Research Unit in Health and Social Care Workforce, The Policy Institute, King's College London. https://doi.org/10.18742/pub01-229

Executive Summary

This research investigates the impact of Community First Responders (CFRs). CFRs are volunteers who are trained and dispatched by ambulance services in their local communities. They may provide life-saving treatment for patients suffering emergencies such as cardiac arrest, stroke or breathing difficulties before the ambulance crew arrives. They may also attend less urgent calls to support patients (AACE, 2025). CFRs are a long established example of volunteers volunteering within the NHS to support the ambulance service. This research aims to contribute to the evidence for supporting and developing volunteering to help patients and services more broadly across the NHS.

Our primary research question is:

- How can we better demonstrate the impact of CFR volunteers on the ambulance service, and what policy recommendations can we make based on this analysis?

Secondary research questions:

- What can we learn from the Community First Responders to support other volunteer roles more widely? In particular:
- How can local operational managers improve the deployment of volunteers?
- How do staff understand the support they receive from volunteers (including the effect on their workload and morale)?
- How do patients understand the support they receive from volunteers?
- How are volunteers influencing services (i.e. ambulance waiting times and non-attendance/transportation times) ?
- What opportunities are there to further develop this volunteer role?

The research combines quantitative and qualitative approaches to data collection and analysis. We identified five NHS Ambulance Trusts that are using the CFR role and were willing and able to share data to enable us to measure key elements of the impact of CFRs locally. To add richness and depth of understanding to the quantitative impact data, the research team also collected qualitative data in two of the five sites. We conducted 26 semi-structured video interviews over MS Teams between February and April 2025 with 16 CFRs and 10 NHS staff members (including managers, paramedics, ambulance technicians and call handlers). A limitation of this research project is that it was not possible for us to interview patients or family members of patients who had interacted with CFRs.

Our quantitative findings demonstrate high variation in the relationship between hours logged, active CFRs and average incidents attended. This suggests variation in both CFR deployment approach and data collection between trusts. We find that CFRs are active all year round, but they are more active in the day than at night. The quantitative findings

show that CFRs are more active in rural rather than urban areas and have broad geographic coverage.

CFRs attend a high number of incidents (>100,000) and for those incidents to which CFRs are dispatched are more often than not the first attenders on scene. CFRs are most active for category 1 and 2 incidents. The role of CFRs in category 1 incidents would appear to be aligned more towards support (see response times and % first on scene rates) whereas for category 2 and category 3 incidents to which they are dispatched they are first on scene the majority of the time and, under direct remote clinical supervision from the control room, can resolve an incident without an ambulance attending.

There is some suggestion that this means that CFRs can save resources (i.e., fewer ambulances being deployed) at category 2 and category 3 incidents. However, it is important to emphasise that this would need further investigation as it is indicative only, due to data concerns.

Irrespective of resources used, CFR attendance reduces the response times for category 2 and category 3 incidents. We also found that where CFRs are the first on the scene, category 2 incidents have a slightly higher See & Treat rate (i.e., patients are assessed at the scene but not conveyed to hospital) and a lower conveyed to non-ED rate. Where CFRs are the first on the scene, category 3 incidents have a slightly higher See & Treat rate and a lower conveyed to ED rate. We suggest this indicates more effective use of ambulance resource overall, but this would need further research which should include geographic analysis and category 1 incidents, particularly as CFRs attend proportionately more rural and category 1 incidents.

Our qualitative findings demonstrate that CFRs are perceived to bring tangible benefits to the NHS – particularly in rural settings. There are wider lessons about the role of volunteering in the NHS that we can develop through analysing what works in relation to the evolution of the CFR role over the past 25 years.

There are diverse factors that motivate CFRs to volunteer – but key is a desire to 'give something back'. The CFRs we interviewed overwhelmingly enjoy the role and gain fulfilment from it.

The CFR role brings them excitement, new challenges and the ability to connect with other members of the community at times when this is vitally needed. CFRs increasingly feel valued by paramedic and other ambulance staff.

To function well, CFRs require a significant managerial commitment from ambulance trusts. They require training and wider resources – this is not a free service. There are particular challenges faced by NHS managers overseeing CFRs.

Finally, the CFR scope of practice is closely regulated. There are tensions between flexibility and standardisation.

In the conclusion section of the report we offer some thoughts about how the use of CFRs could be improved alongside some ideas about how and why the CFR role is valued by volunteers and NHS staff that might encourage thinking about the transferability of learning from the CFR role, for volunteering in the NHS more broadly.

Context & Introduction

Background

The health system is working to recover from the impact of the COVID-19 pandemic and keep up with demand for healthcare. Its workforce and services remain under pressure and both health and care sectors continue to benefit from the generous support of volunteers and voluntary sector organisations. There are over 72,000 volunteers in NHS trusts, (in over 300 different volunteer roles) and these people play an important part supporting the public and easing pressures on the NHS.

The NHS Long Term Plan, The People Plan, and The NHS Long Term Workforce Plan all included commitments to make the best of NHS volunteer input, and the recently published Fit for the Future: 10 Year Health Plan for England further highlights the important role volunteers can play in supporting the health shift from hospital to community. There is an opportunity to explore how groups beyond the formal workforce can support transformation in the NHS to deliver on the ambitions of the 10 Year Health Plan. In 2023 the government also responded to the Health and Social Care Committee inquiry on workforce Recruitment, Retention, and Training; it committed to "maximis[ing] the use of volunteers where they can be most effective" and recommendations in the NHS Volunteering Taskforce Report committed to improve the experience of people who volunteer in the NHS.

However, it is a complicated volunteering landscape in the NHS. Volunteers are recruited from a mixture of places including direct NHS trust recruitment and local or national Voluntary, Community and Social Enterprises (VCSE) and others come from supporting roles that straddle both health, care, and social support. There were also national schemes such as the NHS Care and Volunteer Responders programme which ran from 2020-25. In addition, there are many different types of information recorded about volunteer activity. Some NHS services gather highly developed and detailed information, but others have little, beyond a basic volunteer headcount and activities.

There are many pockets of good practice across the system in relation to how the NHS benefits from volunteer input. Notably, the ambulance service has a highly developed and long-standing Community First Responder (CFR) programme. CFRs are volunteers who are trained and dispatched by ambulance services in their local communities. They may provide life-saving treatment for patients suffering emergencies such as cardiac arrest, stroke or breathing difficulties before the ambulance crew arrives. They may also attend less urgent calls to support patients (AACE, 2025). However, it is difficult for policymakers to plan for future volunteering involvement because of a lack of evidence, particularly with regards to the impact of volunteer inclusion. There is also growing national-level coordination between ambulance trusts through the National Ambulance Voluntary Responder Leadership Group (NAVRLG) and through the Volunteer Strategic Oversight Group (VSOG). Together these groups are enabling increased alignment and standardisation between CFR programmes.

Policymakers aim to increase the number of volunteers to help support patients, the existing workforce and service providers in a safe way, more quickly. There is a pressing need to generate evidence so that policymakers can efficiently focus on future volunteer input and how the NHS can best support volunteers in the system. This report aims to respond to this need.

Aims

We aim to investigate the impact of Community First Responders as a positive, long established example of volunteers supporting the ambulance service. Through doing so we are contributing to the evidence for supporting and developing volunteering to help patients and services more broadly across the NHS.

Our primary research question is:

- How can we better demonstrate the impact of CFR volunteers on the ambulance service, and what policy recommendations can we make based on this analysis?

Secondary research questions:

- What can we learn from the Community First Responders to support other volunteer roles more widely? In particular:
- How can local operational managers improve the deployment of volunteers?
- How do staff understand the support they receive from volunteers (including the effect on their workload and morale)?
- How do patients understand the support they receive from volunteers?
- How are volunteers influencing services (i.e. ambulance waiting times and non-attendance/transportation times) ?

- What opportunities are there to further develop this volunteer role?

Literature Review

Ellen Stewart's (2023) recent work highlights the longstanding and somewhat ambiguous nature of volunteering both within and pre-dating (Gorsky, 2015) the NHS. Overall, volunteering in the NHS remains an under researched area (Naylor et al., 2013; Stewart, 2023) that may provoke strong sentiments (Lindsey et al, 2018; Stewart, 2023). Notwithstanding such tensions, there is policy interest in developing and implementing a more comprehensive and strategic approach to volunteering in the NHS (NHS England, 2019; NHS England and NHS Improvement 2020; Gilburt & Beech, 2022).

In their evidence review of volunteering in health and social care, Malby, Boyle and Crilly (2017) find there is evidence that volunteering appears to have a positive impact upon the 'physical, emotional and mental health' of volunteers themselves as well as patients. However, there is less evidence about the impacts upon staff – with the authors noting that NHS staff may often be 'suspicious' of volunteering. They also find some evidence that NHS or community volunteering can have an impact in driving down demand for some frontline services – but less so where volunteers are replacing conventional NHS tasks without pay (Malby, Boyle, and Crilly, 2017).

There is a growing body of international and UK focused research into the CFR role that has been building over the past two decades. Examples of this body of work include an international scoping review (Phung et al., 2017), research into the role and management of CFRs (Healthcare Commission, 2007; O Meara et al, 2012), and studies focusing on the experiences and motivations of CFRs (Roberts et al, 2014; Barry et al, 2019).

Over the past couple of years, the Community and Health Research Unit at the University of Lincoln has published several articles in relation to the CFR role specifically as part of a larger research project funded by the NIHR titled '*Community First Responders' role in the current and future rural health and care workforce'*. One article focused on the role of Medical School First Responders and found that there were reported educational advantages for students but could not demonstrate improvements in educational or clinical performance (Orsi, et al., 2022). Patel, et al. (2023a) explored the sequential practices of CFRs in a qualitative study that demonstrated the utility of the support CFRs offer to ambulance services in delivering prehospital and emergency care in rural areas. A further article highlights variation in governing processes for CFRs across different NHS Ambulance Trusts (Patel et al., 2023b). Botan, et al. (2023) explored the contribution of CFRs to emergency care provision in relation to type and frequency of callouts they were involved in over a year involving 4.5m incidents drawing on data from 6/10 UK ambulance services. The study showed that CFRs are more active in rural than urban settings, and that their

workload has expanded beyond their original purpose (to attend to out of hospital cardiac arrests). The article calls for more training for CFRs and further research from multiple perspectives (service user, ambulance services, commissioners and CFRs themselves) about the contribution and future the CFR role. The larger, project report (Siriwardena et al., 2024) draws the findings of these articles together. It highlights issues related CFR training, the need for better counselling and peer support, better communication with the control room and the need for improved technological support for CFRs. The report recommends further research be conducted into innovations involving CFRs.

Separate recent qualitative research published by Hird and Richardson (2023) exploring firstly the relationships between CFRs themselves, as well as with ambulance service staff and patients; and secondly issues around call, allocation, technological difficulties and wider support for CFRs highlights similar concerns. The study calls for further comparative research into how different ambulance trusts manage and deploy CFRs and the implications of CFRs attending calls outside their agreed scope of practice. (Hird and Richardson, 2023).

In summary, there are important definitional questions about the meanings and values as well as the impacts and contributions of volunteering in the NHS in general and of the CFR role in particular that emerge across the existing literature. Our work hopes to add to existing knowledge and to explore outstanding questions and draw conclusions that may support NHS bodies to engage more effectively and sustainably with volunteering as a more regular practice.

Methodology

The research combines both quantitative and qualitative approaches to data collection and analysis. We identified five NHS Ambulance Trusts that are using the CFR role and were willing and able to share data to enable us to measure key elements of the impact of CFRs locally. This study builds upon the work of the National Ambulance Volunteering Dashboard (NAVD) by helping engaged trusts to identify and standardise their data relating to CFRs. We worked with the trusts to develop realistic, clear data guidance relating to CFRs that tied in to existing statutory requirements on Ambulance Quality Indicators (AQI), volunteer reporting and the work completed for the NAVD. The final data template was developed and agreed in partnership with the trusts. We report on the following factors:

- *Overall CFR numbers and demographics*
- *CFR activity*
- *Response times and outcomes*
- *Geographic distribution of responses*

To add richness and depth of understanding to the quantitative impact data, the research team also collected qualitative data in two of the five sites. We conducted 26 semi-structured video interviews over MS Teams between February and April 2025 with 16 CFRs and 10 NHS staff members (including managers, paramedics, ambulance technicians and call handlers). Interviews lasted between 40-65 minutes. Interviews were recorded and transcribed, then downloaded into Nvivo software for detailed coding and thematic analysis. We identify and report on the following themes:

- *CFR motivations and perspectives*
- *Management issues and perspectives*
- *Benefits to the NHS and wider issues*

A limitation of this research project is that it was not possible for us to interview patients or family members of patients who had interacted with CFRs. We tried hard to organise patient interviews as we recognise how important this is – but unfortunately, we were unable to do so within the timeframe of the study. Overall, this research design aims to generate transferable knowledge about not only the impacts and processes through with the CFR role operates – but the wider barriers and facilitators to volunteering in the NHS also. These are discussed in detail in the conclusions and recommendations section of the report.

Ethical Approval

We received full NHS HRA ethical approval for this study from the Brighton and Sussex REC on 21 January 2025. We also received site specific approval from each of the five NHS Ambulance Trusts prior to commencing data collection. The IRAS project ID is 347570.

Findings (1) Quantitative analysis

We received data from five ambulance trusts: East of England Ambulance Service (EEAST), North West Ambulance Service (NWAS), South East Coast Ambulance Service (SECAMB), South Western Ambulance Service (SWAST), and Yorkshire Ambulance Service (YAS). The trusts were able to provide the majority of data requested, although most found the demographic data harder to provide. Where data does not relate to all five trusts this is made clear in the text.

Overall CFR numbers and demographics

Two trusts struggled to provide demographic data due to the structure of historic data systems. One trust is undergoing a system change in the next six months and aims to improve the quality and scope of the data collected following this review. Another trust had such high not knowns (92%) relating to ethnicity data that their data has been excluded from the analysis. Two trusts reported that not knowns were caused by CFRs declining to respond alongside the trusts not having formal approaches to the collection of the data.

In the year to 31st December 2024 there were 3,038 Active[1] CFRs in the five trusts, with a further 729 CFRs on book but inactive, making a total of 3,767 CFRs potentially available across the five trusts.

The demographic profiles provided below relate to all CFRs on book and comparisons with adult population are based on ONS population profiles[2] of the geographic areas covered by the trusts.

In the four trusts where data was available, 57% of CFRs were male, 35% were female and gender was not known for 8%. In the same geographic areas, 49% of the adult population are male. (see **Figure 1**)

In the four trusts where data was available, 75% of CFRs were White, 3% were Black or Minority Ethnic (BME), and ethnicity was not known for 22%. Excluding not knowns, 96% of CFRs were White. In the same geographic areas, 91% of the usual resident population are White. (see **Figure 2**)

Data on age was requested using the same age bands used in the National Volunteer Dashboard with the aim of reducing burden. However, these are slightly different from the standard age bands reported by the ONS and one trust could only provide data aligned to ONS age bands. Aligning the requested age bands with ONS standards may make collection and analysis simpler in the future.

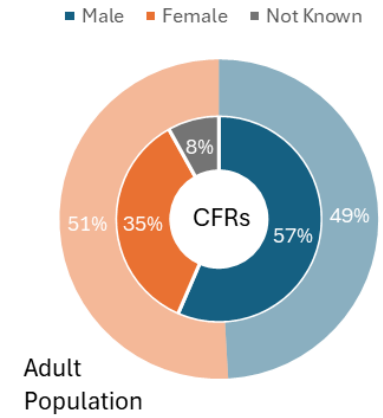
The most common age groups for CFRs were 46-55 and 56-65 which, in the four trusts where data was available, accounted for nearly half (48%) of all CFRs. Interestingly the age profile of CFRs varied between trusts, with one trust having 17% of CFRs aged 25 or under

[1] CFRs who have actively volunteered by giving up their free time anytime in the reference period. One trust provided the figure for active CFRs in December 2024 only as the data was not available for the whole year.

[2] https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/populationprofilesforlocalauthoritiesinengland/2020-12-14

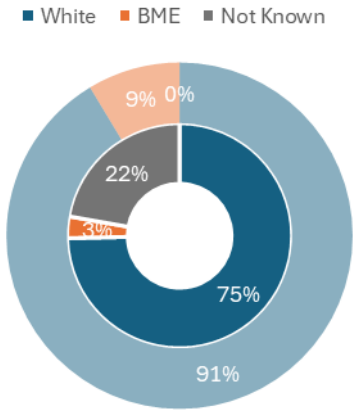
which was more than double the rate in the other three trusts. Conversely, in another trust 15% of their CFRs were aged over 65, compared to 5% in another trust. (see **Figure 3**)

Figure 1: Gender of CFR compared to adult population



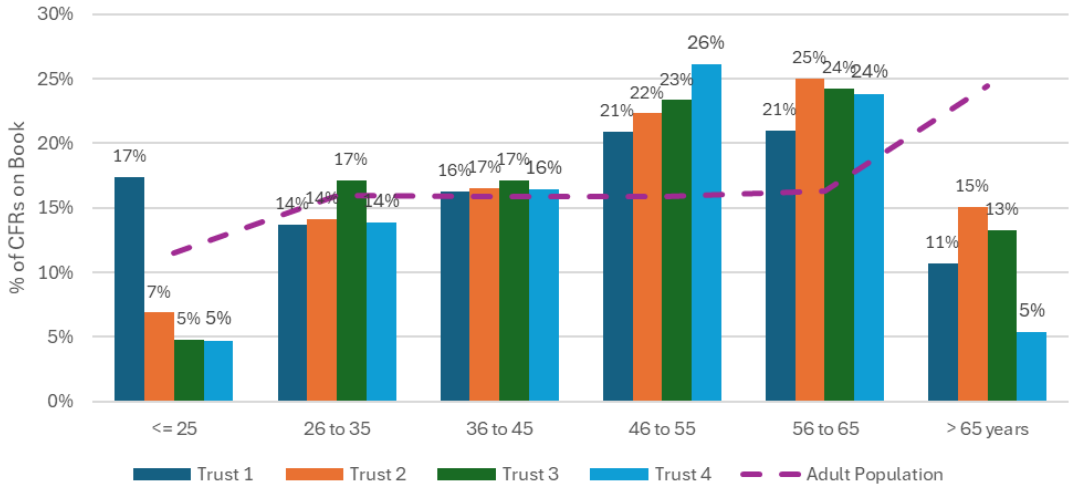
Based on data from 4 trusts

Figure 2: Ethnicity of CFR compared to resident population



Based on data from 4 trusts

Figure 3: Age groups of CFR compared to adult population



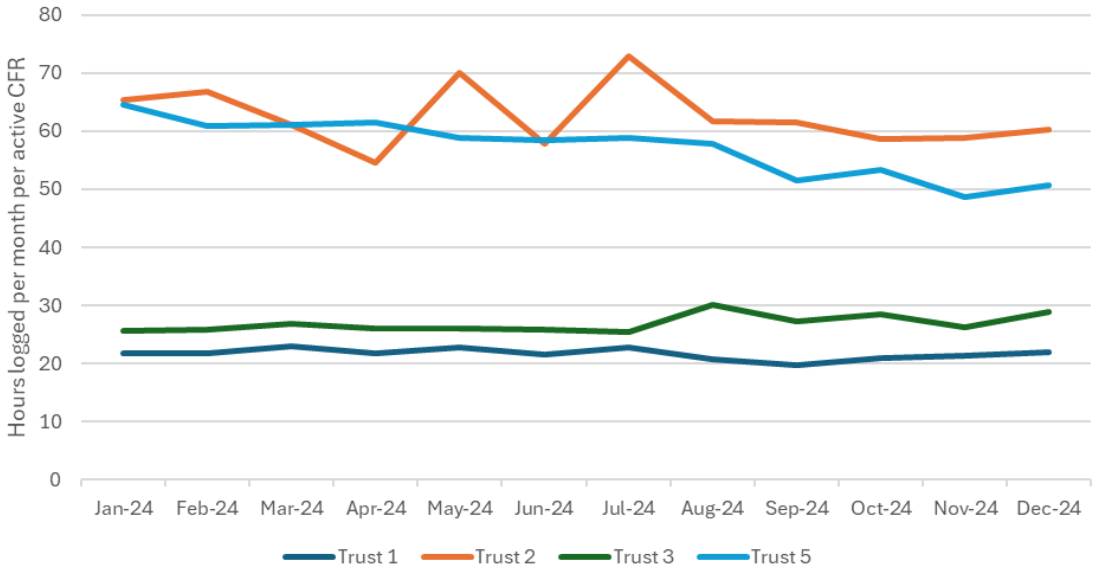
Based on data from 4 trusts

CFR activity

There were a total of 2,089 active CFRs across the five trusts as of December 2024, which equates to 69% of the total active CFRs reported for the year 2024. The ratio between active CFRs in 2024 and those as of 31st December varied by trust and ranged from 100% to 38%. Data on hours recorded by CFR was not available for one of the trusts as it is not collected in a reportable format at this time. In the four other trusts, CFRs logged over 800,000 hours over the course of 2024, with average hours logged per month per CFR of 36.

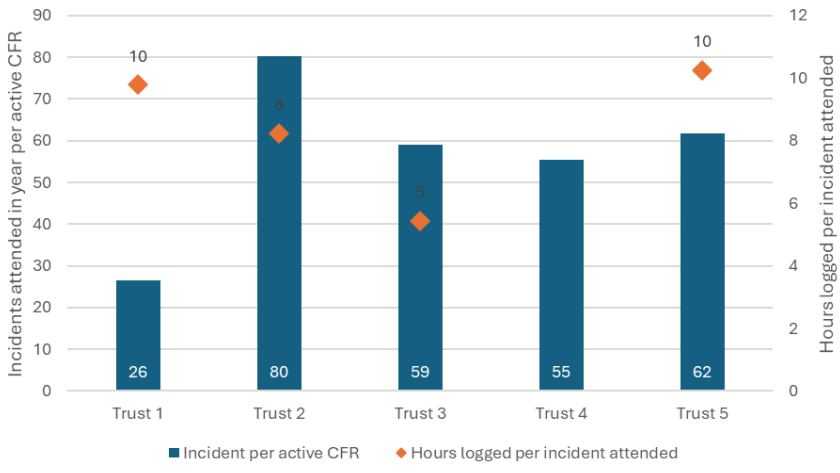
This masks wide variation between trusts, as shown in **Figure 4**, with CFRs in two trusts logging more than double the average hours of CFRs in the other two trusts.

Figure 4: Average hours logged per CFR by trust and month



Across the five trusts, CFRs attended 107,384 incidents in 2024 with an average of 51 incidents attended annually per CFR, and 9 hours logged per incident attended, although again, this masks wide variation between trusts. The time logged represents the time that the CFR has made themselves available to volunteer and has no relation to time spent in attendance at an incident.

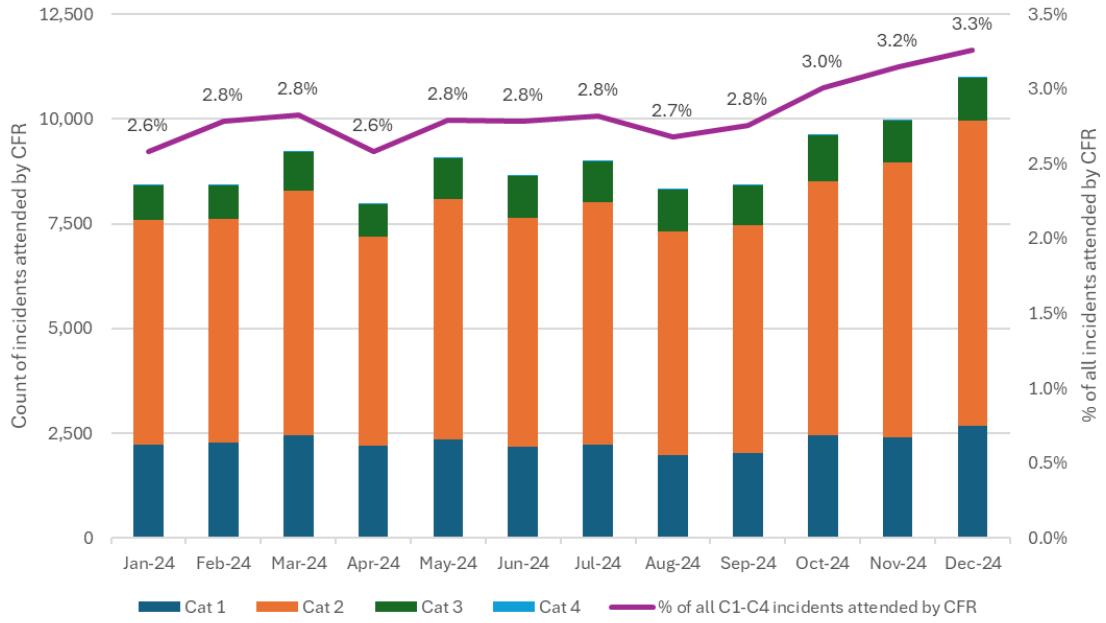
Figure 5: Average incidents per CFR and hours logged per incident attended by trust



One trust had an average incident attended per active CFR of 80, compared to the lowest of 26. The trust with the lowest incident attended per active CFR also had one of the highest hours logged per incident (10) which was double that of another trust. It is possible some of this variation is down to how data on active CFRs and hours logged is recorded, as suggested by the variation in active CFR numbers.

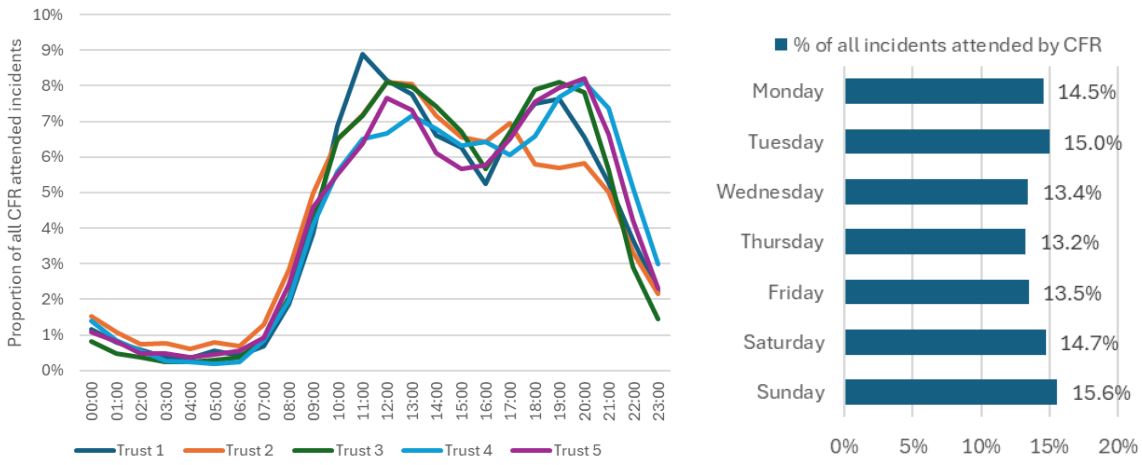
CFRs attend markedly more incidents in October, November and December than in the other months of the year. While December is also the busiest month for Cat 1-4 incidents overall, the next busiest is January, which has one of the lowest CFR attendance rates. This would suggest that the increase in CFR attendance over these months is less about increased demand and may be driven by supply side issues (such as CFRs availability), although we were unable to confirm this with the trusts.

Figure 6: Proportion of incidents attended by CFRs by month



CFR attendance varied by time of day, with most activity between 09:00 and 22:00, although CFRs still attended over 5,000 incidents between midnight and 08:00. The patterns of availability by trust were very similar with lower activity at night and a dip observable around 16:00. CFRs were most active on Sundays, with the lowest CFR activity between Wednesday - Friday. (see **Figure 7**)

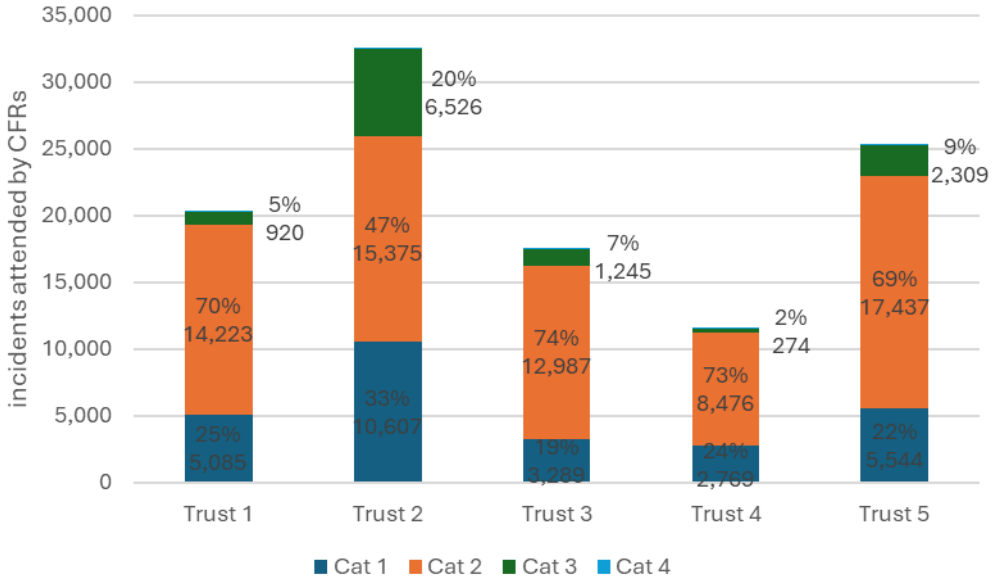
Figure 7: Proportion of incidents attended by CFRs by time of day and day of week



Ambulance incidents are categorised into one of five categories[3]: Cat 1 for life-threatening illnesses or injuries, Cat 2 for serious emergencies, Cat 3 for urgent but non-life-threatening issues, Cat 4 for less urgent problems, and Cat 5 for less urgent problems that do not require a face to face response.

The most common incidents attended by CFRs were Cat 2, which accounted for nearly two thirds (64%) of all incidents attended by CFRs. Whilst Cat 2 incidents were the most common for CFR attendance in every trust, there was still variation in the proportions of incidents by category across the five trusts, in particular amongst Cat 3 where the proportion of incidents attended by CFR varied between 20% in one trust to 2% in another. (see **Figure 8**)

Figure 8: Incidents attended by CFRs by category and trust



The proportion of all incidents attended by a CFR in 2024 was 2.8% across all Cat 1-4 incidents in the five trusts. This proportion was higher for both Cat 1 (5.3%) and Cat 2 (2.8%) incidents. For all incidents attended by CFRs, they were first on scene 75% of the time. This was lower for Cat 1 (60%), likely due to these incidents being given highest priority for ambulance units. For category 2 incidents, which make up the highest proportion of CFR attended incidents, they were first on scene 79% of the time. (see **Table 1**)

Table 1: Cat 1-4 Incidents in 2024 attended by CFRs and CFR first on scene by category

	All Incidents	Attended by CFR		CFR First on Scene	
		Count	% of all incidents	Count	% of CFR attended
Cat 1	512,175	27,294	5.3%	16,494	60.4%

[3] https://www.england.nhs.uk/urgent-emergency-care/improving-ambulance-services/arp/

Cat 2	2,463,332	68,498	2.8%	53,876	78.7%
Cat 3	807,086	11,274	1.4%	10,184	90.3%
Cat 4	30,347	198	0.7%	135	68.2%
Total Cat 1-4	3,812,940	107,264	2.8%	80,689	75.2%

The AQI collects data on both the counts of resources allocated to incidents regardless of whether they arrived on scene, and how many of those resources actually arrived. These resources include all trust-dispatched resources (including urgent tier vehicles), private ambulance services (PAS) and voluntary ambulance services (VAS), but exclude CFRs.

This means that if CFRs are resulting in lower resource use (e.g. a CFR attending an incident may mean an ambulance does not have to) then the average arriving resources per incident should be lower in CFR attended incidents. Similarly, the ratio of allocated resource to arriving resource should demonstrate whether CFRs attending an incident leads to allocated resources not being used (e.g. an allocated ambulance is no longer needed as the CFR has filled the service demand).[4]

Across each category of incident, the ratio between allocated and arriving resource was lower for CFR attended incidents. This was higher for less serious (cat 3 and 4) incidents: for each allocated resource, 0.47 resources arrived at CFR attended Cat 3 incidents compared to 0.62 for all Cat 3 incidents. (see **Table 2**) Put another way, this means that for every 100 resources allocated to Cat 3 incidents, on average 62 arrive at the incident compared to 47 for those attended by CFRs.

Table 2: Ratio of mean resource allocated to mean resource arriving for CFR attended and all incidents

Category	CFR Attended	All incidents
Cat 1	1 : 0.70	1 : 0.73
Cat 2	1 : 0.71	1 : 0.78
Cat 3	1 : 0.47	1 : 0.62
Cat 4	1 : 0.54	1 : 0.65

This saving of resources is also observable in the mean average resource per incident, which was lower for each category of incident when CFRs were in attendance. For the most serious incidents (Cat 1) the difference in mean arriving resource was actually slightly higher for CFR attended incidents. This may be due to the types of Cat 1 incident to which the trusts

[4] Resource data was provided for each of the trusts, however the data for one trust was a significant outlier and appeared to include CFRs within the resource count. This was queried with the trust but no explanation was provided and so this response has been excluded from the analysis on the balance of probabilities that it is not comparable with the other trusts data.

will deploy CFRs. For Cat 2 incidents, there was a slightly lower resource per incident when attended by CFRs. For less serious incidents there was a marked difference, with Cat 3 incidents attended by CFRs having an average resource arriving of 0.83 compared to all incidents of 1.05. This is the equivalent of one resource saved for every five incidents attended by a CFR. (see **Table 3**) Due to limited sample and concerns around data quality, it would be beneficial to undertake further research in this area before drawing any firm conclusions about potential resource savings.

Table 3: Mean resource arriving by category for CFR attended and all incidents

Category	CFR Attended	All incidents	Difference
Cat 1	1.53	1.48	-0.06
Cat 2	1.04	1.06	0.02
Cat 3	0.83	1.05	0.22
Cat 4	0.75	1.06	0.31

An approximation of total resource saving for Cat 2 and Cat 3 incidents can be made by multiplying the difference in mean resource arriving for those categories with the total number of incidents attended by CFRs. This results in a (rough) estimate of 3,000 resources that were not used for Cat 2 and 3 incidents over the four trusts in a year due to CFR attendance, with Cat 3 (67%) incidents accounting for the majority of these savings.

Response times and outcomes

Response times were calculated using a weighted average and 90th centile across the five trusts. While this is the most accurate way to compare the response times in CFR attended incidents with all incidents, it also means that the trusts with the largest CFR activity have a greater impact on the overall average. Trusts that cover a higher proportion of rural areas can have higher average response times due to greater distances between incidents and hospitals. This is the case for Trust 2, which has by far the most CFR activity, and has the effect of increasing the average response time in CFR attended incidents.

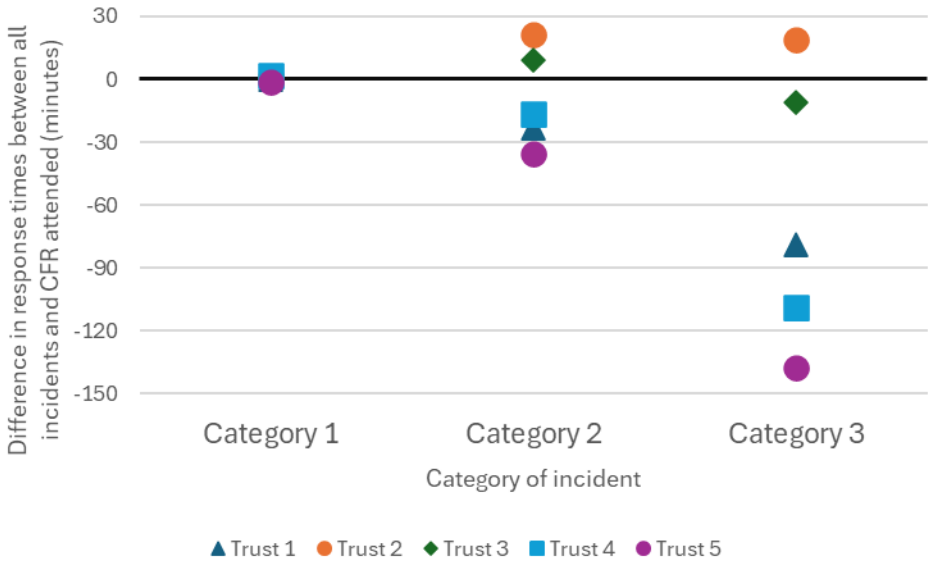
For Cat 1 incidents the weighted mean average response time for incidents attended by CFRs was just over 9 minutes, compared to over 8 and a half minutes for all incidents. For Cat 2 incidents the weighted response time across the five trusts is around 36 minutes but is just over 28 minutes for incidents attended by CFRs. For Cat 3 the average response is over 2 hours but is just over 1 hour 45 minutes for those attended by CFRs. (see **Table 4**)

Table 4: Weighted mean and 90th centile response times for incidents attended by CFRs and all incidents

	Attended by CFR		All Incidents	
	mean time	90th centile time	mean time	90th centile time
Cat 1	0:09:21	0:16:28	0:08:39	0:15:36
Cat 2	0:28:05	0:52:26	0:36:17	1:17:11
Cat 3	1:46:54	3:56:28	2:09:53	5:02:32

Again these average mask large variation between the trusts and the weighted average is impacted by the rurality of the most active CFR trust. When response times are examined at a trust level this becomes particularly apparent. **Figure 9** shows that difference in average response times across 2024 for each trust for Cat 1-3 incidents (due to low sample for Cat 4 attended by CFR). There is not much impact on response times for Cat 1 incidents, with three trusts having slightly quicker responses in CFR attended incidents and two having slightly slower.

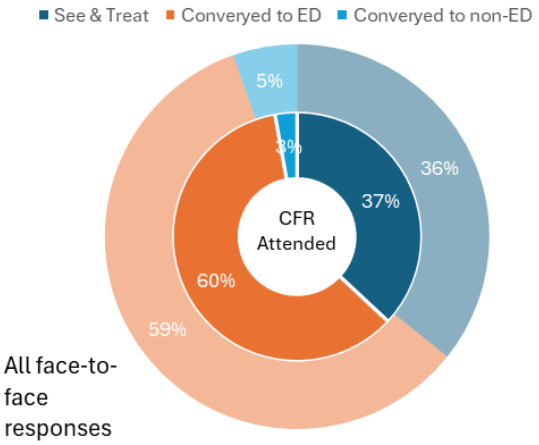
Figure 9: Difference in response times between CFR attended and all incidents by category and trust



For Cat 2 incidents, again two trusts have a slightly slower response, but three have notably quicker responses in CFR attended incidents (all faster by 20 minutes or more). For Cat 3 the differences become even more pronounced with only one trust with a slower response time for CFR attended incidents (likely to be caused by a greater proportion of these being in rural areas), and four trusts with quicker response times. Three of these trusts have response times that are over an hour faster for CFR attended incidents.

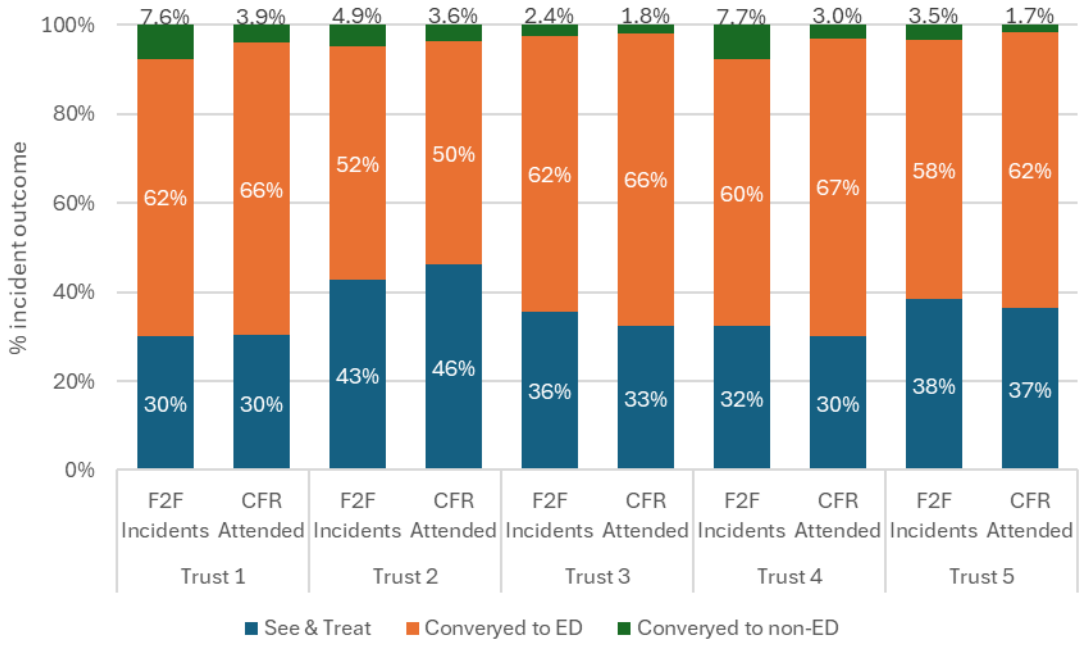
Given the impact on response times we were interested to see whether there was also an impact on conveyance and See & Treat rates. Comparing those incidents attended by CFRs with all face-to-face response incidents (as all incidents attended by CFRs are classified as face to face responses) the proportion of incidents that result in See & Treat is slightly higher for incidents attended by CFRs (37% compared to 36%). (see **Figure 10**)

Figure 10: Incident outcomes for face to face incidents and CFR attended



There was not much variation at trust level between the outcomes of CFR attended incidents and all incidents. One noticeable pattern was a lower rate of non-ED conveyance in CFR attended incidents which was the case in each of the trusts. (see **Figure 11**)

Figure 11: Incident outcomes for face to face incidents and CFR attended by trust



When interpreting outcome data, it is important to note that CFRs attend proportionately more serious (Cat 1 and 2) incidents. So comparisons with AQI data are not reliable, as outcome data from the AQI will contain proportionately more Cat 3 and 4 incidents (which it is reasonable to assume would be more likely to result in See & Treat). Due to resource and time limitations, we felt it best to focus any additional analysis on the category 2 and 3 incidents as the data revealed the largest differences in response times that would warrant further investigation. We therefore requested a breakdown of conveyance rates by Cat 2 and 3 (both for CFR first on scene and also all incidents that required a face to face response as this data is not available in the AQI). Four trusts provided this data in time for analysis. We then subtracted the CFR first on scene figures from the total face to face response figures to enable an accurate comparison (i.e. to convert all face to face incidents to all face to face incidents excluding those where CFR first on scene). The sample for this analysis was limited and some trusts found it challenging to provide the data. Further research would be beneficial and should also look to include geographic analysis and category 1 incidents, particularly as CFRs attend proportionately more rural and category 1 incidents.

There were 43,676 Cat 2 incidents and 9,411 Cat 3 incidents where a CFR was first on scene. The proportion that resulted in See & Treat outcomes were 39% and 58% respectively, with CFRs on scene without backup from other resources for 1,362 incidents. (see **Table 5**)

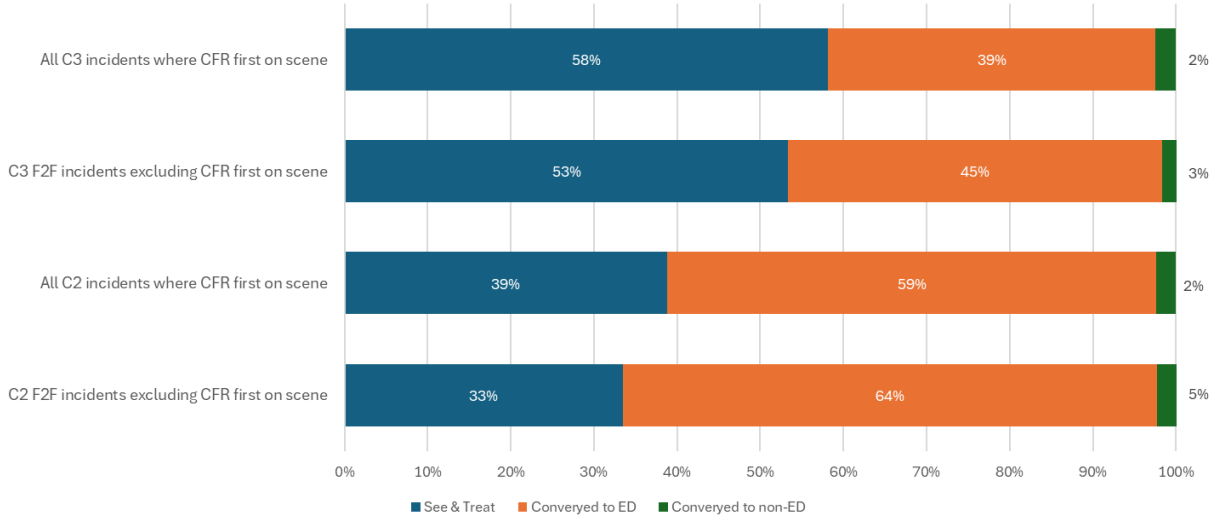
Two trusts were also able to provide the time between CFR arriving first on scene and backup from other resources arriving for incidents, with the weighted mean average time for Cat 2 incidents of 28 minutes and for cat 3 incidents of 43 minutes.

Table 5: Number and percentage of incidents where CFRs first on scene by outcome and category

	Cat 2		Cat 3	
	n	%	N	%
See & Treat	16,940	39%	5,471	58%
Conveyed to ED	25,688	59%	3,710	39%
Conveyed to non-ED	1,048	2%	230	2%
Total Incidents where CFR first on scene	43,676	-	9,411	-
CFR without backup from other resources	896	2%	466	5%

Figure 12 compares the outcomes of incidents where a CFR was first on scene with all other incidents which required a face to face response, from the four trusts who provided the data. 39% of Cat 2 incidents where a CFR was first on scene resulted in See & Treat, compared to 33% of all other Cat 2 incidents with a face to face response. For Cat 3 incidents, the outcomes were 58% and 53% respectively.

Figure 12: Outcome of incidents where CFRs first on scene and all face to face responses



To test whether the observed differences in See & Treat rates are statistically significant, we used a Generalized Linear Model (GLZ) with binomial distribution with Trust, Month and Response (CFR first on scene or All excluding CFR first on scene) as factors. This is because the See & Treat rate is a bounded (between 0 and 1), binomial outcome and standard linear models assume the outcome variable to be normally distributed and unbounded. We ran the model separately for Cat 2 and 3 incidents.

The results, reported in full below, confirmed that incidents where a CFR is first on scene have a higher chance of resulting in See & Treat, than all other face to face incidents. However, what is driving this would appear to be different for Cat 2 and Cat 3 incidents. For Cat 2, this is matched by a consistent and significant reduction in conveyance to non-ED while for Cat 3 it is matched by a significant reduction in conveyance to ED.

For Cat 2 incidents, all of the factors had a significant effect on the odds of an incident resulting in a See & Treat outcome. The odds of See & Treat were highest in December (estimate mean See & Treat rate: 37%), with all other months having significantly lower odds (between 5-11%). Incidents where a CFR was first on scene had significantly higher (OR: 1.21, $p < .001$) odds of resulting in See & Treat than all other Cat 2 incidents with a face to face response. The odds ratio here equate to a 21% higher chance of See & Treat for Cat 2 incidents where a CFR is first on scene. Using the same model but with Convey to ED and Convey to non-ED respectively as dependent variables, shows that incidents where CFR were first on scene have significantly lower odds of resulting in Conveyed to non-ED (OR: 0.58, $p < .001$) and lower (OR: 0.89, $p < .001$) odds of resulting in Convey to ED.

In assessing the model, one of the trusts' data stood out as a potential outlier due to very high See & Treat rates for CFR first on scene incidents. This was checked with the Trust, and it passed QA but given the relatively small sample sizes we wanted to check whether the same results were found when this trust's data was excluded. When the outlier trust's data was

excluded from the model all factors remained significant, but the results for CFR first on scene (OR: 1.04, p < .001) now equated to a 4% higher chance of See & Treat. There remained significantly lower odds of CFR first on scene incidents resulting in Conveyed to non-ED (OR: 0.61, p < .001), but now marginally higher (OR: 1.03, p = .003) odds of resulting in Convey to ED.

For Cat 3 incidents, all of the factors had a significant effect on the odds of an incident resulting in a See & Treat outcome, with no trust appearing as an outlier. The odds of See & Treat were highest in November (estimate mean See & Treat rate: 57%), with all other months excluding December having significantly lower odds (between 6-13%). Incidents where a CFR was first on scene had significantly higher (OR: 1.11, p < .001) odds of resulting in See & Treat than all other Cat 3 incidents with a face to face response. The odds ratio here equate to an 11% higher chance of See & Treat for Cat 3 incidents where a CFR is first on scene. Again, using the same model but for Convey to ED and Convey to non-ED found no significant impact of CFRs on Convey to non-ED for Cat 3 incidents (OR: 1.08, p = .29) but significantly lower odds (OR: 0.86, p < .001) of Convey to ED.

One note of caution, some trusts reported difficulty in obtaining this data and before definitive conclusions are drawn it would be sensible to repeat this analysis on a regular basis to increase the consistency and sample size on which these conclusions can be based.

Geographic distribution of responses

We requested data on the location (LSOA code), datetime, category and CFR attendance status (0 = no CFR attended, 1 = CFR attended) for all Cat 1-4 incidents in 2024. Four trusts were able to provide this data. The fifth trust was able to provide all data but could only provide an Outward Postcode for location, citing concern over DPA/disclosure, which was not mappable to LSOA. Using the data from the four trusts we were then able to breakdown the total distribution of incidents by LSOA, and consequently by Rural/Urban classification 2021[5] and Indices of Multiple Deprivation 2019[6].

Table 6: Number and percentage of incidents attended by CFRs and all incidents by urban/rural classification

	Attended by CFR		All Incidents	
	n	%	N	%

[5] https://www.ons.gov.uk/methodology/geography/geographicalproducts/ruralurbanclassifications/2021ruralurbanclassification

[6] https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019

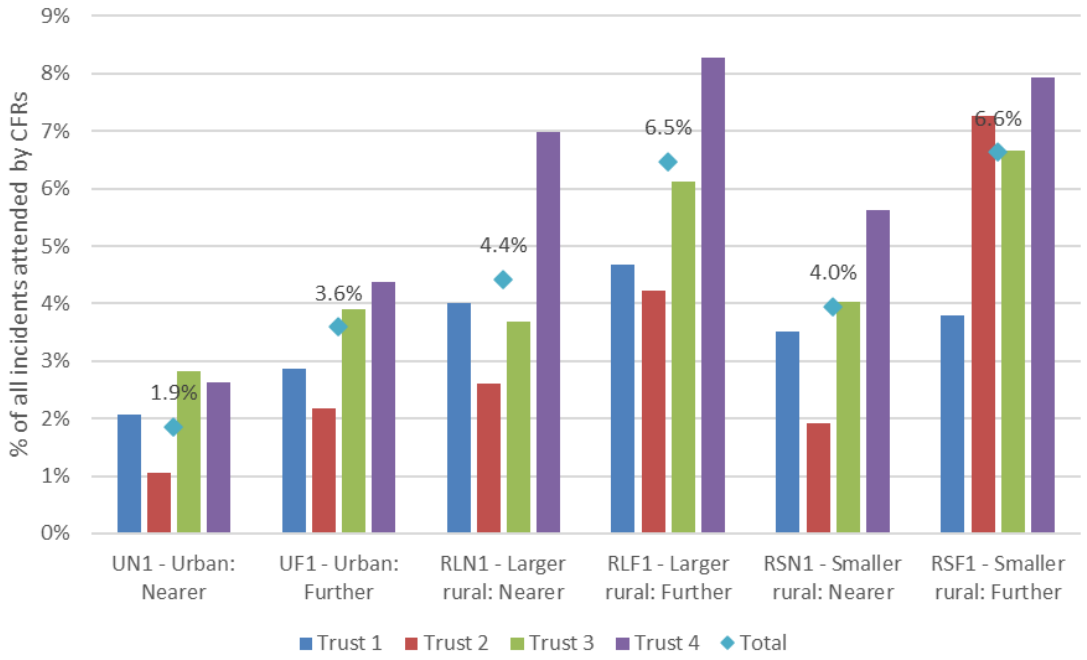
UN1 Urban: Nearer to major town/city	36,912	45.7%	2,057,497	68.0%
UF1 Urban: Further from major town/city	13,146	16.3%	390,210	12.9%
RLN1 Larger rural: Nearer to major town/city	7,819	9.7%	169,871	5.6%
RLF1 Larger rural: Further from major town/city	8,398	10.4%	127,999	4.2%
RSN1 Smaller rural: Nearer to major town/city	6,221	7.7%	156,491	5.2%
RSF1 Smaller rural: Further from major town/city	8,270	10.2%	123,631	4.1%
Total	80,766		3,025,699	
Location not known	6,947		330,014	

There were around 330,000 incidents for which the location was not known, with two trusts making up 68% and 31% of that total respectively. These incidents were excluded from the following geographic analysis but were included in the availability analysis earlier in this report.

There were over 3 million Cat 1-4 incidents, of which around two thirds (68%) were in major urban areas with only 19% occurring in rural areas. This correlates to the total populations of those areas with 68% of total population located in major urban areas and 22% in rural.

In comparison, only 46% of incidents attended by CFRs were located in major urban areas, with 38% occurring in rural areas (double the rate of all incidents). This was a pattern of response which held across each of the four trusts, with rural areas having a higher rate of CFR attendance than urban areas. (see **Figure 13**)

Figure 13: Proportion of Incidents attended by CFR by urban/rural classification



To check that there was a significant difference in CFR attendance between urban and rural areas we under took a Kruskal-Wallis test, as the data was not normally distributed. This confirmed a significant difference[7] in the proportion of Cat 1-4 incidents attended by CFRs across the three urban/rural settlement groups (Urban, Smaller Rural, Larger Rural). Follow-up pairwise Mann-Whitney U tests with Bonferroni correction ($\alpha = 0.0167$) indicated a significant difference in CFR attendance rates between Urban and Larger Rural[8] and Urban and Smaller Rural[9] while no significant difference was found between Larger Rural and Smaller Rural.[10]

This highlights two facts about CFR deployment: the first is that by overall incident count CFRs are most active in Urban areas (with 62% of incidents attended by CFRs being in Urban areas). This is a direct result of Urban areas having higher levels of population and therefore more incidents overall. The second is that per incident, CFRs are more active in rural areas.

The Indices of Multiple Deprivation 2019 (IMD) is used to assess relative deprivation across LSOAs. It combines information from seven domains: income, employment, health and disability, education, skills and training, crime, barriers to housing and services, and living environment. The barriers to housing and services includes a domain relating to Geographical Barriers to services, which relate to the physical proximity of local services (including GPs).

Around 13% of CFR attended incidents occurred within the top 20% most deprived areas of England (1st quintile), compared to 23% of all incidents. The slightly lower rate for CFR attended incidents is likely to be the result of CFRs being more active in rural areas as urban areas typically have higher deprivation. (see **Table 7**)

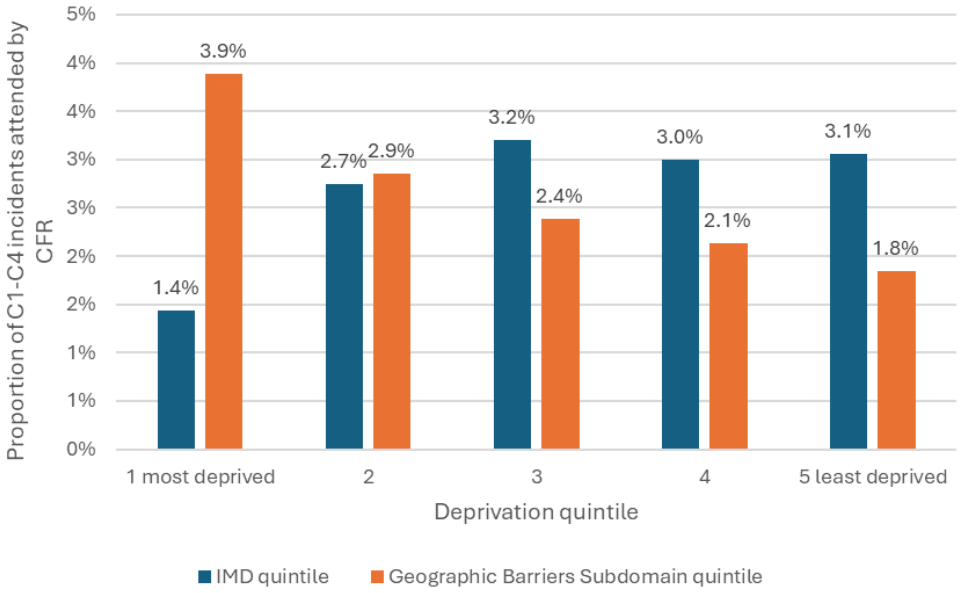
Table 7: Number and percentage of incidents attended by CFRs and all incidents by IMD quintile

IMD quintile	Attended by CFR		All Incidents	
	n	%	N	%
1 most deprived	10,649	13.2%	710,616	23.5%
2	17,246	21.4%	638,588	21.1%
3	21,230	26.3%	650,220	21.5%
4	17,130	21.2%	557,368	18.4%
5 least deprived	14,511	18.0%	468,907	15.5%
Total	80,766		3,025,699	

[7] $p < .001$
[8] ($U = 4578631$, $Z = -22.0$ $p < .001$)
[9] ($U = 4982235$, $Z = -23.8$ $p < .001$)
[10] ($U = 1007199$, $Z = -.6$ $p = .547$)

Figure 14 shows the rate of CFR attendance for all Cat 1-4 incidents by both IMD quintile and by the Geographic Barriers (GB) sub-domain quintile. The most deprived areas overall had the lowest rate of CFR attendance (1.4%), but the most deprived in terms of proximity to services had the highest rate (3.9%).

Figure 14: Proportion of Incidents attended by CFR by IMD and GB quintiles



A Kruskal-Wallis test confirmed a significant difference[11] in the proportion of Cat 1-4 incidents attended by CFRs across IMD and GB quintiles. Follow-up pairwise Mann-Whitney U tests with Bonferroni correction ($\alpha = 0.005$) indicated a significant difference in CFR attendance rates between the two most deprived IMD quintiles and each of the three less deprived IMD quintiles.[12] There was no significant difference in attendance rate between quintiles 3-5 for IMD.[13]

Follow-up pairwise Mann-Whitney U tests with Bonferroni correction ($\alpha = 0.005$) indicated a significant difference in CFR attendance rates between each of the GB quintiles except the two least deprived.[14] This confirms that CFRs are more active in areas with greater geographic barriers, which would correspond to more rural areas.

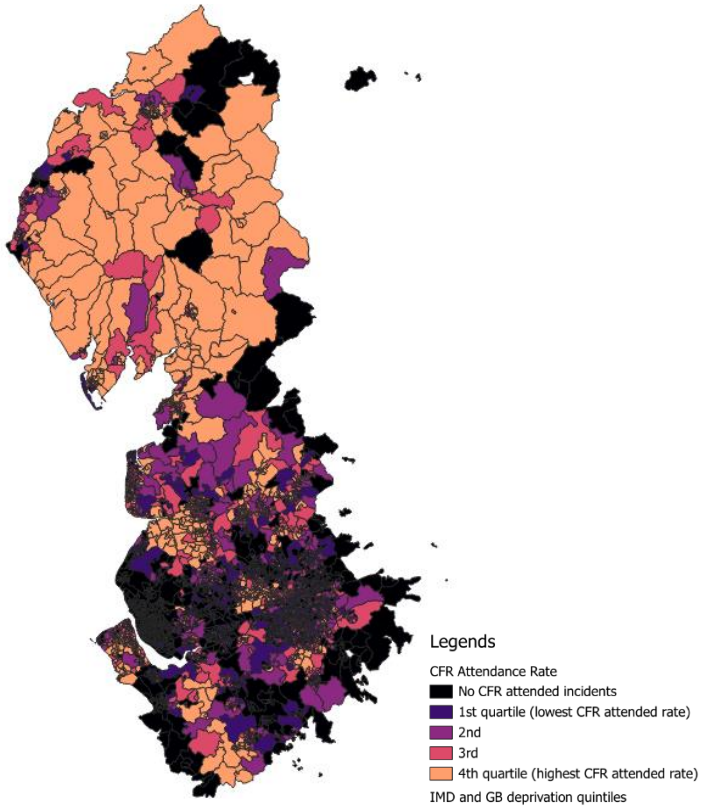
[11] $p < .001$
[12] 1:2 ($U = 2300317$, $Z = -13.5$ $p < .001$), 1:3 ($U = 2460227$, $Z = -18.4$ $p < .001$), 1:4 ($U = 2509754$, $Z = -16.9$ $p < .001$), 1:5 ($U = 2455431$, $Z = -18.7$ $p < .001$), 2:3 ($U = 3269995$, $Z = -4.6$ $p < .001$), 2:4 ($U = 3308225$, $Z = -3.2$ $p = .002$), 2:5 ($U = 3268711$, $Z = -4.9 < .001$)
[13] 3:4 ($U = 3998942$, $Z = -1.5$ $p = .133$), 3:5 ($U = 4147532$, $Z = -.246$ $p = .806$), 4:5 ($U = 4002920$, $Z = -1.7$ $p = .083$)
[14] 1:2 ($U = 4230948$, $Z = -9.1$ $p < .001$), 1:3 ($U = 3522221$, $Z = -14$ $p < .001$), 1:4 ($U = 3150002$, $Z = -16.9$ $p < .001$), 1:5 ($U = 2322808$, $Z = -18.9$ $p < .001$), 2:3 ($U = 3591923$, $Z = -5.2$ $p < .001$), 2:4 ($U = 3226637$, $Z = -8.4$ $p < .001$), 2:5 ($U = 2403475$, $Z = -10.9 < .001$), 3:4 ($U = 3216194$, $Z = -3.2$ $p = .001$), 3:5 ($U = 2411207$, $Z = -5.9$ $p < .001$), 4:5 ($U = 2427447$, $Z = -2.8$ $p = .006$)

The following pages provide four maps per trust. The first shows the proportion of all Cat 1-4 incidents attended by CFRs as quartiles (black = no attendance in that area, lighter colours = higher attendance rate). The next shows the same area by urban/rural classification. The final two show deprivation quintiles for overall IMD and for the GB sub-domain. The maps relate only to LSOAs in which incidents were reported so some may contain LSOAs outside the trusts official coverage and some may have gaps in coverage where data was not available.

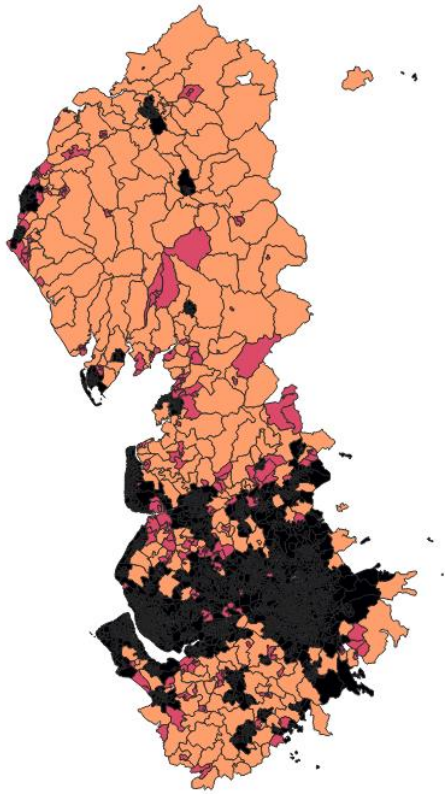
The maps clearly illustrate the more rural focus of CFR attendance, but also the wide coverage overall. There are very few areas that have no CFR attendance and where there is no CFR attendance it typically occurs in urban areas. There is also the suggestion that CFR attendance may be lower at the edges of the trust's coverage, in areas which lie adjacent to another trust.

North West Ambulance Service

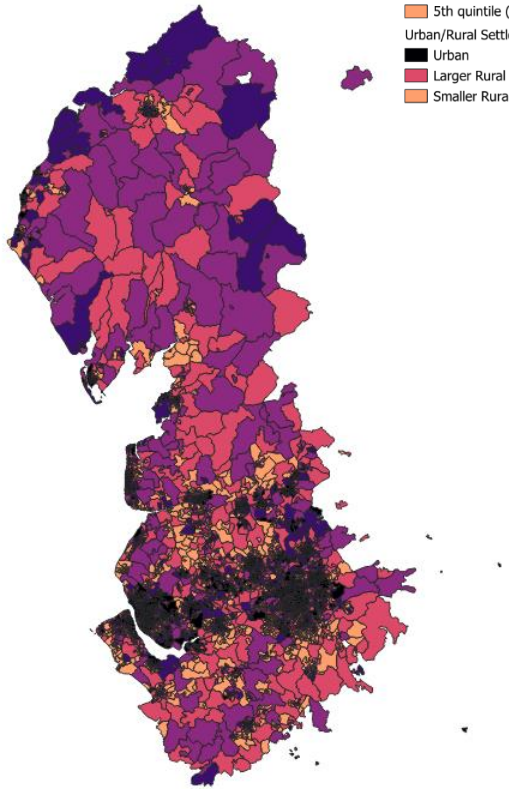
CFR Attendance Rate



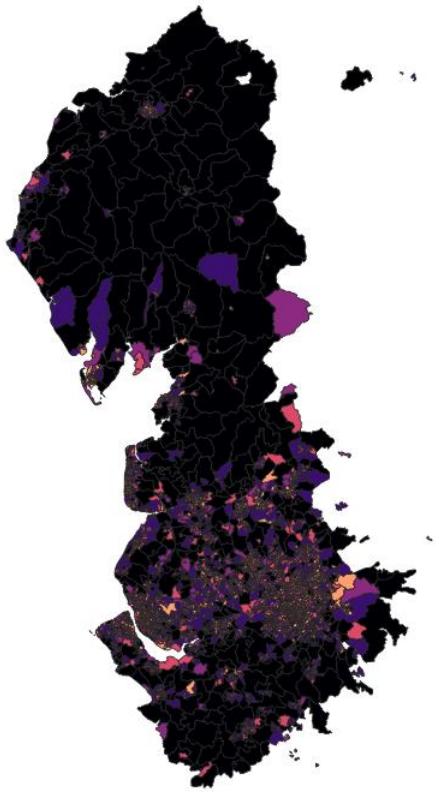
Urban/Rural Settlements



IMD Deprivation Quintiles

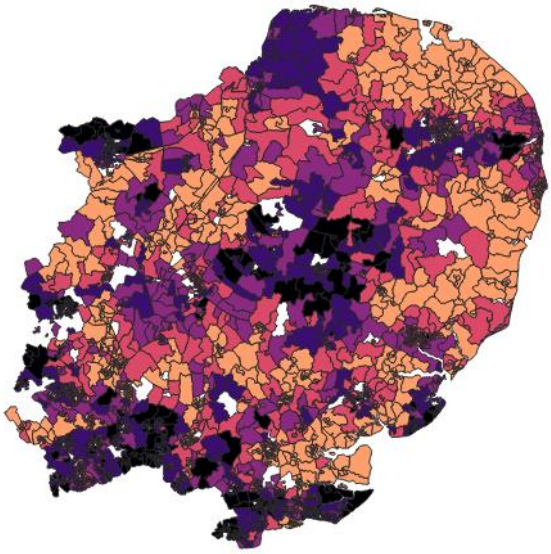


GB sub-domain quintiles

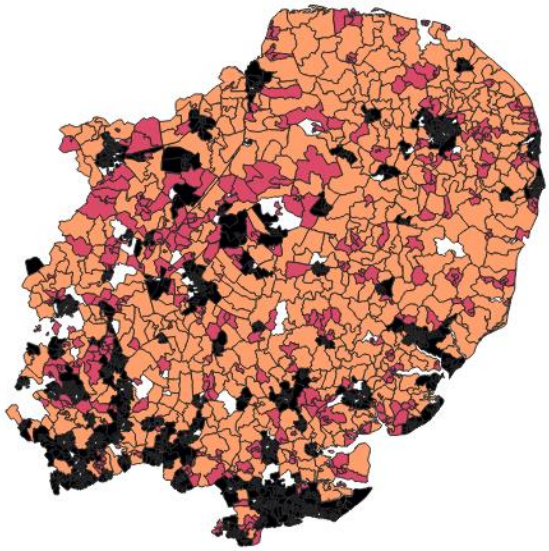


East of England Ambulance Service

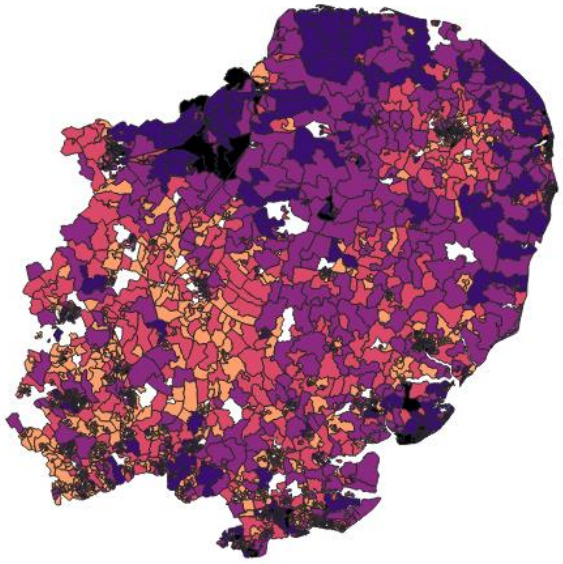
CFR Attendance Rate



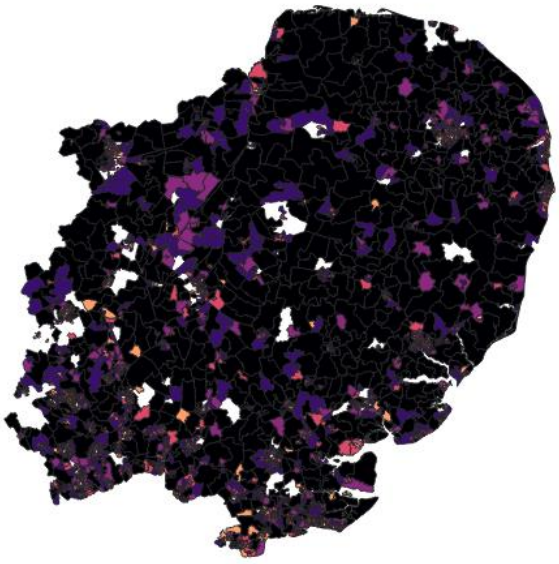
Urban/Rural Settlements



IMD Deprivation Quintiles



GB sub-domain quintiles



Legends

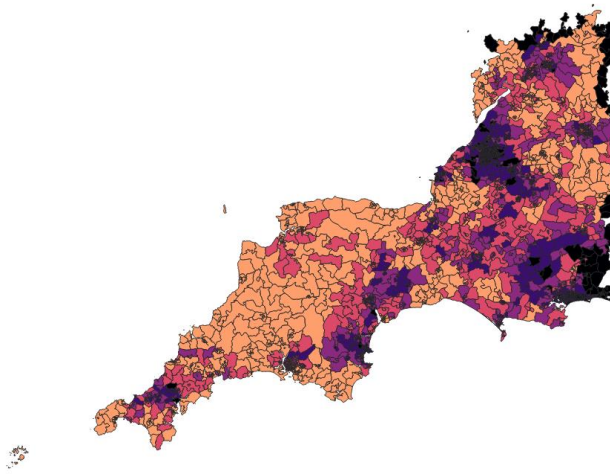
CFR Attendance Rate
- No CFR attended incidents
- 1st quartile (lowest CFR attended rate)
- 2nd
- 3rd
- 4th quartile (highest CFR attended rate)

IMD and GB deprivation quintiles
- 1st quintile (most deprived)
- 2
- 3
- 4
- 5th quintile (least deprived)

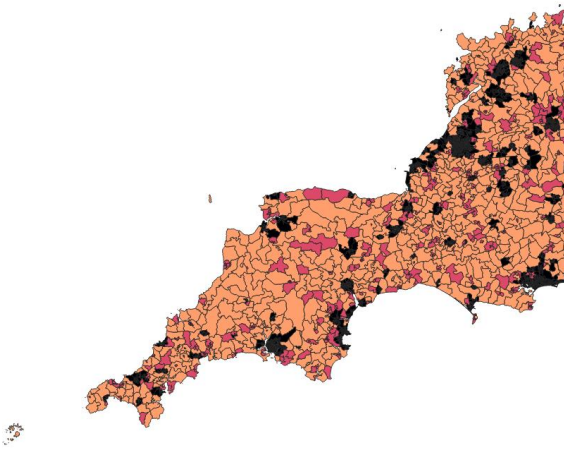
Urban/Rural Settlements
- Urban
- Larger Rural
- Smaller Rural

South West Ambulance Service

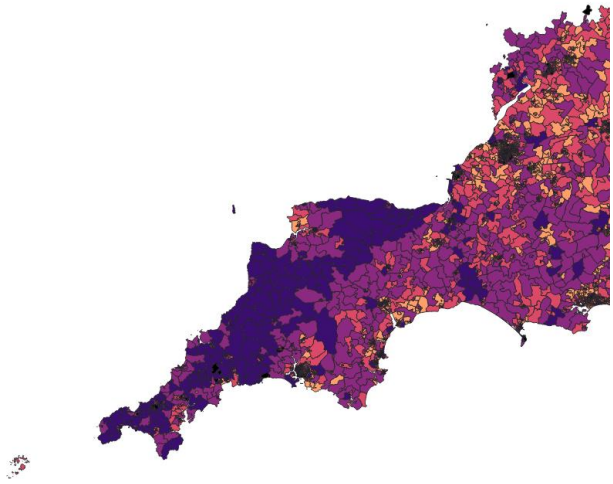
CFR Attendance Rate



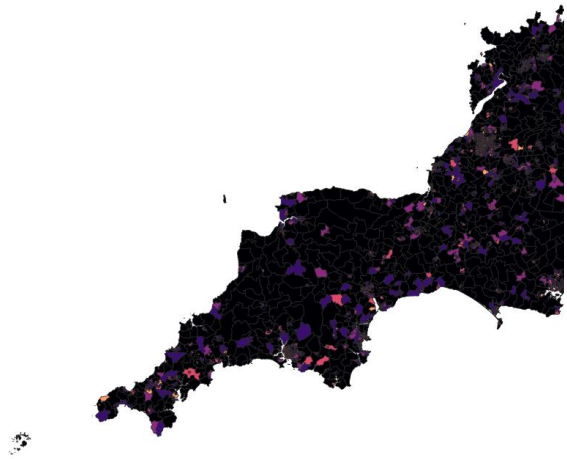
Urban/Rural Settlements



IMD Deprivation Quintiles



GB sub-domain quintiles



Legends

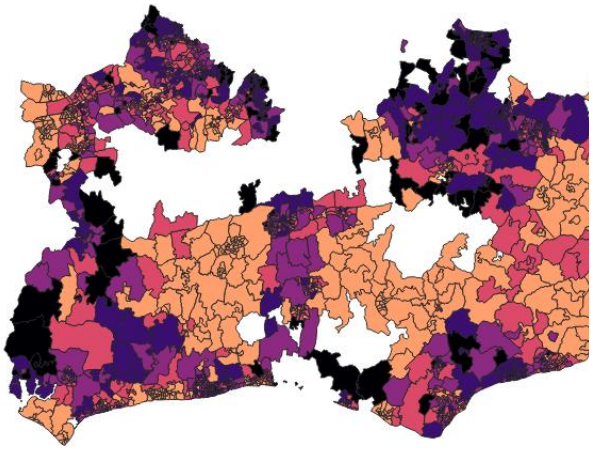
CFR Attendance Rate
- No CFR attended incidents
- 1st quartile (lowest CFR attended rate)
- 2nd
- 3rd
- 4th quartile (highest CFR attended rate)

IMD and GB deprivation quintiles
- 1st quintile (most deprived)
- 2
- 3
- 4
- 5th quintile (least deprived)

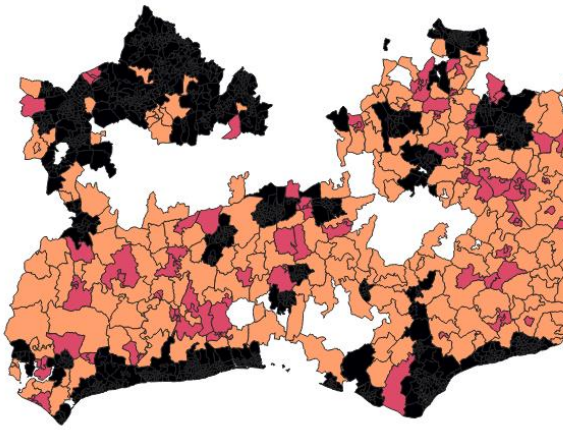
Urban/Rural Settlements
- Urban
- Larger Rural
- Smaller Rural

South East Coast Ambulance Service

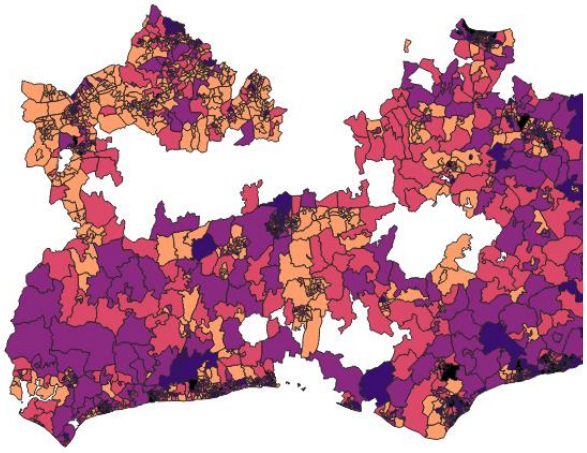
CFR Attendance Rate



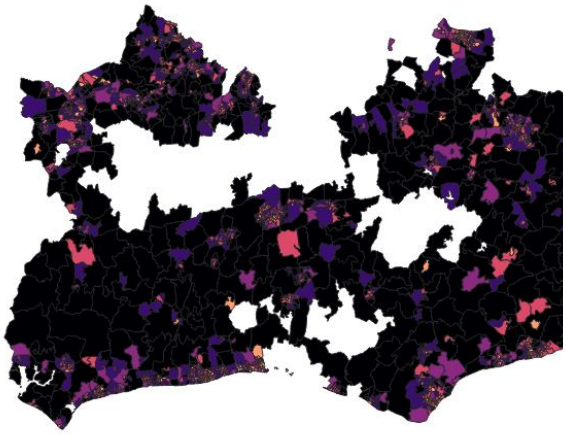
Urban/Rural Settlements



IMD Deprivation Quintiles



GB sub-domain quintiles



Legends

CFR Attendance Rate
- No CFR attended incidents
- 1st quartile (lowest CFR attended rate)
- 2nd
- 3rd
- 4th quartile (highest CFR attended rate)

IMD and GB deprivation quintiles
- 1st quintile (most deprived)
- 2
- 3
- 4
- 5th quintile (least deprived)

Urban/Rural Settlements
- Urban
- Larger Rural
- Smaller Rural

Summary of the key quantitative findings:

Overall, the data in this section demonstrate high variation in the relationship between hours logged, active CFRs and average incidents attended. This suggests variation in both CFR deployment approach and data collection between trusts. We find that CFRs are active all year round, but they are more active in the day than at night.

CFRs attend a high number of incidents (>100,000) and for those incidents to which CFRs are dispatched are more often than not the first attenders on scene. CFRs are most active for category 2 incidents. The role of CFRs in category 1 incidents would appear to be aligned more towards support (see response times and % first on scene rates) whereas for category 2 and category 3 incidents attended by CFRs they are first on scene the majority of the time and, under direct remote clinical supervision from the control room, can resolve an incident without an ambulance attending.

There is some suggestion that his means that CFRs can save resources (i.e., fewer ambulances being deployed) at category 2 and category 3 incidents. However, it is important to emphasise that this would need further investigation as it is indicative only, due to data concerns.

Irrespective of resources used, CFR attendance reduces the response times for category 2 and category 3 incidents. We also found that where CFRs are the first on the scene, category 2 incidents have a slightly higher See & Treat rate and a much lower conveyed to non-ED rate. Where CFRs are the first on the scene, category 3 incidents have a slightly higher See & Treat rate and a much lower conveyed to ED rate. We suggest this indicates more effective use of ambulance resource overall.

Finally, we find that CFRs are more active in rural rather than urban areas and have broad geographic coverage.

Findings (2) Qualitative analysis

Benefits to the NHS

CFRs provide additional valuable resource to the NHS in several important ways

This first qualitative section presents informants' perspectives on the value of CFRs in improving NHS patient services. First and foremost, and linked to the original model of CFRs, they are perceived as being able to deliver life-saving interventions, including CPR.

> *'In terms of a cardiac arrest, the early CPR, early recognition, and early Defibrillation are all really important things that CFRs are providing'*
>
> CFR 10 & Ambulance Technician Site 1

CFRs are perceived to provide faster interventions and to speed up response times and delivering resources. This includes the time to arrive on scene and the overall time spent responding to an incident. CFRs are considered to be a valuable additional resource, that can support ambulance crews by providing flexibility in dispatch, potentially saving money through more efficient use of resources, and having extra people to mobilise. As an additional resource, CFRs are broadly considered to be a useful extra pair of hands that can assist ambulance teams with both clinical and practical tasks.

> *'They're really useful for assisting crews. Just that extra pair of hands. The extra set of eyes. Can make the difference in maybe moving a patient or going and getting something from the ambulances'*
>
> CFR 10 & Ambulance Technician Site 1

An important benefit of the CFR role lies in their ability to provide more effective communication and an accurate triage to the control room. This includes relaying information about the patient, their symptoms and situation in order to re-triage them when appropriate – especially as the CFR can take more objective measures and actually see the patient rather than just speaking over the phone. This can lead to escalation or de-escalation of ambulance crews depending upon need as highlighted in the earlier quantitative data section in relation to CFRs arriving quickly to category 2 and 3 calls:

> *'It enables the NHS as a whole to provide a better service without a doubt, and the reason I say that is because when 999 calls come in, a lot of the time things can be misconstrued or they can be somebody who's in a state of panic who might not clearly put across that*

information... it enables us to relay a more accurate representation of what's happening on scene'

CFR 5 Site 2

As mentioned later in the report, CFRs can also very effectively provide reassurance and support to patients and families as they wait for an ambulance crew to arrive. The interviews emphasised the particular importance that CFRs have for rural communities:

'There are likely to be pockets and communities in my direct area where a traditional ambulance response would take longer than is desirable. Where I live. I live in an area where the nearest ambulance station is probably about 20 minutes away. And so the response to my community could be longer than we'd like'

Paramedic 1 Site 2

In rural areas, as illustrated in the spatial diagrams earlier in this report, CFRs can reach patients faster than ambulances, offering potentially life-saving interventions that the NHS could not realistically or cost-effectively deliver otherwise.

Wider lessons about volunteering in the NHS

As part of this research, we also asked participants about broader lessons they might highlight regarding the development of the CFR role and volunteering more generally within the NHS. A consistent message was that the CFR role is not sufficiently publicised, and that it ought to be more so:

'[We need] national awareness of CFRs, you know, like I said for us in [our region] 25 years we've been going! And we've still got a lot of people going "what, what are they, you know, who are they?" [We need] some kind of national campaign, I've never seen anything like that to raise awareness of what a CFR is... I feel like it needs, you know, if you think about a Police Special [Constable], everybody knows what a police special [is]... But if you said, do you know what, a CFR is? [People do] not [have] a clue.'

Manager 3 Site 2

CFR and NHS staff respondents felt that with more publicity about the CFR role, there would be a greater number of volunteers who might come forward. Respondents also made similar points about volunteering in the NHS more generally – suggesting that a barrier to increased volunteering uptake is linked to a lack of visibility about volunteer roles and the impact that volunteering can make.

A second issue concerned increased training and structure for volunteers like CFRs. Several CFRs suggested that they felt that better, more regular, and more effectively structured training would encourages greater engagement from volunteers. As previously noted,), tensions existed between CFRs who wish to expand their role and take on more responsibilities, and those who are less enthusiastic, as we will discuss in greater detail later. These differences also have resource implications. However, it appears that the better the training volunteers receive, the more confident they feel, which in turn makes them more likely to continue volunteering and to be effective in their interactions with patients and the wider public. An important distinction for many informants related to the 'additionality' of volunteering in the NHS context, as opposed volunteering 'replacing' other paid staff or existing services:

> *'I think there is absolutely a place for volunteers in the NHS. I think that there needs to be careful management that it doesn't replace what clinical skill mix you need - like it can't be a replacement. It needs to be an additional benefit... So very much in the [case of] CFRs it's an additional contribution... [T]here's a lot more to think about when you're trying to introduce a volunteer program than just, you know, how much of a performance contribution am I getting... It's a positive story [of] healthcare services integrating with its communities, it's that real neighbourhood feeling. It's about trying to introduce that community feeling back into certain communities that we've absolutely lost in the UK over the last few years... [Volunteers]can't replace clinicians, they need to be an additional benefit... [T]hey could all stop tomorrow if they wanted to. So there needs to be not too much reliance on them. Some reliance. Not too much. There's got to be like, you know, Goldilocks in three bears. There'll be a happy medium somewhere.'*
> Manager 4 Site 1

The importance of striking the right balance was intimated by many informants, and very well captured in the quote above. CFRs and volunteers across the NHS more widely need to be carefully recruited, comprehensively trained, and consistently well treated. Building on this, a number of informants suggested that (as we highlight later) most CFRs derive intrinsic personal satisfaction from the role, fulfilling altruistic motivations, but it was also noted that volunteers would also appreciate more regular formal and informal thanks and recognition for what they do. This again links back to the first point in this section – around publicity and raising awareness of the value of volunteering.

CFR motivations and perspectives

Understanding the Motivations of Community First Responders

Community First Responders are motivated by a range of factors—some broadly applicable to other NHS volunteer roles, and others unique to the CFR position. Both NHS staff and CFRs describe the role as distinct, shaped by its unusual balance of engagement with acute situations, its hands-on, caring nature, and its integration within emergency care service teams. A prominent motivator, common across volunteering, was self-satisfaction. CFRs and managers alike described a deep, intrinsic drive to help others and a sense of fulfilment that arises from doing so. As one manager noted:

> *'I think the main thing is the innate feeling that people have that they want to help'*
>
> Manager 2 Site 1

There also appeared to be a deeply rooted personal identity in being a volunteer—something that many had engaged in throughout their lives. One CFR shared:

> *'I'm the sort of person who volunteers for all sorts of things—like I used to look after the railway track at a local preserved railway. (...) I've always done that sort of thing. (...) In life, I've always got the most satisfaction out of things that I've done for nothing, and when you help people, you get, you get far more back than you give, so perhaps it's a bit selfish'*
>
> CFR 6 Site 2

While the flexibility of the CFR role was often cited as an important enabler, having available time—such as after retirement or while attending university—was a key factor that seemed to make volunteering possible. In particular, both NHS staff and CFRs noted that retirement often prompted people to seek meaningful ways to occupy their time. For both older and younger volunteers, this availability of time often intersected with a deeper, more meaningful driver: the desire to give back to the community. Whether based in their hometowns or university areas, many CFRs described a strong sense of local connection and responsibility that motivated their decision to volunteer.

> *'I think a lot of it is just trying to give back to the community. Most people who do it feel that way. I also respond with both my local scheme and my university one, and they're all*

just people who want to give back to the community and the people they live with. They're part of that community, so I guess it's a kind of vested interest—to support and protect it as much as possible'

CFR 2 Site 2

Another CFR highlighted how this motivation was grounded in practical local needs:

'So initially it was to do something for the community, and I know that sounds very glib, but it was the thought of where I live is very rural. We do have an ambulance station 3 1/2, four miles down the road, but there's not always an ambulance there'

CFR 11 Site 1

While the motivations of self-satisfaction and community service are generalisable to broader volunteering, a key factor unique to volunteering with the NHS was having a personal interaction with the service—particularly with emergency care providers or CFRs themselves. This kind of personal experience often acted as a catalyst for choosing to volunteer specifically within the NHS, rather than with other organisations. Nevertheless, the place-based and community-oriented nature of the role appeared to take precedence over motivations related to contributing to the NHS as an institution. Engagements with the NHS seemed to reinforce the perception that individuals could meaningfully undertake the role of a CFR or provide a valuable complement to the services delivered by employed ambulance service staff.

Given the uniqueness of the CFR role, there were also more specific motivations for choosing this position over other NHS volunteering opportunities. One such motivation was the perception of the CFR role as a pathway into a career in emergency healthcare, or as a second chance to pursue a long-standing interest in medicine. As one CFR explained:

'For me it was [that] I've always enjoyed pre hospital medicine. That's what I'd like to do when I'm graduate and I like working with the ambulance service and working in a different environment and then also you do you get to see a lot more of patients. You spend a lot more time with them. You can do varying degrees for each patient, but I enjoy it because it it's really good for my university skills. It's really good for my generals. And also just it's really rewarding'

CFR 2 Site 2

Others mentioned they had long been interested in emergency care or medicine but had pursued other careers, or that working in emergency services hadn't been accessible when they were younger. The CFR role provided an opportunity to reconnect with that interest in a meaningful and practical way. The intellectually challenging and emotionally intense nature of emergency response also held strong appeal. One paramedic lead described this attraction as:

'The ability to contribute and the desire to do something unusual or out of the ordinary, perhaps more exciting. Often those individuals will work jobs in the local area that will allow them to be flexible and perhaps be looking for some more interest, excitement, development opportunities.'

Paramedic 1 Site 2

This intersection, between having the time to engage in a relatively flexible role and the desire for a developmental, stimulating experience, appeared to emerge as a key factor in motivating participation. It stands in contrast to more conventional forms of volunteering, such as retail roles or structured youth work, which often involve fixed schedules and less varied engagement. Closely connected to this sense of excitement, the role also requires an interest in, or at least a willingness to, enter into people's lives at moments of acute distress and vulnerability, often in deeply personal settings. The intimate nature of these encounters carries a certain intensity or draw that is not typically found in other volunteer roles. As one CFR described:

'It's just helping people, but you get a real buzz when you knock on the door and walk in when people are having somewhere between a bad day and the worst day of their life. And just to see the look on the face and think. Thank God someone's here. And you know, I got tremendous buzz out of that'

CFR 7 Site 2

This aspect of the role can attract people who are emotionally resilient and motivated by intellectual challenge. Another key motivator often overshadowed by the high-drama elements is the opportunity to provide a more human touch to emergency response services. While the role can include urgent interventions, many CFRs are equally or more motivated by the chance to offer calm, personal support in lower-acuity situations. This includes spending time with vulnerable people, especially those who may not need immediate treatment but do need a reassuring, human presence.

'Dementia is a very difficult thing to deal with… as community first responders we have the time to talk to [patients with dementia] more [than time-pressed ambulance crews sometimes]. You know, they're often not actually medically ill as such, they're just confused…I just [feel] I could help'

CFR 8 Site 1

This slower, more personal form of care can be deeply fulfilling and was a key reason some volunteers chose to stay in the role long-term. Finally, beyond individual motivations, many CFRs find meaning in being part of a team and in the sense of camaraderie the role fosters with employed ambulance crews and other responders. As one CFR explained:

'[T]here's that camaraderie with the crew and some are just absolutely lovely and it's nice to be part of a club. You know, it's the herd instinct, isn't it? And it's quite a specific club and quite an elite club.'

CFR 7 Site 2

Rather than supplanting emergency responders, many CFRs are motivated by their ability to complement ambulance service care, offering a personalised, empathetic presence in moments of uncertainty, whether or not an emergency response is required.

Understanding the Community First Responders' Perspectives on the roles they play

The following section sets out how CFRs describe their role and contribution as well as some differences in opinion on their identity and role they play. CFRs offer not only initial response but also emotional and practical support that bridges the gap between the 999 call, the arrival of ambulance crews, and the patient receiving treatment at hospital. Their reflections reveal the layered and often emotionally charged nature of the role.

CFRs' perspectives on the roles they play centre around their caring interactions with patients and the importance of timely emergency care. Integral to their role is the ability to provide initial assessments and emotional reassurance to patients and their families. A key aspect of this interaction is their capacity to provide a personal touch while waiting for an ambulance. For example, a CFR described being able to provide support to someone experiencing an anxiety attack. Another illustration of their value is their ability to reduce tension at the scene by supporting family members, thereby enabling emergency services to concentrate fully on the patient.

'If we go out and, you know, the loved ones of the patient are really upset and the paramedics are trying to deal with the patient, they can sometimes become obstructive—when they're in the way and they're asking questions. They're getting upset (...), so we can focus now on the loved ones. We can calm them down, we can distract them. (...) If we went out to, like, a young single mum and something happened to the mum and there's a small child there who's really upset, you know, we can try and entertain them, we can distract them, and it just stops the, the paramedics or the medical professionals from being distracted from what they're actually there to do. And I think that's something that not everybody sees... (and) it's a really difficult job.'

CFR 5 Site 2

In addition to their interactions with patients, CFRs described their ability to complement the work of the emergency crews as a core part of their effectiveness. Many felt that their presence helped reduce friction during handovers, as they could collect and convey information that enabled faster and more focused treatment.

> *'[W]e can take as many details as we can from them so we can enable that treatment and care to start a lot faster. Because as soon as the crew come in and we do a handover, we can say, right, well actually, you know, this is what's happening. This is what medication they're on. And then immediately the paramedics don't have to sit there asking, you know, five or six minutes' worth of questions. They can get straight to dealing with what they think it is. So I think, on every aspect of the role, I think it's very important.'*
>
> CFR 5 Site 2

Beyond CFR to ambulance crew handovers, CFRs could also engage in practical tasks, such as preparing transport, that eased the overall care process. CFRs spoke warmly about the aspects of the role that gave them the most joy: easing distress, offering comfort, and ensuring that people felt cared for at a time of fear and uncertainty. Simple actions—such as *"holding their hand"* or *"making a cup of tea"*—carried deep meaning.

> *'What I love about the role is meeting the patients and being able to make it better for them. They are so grateful when you turn up because they're really, really worried. They've called an ambulance scared, and we can go there with a little bit of kit that we've got and a little bit of advice—holding their hand.'*
>
> CFR 4 Site 1

While many CFRs derived deep satisfaction from the caring aspect their role, they also acknowledged the emotional toll it could take. The very human nature of their role, bearing witness to loss, trauma, and distress, was also one of its greatest challenges.

> *'You know, when we've been to that job, we've done everything that we can possibly do, and suddenly the family find out that actually, their loved one isn't breathing anymore. There are always those kinds of jobs, and those screams do tend to stay with people for a while... It's the human aspect of that. It's the fact that actually this, this... You go to a call—85-year-olds—they've just celebrated their diamond wedding anniversary. They've lived in the same house since they were kids. That kind of stuff. She's going to hospital. He just goes, "Here, my dear. You know, see you in a few days," and you kind of think in the back of your head, actually, you're not going to. I can't tell you you're not going to, because that's wrong. But you're not going to. So that human interface can sometimes be a bit [emotional]'*
>
> CFR 1 Site 1

Some informants expressed that they also found it difficult not knowing what happened to patients afterward—unless the incident involved cardiac arrest or some other traumatic

element, in which case CFRs received a call from the ambulance team, there was rarely any follow-up. CFRs also faced other, more institutional frustrations. CFRs spoke about a perceived lack of recognition for their efforts, a sense of being underused, and fears that their skills might fade without continued opportunities for development. The informant below – who volunteered as a CFR and worked as an ambulance technician was well placed to discuss this:

> *'The lack of continuing development for CFRs—me [as an ambulance technician], being on the road, I get lots of CPD, I see lots of different jobs. Whereas the CFRs… might not get to witness or attend a whole lot of jobs. They might be a bit rusty in some things. I do sit in on some of the training sessions… that are run by our volunteer trainers. And I see that there is a bit of skill fade from people who haven't done jobs in a while. They might just not be as methodical, or they might still get a bit flustered. Whether that's because it's an assessment or not, I don't know. But I think it would be better to have a more structured continuing development for CFRs.'*
>
> CFR10 & Ambulance Technician Site 1

These frustrations were part of a broader discussion around the identity of the CFR role. Some CFRs voiced concern about inconsistencies in what they were allowed to do across regions, and why some local areas could develop new skills while others could not. While some advocated for tiered roles and clearer progression pathways, others valued the current limits, seeing the defined scope as key to managing the stress and responsibility. This question of role identity also extended to how CFRs were visually represented to the public. In one of our two qualitative sites, CFRs wore green uniforms similar to those of paramedics, with different epaulettes. While many CFRs felt proud to wear this uniform—believing it helped them integrate with the team—others worried it might cause confusion, leading the public to assume they were paid staff. Although CFRs are trained to introduce themselves, they acknowledged that this distinction could be lost in high-pressure moments unless they spent significant time with the patient and family. By contrast, in our other qualitative site, CFRs wear maroon or red uniforms to clearly differentiate them from paramedics. While this improved transparency, it sometimes prompted patients or families to question who they were and why they looked different, creating brief moments of confusion.

A final and very important issue in this section relates to CFR-paramedic interactions over time. There was a striking convergence in the interviews with many (CFR and paid staff) participants about how CFRs used to often face a frosty reception from paid paramedic staff 20 or even 10 years ago, but that, over time, resistance from paramedics has significantly lessened:

> *'[W]hen I started 10 years ago, there was still a lot of resistance by front line staff to CFRs. I would say about half the crews wouldn't even acknowledge you when they came on scene. They just, they wouldn't wait for a handover. Anything. They just go straight to*

the patient. Now [paramedics] know what we can contribute And, now it's very rare for a crew not to ask for a proper handover.'

CFR 7 Site 2

CFRs have observed a cultural shift in how paramedic teams view their role. As older, more resistant paramedics have retired and newer paramedics have begun their roles working alongside CFRs, the CFR role has become more normalised and valued. Indeed many paid ambulance staff have also volunteered as CFRs at different points in their lives. This is not to say there is no resistance at all – but it is much less than in the past – though this normalisation process has taken time – it has not been quick or easy.

In summary, this section has reported that CFRs recognise that they occupy a unique position within emergency care, bridging professional and voluntary service, combining technical and emotional labour, and volunteering at the margins of both formal systems and human vulnerability.

Management issues and perspectives

Managerial Structure and Performance Management

Whilst the managerial approaches to CFRs have some differences between the two sites, the basic organising principles are quite consistent overall. Both Ambulance Trusts have designated paid staff who have strategic and operational managerial responsibilities for the several hundred CFRs across their respective geographies. One site in particular noted the high level of support for CFRs from very senior levels of the organisation and suggested this promoted a culture across the organisation that was pro-CFR. In both sites we identified and interviewed key managers with region-wide responsibilities for overseeing CFR activity. These managers oversaw small groups of geographically aligned managers who in turn are responsible for overseeing the activities of local CFR teams. Each team has a CFR leader, or local coordinator. Some informants suggested that the local coordinating role can become burdensome, particularly when local CFR teams shed members – which happens quite frequently. Local teams self-organise in relation to shift coverage and sharing emergency response kit bags, and it seems that coordinating burdens within teams could be better shared, but this is difficult given the self-organising ethos towards local teams.

In general, when we asked paid staff and CFRs about the Key Performance Indicators and wider performance measurement linked to the CFR role, the responses we received suggested performance measurement recording, data collection and targets were quite

secondary to the role. Sometimes this was linked to technological barriers – for instance a reliance on paper reports rather than digital recording of practice:

> *'[O]ne of the key things that we'll need to do to… make sure that we've got an electronic patient record. At the moment we haven't. That means we don't have an awful lot of auditable data we get, we get data, and we do records, and we do note keeping, but it's hard to audit it without big manual tasks. It's hard, you know, to check things.'*
>
> Manager 2 Site 2

At a macro-level, respondents from both sites reported on efforts from managers to encourage all CFRs to volunteer for a minimum of around 20 hours per month. Whilst many of our CFR informants did many more hours than this and some felt it was important that CFRs did a minimum number of hours to maintain the skills and confidence, other informants resented the idea that they be mandated to complete a set number of hours in any way and asserted that this kind of policy ran counter to the ethos of volunteering. Indeed, a major factor that CFRs noted as valuable for them was the flexibility of the role and the autonomy that they had to volunteer as and when they wanted. This does mean though, that informants reported there were often significant gaps in CFR coverage in different locations – hinting at tensions between the goals of standardisation and reliability and CFR self-management. At a micro-level however, the CFRs were very clear on the key targets for their role in relation to Category 1 and 2 call outs and the need to get to local potential emergencies as quickly as possible.

A theme covered in many of the interviews related to some of the distinctive challenges of *managing volunteers*. This was an issue both for NHS managers with oversight responsibilities for CFRs and local CFR team coordinators. Many informants compared the Human Resource Management of conventional (paid) staff and voluntary staff:

> *'I think for me the difference between a volunteer and a paid member staff is one can just walk away just like that. You know, so a volunteer, if they don't like what you say or the way you're treating them, they'll just go "there you go, there's my badge see you later!" Whereas obviously, as a paid member staff, it's a bit different. They can't just walk away. They've got mortgages to think about and all the rest of it and it's more than you have to talk it through and either go through the right channels, whether that be that it's that serious enough around the grievance and side of things. Whereas yeah, a volunteer... You've got to treat them more softly-softly. You know, you've got to think about what you're saying. Always. It's a balance, because what we've tried to get through to them is this is not you volunteering to sit in Age UK on a reception desk. This you're in quite a trusted position. It's one of the most trusted positions you can be in as a volunteer role because you are representing the ambulance service. You've got a uniform on.'*
>
> Manager 3 Site 2

The above quote highlights the power dynamics of a situation in which a CFR can choose to 'walk away' with greater ease than a paid employee. This means paid managers have to tread 'softly' but at the same time, the responsibility of the CFR position is such that paid managers have to nonetheless maintain a firm grip upon standards of practice. These types of managerial challenges require great skill, tact and diplomacy – particularly when operating in what often remains a 'command and control' culture.

Some CFRs expressed frustration about the difficulties of dealing with fellow CFRs who they perceived as being damaging or disruptive to the local team. Because local team members, and local CFR coordinators do not have line management responsibilities, some informants suggested it can be hard for them to deal adequately with problematic behaviour from other CFRs. Whilst some CFR coordinators spoke in more positive terms about their abilities to deal with disruptive or incompetent peers, often this was linked to their existing experience in their 'day jobs' or where they have good relationships with regional paid CFR managers rather than established local protocols or training. We heard of examples of problematic behaviour from some CFRs. We identified a distinction between the vast majority of CFRs volunteering for 'appropriate' reasons and a much smaller minority for 'inappropriate' reasons. These 'inappropriate' reasons might include what has previously been referred to in the literature as being 'adrenaline junkies' (Nelson & Barley, 1997), leading them to overstep the CFR remit, for instance by adding blue lights to their cars, or to engage in other forms of problematic behaviour whilst in uniform. In response to instances of damaging or disruptive behaviour it falls to paid NHS managers to terminate the ability of such actors to volunteer as CFRs.

Bureaucratic and Utilisation Frustrations

Another tension that we noted related to a sense from CFRs that the NHS structures under which they operate move slowly and are characterised as being bureaucratic and hard to navigate:

> *'The ambulance service and the NHS in total work in very, very slow time. Can't get the immediate response that you would want to get. You know I've got a problem or question. I still often feel that it just takes forever to get the result I want.'*
>
> CFR 9 Site 1

Responses from NHS staff and management once again highlight the institutional constraints that restrict the organisation's ability to respond effectively to CFRs. It is also the case that there may well be good reasons why change can take a long time and again there is a sense that perhaps CFRs are unaware of the reasons for these constraints:

'[W]e've got to make sure [any changes to CFR working practices are] planned... structured and that that the infrastructure is there and supports volunteers and for that to be a success. And that at the heart of it, we remain looking after volunteers. And I think that for some volunteers that's frustrating and particularly for people that have never worked in the NHS and don't understand how slow the wheels [move]'

Manager 2 Site 2

At times, it seems that the highly valued flexibility of the CFR role runs up against the rigidity of NHS institutional processes and procedures, posing challenges for NHS managers with CFR oversight responsibilities. Linked to these tensions, an issue articulated by both CFRs and NHS managers responsible for overseeing CFRs related to perceptions of under-utilisation. Many CFR informants spoke of frustration at times because they felt they were not being called out as regularly as they would like to be:

'So with volunteers, you know, there's a grand thing that we say, you know, "either use us or lose us". And that is a big that's a big statement. I know. But that is that is exactly how the volunteers work. And I don't think sometimes the staff and actually the control room staff [understand] that we've had, you know, we've done some engagement with them and the one of the reasons I go in on their training course is because I need to get over to them is [that] if there's a job come in, don't not send us because you think it's going to disturb us, send us because we want to go... We've had comments from dispatchers who've said, well, didn't like to wake you up in the middle of the night for this job. And we're like, well, if we didn't want to be woken up, we wouldn't log on. And the other thing is we want to go to jobs, we need to go to jobs to keep up our confidence as well because if you don't, if you don't do jobs because you're working on the front line on your own, so you're not working with another crew mate, which most of the staff are, you can become well, you get skill fade, but you can become quite anxious about going to your next job.'

CFR 12 Site 1

As the quote above highlights, there is a sense from some CFRs that dispatchers fail to call CFRs to cases at times. It was suggested that this could be linked to something as simple as some dispatchers not being aware of CFRs, so overlooking their potential contribution. Other CFR informants suggested that when dispatchers are overly busy, they might overlook CFRs or be reticent to call them out so as not to 'burden' the volunteers. A call-handler (who had also volunteered as a CFR in the past) offered a defence of dispatchers:

'CFRs don't always know the full facts. So it may come through as an alert on their phone or their NMA [National Mobilisation Application] saying "somebody's collapsed and they're not breathing", but [the CFRs] don't know that what I'm hearing on the phone is that there's a fight going on in the background and they're not sent out to that or they'll phone up and say I can go on that job and the dispatcher will say it's not suitable. So I know that CFRs can be frustrated sometimes with dispatchers, the same when they ring

in to clear from a job because the CFR desk isn't always manned because there is a specific desk for CFRs and that dispatcher is literally just looking at CFRs, where is your normal dispatcher is looking at everyone, so they're looking at double staffed ambulances, the Rapid Response Vehicle cars, which are usually single, they're looking at CFRs. They're looking at anyone else that they've got that they can use. Whilst juggling 50 jobs at a time, so when we can get the CFR desk manned, that person is just looking at CFRs which does get a lot more of them out. It's difficult, it's difficult, it's a difficult job to get that balance.'

CFR 11 & Call Handler Site 1

So, there are often good reasons why CFRs do not get asked to attend certain calls. The above quote also notes that there are some initiatives to develop CFR focused dispatch desks which may increase CFR use – but these initiatives are not systematic. It is worth noting too that some CFRs take a different more philosophical view about not being called out:

'And I only talked about this on Monday at football and I said, well, I did 40 hours in March and [my friends] said how many times did you get called out? I said I got called out four times, but when I got in the car I was stood down. And they went well. That's crap. And how boring is that? And I went. No, I look at it exactly the opposite way I look at that as good. Because for me that means that for those 40 hours, nobody needed my assistance… So that's how I look at it.'

CFR 4 Site 2

Interestingly, this informant was of retirement age and there may be an element whereby some younger CFRs may want more 'action' than some older volunteers. Overall, what these tensions highlight are the diversity of desires across the CFRs cohorts, and the complexity of satisfying all these desires for ambulance staff given their other wider aims and responsibilities – many of which are often obscured to some CFRs. This once again underlines the differences of managing paid staff and volunteers and diverging goals of these groups when working together.

The Cost Implications of CFRs

A final issue to discuss in this section relates to the costs of running CFR services. There was widespread recognition from all informants that volunteering is not a free resource – but in reality, it requires significant up front and ongoing costs to be paid by the NHS and also charitable donations:

'[T]he NHS has always got the challenge of funding and the financial side of it. But it's understanding that volunteering is free at point of delivery, not free. To get to point of

delivery. Right. Yeah, the hours our volunteers give us are free, but actually to train them to keep them to support them, to manage them takes an infrastructure.'

Manager 1 Site 1

It is also difficult then to calculate what value for money might look like:

'[W]e have a team and so to support 700-ish volunteers at anyone's time and to maintain it at that level because we're always losing volunteers, we're recruiting new volunteers and getting them through and then to maintain volunteers you know we have a team of about 20 full time equivalent staff that work in there at different banding. So that includes 5 band 6 and the remainder at Band 4. And they're kept very busy, and they do everything from the recruitment, the training, other things. Then on top of that, you've got the support of our HR teams in recruitment, recruitment. So this is by no means a free resource and a lot of the work that we do and make sure that we're really, really clear on it. This is not a free resource and anything that we do that expands the role and remit have got a cost implication. It might not have a direct cost to the volunteer hours, but the training, the recruitment, the development of the training courses, all of that has to be done within that team or we have to make a business case to expand that team. And I think it's that's tricky then and I think it's how do you manage value for money of something which is a very, very tricky thing to do.'

Manager 2 Site 2

'It costs decent amount to run because we've got the wages of around 20 individuals. We've got all the kit that we use, all the cost of the phones, all the rest of it. Just generally everything there, it just cost a lot of money. So do we get that amount back? Probably not. But the investment into the communities is massive. You know that it's an amazing thing to see the difference. It does make to those communities.'

Manager 3 Site 2

So, it is clear that CFRs are not a free resource, but they are perceived by many of our informants as delivering valuable, worthwhile services that could not be performed by other existing NHS ambulance staff roles – including in the second quote a contribution to local communities. Without detailed health economic work, the cost implications of CFRs are difficult to comment on. Whilst some costs are easy to articulate as they are visible and measurable and appear on a balance sheet (staff, equipment etc), the return on that investment is less visible and fraught with political considerations.

Scope of practice and standardisation

A very significant theme in our data builds on some of these tensions between flexibility and rigidity in discussions around the scope of practice for CFRs, and the extent to which their roles and activities should be standardised. In this section we discuss the views of NHS managers in relation these issues. One manager emphasised that, at the day-to-day level, the clear and well-understood scope of practice for CFRs—by both the CFRs themselves and the paramedics and other ambulance staff they work with—helps maintain respect and good relationships between the paid and voluntary groups:

> *'I think that really helps to foster those strong relationships between staff and volunteer, really, because everybody's there because they want to be there, the volunteers are there because they want to be there... And they're trained. They're trained [to be] there. [The CFRs] have a very strict scope of practice. They know what the scope of their role is, they don't step outside of that.'*
>
> Manager 1 Site 2

In this way, maintaining strict boundaries on the tasks and responsibilities that CFRs have, and ensuring they are well understood by both CFRs and paid ambulance staff is integral to delivering harmony between the two groups and avoiding some of the 'bad' behaviour outlined earlier.

Linked to questions of changing the current scope of practice for CFRs are questions about standardising CFR roles and responsibilities across the NHS. Whilst some CFRs were keen on this idea – for instance, often citing clinical activities that they were aware CFRs in a different region were permitted to perform – and lamenting the fact that they were not locally permitted to do so, or denied the kit to do so. From a managerial perspective these questions are a little more nuanced than maybe CFRs appreciate:

> *'I think there is a recognition nationally and some of the discussions [at a high level]... exploring whether there is an appetite to look at, do we move towards standardisation... But there is a real acknowledgement that we're all in very, very different starting places... I think as far as you can standardise, you've also got to acknowledge that there are differences and there are different challenges that ambulance trusts face...So I think there are always opportunities for us to learn from each other and... catch up with people that are perceived as being further ahead than us...But, but we'll do that safely'*
>
> Manager 2 Site 2

The complexity of the broader perspective that managers must take—considering local demographics, economic context, and safety concerns—constrains developments related to scope of practice and standardisation. This leads into a concern for risk management. This is a theme that emerged in two different ways through interviews – firstly risk management in relation to keeping CFRs safe. And secondly risk management in terms of keeping patients safe. In relation to the first of these, sometimes some CFRs felt that the scope of practice and strict rules about the types of calls they could attend was overly restrictive and inhibited

their abilities to help people in need and suggested they would like the rules protecting them to be loosened. Other CFRs related times that they had been inadvertently placed in risky situations – highlighting that these rules are not fool-proof. In relation to the second type of risk management, one NHS manager was particularly insightful about the spatial dimension of risk – comparing risk as perceived within a controlled hospital environment and a less controlled non-hospital environment. This manager argued that the appetite for risk is lower in the former than the latter, and that by implication, it is more logical to enable volunteers scope to take risks outside of hospital settings, in emergency situations that we would be in other contexts:

> *'I think it's about perception of risk for people and individuals... And I think if you look at where CFRs came from and they're very much that they were there to respond, somebody in cardiac arrest. You're not going to make it worse! Somebody is already in cardiac arrest and you're going to [have] a chance [to make] something better. And I think if you start from that as a perception of risk, I think what the ambulance trusts have done and started to work through is that they are much... better balancing those risks and better understanding those risks because they've been forced to. So [in the ambulance service] we've got much more ingrained things like the joint decision making model as to how we make decisions. And how we deploy staff, but we can't control our environment. So we have to have a way that we're structured and forced every single day to balance those risks both for our substantive staff and for our ambulance staff [in contrast to hospital settings].'*
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> Manager 2 Site 2

This long quote distils some important ideas about the time critical and spatial particularities of the role that CFRs have with implications for wider theorising about the applicability of learning from the CFR experience for other NHS volunteering roles.

Summary of the key qualitative findings:

Overall, the data in this section demonstrate that CFRs are perceived to bring tangible benefits to the NHS – particularly in rural settings. There are wider lessons about the role of volunteering in the NHS that we can develop through analysing what works in relation to the evolution of the CFR role over the past 25 years.

There are diverse factors that motivate CFRs to volunteer – but key is a desire to 'give something back'. The CFRs we interviewed overwhelmingly enjoy the role and gain fulfilment from it.

The CFR role brings them excitement, new challenges and the ability to connect with other members of the community at times when this is vitally needed. CFRs increasingly feel valued by paramedic and other ambulance staff.

To function well, CFRs require a significant managerial commitment from ambulance trusts. They require training and wider resources – this is not a free service. There are particular challenges faced by NHS managers overseeing CFRs.

Finally, the CFR scope of practice is closely regulated. There are tensions between flexibility and standardisation.

Conclusions

In this final section of the report, we bring the findings of the earlier sections together and discuss the implications of the study. We return to our original research questions and combine our quantitative and qualitative findings to respond to these and offer some reflections for the further development of the CFR role, and for volunteering in the NHS more broadly.

The Research Questions

Primary research question:

- How can we better demonstrate the impact of CFR volunteers on the ambulance service, and what policy recommendations can we make based on this analysis?

Secondary research questions:

- What can we learn from the Community First Responders to support other volunteer roles more widely? In particular:
- How can local operational managers improve the deployment of volunteers?
- How do staff understand the support they receive from volunteers (including the effect on their workload and morale)?
- How do patients understand the support they receive from volunteers?
- How are volunteers influencing services (i.e. ambulance waiting times and non-attendance/transportation times?)
- What opportunities are there to further develop this volunteer role?

Reflecting on the primary research question, we feel that this report itself represents a demonstration of the impact that CFRs have on the ambulance service. We suggest that combining quantitative and qualitative approaches is fruitful, and we recognise that our work builds on previous mixed methods work in this space (Siriwardena et al., 2024).

We now turn to the secondary research questions and explore these thematically, combining quantitative and qualitative insights.

How can local operational managers improve the deployment of volunteers?

This research demonstrates high variation in the relationship between hours logged, active CFRs and average incidents attended. This suggests variation in CFR deployment approach between trusts. This finding is consistent with and can be explained by our qualitative data. Qualitatively, we find very high levels of CFR autonomy and control in relation to *when* they chose to volunteer. A consistent finding is that CFRs massively value this flexibility and how it enables them to combine volunteering with their other commitments and interests. Neither CFR coordinators, nor NHS/ambulance managers have any mandate to instruct CFRs as to when they should volunteer. We found some examples of ambulance trusts attempting to mandate minimum monthly hour-commitments as part of drives towards standardisation, but these were often resisted or resented by CFRs. There is an important principle of autonomy for volunteers that is highly valued by them and respected by managers. It is also the case that CFRs have diverse personal aims and motivations and different levels of time they can dedicate to volunteering, and we find that different ambulance trusts approach volunteering according to local priorities and values – the colour and variation of uniforms is an obvious example of this.

We also highlight that CFRs are active all year round, but they are more active in the day than at night. Again this is consistent with and can be explained by our qualitative work. As noted previously, CFRs make self-determined decisions about when to volunteer and coordinate this around their other life-commitments – this makes day shifts more likely than night shifts. It may also be that the quantitative data misses out some of the nighttime availability of CFRs – for instance, CFRs reported to us that although they might not formally log-on at night, they would use technologies such as the Good SAM app that would flag nearby emergencies, and they would respond to these if needed.

We find that CFRs are more active in rural rather than urban areas through quantitative analysis. This corresponds with existing recent research (Botan et al., 2023) and very closely with our qualitative findings. Whilst some informants volunteered in urban settings, most CFRs (and managers) spoke about the particular support that CFRs were able to offer to those living in rural settings – further from hospitals and ambulance in spatial and time critical terms.

So, overall, we suggest there are practical limitations to the degree to which managers can improve the deployment of volunteers because the volunteers highly value the flexibility of when and where they volunteer – making standardisation difficult. However, qualitative findings suggest that some CFRs feel under-utilised and would like greater and more regular deployment when they are logged on for calls. An area that may be fruitful to explore here could be to expand the use of dedicated CFR dispatch desks. One site had experimented

with the temporary use of a dedicated CFR dispatch desk to improve use of CFRs. Training might be another approach to increasing local use. CFRs also mentioned the importance of wider communication about the CFR roles.

How do staff understand the support they receive from volunteers (including the effect on their workload and morale)?

The picture here is a very positive one. Both CFRs and the ambulance staff they volunteer alongside report that over the past two decades, CFRs have become ever more accepted and valued by their paid colleagues. The value that CFRs bring across category 1-4 calls is very well articulated in our findings. Ambulance staff recognise that CFRs provide valuable practical, clinical and moral support to both them and to patients and families. It is widely appreciated that CFRs offer an additional and complementary resource for the ambulance service rather than alternative or competitive one. We suggest this is linked to the clear mandates (Nelson & Barley, 1997) of the CFR role and the fact that this is respected by the CFRs.

How do patients understand the support they receive from volunteers?

A weakness of our study is that we were unable to interact with patients or their family members despite our best efforts so we cannot comment directly on this research question. However, we have second hand reports from CFRs and managers reflecting on their sense that CFRs are very much appreciated by patients.

How are volunteers influencing services (i.e. ambulance waiting times and non-attendance/transportation times?)

We find that CFRs attend a high number of incidents (>100,000) and are more often than not the first attenders on scene. CFRs are most active for category 2 incidents. The role of CFRs in category 1 incidents would appear to be aligned more towards support (see response times and % first on scene rates) whereas for category 2 and category 3 incidents they are usually first on scene and can resolve an incident before an ambulance arrives.

These findings correlate once more with our qualitative data. CFRs are located within communities and are therefore most often closer to the people who need them than ambulances will be. CFRs also reported that they often know the quickest local routes which again increases their ability to arrive on scene quickly. **The qualitative findings furthermore highlight that, whilst CFRs have huge flexibility over *when* they volunteer, they are incredibly self-disciplined and deeply controlled in relation to *what they do when they are on scene.* CFRs understand and respect the boundaries of their operational mandates as they relate to respective categories.**

CFRs therefore know that in category 1 incidents, their role is to hand over to the ambulance crew as soon as they arrive on the scene and drop into a supportive role in recognition of the superior mandate of the ambulance staff. In contrast, in category 2 and category 3 situations, CFRs often have a longer time as sole responders (before the ambulance crew arrives) – an average of 28 minutes for category 2 and 43 minutes for category 3. In these situations they act as valuable 'eyes' for the EOC being well placed to liaise with the central team around the nature of the situation and help inform decisions about escalating or de-escalating ambulance crews in response to the severity of the situation they survey. It should be emphasised that volunteers are not making clinical decisions. They escalate and report to the control room and operate under close clinical supervision even while volunteering remotely. This is a very important role and can lead to better service quality for patients and families and improved resource utilisation for the NHS overall.

The quantitative analysis tentatively suggests that CFRs save resources (i.e., fewer ambulances being deployed) at category 2 and category 3 incidents. However, it is important to emphasise that this would need further investigation as it is indicative only due to data concerns. The qualitative analysis about the CFRs acting as 'eyes' for the EOC as just discussed would offer potential reasons for this to be the case. This could also help explain why CFR attendance reduces the response times for category 2 and category 3 incidents. We find that where CFRs are the first on the scene, category 2 incidents have a slightly higher See & Treat rate and a much lower conveyed to non-ED rate. Where CFRs are the first on the scene, category 3 incidents have a slightly higher See & Treat rate (i.e., patients are assessed at the scene but not conveyed to hospital) and a much lower conveyed to ED rate. More broadly, our qualitative findings highlight that to function well, CFR programmes require a significant managerial commitment from ambulance trusts. CFRs require training and wider resources – this is by no means a cost free service. We also highlight complexities in perceptions of what 'cost-effectiveness' would look like in relation to the impact that CFRs may have, and the delicate political implications of how to measure this.

What opportunities are there to further develop this volunteer role?

Overall, this research demonstrates that the CFR role is well established and managerially well supported across the participating sites. CFRs are demonstrably impacting positively and improving emergency service quality – particularly in rural settings. CFRs volunteer for the role for a variety of reasons and the role provides affective satisfaction. Over time the CFR role has become accepted by paid ambulance staff. It is increasingly valued by them and seen as complementary to, rather than conflictual with, existing professional jurisdictions. The roles that CFRs play are tightly mandated and controlled – there are clear spatial and time critical definitions and boundaries in relation to the CFR scope of practice. There are mixed views amongst CFRs and the ambulance staff with whom they interact in relation to when, whether or how this scope of practice, or CFR mandate may change.

Building on these findings we suggest that the CFR role could be further developed and improved by better and more consistent data collection at both regional and national level – including moving from paper to digital record keeping. There is scope for more research into understanding in finer detail the actions and implications of CFR responses to category 2 and 3 calls and the role of CFRs as they hand-over patients to ambulance crews, and patient and family member perspectives. This research suggests that greater publicity of the CFR role in general might be helpful to increase uptake and ultimately CFR coverage. The research suggests there is real appetite for greater discussion and debate about standardisation of CFR roles and responsibilities (including questions about the best colour for CFR uniforms). We also suggest that more research into the health economics and wider cost-effectiveness of CFR roles would be beneficial.

It is difficult to comment upon the wider lessons for other NHS stakeholders from this research into CFR roles. Partly, this is because of the particularities of the CFR role. However, we might tentatively offer these final general reflections about how and why the CFR role is valued by volunteers and NHS staff that might encourage broader thinking about the transferability of learning from the CFR role. Firstly, CFRs provide a service that is highly valued by those NHS colleagues with whom they interact. This service – particularly in rural settings is not only valuable – but beyond the scope of existing NHS service capacity. The risk profile of CFR role is acceptable to CFRs and NHS staff. The CFR role has very well defined spatial, time critical, clinical and cultural boundaries making it complementary to, rather than conflictual with, established professional and occupational jurisdictions and mandates. The CFR role satisfies the wide diversity of volunteers' affective desires. The CFR experience over the past 25 years in England at least demonstrates that it may well take a long time to develop and negotiate the scope of volunteering roles that deliver for volunteers and are accepted by other stakeholders. Finally, local and regional variance in roles/responsibilities for volunteers may persist and be justifiable.

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