SWAP: Promoting Staff Wellbeing in UK NHS Ambulance Personnel - Final Report

December 2021

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Funded by Health Education England

1. Executive Summary

NHS ambulance staff sickness absence rates are around 5.62%, compared to the NHS average of 4.25% (Sept 2019, NHS Digital[1]) with significant variations within and across ambulance services. In addition, high rates of burnout and post-traumatic stress disorder are reported amongst ambulance emergency responders and staff. Health Education England (HEE), in the NHS Staff and Learners' Mental Wellbeing Commission Report published in February 2019[2], made specific reference to the problems facing ambulance staff leading to sickness absence. Furthermore, recent research has shown that there is a need to support evidence-based interventions to support ambulance staff wellbeing.

The SWAP study aimed to identify characteristics of successful employee mental wellbeing services within staff groups in UK ambulance services and to understand how existing services could be improved.

Approval for the two-phase study was obtained through the Health Research Authority, and University Research Ethics Committee. The second phase study was carried out during the SARS-CoV-2 pandemic, and an amendment was made to the study to take into account any impact of the pandemic on ambulance personnel wellbeing.

Phase 1 of the work explored the variation in reported sickness absence rates across the English NHS ambulance workforce. This was complemented by analysis of ambulance workforce policies and strategies for physical and mental wellbeing. This focussed on specific mental wellbeing and suicide prevention strategies and interventions through analysis of policies and key informant interviews. Statistical analysis of sickness data for this study in a subgroup of clinical staff across English ambulance services demonstrated a clear pattern of seasonality, with increases in January to February annually. Further analysis suggests that statistical modelling predicted future absence trends to support planning and resourcing, and the model will be applied to the most recent period of time to include COVID-19 absence.

Documentary analysis of policies indicated that most Trusts have adopted an integrated approach to workplace mental health: looking to protect staff from harm to mental health; promoting good mental health; and addressing existing mental health concerns. However, variation is apparent in the number and type of actions for each Trust. Structured interviews with key informants added to the understanding of the policies in action, and identified actions to further improve the wellbeing offer for staff.

Phase 2 of this work captured the knowledge and perceptions of UK ambulance staff of wellbeing interventions available through their employer and informal support arrangements. Staff from three Trusts were interviewed by telephone before and during the SARS-CoV2 pandemic, and a short online survey for all UK ambulance service staff captured views from 3067 UK ambulance service staff during the pandemic.

Staff reported that their normal ways to remain well were disrupted during the pandemic, most notably socialising with family and friends and physical activity. Help was needed for staff with stress, anxiety and depression as well as sleep and ‘calming a racing mind’. Staff awareness of primary and secondary interventions was high, but with a low rate of previous or planned access of available services.

The results generated the following recommendations

- Increase accessibility, consistency and timeliness of wellbeing interventions
- Increase wellbeing offer coverage
- Support and train line managers to care for their staff
- Incorporate staff suicide prevention and postvention in trust wellbeing offer
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- Promote a social model of disability and emphasise universal/inclusive design in the work environment
- Repeat sickness absence modelling using up-to-date data

2. Project Introduction

Ambulance Staff Wellbeing

Evidence that ambulance workers may experience episodes of stress, burnout, poor mental health, loss of sleep and post-traumatic stress disorder (PTSD) while working in a physically intense and emotionally charged environments is clear [3 4 5 6 7–10]. However, evidence on preparedness of frontline staff and organisational support after serious traumatic events is mixed [11] as is evidence of the psychological and physical risks of violence against staff [12]. This is accompanied by a funding gap to meet the ever-growing demand for emergency services [13 14] which affect the wellbeing of the ambulance staff.

The issue of staff reporting to work while still being sick (presenteeism) is widespread in healthcare settings [2] including ambulance services. [15 16] The 10 percent national shortage of paramedic staff puts additional pressure on frontline service delivery [14]. While staff wellbeing is a national policy priority (NHS Long Term plan inclusive) [17], it remains under-researched within the NHS ambulance service setting [6,18].

The NHS Health and Wellbeing Framework highlighted the need for both organisational enablers and health interventions, with specific mention of the need for mental health services to support NHS staff. Previous work by Stevenson and Farmer [17] provided recommendations on supporting staff to ensure that they thrive at work despite acknowledging that the mental health crisis in the workplace was greater than first expected. Both of these publications were further developed upon by the HEE Staff and Learners Wellbeing Commission[2], published in 2019 which again has provided recommendations to NHS organisations for improving the mental health of their staff. Although this report is NHS-wide, there is specific mention of ambulance staff and the unique challenges they face, as well as recommendations to support improving wellbeing.

The ambulance workforce has undergone significant change in the face of a changing urgent and emergency care system responding to increasing demand. These workforce changes include HCPC-registered paramedics moving up the Agenda for Change pay scale in 2016 to recognise their clinical care responsibilities[19], and some ambulance services being commissioned to deliver NHS 111 telephone services[8].

In a UK survey by the charity Mind of over 1,300 ambulance service responders, problems at work were often cited as the main cause of mental health problems. These included excessive workload, pressure from management, long hours, changing shift patterns, and exposure to traumatic incidents[20]. The negative impact of ambulance work from organisational culture and demands together with the effect of critical incidents on employee wellbeing is further analysed in a systematic review by Lawn *et al* (2020)[21].

Data from the Office of National Statistics (ONS) has shown that male paramedics are at a greater risk of dying by suicide than the general population, and further work has shown that suicides also occurred in non-paramedic staff groups within the UK ambulance service[22]. Work is ongoing to assist employers within the NHS to support employee wellbeing. One example of this is the delayed in the 'Ambulance Workforce' section of the NHS Employers website[23], which has curated resources to assist NHS Ambulance Trusts in providing support to promote mental wellness.

The Association of Ambulance Chief Executives (AACE) has worked with NHS ambulance Trusts to develop networks of leaders, create resources[24–27] and engage with charities to offer wellbeing support.[28] An evidence map of wellbeing interventions in the ambulance sector identified an absence of interventional research. This came with a recommendation to develop and test theoretically-informed interventions, with a focus on areas of ill-health. There is still limited evidence in the literature such as self-harm, bullying, sleep and fatigue or alcohol and substance use[29].

Ambulance Staff Sickness and Absence

NHS ambulance services exhibit the highest sickness absence rates among all the NHS organisations (Wankhade, 2016). Over a period of seven years, against the national average NHS sickness absence rate of 4.18%, the rate in ambulance services was 5.7% (Table 1). Lord Carter, in his independent review of ambulance services concluded that a 1% reduction in these rates could generate annual savings of £15 million to the health sector[19].

Table 1. Annual Sickness Absence Rates by Organisation Type in the NHS

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
England	**4.24%**	**4.06%**	**4.25%**	**4.15%**	**4.16%**	**4.19%**	**4.21%**
Acute Trusts	4.01%	3.84%	4.03%	3.97%	3.99%	4.01%	4.04%
Ambulance Trusts	**6.05%**	**5.82%**	**6.27%**	**5.51%**	**5.40%**	**5.49%**	**5.40%**
Clinical Commissioning Groups	2.07%	2.20%	2.60%	2.61%	2.78%	2.85%	2.89%
Commissioning Support Groups	-	2.69%	3.05%	2.82%	2.84%	2.93%	3.06%
Community Provider Trusts	4.65%	4.47%	4.65%	4.57%	4.66%	4.81%	4.70%
Mental Health	4.94%	4.74%	4.88%	4.78%	4.79%	4.84%	4.85%
PCT	3.09%	3.26%	2.15%	-	-	.	.
Special Health Authority	3.56%	3.30%	3.47%	3.29%	3.17%	2.75%	2.70%
SHA	2.55%	-	-	-	-		

Source: Adapted from NHS Sickness Absence Rates, Annual Summary Tables, 2013 to 2018-19, NHS Digital, 25 July 2019 .

Whilst the absence rate for the ambulance sector is high, there is considerable unexplained variation in sickness absence rates between ambulance services (monthly 2.97-6.49% during quarter 2 of 2018[1]). While reasons for absence have only recently been included in NHS Digital reporting, anxiety, stress, depression, and other psychiatric illnesses are consistently the most reported reason for NHS sickness absence[30]. This is similar to other employment sectors [31]. In addition, only a small percentage of NHS Trusts provided managers with training for early recognition of these problems[32]. In fact, research into staff sickness absence at the University of Lincoln has identified a lack of evidence into the effectiveness of wellbeing interventions[18]. Evidence that has been conducted so far is generally of low quality, and none has examined interventions specifically tailored to ambulance services[18]. Whilst these interventions have not been robustly evaluated, 65.6% of ambulance service staff and volunteers who took the Mind Blue Light survey in 2019 were aware of the mental health support available to them through their organisation, compared to 43.6% who had completed it in 2015[33].

The impact of COVID-19

The COVID-19 pandemic has tested the global healthcare system with its impact on ambulance services has been being particularly challenging, severely testing the physical and psychosocial wellbeing of staff[3]. In 2021 a survey by the charity Mind "behind the mask" identified that almost a third of ambulance staff who responded described their mental health a poor or very poor (n=991), with 77% stating their mental health has got worse during the COVID-19 pandemic[34].

This led to an increased risk of what Greenberg *et al.,* (2020)[35] described as "moral injury or psychological distress resulting from actions, or the lack of them, which violate someone's moral or ethical code". The need for building staff resilience has been identified globally[36,37] and providing psychosocial support to ambulance staff and managers, including training to frontline crews, has never been greater[35,38]. Protecting the emotional and psychological wellbeing of staff including the effect of higher risks of psychological distress or 'moral injury' to frontline staff has been an important lesson for ambulance services [3,21,39]. Heath *et al.,* (2021)[3] in their recent study have argued the usefulness of the concept of 'Public Value' (PV) to establish the nature of relationships between wellbeing and 'public' and 'values' so that it can be embedded in the ethos of the ambulance service delivery and care for patients.

In summary, NHS ambulance service personnel are at high risk of poor physical and mental wellbeing and may have a greater risk of occupational suicide than the general population. The factors which influence poor wellbeing are poorly understood, as are interventions aimed at reducing these risks. It is important to recognise where occupation-specific risks can be modified in the context of personal, cultural, or job-specific e.g. trauma) circumstances and within individual organisations.

3. Project Overview and Rationale

Recognised variation between ambulance services in sickness absence rates may indicate variation in wellbeing services. Ambulance service policies and procedures supporting staff wellbeing provide important contextual information. Policies signal organisational intent and prioritisation of staff wellbeing and on managing factors that impact upon it.

This exploratory sequential study investigated staff perceptions of formal and informal wellbeing support through staff interviews in three ambulance services with high, medium and low rates of sickness absence. The interviews were supplemented by a short survey for all English ambulance staff, that aimed to identify which interventions staff were aware of, how these were implemented, and how they were received by staff to explore commonalities and differences across staff groups. The online survey was planned before the declaration of the COVID-19 pandemic, and was adapted to ensure that the influence of this on staff would be captured. Integration of absence rates and specific actions recommended in staff wellbeing policies for each service, and staff perceptions of the support they received (interview and survey respondents) was used to describe commonalities and differences in wellbeing support across staff groups.

Aims

A. **TO DETERMINE THE VARIATION IN RATES OF SICKNESS ABSENCE IN NHS AMBULANCE SERVICE TRUSTS.**

B. **TO UNDERSTAND VARIATION IN UK AMBULANCE SERVICE POLICIES AND STRATEGIES FOR STAFF WELLBEING, FOCUSSING ON SPECIFIC MENTAL WELLBEING STRATEGIES AND INTERVENTION, AND SUICIDE PREVENTION STRATEGIES AND INTERVENTIONS.**

C. **TO UNDERSTAND THE KNOWLEDGE AND PERCEPTIONS OF UK AMBULANCE STAFF OF WELLBEING INTERVENTIONS AVAILABLE THROUGH THEIR EMPLOYER AND INFORMAL SUPPORT ARRANGEMENTS.**

D. **FOR DIFFERENT STAFF GROUPS, DEVELOP AN UNDERSTANDING OF THE FACTORS WHICH INFLUENCE THEIR PERCEPTION OF A SUCCESSFUL OUTCOME FROM INTERACTING WITH A MENTAL WELLBEING INTERVENTION**

The project planned to consider different staff and learner groupings within the NHS ambulance service: student paramedics; newly-qualified paramedics; clinicians working in emergency ambulances (with at least 5 years or less than 5 years' experience); non-emergency patient transport services staff; NHS111 call centre staff (including clinicians); 999 call centre staff (including clinicians); frontline staff managers; ancillary and

support staff. However when the data were analysed, alongside the response rates, only two groups were included in the final analysis: face-to-face patient care or remote patient care and support services.

The study excluded paramedics working in a non-NHS ambulance Trust, e.g. within primary care or private providers, and excludes NHS111 staff working outside an NHS ambulance Trust.

The project was delivered as a number of discrete work packages.

- Work package 1 comprised a review of the current available literature into staff sickness absence rates across UK ambulance services, identifying the extent to which rates vary across staff groupings and over time. It also included statistical analysis of sickness absence data obtained from NHS Digital.
- Work package 2 was a documentary analysis of all UK ambulance service policies and strategies for staff wellbeing, focussing on specific mental wellbeing strategies, and suicide prevention strategies. This included key informant interviews to contextualise the documentary analysis.
- Work package 3 involved undertaking interviews with staff to understand how Employee Wellbeing Services (EWS) interventions function in practice, explore barriers and facilitators to their uptake, and their perceived effectiveness in staff. Specifically, these interviews intended to:
  - Identify factors which influence behaviours to engage with EWS, in particular considering specific times when access is required (e.g. during disciplinary processes).
  - Understand what value is placed on informal (non-EWS) support, and what characterises this.
  - Understand staff views of a successful or desired outcome when engaging with an existing or planned EWS.
  - Understand commonalities and differences across staff groups, to understand requirements upon an EWS.
- Work package 4 was the development and implementation of a brief survey for all UK ambulance staff to understand their knowledge and perceptions of employee wellbeing services. The survey aimed to:
  - Understand current wellbeing status.
  - Determine what wellbeing services staff know to be available to them (based on the responses from WP2).
  - For respondents who identify as having had low mood in their employment or training, determine the proportion of respondents who accessed EWS for their wellbeing.
  - Determine the proportion of respondents who accessed informal support (non-EWS) for their wellbeing during their employment or training.
  - Understand views of the ease of access to existing EWS and informal or formal available support structures.
  - Refine understanding of commonalities and differences across staff groups.

- Gather staff views on how EWS were implemented by the employer.
- Gather staff views on the importance of EWS and informal support to their wellbeing (physical and mental).

Ethical approval for the study was obtained through University of Lincoln REC (Ref: 2019-Aug-0723). Health Research Authority Approval was not required or sought.

The findings of each package of work are presented separately, and themes from each work package are presented in a matrix to show how quantitative and qualitative data were integrated [40].

4. Variation in sickness absence in the ambulance service

Aim

TO COMPLETE AN ANALYSIS OF PUBLISHED STAFF SICKNESS RATES BY GENDER, AGE, JOB ROLE AND REGION TO UNDERSTAND VARIATION ACROSS DIFFERENT TRUSTS.

4.1 Introduction

Ambulance services in England have the highest sickness absence rates compared to other healthcare organisations in the UK National Health Service[1]. Against the national average absence rate of 4.3 per cent over an eight-year period (data available since 2009), ambulance staff showed an average absence rate of 6.2 per cent with year-on-year increases. An independent review[19] estimated that a 1 per cent reduction in staff absence could save ambulance Trusts £15 million per year.

Systematic analysis of sickness absence in ambulance services is lacking despite staff health and wellbeing having been identified as a key priority among all NHS employees[41]. An early study examining sickness absence in West Midlands Metropolitan Ambulance Service compared with the Post Office and Fire Service in the 1980s[42] found that musculoskeletal injury was the main cause of sickness absence and this was exacerbated by the nature of ambulance work. Sickness absence has been highlighted as a concern for health in ambulance services[6,18] but detailed reasons for this and potential solutions are needed.

Previous research suggests high rates of mental health problems including burn-out, substance misuse and suicide in emergency ambulance workers, which may highlight occupation-specific stressors and health related sequelae [7,43]. In a survey by the charity Mind of over 1,300 UK ambulance service responders, problems at work including excessive workload, pressure from management, long hours, changing shift patterns, and exposure to traumatic incidents, were often cited as the main cause of mental health problems[20]. While reasons for absence are not included in reported figures, a previous study identified that mental health problems were in the top three reasons for sickness absence in the NHS [19] and has been identified as a key area for action[17].

4.2 Methods

Initial analysis was performed using Stata v14.2, and subsequent analysis for forecasting was done using Wolfram Mathematica 11.3.

The dataset analysed obtained from NHS Digital included sickness absence rates for NHS ambulance staff calculated from the Electronic Staff Record (ESR). Rates were obtained by dividing the "Full Time Equivalent (FTE) Number of Days Sick" by the "FTE Number of Days Available" from the absence dimension on the ESR Data Warehouse which gave the following information: FTE days available, FTE days lost, sickness absence rate by staff group, qualification level and ambulance Trust for October to September for the 10-year period from 2009 to 2018. In line with The Data Protection Act if the organisation had less than 330 FTE days available during the study period it was censored for analysis. Ambulance Trusts were randomly assigned an alphabetical letter (A to J) to protect confidentiality of individual Trusts where higher or lower rates were apparent. Our approach was to present the data anonymously to the participating Trusts to inform shared learning. Funnels plots were used to chart sickness absence rate for all the ambulance Trusts at two timepoints from October 2009 to September 2010 and October 2017 to Sept 2018.

The Autoregressive Moving Average (ARMA) is based on taking the previous linear incidence termed autogressive (AR) together with the linear moving average (MA) which considers the current and previous residual time series. We used the Box-Jenkins method of Autoregressive Integrated Moving Average (ARIMA), where a univariate time series model is based on the generalised model of ARMA with a differencing process which converts non-stationary (seasonally variable) data to stationary data. The differencing is a measure of how many non-seasonal differences are needed to achieve stationarity, and if there is no differencing then we simply revert back to ARMA.

As there was strong evidence of seasonality within our data, Seasonal Autoregressive Integrated Moving Average (SARIMA) models were also used. SARIMA models are based on the ARIMA model but include seasonal differencing, where periodicity within the dataset is accounted for. We focused the model on sickness absence in clinical staff groups which included professionally qualified clinical staff (Hospital and Community Health Service (HCHS) doctors; Ambulance Paramedic; Ambulance Technician; Emergency Care Practitioner; Manager; Medical Technical Officers (MTO) / Technician; Nurse; Other Senior Technicians (ST) & Technician Manager (TM); Scientist; Tutor).

Auto correlation functions (ACF) and partial autocorrelation function (PAF) were used to determine whether seasonality was present (non-stationarity) within the model or not. If the ACF and the PAF showed points outside the acceptance value then this was taken to indicate seasonality within the time series, requiring the use of SARIMA model.

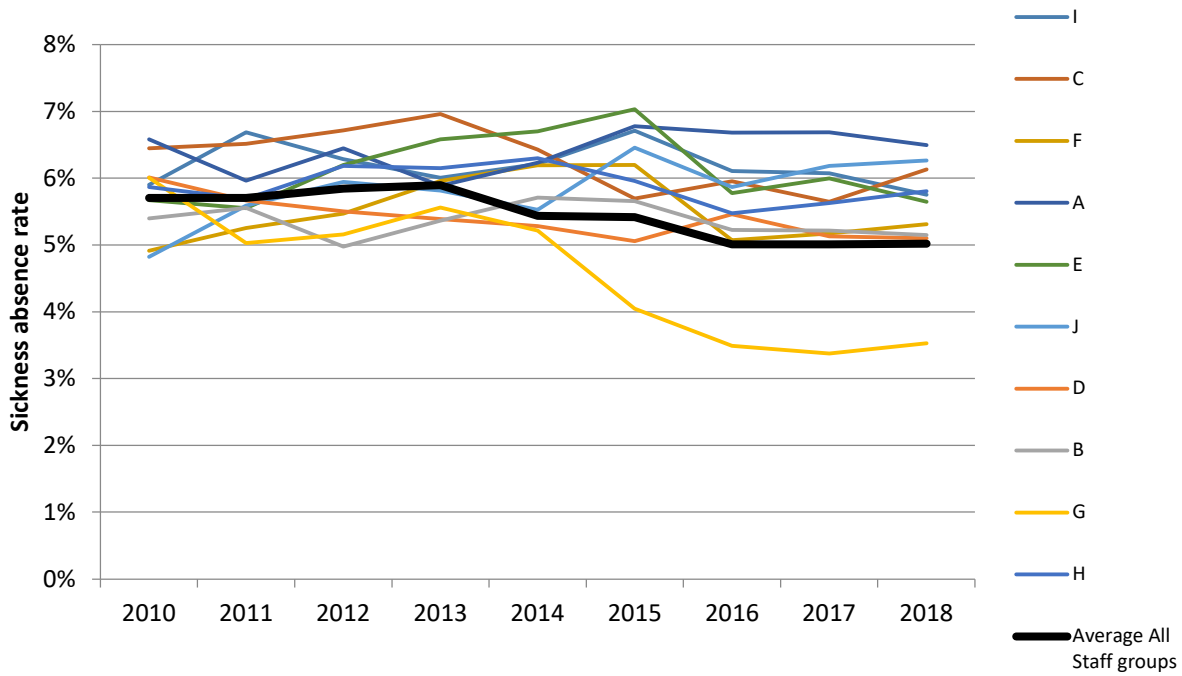
Akaike information criterion (AIC), Bayesian information criterion (BIC) or Schwarz Bayesian information criterion (SBC) likelihood values were calculated but AIC was used for model selection.

4.3 Results

In our analysis, a total of 1117 months of sickness absence rate data for all English ambulance services were included. Across all included ambulance services the median days available were 1,336,888 with inter quartile range (IQR) of 54,8796 and 73,346 median days lost due to sickness absence, with IQR of 30,551 days. The sample size of months for individual ambulance services was the same (N=109), except ambulance service Trust I where data were only available until November 2016 (N=76). For model validation, 6 months' data were used to compare model forecasts. We noticed considerable variation in annual sickness absence rates among all clinical staff across each ambulance service in England and over 10 years between 2009 and 2018 (1) (Figure 1).

Within each organisation, ambulance sickness absence rates did not vary greatly over time, with the exception of ambulance service G, which experienced a drop of 3.2% absence between the annual averages in 2010 and 2018. Figure 1 illustrates that for this reduction in absence, the rate was sustained in subsequent years. There was also a slight drop in in average rates across all the ambulance services; this drop is still persistent when the outlier ambulance service was removed.

Figure 1 Annual sickness absence rates for all clinical staff in each (A-J) NHS ambulance service in England. Sickness Absence for all the Ambulance Service from Oct 2009 to Sept 2018



When data from the start and end of the study period were examined (2010 vs 2018) there were clear differences between ambulance service absence rates. Funnel plots in Figure 2a and 2b illustrate these differences, and in particular that service G maintained low sickness absence rates between the two periods.

Figure 2a Funnel Plot for Sickness Absence from October 2009 to September 2010. The dashed lines represent the control limits 95% and 99.8% confidence intervals respectively (approximately 2 and 3 Standard Deviations).

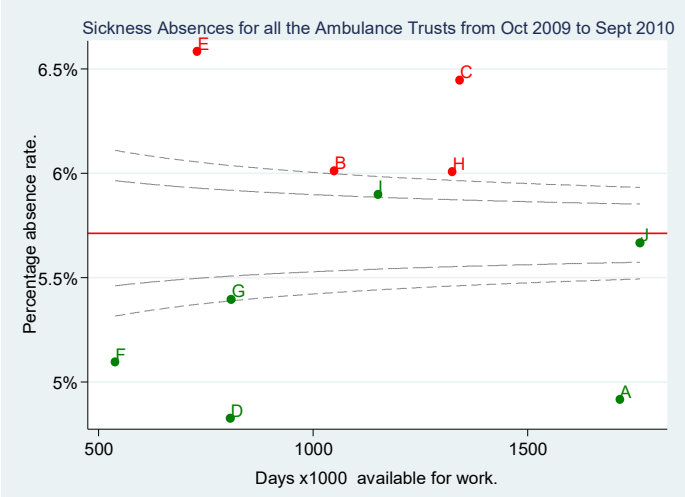
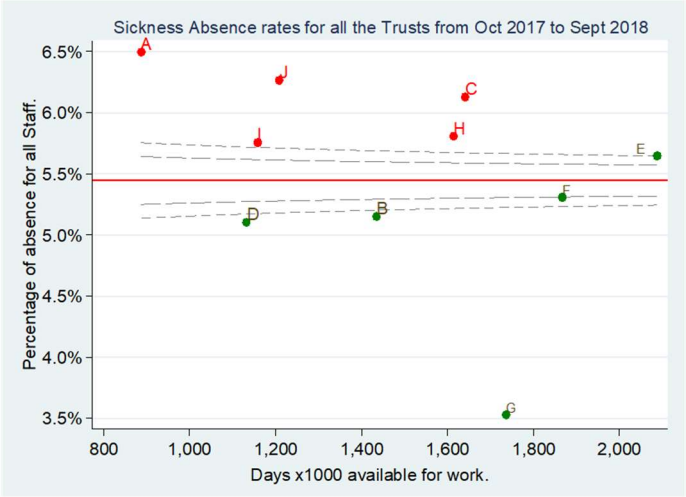


Figure 2b Funnel Plot for Sickness Absence from October 2017 to September 2018. The dashed lines represent the control limits 95% and 99.8% confidence intervals respectively (approximately 2 and 3 Standard Deviations).



Further analysis of absence data for the subgroup of professionally qualified clinical staff (HCHS doctors; Ambulance Paramedic; Ambulance Technician; Emergency Care Practitioner; Manager; MTO / Technician; Nurse; Other ST&T Manager; Scientist; Tutor) was also carried out.

Models ARIMA or SARIMA were developed and selected based on information criteria which estimated prediction errors of the models for the given ambulance service sub-group data including Akaike information criterion (AIC), Bayesian information criterion (BIC) or Schwarz Bayesian information criterion (SBC) likelihood values. Lower values indicated higher quality of fit and therefore the model with lowest values was selected. SARIMA models were selected because of seasonality in the data; most services showed differences between ARIMA and SARIMA model statistics, but this was less so for ambulance service I. The mean sickness absence rates for clinical staff in individual ambulance services at monthly intervals between 2009 and 2018 are presented in Table 2, and SARIMA model selection is presented in Table 3.

Table 2. Mean sickness absence rate and Standard Deviation for each Ambulance service

Ambulance Service	N (number of months of data available)	Mean [95% Confidence Interval]	Standard Deviation
A	109	7.35 [7.07 - 7.62]	1.43
B	109	5.61 [5.46 - 5.77]	0.82
C	109	7.19 [6.97 - 7.42]	1.19
D	109	5.57 [5.42 - 5.73]	0.81
E	109	6.2 [6.00 - 6.40]	1.06
F	109	5.86 [5.71 – 6.00]	0.77
G	109	4.82 [4.55 - 5.09]	1.41
H	109	6.24 [6.06 - 6.41]	0.91
I	76	7.28 [7.05 - 7.52]	1.01
J	109	6.25 [6.06 - 6.44]	1.00

Table 3 Model fit tests for each ambulance service where SARIMA was selected. (Other Trusts are presented in further Tables)

Ambulance Service	Model fitness Tests	**Akaike's information criterion (AIC)**	corrected Akaike's information criterion (AICc)	Bayesian information criterion (BIC)	Schwarz Bayesian information criterion (SBC)	Model selected
D	ARIMA	**-130.063**	-127.481	-119.862	-119.298	
	SARIMA	**-169.131**	-166.022	-152.606	-152.983	SARIMA $\{1,0,1\},\{0,1,2\}_{12}$
G	ARIMA	**-113.001**	-110.634	-100.595	-104.792	
	SARIMA	**-155.229**	-152.444	-134.769	-141.548	SARIMA $\{0,1,0\},\{1,1,2\}_{12}$
E	ARIMA	**-127.562**	-125.006	-117.629	-116.617	
	SARIMA	**-123.077**	-120.021	-110.713	-106.66	SARIMA $\{1,0,1\},\{1,1,1\}_{12}$
H	ARIMA	**-150.431**	-147.608	-135.31	-136.975	
	SARIMA	**-120.737**	-117.913	-107.612	-107.28	SARIMA $\{1,0,0\},\{2,1,0\}_{12}$

We forecast sickness absence rates for 2019 based on the SARIMA models, the modelling is shown as dotted lines on figures. We then obtained data for 2019 where actual rates for the year are shown as different coloured solid lines and compared the actual and predicted graphs. Predicted values corresponded well for services D, E, G and H (Figures 3 and 4).

Figure 3 Sickness absence rates over time (2009-2018) for ambulance services D (blue line) and G (Black line) with forecasted (dotted lines, 12 months period). Solid green line shows new data rates for the period 01-10-2018 to 01-03-2019.

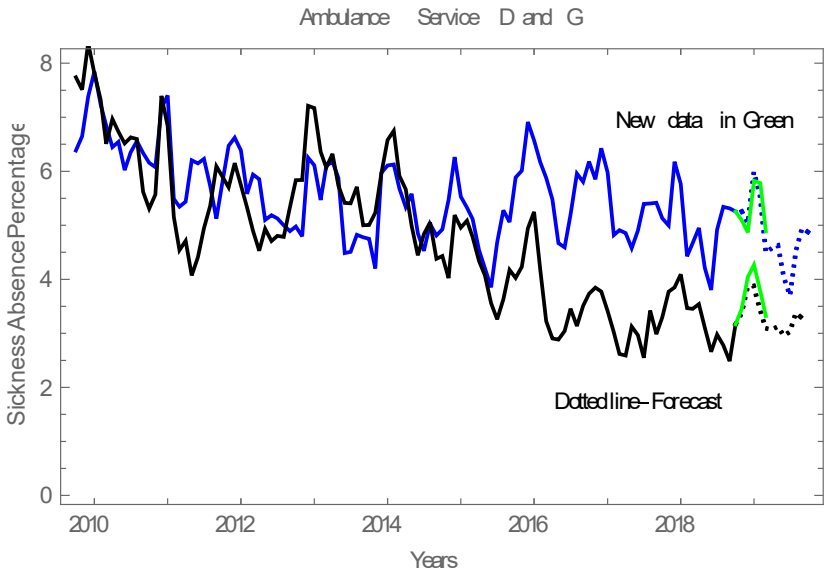
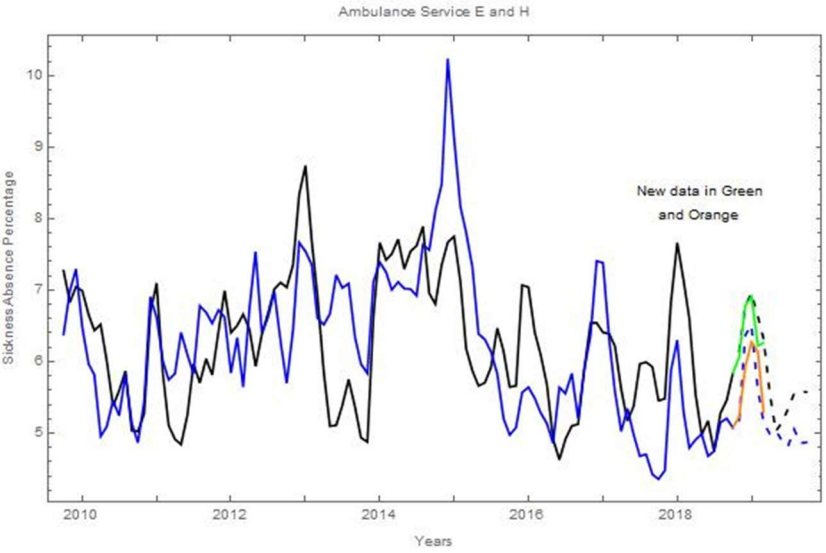


Figure 4 Sickness absence rates over time (2009-2018) with forecast (dotted line) and actual rates for 2019 (solid line) for ambulance services E (blue line) and H (Black line). Solid green (service H) and Solid orange (service E) lines show new data for the period 01-10-2018 to 01-03-2019



Trusts E and H had similar means and standard deviations (Table 2), which indicate high variability between months, and the selected models predicted the seasonality and trends well.

Although ambulance Trusts A and G had the largest standard deviations, i.e. variability (Table 2), Trust G had better model fit. Model fits for Trusts C and I are shown in Table 4, and for Trusts A, B and J model fits are shown in Table 5.

Table 4. Model fits with 95% confidence intervals showing variation in prediction over 12 months.

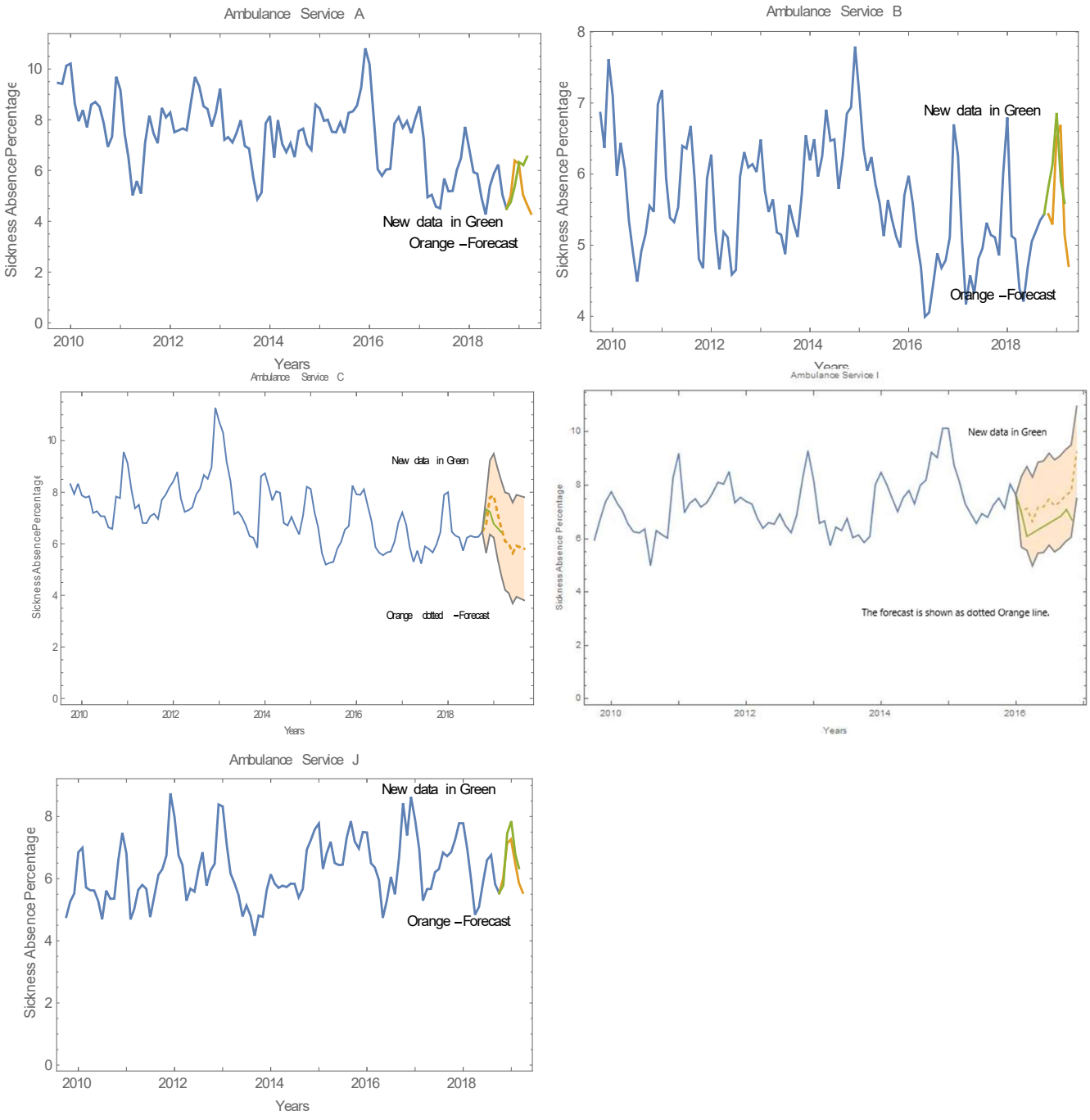
Ambulance Service	Model fitness Tests	**Akaike's information criterion (AIC)**	corrected Akaike's information criterion (AICc)	Bayesian information criterion (BIC)	Schwarz Bayesian information criterion (SBC)	Model selected
C	ARIMA	**-90.1803**	-87.5977	-77.4113	-79.4149	
	SARIMA	**-116.747**	-113.923	-100.169	-103.29	SARIMA $\{1,0,0\},\{1,1,1\}_{12}$
I	ARIMA	**-47.7445**	-45.1811	-40.9185	-40.7523	
	SARIMA	**-47.7705**	-44.1235	-37.5104	-33.7861	SARIMA $\{1,0,0\},\{2,1,1\}_{12}$

Table 5. Model fit tests for ambulance services A, B and J.

Ambulance Service	Model fitness Tests	**Akaike's information criterion (AIC)**	corrected Akaike's information criterion (AICc)	Bayesian information criterion (BIC)	Schwarz Bayesian information criterion (SBC)	Model selected
A	ARIMA	-13.1636	-10.5811	-2.44251	-2.39825	
	SARIMA	-35.7657	-32.6568	-19.8912	-19.6176	SARIMA $\{1,0,0\},\{1,1,2\}_{12}$
B	ARIMA	-120.982	-118.399	-111.132	-110.216	
	SARIMA	-117.623	-114.799	-106.565	-104.166	SARIMA $\{1,0,1\},\{1,1,0\}_{12}$
J	SARIMA	-73.7603	-71.1777	-64.2001	-62.9949	
	SARIMA	-63.7719	-60.663	-52.5644	-47.6238	SARIMA $\{1,0,0\},\{1,1,2\}_{12}$

Figure 6 shows absence data for Trusts A, B, C, I and J, with modelled and actual rates. Trusts D and G showed clear decline in sickness absence trend. Forecasted sickness absence rates were higher than actual rates for services I and C, 95% confidence intervals around forecasts suggest that predictions are still within range of acceptance.

Figure 6 Sickness absence rates over time (2009-2018, Blue solid line) with forecast (Orange dotted or solid line) and actual rates for 2019 (Green solid lines) for ambulance services A, B, C, I and J. The shaded area represents the 95% forecast confidence intervals for 12 months prediction.



4.4 Discussion

4.4.1 Seasonality

To our knowledge, this is one of the first studies to analyse, in detail, published NHS staff sickness absence data. A clear pattern emerged of seasonal variation in sickness absence rates which peaked during January

and February and then showed a reduction before climbing again in the autumn months of October and November. This is an important finding which should be explored in other NHS organisational groups, including hospital and primary care. Sickness absence in NHS doctors has been noted in a previous analysis of 2016/17 data[44], but at much lower rates (range 1 to 1.3%), with a peak during the months of December and January. The extent of seasonal variation in sickness absence may vary according to staff group and the reasons for this, such as differential uptake of influenza vaccinate or other measures, may be important for alleviating sickness absence. In the cases of both services F and G a sustained drop in absence was noted, but seasonal variation in sickness absence persisted. Reasons for sickness absence were not available in this dataset, so the impact of factors such as influenza or winter illnesses cannot be determined.

4.4.2 Predictability

The models can predict future absence for individual ambulance Trusts into 2020 (pre-COVID-19 pandemic), which may therefore be used to manage and prepare for workforce availability.

4.4.3 Detailed examination of high/low absence rates between organisations

Some models did not predict as well as others. This indicates the need for further investigation as these parsimonious models may not be capturing all the heterogeneity relating to services. We were aware of some structural changes taking place including recruitment drives, which could create slightly more troughs or peaks out of sync with the model predictions. The COVID-19 pandemic is also likely to alter the patterns of absence during 2020-21, but it is not clear if the seasonality in this staff cohort will be re-established once vaccines efficacy and policies that reduce requirements for quarantine take effect.

4.4.4 Conclusions

This study provides the first systematic analysis of sickness absence data in English NHS ambulance Trusts over time, covering the workforce over a ten-year period. We have also demonstrated that within an organisation, ambulance sickness absence rates vary predictably over time and that predictive models can help to forecast sickness absence in health care setting. Our analysis indicates that future trends can be predicted from past rates.[45]

There are limitations to this study. Firstly, the absence prediction modelling was based on data for some clinical ambulance staff, but excluded those in the support staff category, because of missing and incomplete data. The second limitation is the lack of availability of data for gender and age of staff or the reasons for absence, although reported absence reasons are generally not well recorded[19]. Although these models can predict absence in most Trusts, there are many complex organisational, economic, environmental, socio-political changes which can make prediction difficult. Some of these factors include urgent and emergency care service reconfigurations, changes to operational delivery models through contracting arrangements for non-emergency patient transfer and 111 services, in addition to the changes to commissioning and

consequent budgetary changes and reduction in public funding in the face of increasing demand for emergency care[19].

In this work, now published[46], we demonstrated that seasonality played a key role in determining the extent of sickness absence in the ambulance service. Our model has also the predictive quality to help prepare ambulance Trusts for periods of increased activities. The model may be able help to predict sickness absence in a wider variety of health settings, leading to financial savings and resource planning.

5. Analysis of ambulance service staff wellbeing policies

Aim

TO EXPLORE UK AMBULANCE SERVICE POLICIES AND STRATEGIES FOR STAFF WELLBEING, FOCUSSING ON SPECIFIC MENTAL WELLBEING STRATEGIES AND INTERVENTIONS, AND SUICIDE PREVENTION STRATEGIES AND INTERVENTIONS.

5.1 Introduction

Ambulance service policies and procedures around staff wellbeing provide important contextual information. Policies signal organisational intent and prioritisation of staff wellbeing and on managing factors that impact upon it. The specific actions recommended in staff wellbeing, the ownership of resulting actions, and whether or not there is an implementation plan can allow interpretation of staff perceptions of the support they receive.

The Association of Ambulance Chief Executives (AACE) has recently issued guidance on designing a staff mental health strategy[24]. Trusts are also likely to be drawing on existing resources such as Head First hosted on NHS Employers developed specifically for ambulance services, TRiM (trauma risk support system), Mind's Blue Light resources for the emergency services, and generic workplace resources including Health & Safety Executive Stress Surveillance tools, NICE guidelines and the Workplace Wellbeing Charter.

Ambulance workers are understood to have a higher risk of permanent medical impairments and early retirement on medical grounds than other medical groups[47–49].

5.2 Methods

A documentary analysis with key informant interviews to explore ambulance service policies for staff wellbeing, including mental wellbeing and suicide prevention was undertaken.

5.2.1 Documentary analysis

For each Trust, eligible documents included policies, procedures or guidance that directly related to staff wellbeing (e.g. mental health or wellbeing policy, suicide prevention, incident debriefing, health promotion, health screening, return to work) and those related to risk/protective factors for poor health and wellbeing (e.g. fatigue management, meal/rest breaks, job stress surveillance, dignity at work, bullying and harassment, fitness for work, absenteeism management). Relevant national policies or guidelines

developed for the ambulance sector provided a national context. Policies, procedures and documents that were not the most current (in use) version or that covered operations not related to staff wellbeing or related factors were excluded.

Trust policies and documents were requested via the Human Resources (HR) Director in each ambulance service, using a gatekeeper approach. A letter was sent to each HR Director requesting permission to receive this documentation. Research staff within each of the English ambulance services provided support with the identification of current documentation relating to staff wellbeing policies, procedures and guidance using a provided list of in-scope documents. National documents were identified through Google searches and through relevant organisations that were partners in this study (AACE, Unison).

Documents from individual Trusts were coded using directed content analysis, replicating the technique reported by Memish *et al.,* (2017)[50]. The guiding framework used was the integrated approach to workplace mental health and wellbeing that captures actions at different levels of the organisation and includes primary, secondary and tertiary levels of intervention (Table 6) [51]. This approach is encapsulated in recent reports on supporting the wellbeing of NHS workforces[2]. Primary interventions were those targeted at risk and protective factors for mental health and wellbeing (e.g. reducing job strain, promoting respectful relationships at work). Secondary interventions targeted those at risk of developing poor mental health (e.g. post-incident support), and tertiary interventions were targeted at preventing further health loss in individuals who had already developed a health issue (e.g. supportive disclosure, return to work).

Recommended actions/interventions within each document were coded into one of six categories representing the type of approach (primary, secondary, tertiary), by target of the intervention (individual, organisation), allowing a count of actions per category type. Illustrative phrases for each recommendation were extracted verbatim. Data extraction was done by two independent reviewers per document, shared across three coders. Any disagreement was discussed until consensus was reached. An Excel-based data extraction tool was developed and piloted with documents from one Trust. National documents will be summarised narratively for context.

Table 6: Matrix of six types of actions utilised in content analysis, adapted from Memish *et al.* (2017)[50]

	Primary	**Secondary**	**Tertiary**
Individual	Primary-Individual (PI)	Secondary-Individual (SI)	Tertiary-Individual (TI)
Organisational	Primary-Organisational (PO)	Secondary-Organisational (SO)	Tertiary-Organisational (TO)

The second stage of examination of wellbeing documents was a critical corporate discourse, which added a further depth to our understanding. This aspect of our approach follows directly from Bowen (2009)[52]. This part of the analysis involved a careful reading of the documents along with a critical frame of reference. This review used a narrative synthesis strategy. To capture all dimensions of these documents, results are presented in narrative and tabular form to provide a summary of the characteristics of all included documents.

5.2.2 Organisational informant interviews

The findings of the documentary analysis were validated with organisational informant interviews. The AACE-supported Human Resources Directors group were approached directly to identify potential participants. Members of the group were asked to pass the project information (participant information sheet and consent form) to the relevant Health and Wellbeing Lead or equivalent in each ambulance service. Interviews were via telephone or Skype and were digitally recorded and transcribed verbatim. After being transcribed, the interviews were analysed using NVivo 12 adopting a framework analysis. The interviews were informed by the themes that were covered by the online survey. This meant that the study adopted a mixed methods sequential explanatory methodology since the quantitative element (the online study) preceded and informed the subsequent qualitative interview study. Because the interview study was deductive in that it was informed by the online survey, coding and analysis mainly produced *a priori* codes. That said, the process of coding and analysis did not preclude de novo codes since the process was flexible in that it left open the possibility of uncovering new codes.

5.3 Results

5.3.1 Documentary analysis

Eight out of ten English ambulance Trusts provided an overarching staff wellbeing policy, with Trusts A and J unable to provide this policy as it was under revision. Table 7 presents a breakdown of the directed-content analysis of the primary staff wellbeing policy documents. The total number of actions in the primary staff wellbeing policy per action type is presented, with percentages to show the distribution of total actions across action type. For example, the policy in Trust I had 299 total actions, with nearly three-quarters of these actions classified as tertiary (72.9%). This contrasts with Trust C where only 4.2% of actions were classified as tertiary. There was more emphasis on primary preventative actions (72.5%).

Table 7: Directed-content analysis of primary staff wellbeing policies (not including Trust A and J)

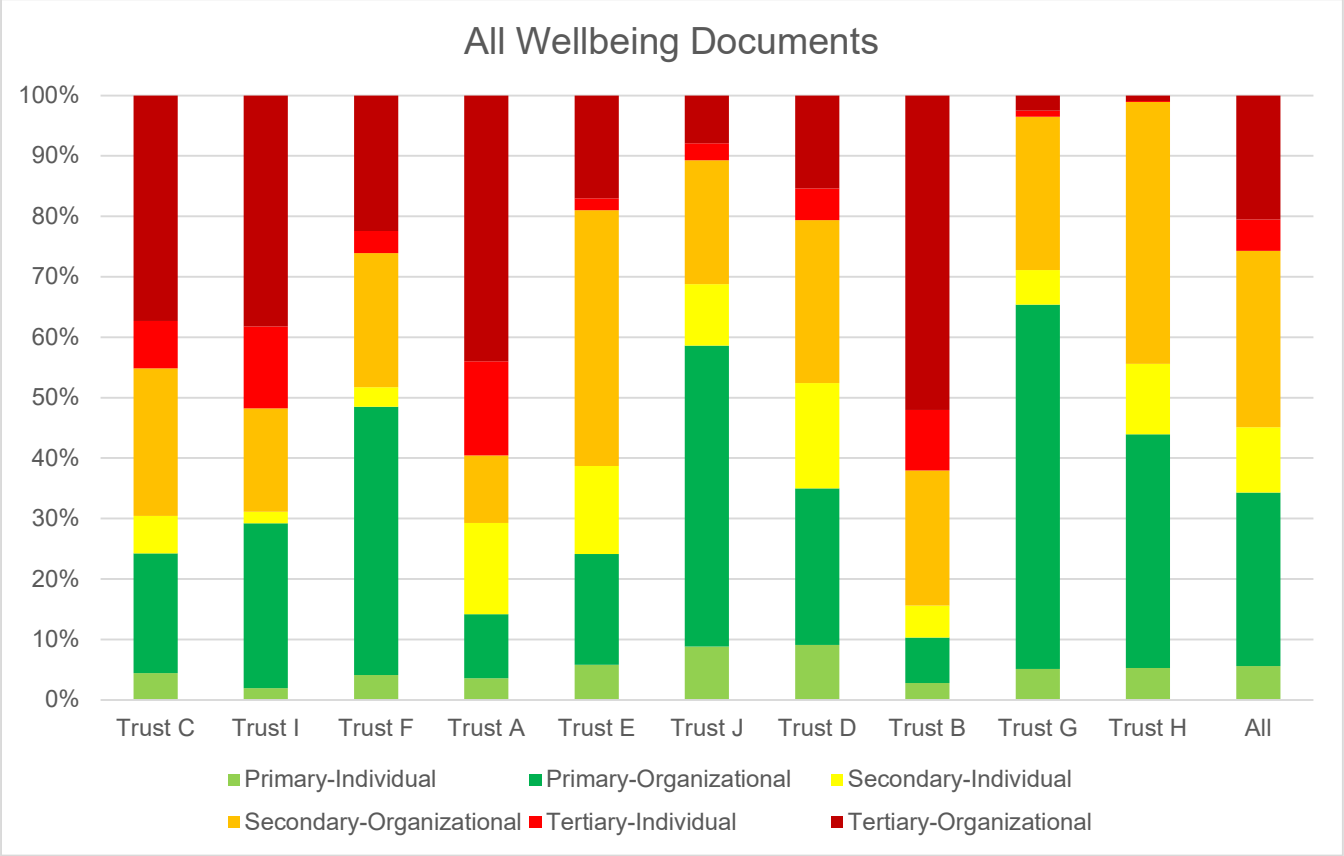
Trust	PI	PO	SI	SO	TI	TO	TOTAL
Trust C	14 (11.7)	73 (60.8)	8 (6.7)	20 (16.7)	0 (0)	5 (4.2)	120
Trust I	4 (1.3)	17 (5.7)	7 (2.3)	53 (17.7)	57 (19.1)	161 (53.8)	299
Trust F	11 (5.2)	171 (80.3)	2 (0.9)	25 (11.7)	0 (0)	4 (1.9)	213
Trust E	5 (7.9)	52 (94.6)	1 (1.6)	5 (7.9)	0 (0.0)	0 (0.0)	63
Trust D	0 (0.0)	45 (84.9)	0 (0.0)	6 (11.3)	0 (0.0)	2 (3.8)	53
Trust B	9 (5.9)	24 (15.8)	12 (7.9)	60 (39.5)	8 (5.3)	39 (25.7)	152
Trust G	9 (5.3)	125 (73.1)	1 (0.6)	27 (15.8)	3 (1.8)	6 (3.5)	171
Trust H	0 (0.0)	79 (98.8)	0 (0.0)	1 (1.3)	0 (0.0)	0 (0.0)	80
	52 (4.5)	**586 (50.9)**	**31 (2.7)**	**197 (17.1)**	**68 (5.9)**	**217 (18.9)**	**1151**

Additional content analysis involved the use of word frequencies and word clouds, which are visual representations of word frequencies. Each word is shown in a size that is proportional to the number of times it appears in the document. Figure 7 shows the word frequency within the primary staff wellbeing policies.

Figure 7: Word cloud of central Health and Wellbeing documents

All Trusts provided a variety of other staff wellbeing policy documents (e.g. absence management, domestic abuse). The Appendix presents a full list of coded policy documents. Figure 8 presents an overview of the distribution of content by action type.

Figure 8 Action type within all included wellbeing documents, by Trust.



To further illustrate what types of actions are being promoted within ambulance services, Table 8 presents some example actions extracted from staff wellbeing policies, reflecting the different levels of intervention and target of action.

Table 8: Example actions to illustrate the types of approaches observed in ambulance service staff wellbeing documents

	Primary	Secondary	Tertiary
Individual	We all take responsibility for our own wellbeing Promoting good nutrition and exercise Promoting better sleep through access to advice and support Support each other Promoting economic wellbeing- opportunities to have fun and save money through use of negotiated staff discounts, access to financial information/support and salary sacrifice schemes (where appropriate).	Self-refer to occupational health in anticipation of a health concern Participate in Occupational Health Service assessment if referred	Participate in return-to-work meetings as requested Comply with sickness absence procedures
Organisational	Provide a clear, accessible entry point for employees to obtain wellbeing advice, signposting and access appropriate services in a timely manner Ensure managers are equipped to support employee wellbeing	Providing access to Truama Risk Management (TRiM) process for everyone Line managers discuss any concerns early where necessary Employee assistance programme, Post-incident Care process, stress management workshops, information for managers and tailored interventions provided directly to staff in the workplace	Ensure a fair and equitable process for managing alternative duties Support employees' transition back into work Managers to hold a detailed return to work interview within 7 days of employee return from sickness absence

5.3.1.1 Suicide and Self-harm

One Trust had revised its strategy in 2019 in line with the AACE employee wellbeing strategy guidance document[24], noting recommended use of risk assessments for suicide at local level, especially in times of heightened risk (e.g. death by suicide of colleague, loss of driving licence[53]). No other policy mentioned risk reduction of death by suicide amongst staff. The following table summarises mentions of suicide and self-harm in English ambulance wellbeing documents:

Table 9: Mentions of "Suicide" and "Self-Harm"

Trust	Document	Suicide	Self-Harm
Trust I	People strategy (objective 6)	7	0
Trust F	Peer Support Network (PowerPoint presentation)	1	0
	Resilience and Preparedness Building Group Meetings	1	0
	Wellbeing Strategy	1	1
	Sickness Absence Policy	1	0
Trust D	Depression and Low Mood (self-help leaflet)	2	5
	Stress (self-help leaflet)	1	1
	Trauma (self-help leaflet)	1	2
	TRiM Guidance	1	0
	Wellbeing Hub (managers guide)	1	0
	Wellbeing hub (guide to wellbeing)	2	2
Trust G	Health and Wellbeing Strategy	6	0
	Total	**25**	**11**

Despite the widespread recognition that suicide is a problem in ambulance service staff, the amount of attention dedicated to it in these documents appears disproportionately small. Out of all the Trusts, only four have any mention at all. It also revealed that out of these four, none provided specific guidance on suicide prevention support.

5.3.2 Informant interviews

The implementation of these policies in practice was explored through interviews with eight staff wellbeing leads (Trusts A and G not represented). The topic guide began with reflections on how policy was developed, before exploring how the staff support programmes are implemented

Policy development

All decisions required the approval of senior management within each Trust. Trust H explained after a long negotiation, the Trust had the final right of veto: "*"a number of recommendations, two of which are about to go to Trust for approval*" (Trust H). Decisions around what is included in and omitted from the wellbeing policy led at times to conflict between wellbeing leads and their superiors. For example, in the following quote, the wellbeing professional employs combative imagery to describe the long-term struggle they had in establishing what they regarded as an essential addition to the Trust's welfare provision:

> *'I fought for three long and hard years, with management, high up, and I mean the board, everybody, to put in place my own recruited, trained, bespoke counselling team who were experienced and trained to deal with trauma.' (Trust F)*

Having experienced counsellors was important as:

> *'There was a lot of feedback from previous counsellors who would start crying, a couple of times they fainted, or they would just say, "You must leave the service," none of which is what we want.' (Trust F).*

Wellbeing and responsibility

The documentary analysis illustrated how the balance between organisational and individual actions varied across Trust policies. Trust leads highlighted a real felt tension between individual and organisational responsibility.

> *' sometimes, there was a sense of entitlement from staff around that kind of, "You need to fix me." I think that one of the things that I recognised was we had to support people to understand that they were capable of supporting their own health and wellbeing alongside us, to provide them with the foundations, support and the ideas to look after themselves, but we couldn't fix them because that required their input into their own wellbeing.' (Trust B).*

In looking at accountability, it was also important to recognise the limits to wellbeing policies in the ambulance service and the external factors that were outside their remit. Just as ambulance staff faced obstacles in achieving positive wellbeing, so did wellbeing policies and leads. Each ambulance trust is different, but all have a large number of staff to serve working in diverse and mobile environments. The Trust H lead describes the practical difficulty in meeting the needs of their workforce:

'We cover 6,000 square miles. We've got over 65 ambulance stations, as well as a number of other venues that we use…Just being able to communicate with the workforce being so dispersed is the biggest challenge that I think we have. Letting them know what we're doing, what our plans our, how they can get involved. I think that's for me the biggest challenge.' (Trust H)

Mental health and suicide prevention

Wellbeing leads keenly understood that their workers faced many work-related pressures that impacted upon their mental health, but that there were also people who are attracted to the nature of this work.

'Of course, those jobs, as horrendous and emotionally demanding as they are, many of our staff, the larger majority of our staff, frankly, that's why they joined. […] but it gives them a buzz, as opposed to going to the "rubbish" jobs.' (Trust F).

There was recognition that personal experiences of these stressors varied, and the Trust's response had to accommodate this diversity of needs.

'So, what they want most is for their management high up to say, "Well done, thank you," *not to inundate them with… well, not to pathologise something that's normal. If we're standing at [a burning building] and we've been trained to save people's lives and we … see people burning to death, that is going to affect us, but it's not going to destroy us unless someone says,* "Oh, my God. You must be broken. Oh, my…" *Do you see what I mean? It's all that kind of nonsense.' (Trust F).*

Interviewees also understood the pervasive impact of mental health for some individuals.

'Depression is definitely a big thing, chronic stress, stress that slowly drips and accumulates, which then impacts communication, which impacts how they talk to managers, how they respond to members of the public, how they respond at home.' (Trust F).

Wellbeing leads described how, in recent years, their work around mental health had increased significantly. The centrality of mental health in wellbeing documents seemed to only be increasing over time, and reflected the diversity in conditions that could be classified as mental health challenges:

'It's probably worth noting that we're putting a lot of effort into our Mental Health framework going forward"..."I think, anecdotally, mental health is probably a big one at the moment. That can be low-level mental health. It's not just like for PTSD or addiction forms of mental health. It could be just day-to-day stress and anxiety.' (Trust E).

Many of the most significant mental health related issues addressed were for non-work-related factors. Trust B provided the example of employees who had experienced trauma through their previous employment.

'We've got lots of ex-Forces that end up working for us who've got really significant PTSD from their experiences on tour and have spoken quite openly about historic dependence on things like alcohol. I think it's that self-medicating that people find comforting.' (Trust B).

The Trust H lead noted that non-work factors may constitute a majority of reasons for help through formal channels.

'we also see a lot of people with mental-health-related difficulty due to reasons outside of work. Our employee assistance programme that we commission sees two thirds more people accessing that service with personal-related problems than they are with work-related problems.' (Trust H).

There was a consensus among the wellbeing leads that mental health was given primacy other wellbeing initiatives.

'we're absolutely putting a huge amount of focus into mental wellbeing for our staff and our managers. And it does feel like that is absolutely the priority in terms of where our energy and time is being spent.' (Trust H).

As noted above the limited attention dedicated to suicide prevention in the policy documents was small. Only four Trusts mentioned it at all, and none provided specific guidance. This omission seemed more glaring when considering the working experience of Trust C:

'I would say that over a period of four years that we have had many, many, many people with suicidal ideation. I mean, you know, daily.' (Trust C).

There is a clear sense that trust interventions can reduce instances of suicide, and Trusts were mobilising to identify preventative actions.

'What we know we have done is stopped several people from actually completing suicide.' (Trust C).

'We've got a suicide prevention task and finish group, which is starting to look at having procedures and support and guidance in place for managers who are supporting staff who are experiencing suicide ideation.' (Trust H).

Culture of openness versus stigma

Trust J speculated that there had been a cultural shift around stigma and mental health, and this had increased demand as people were, in these circumstances, more likely to seek help.

'Culturally, it is more acceptable to come forward with mental health issue, and I think we've had to try and embed that internally as well, which has been particularly challenging within the ambulance service, because when I joined 13 years ago, it was very much 'stiff upper lip and carry on.' (Trust J).

The need for openness and willingness to disclose was reflected in staff wellbeing policies, such as:

> *'It is … imperative that we continue to foster an open culture of disclosure to encourage staff to seek the right support when they need it.'(Trust E policy).*

Healthy lifestyle promotion and physical health

There was a majority understanding that behaviour changes around diet, exercise and movement could have a significant and positive effect on the overall mental health of their workforce:

> *'Linking mental health with physical exercise, awesome. All these things are brilliant because they make sense. As a human being, if you're chronically stressed, if you step outside and put one foot in front of the other, you are regaining control of your life.' (Trust F).*

However, wellbeing leads did not universally support these intervention policies. One initiative produced by Trust F encouraged staff to use an exercise bike during their breaks and were rewarded with a healthy fruit smoothie if they achieved a set distance. The wellbeing lead made a negative assessment of this, and queried whether such approaches were really tackling the root cause of problems. These were viewed as gimmicks that failed to tackle the root causes.

> *'That's not patronising at all, is it? No, not at all…..I love yoga and Tai Chi, but the idea that things like this will prevent someone from developing chronic stress disorder, or suicidal ideation, or, actually, taking their own lives or depression that is intense and impactful. No, it won't. None of that [expletive] will work.' (Trust F).*

Physical health concerns were noted, particularly musculoskeletal conditions and injuries, with support for different aspects of health varying over the working life course.

> *'we also do have a high level of people that have musculoskeletal conditions and injuries related to the role. Our absence level for that is pretty close to mental health, to be honest.' (Trust H).*

> *'our people at the moment will have to work until they're 67, so it was interesting to see how sickness levels or people's needs changed over that period of time in their career.' (Trust I).*

Wellbeing During a Pandemic

Three of the interviews with wellbeing leads were carried out during the early stages of the COVID-19 pandemic (Trusts E, G and H). Within these interviews, there was a strongly expressed view that the novel working environment would negatively affect the wellbeing of their workforce. There was concern because of increased demand, challenges in accessibility and changes to the wellbeing offer:

‘I think with everything at the moment being so demanding, the pressures being high and the worries for our staff, certainly the front line, are significant’. (Trust H)

‘Things are obviously, as I’m sure you can imagine, very manic within the service, so things are being re-prioritised.’ (Trust G)

‘*At the moment, referring, maybe, for physiotherapy for an old injury is at the bottom of some people’s list.’ (Trust G)*

In expectation of a significant increased demand on call-handers, ambulance trusts took the pre-emptive decision to hire large numbers of untrained and inexperienced temporary staff from employment agencies. This, by definition, increased demand for wellbeing services at a time when these services were under so much pressure:

‘There are only three of us in our little service and we cover the whole trust, which, at the moment, is coming up to about 6,500 people, wellbeing-wise, because of all the new recruits from COVID’. (Trust H)

Provided wellbeing services (as well as, of course, all of healthcare) had been heavily affected by the pandemic and were required to make changes to their work practices.

‘they'll be able to access physiotherapy – it was face to face until COVID came, but now it's remotely – probably within five days of the referral’. (Trust H)

Planning for the future of the wellbeing provision was uncertain, but was being considered in one of the Trusts.

‘We don't know what's going to happen in the future. That is where we're going to have to really make sure that our health and wellbeing offering is really solid’. (Trust H)
‘Our peak will be a month after the peak because it will be the outfall of COVID and the moral injury, the disenfranchised grief that people might feel associated with the decisions that have had to be made in those circumstances, but also the possible impact of family members passing away, to colleagues passing away”. (Trust H)

‘we've got our campaigns ready now until June, but, as you know, with COVID, it makes things a little bit more difficult to plan’. (Trust H)

5.4 Discussion

This work package adopted a grounded approach with mixed methods that incorporated in-depth interviews with the wellbeing leads and an analysis of wellbeing policy documents. The document analysis incorporated a direct content analysis which divided every action into six categories, determining the responsible agent and type of approach offered. Numerous workplace and non-workplace factors were explored which affect staff wellbeing (both positive and negative).

Interviewees described the development of wellbeing policy as a result of adhering to various legislation and collaboration sometimes involving several parties within the Trust. This revealed tensions and power-dynamics at play. Interviewees also highlighted a perceived conflict between individual and organisational responsibility for staff wellbeing.

To take advantage of some employer wellbeing offerings, employees were first required to disclose personal information to their employer. Disclosure can be the requirement to trigger almost all secondary and tertiary wellbeing interventions and can also be used to claim a plethora of legislative rights for protected characteristics including disability rights and certain gender specific matters. However, it can lead to various forms of prejudice and discrimination. Those will mental health conditions describe complex situations around disclosure and employment[54]. Non-disclosure may be the most rational course of action as empirical research has demonstrated disclosure poses significant challenge for people with hidden disabilities. Harlan and Robert (1998)[55] conclude that it "entails substantial risk to their careers". Rollins *et al.* (2002)[56] showed that individuals who did disclose their disability had higher stress post disclosure. The 2019 Mind Blue Light survey showed that disclosure and help-seeking for mental health problems is low amongst ambulance staff, but reflects general workplace attitudes. [33]

Although wellbeing lead interviewees reported physical health problems affected staff to the same degree as mental health, much more time and resources were devoted to the latter. Working practices and environment such as lifting, and desk-based work were understood to negatively affect employee health. There was however an agreement that the stigma around staff mental health had reduced within the ambulance service, which is in agreement with ambulance trust respondents to a recent survey from Mind[28]. English ambulance trusts invest heavily in preventative, positive lifestyle interventions. It is difficult to judge the efficacy of these various initiatives, especially over the long term, but leads suggest that they have an important symbolic function, signalling a level of care. Alongside this there is a strong emphasis on absence or attendance management with eight out of the ten trusts having clear attendance / absence management policies and supporting documentation. One trust also had an explicit objective to reduce absence rates.

Within the included documents there was relatively little on either financial wellbeing or the promotion of good sleep. A careful critique of disability policy through the lens of the social, medical and affirmation model of

disability revealed some important aspects which should be addressed. Specifically, more care should be applied when writing policy about absence and reasonable adjustments. In disability policy, more emphasis should be placed on how they impact notions and experiences of stigma, discrimination and empowerment.

Documentary analysis revealed that mentions of “suicide” and “self-harm” were described in ambulance health and wellbeing documents in three central ways (i) to provide information on it, (ii) propose organisational action to combat it and, (iii) signpost available support to those who suffer from it. However, only four of the trusts mentioned staff suicide within their wellbeing documents, and none described their suicide prevention or postvention strategies or plan, although interviews describe these activities and their perceived impact for staff in reducing suicide and signposting was the most common way that suicide was discussed.

Interviews carried out at the start of the COVID-19 pandemic illustrated the understanding that the pandemic had already negatively impacted the wellbeing of ambulance staff, and wellbeing leads felt that many of the negative effects would not be felt until the direct threat of the pandemic had passed. This assessment is consistent with the literature of PTSD that demonstrate that there is a delayed on-set of symptoms[57]. The long-term nature of the pandemic was not appreciated at that time, and cumulative distress in the NHS workforce is now being described[58].

6. Exploring staff experiences of wellbeing interventions by semi-structured interview

Aim

TO UNDERSTAND THE KNOWLEDGE AND PERCEPTIONS OF UK AMBULANCE STAFF OF WELLBEING INTERVENTIONS AVAILABLE THROUGH THEIR EMPLOYER AND INFORMAL SUPPORT ARRANGEMENTS.

6.1 Introduction

In the 2018 NHS staff survey, ambulance services were described as: "*far worse than other NHS organisations for discrimination and equal opportunities, illness due to work-related stress and poor employee engagement as compared to other health organisations*" [59]. These problems were aggravated by a national paramedic shortage and high turnover rates [14].

A survey by the charity Mind of over 1,300 UK ambulance service responders, cited that problems at work were often the main cause of mental health problems. These problems included: excessive workload; pressure from management; long hours; changing shift patterns; and exposure to traumatic incidents [20]. Ambulance staff are at risk of poor wellbeing [60–62] any may have a greater risk of occupational suicide than the general population [53]. Previous research into sickness absence among ambulance staff suggested a lack of evidence for the effectiveness of wellbeing interventions[18].

NHS ambulance services provide employee wellbeing support via occupational health and other services. These were identified during the documentary analysis in Work package 2 above. NHS ambulance staff are also able to access non-employer based wellbeing services such as the Mind Blue Light programme, The Ambulance Staff Charity, via their Unions or professional bodies. At the end of the Mind Blue Light programme (2015-2019), a survey of ambulance staff indicated that there had been changes in staff experiences of mental health. Notably:

- In 2019 65.6% of respondents were aware of the mental health support available to them through their organisation, compared to 43.6% in 2015
- 43.3% of respondents in 2019 thought that their organisation support employees who experience mental health problems well, compared to 20.9% in 2015.
- 2015 just 19.6% of respondents felt that their organisation encourages staff to talk openly, in 2019 this was 59.7%.

Whilst some aspects of employer support for staff appeared to have improved over the four-year period between surveys, further improvements in the modification of workplace factors that contribute to poor wellbeing such as exposure to trauma and excessive workload and improvements in the accessibility and delivery of support are needed [33].

Ambulance services are the first response to seriously unwell and injured patients, including those symptomatic with COVID-19. The pandemic has led to growing concerns about the psychological impact on frontline healthcare professionals (Greenberg, Gnanapragasam, and Wessely 2020). This study was planned before the SARS-CoV2 pandemic, and was conducted both before and during the UK first pandemic wave.

The telephone interview study aimed to examine the knowledge, experience and perceptions of UK ambulance staff about the mental health and wellbeing interventions available through their employer and informal support arrangements.

6.2 Methods

Interviews were conducted with ambulance staff from three NHS ambulance trusts in England (C, I, and G), selected to represent services with high, medium or low relative sickness absence rates.

Ambulance staff who were working directly with patients (in face-to-face or telephone contact roles) in participating NHS Trusts were invited to contact the research team to express their interest in being interviewed through a variety of internal communications routes, including newsletters and social media. Interviews with staff were conducted by telephone and semi-structured using a topic guide (see Appendix), but interviewers encouraged staff to talk freely about their experiences [63–65]. These were digitally recorded and transcribed verbatim. Interviews continued until data saturation was reached, where they produced "*no new data, no new themes, no new coding and ability to replicate the study*" [66].

Transcripts were coded and analysed using Framework Analysis (FA). The initial stage of FA was to familiarise the content of the interviews through reading the transcripts as well as the contemporaneous handwritten notes made during the interview. This indicated the themes that would need to be coded and analysed supported by NVivo 12 at a later stage [67]. The next stage was to establish the main themes[67]. FA suggests a degree of flexibility by retaining both the a priori codes and the possibility of modification and supplementing these with *de novo* codes [67,68]. Having established the main thematic framework, the next stage of FA was to index the data. Indexing involved organising and categorising the data into themes.

Following on from indexing the data, we charted the data into the relevant headings and subheadings. After charting, we mapped and interpreted the interview data.

6.3 Results

We undertook 25 semi-structured telephone interviews with ambulance staff from Trust C (16), Trust I (2) and Trust G (7) from April-November 2020. From these interviews, the main themes were: supporting staff; engagement with staff wellbeing; symbiotic associations between staff and employer; and resilience or resignation.

Supporting staff

Witnessing, either in person or remotely in a call centre and over the phone, distressing and trauma events, coupled with adversarial interactions with patients and members of the public was described by interviewees as harmful. Unfounded guilt was a common emotional response and employees perceived a lack of managerial and organisational support over these matters. Employees further noted how their day-to-day tasks could harm their physical health. This was most obvious in incidents of violence but also in various injuries that resulted from lifting and desk-based work.

Supporting staff: Unhealthy work

The types of incidents staff encountered could exact an emotional toll on staff.

> *'No-one does. And they kind of sort of sat me down and gave me a tissue because I was crying, and he told me that I should have more confidence. And that was basically the end of it.' Staff 3, Trust G.*

> *'Yes. I mean I started off doing 111 last year because Trust G took over the 111 service for the [region Trust C] this time last year, so I've been in the 999 environment about 10 months now. And anything and everything that you could have experienced, I've heard, and as I say, it is expected, we are an emergency service, and the ambulance service receives quite a lot of calls. Well, I think the police take more than us, but the ambulance service, we do take a lot of crazy stuff. But we're only human, we do still get personally affected by it.' Staff 6, Trust G.*

> *'I got assaulted at work about five weeks ago and the lack of support I've had from the Trust.....' Staff 3, Trust C.*

Indeed, staff described that interaction with patients or the general public over the telephone could be just as fraught as those that were conducted face-to-face.

> *'Yes. You know, "You're crap, you need a new job." You think, "Hang on a minute, you've called for help and all you've done is shout at me from the moment I picked the phone up.' Staff 1, Trust I*

The additional risks associated with ambulance work during the COVID-19 pandemic were raised by interviewees in relation to both their physical and mental health.

> *'…quite a lot of stress in going to patients in the sense of we didn't really fully understand what was expected of us which was quite difficult.' (Staff 2, Trust I).*

> *'you have got no protection in there [the call centre]. You have got no screens up in-between." Where even shops have made the effort to put a piece of Perspex up. Staff 13 Trust I.*

Supporting staff: Ideal and reality

Given the nature of the job roles, respondents felt the onus was on ambulance service to put in place structures and processes to address wellbeing problems and also to prevent them where possible. For some interviewees, despite notions of what the ambulance service should be doing, the reality on the ground did not always match these preconceptions. Manager attitudes and behaviours sometimes led to a disconnect between the ideal and reality of wellbeing provision. The adoption of metrics, targets and a business-like model was felt by some respondents to be inconsistent with the duty of care to staff.

> *'Yes, and it goes against the vision and values that they put in front of you and make you preach at your interview that it's about patient care and getting best treatment at the best time. Even on jobs you've got them on your back*, "How long you're going to be? You've been on this job whatever time." *It's like, "*I'm waiting to speak to a doctor." *I'm the one that's seen the patient. I'm the one that's going to be stood up in front of the court.' Staff 2, Trust G.*

A lack of empathy from management also affected the extent to which interviewees felt valued. This was perceived to stem from a disproportionate emphasis on hitting targets, which some felt to be prioritised at the expense of staff health and wellbeing. There was perceived to be more that could be done to make ambulance staff feel more supported in carrying out their duties.

> *'I think they probably could have offered me some more shifts with more experienced paramedics and that would have made me feel a bit more at ease.' Staff 3, Trust G.*

While some interviewees were dissatisfied with the support they received, others had a much more positive view of management support.

> *'I mean I've had colleagues before, like when I've been with supervisors when they've had very difficult- this is just an example, this isn't- you know, hangings or [something has 0:16:05] really affected somebody. They've let them go home, they've said, "You need to go home." They're very good at taking control and saying, "This is actually for your mental health, not anybody else's." "I mean you're saying that you're okay, but I can see that you're not. You need to go home."' Staff 6, Trust G.*

The perceived clash of values between management and staff led to some interviewees feeling undervalued.

> *'The ones [employees] they can rely on; they don't seem to value them. The ones that they think, "Oh yes, she'll turn up whatever happens." Staff 1, Trust C.*

Conversely, some interviewees gave examples of where management showed them concern, reflecting how they value their staff.

> *'Even the… I don't want to say the second most important person, but the second highest in command out of the whole service came in and had a chat with us and put everyone's mind at rest. He learned all of our names. He said that he personally… If anyone needed to have a chat, if anyone was worried about anything, we could contact him. It was so lovely that someone so high up, with so much responsibility and so many other things to worry about, was so caring and so considerate to the way we were feeling. That was just really, really, lovely, so I thought I'd mention that.' Staff 5, Trust G.*

> *'Oh, definitely, yes. I don't know. There is just a happier vibe. We have got the director of the 111 service in the [area]. He comes round every weekend and he says hello to every member of staff.' Staff 4, Trust G.*

Engagement with the staff wellbeing agenda

Responsibility for personal wellbeing was commonly seen as a balance between individuals themselves and their employer. Generally, most of the employees we interviewed reported that it was their own individual responsibility to look after their own health and personally be engaged to benefit from the range of provision offered by their employer. Some interviewees perceived a lack of recognition from managers of the mental and physical toll of the job on ambulance staff leading some staff to continue working despite their problems remaining unresolved.

> *'I personally think that people do need to take a lot of responsibility for their own wellbeing.' Staff 3, Trust C.*

> *'They expect you to say, "Oh yes, I'll go in." The ones that go off all the while, it seems to me that they get rewarded. They get all the support they need. One particular guy, since he passed his assessment, he's not done a straight 6- He's been off, I would say… He's been a year, 14 months, I would say he's probably been off 8 months. Admittedly, his brother… He had a death in the family with his brother, so that knocked him back again. He'd been off before that, previously, so… He's been getting all the support. You think, "That lady there, that's been sat there for the last 12 years, that really needs some help and…" They just expect it of the ones that turn up day in and day out.' Staff 1, Trust C.*

Engagement with the staff wellbeing agenda: Variable experiences of health and wellbeing services

Some interviewees' felt a lack of empathy and support when describing their experiences of trying to access health and wellbeing services within their ambulance Trust.

> *'Yes. When I was at an all-time low and struggling they left me two weeks, so they're not going to be bothered about someone that's just worried because of their job.' Staff 2, Trust G.*

The experiences of mental health and wellbeing services also varied but there were many examples of positive experiences.

> *'They always listen to you. You can always hear them making notes and stuff, to make sure they don't forget anything if they talk to you again. To be honest, the lady I speak to, I don't think she really needs to take many notes. We're quite familiar with each other now, and you build up a bit of a relationship with them. When you need to access things, it's always there. They'll always be someone, in one of the services, who will answer the phone or get back to you as quick as they can.' Staff 1, Trust G.*

> *'When I was going through my divorce I worked for a different service then. They were supportive and they put in obviously referrals to see a counsellor but my GP also put in a service as well. It came through at the same time but I just used the Ambulance Service one because obviously it was better using the work one. I found that quite helpful and got a lot of things off my chest that I suppose you don't realise bothers you until you start talking about things.' Staff 2, Trust G.*

The COVID-19 pandemic affected the availability and provision of wellbeing services.

> *'I know the NHS service is absolutely inundated. I've just been discharged unfortunately because of the coronavirus and they're not doing face-to-face. The woman that I was seeing was leaving, so they've discharged me without completing the course. Given me some online stuff to do.' Staff 4, Trust I.*

Engagement with the staff wellbeing agenda: Variable experiences of Trauma Risk Management (TRiM)

Many participants discussed Trauma Risk Management (TRiM), a peer-delivered service designed to be an ongoing system of support for individuals following traumatic events. This intervention needs to be differentiated from counselling services which employees can also be referred to.

> *'They've got the TRiM where if you feel that you need to talk to somebody about a certain call, they'll listen to the call and be able to give you their opinion and give you some sort of counselling towards if it was a particularly bad one.' (Staff 1)*

When TRiM assessments did lead to formal counselling sessions with a trained professional, colleagues were generally positive while still suggesting improvements to the service. For instance, some felt agitated that they had to invest considerable time and effort in describing the intricacies of their work to someone who they felt was completely ignorant on the subject. It was suggested that massive improvements would be made if a counsellor had worked for the ambulance service or if they had a cohort of clients who worked there. This time-investment was all the more valuable as employees were restricted to only six therapy sessions, regardless of the severity of their mental health problem. TRiM was therefore perceived to work for some staff but was not a magic bullet:

> *'Then they can come back and say, "I need TRiM." It seems to work for them. However, for others, they go off for months because of it. Not because of TRiM but because it's not worked' Staff 1, Trust I.*

> *'They've got the TRiM where if you feel that you need to talk to somebody about a certain call, they'll listen to the call and be able to give you their opinion and give you some sort of counselling towards if it was a particularly bad one.' Staff 1, Trust C.*

Challenges with the appropriateness of and accessibility of TRiM referrals was raised.

> '*we will be automatically referred, but equally, one person's nasty job may not be another's.' (Staff 7, Trust I).*

> *'TRiM […] I had several referrals to them over the years and never heard from them.' (Staff 9, Trust C)*

Other staff also raised that they did not know what professional help they could seek, if they were experience mental health problems but unconnected to a traumatic event.

Engagement with the staff wellbeing agenda: Culture of openness or stigma

Interviewees experienced a range of organisational cultures towards wellbeing on an open-closed continuum. An open culture was one where colleagues were on hand to discuss problems with others and management proactively concerned themselves about staff health and wellbeing. A closed (or stigmatising) culture was one where employees were not encouraged to speak up about their personal health and wellbeing concerns. It was also where expression of these concerns were not taken sufficiently seriously or were not prioritised above management targets. Interviewees found it easier to deal with mental health and wellbeing problems if there was a culture that was open to discussing it at work.

> *'Yes. The support, from management, is nowhere near as good as the support you get outside. They, very much, just want you to be doing your job. They don't want you to be off work. They just*

want you to be there doing it. They don't want to be paying you if you're not there, things like that. The other support you get is brilliant. Even with management… I think it happens most places, doesn't it, management just sort of want you to man up a bit, get on with it, if that's the right thing to- Well I did get told that once by management, to be honest, "Just man up." That didn't go down very well.' Staff 1, Trust G.

Symbiotic relationships between staff and their employer

Dealing with mental health and wellbeing in the workplace was seen as a two-way interaction, depending on both staff and organisation taking it seriously. In some cases, immediate line managers and others did, whereas this was felt to be less so in other cases.

Symbiotic relationships between staff and their employer: Mutualism

The interviews illustrate the reality of how sickness and absence policies, as set out in the documentary analysis, impacted upon ambulance staff at ground level.

'My manager, particularly, is so lovely, he is so helpful. I've got a few health problems. Whenever I've got a problem, I have to take some time off. He's the first person to come and ask me if I'm okay and have a chat with me about what was wrong and, "What are you doing to…? Have you spoken to someone?" Staff 5, Trust G.

'They helped me with juggling some hours, start times and… I've said that I think I can't do 12-hour nights, or I can't do 6:00 to 6:00, 18:00 to 06:00 anymore. They said, "Come up with what you want to do, then we'll see if we can fit it in?" I don't like to think about dropping it but I think, for myself, I've got to because I'm just not sleeping. If can get home by 4:00 o'clock in the morning- They've said they'll look at it.' Staff 1, Trust C.

'I've also got a colleague that's been fighting just to reduce her hours for a few hours. She's been fighting for it for three years. It's just tipped her over- She lost her husband. As soon as she got back to work, they expected her to be back at work and normal. It just didn't happen. She's had no support, really, whatsoever. She's now off sick.' Staff 1, Trust I.

Lifestyle schemes were generally thought of as positive, and it was noted that schemes like these perform an important symbolic function in these organisations, working almost as a gesture of goodwill.

'It makes you feel like, mentally, the Trust is trying to give you back something so you're getting something out of the Trust rather than them just constantly draining the life out of you.' (Staff 2, Trust I).

Other members of staff felt that these lifestyle efforts were not addressing some important aspects of wellbeing, like sleep, or that the scale of them meant there was minimum impact.

Relationships between staff and their employer: Presenteeism

Potentially linked to the lack of support from management and stigmatising organisational culture is the manifestation of presenteeism. This is where staff carried out their duties, but not to the best of their abilities because mental and/or physical problems impacted upon their ability to do so.

> *'It's taken all my will power not to go in this weekend….I'm on antibiotics, now, for an infection…..it's not anything major but I- I wanted to go in this weekend because I know they're going to be busy and it's my team, but I had to think of myself. I'm really only back to normal the last 6 months, after 18 months, so I can't afford- As much as I want to go in, I can't afford to risk it really at the minute.' Staff 1, Trust C*.

There was also guilt around staff self-isolating during COVID-19 when they may be needed.

> *'You're sitting at home feeling a bit of a fraud really, because I'm getting paid to sit at home, you know?' (Staff 8. Trust I)*

Resilience or resignation

Staff responded to mental health and wellbeing challenges in different ways. While some showed resilience to these challenges, others accepted it as part of the job.

Resilience or resignation: Decline and deterioration

Older people are more susceptible to physical deterioration. The nature of ambulance work, with the inherent long and irregular shifts, as well as the likelihood of encountering traumatic events are more likely to have a greater impact on older staff. Long hours undertaking physically and mentally draining work took its toll on ambulance staff, particularly as they staff aged, as increasing age and the job role was felt to be associated with physical and mental decline.

> *'We work such awful hours. There are loads of studies that show our life expectancy and our health is reduced over the long term because of the type of work we do.' Staff 2, Trust C.*

> *'Now I'm getting older and getting a bit creakier…I needed to get myself fit in several ways – general stamina, but also upper body strength.' Staff 16, Trust C.*

Resilience or resignation: Coping strategies for stress and ill-health

Long and irregular hours are likely to impact on physical health. Encountering traumatic incidents may aggravate mental health. Therefore, for most staff, there are challenges to their mental health. These challenges elicit different responses. They have different ways of dealing with these challenges. Linked to notions of resilience were ways that ambulance staff used to achieve improve mental health and wellbeing outcomes themselves. Strategies have included exercise, banter, black humour and rest.

> *'I do zone out a little bit when things get a bit too much.' Staff 4, Trust C.*

'I find that a nice release to go and exercise.' Staff 3, Trust C.

'I have a five-minute kip and I am right as rain afterwards.' Staff 14, Trust C.

'You crack a joke and it doesn't always work, so you try something else to alleviate the situation. But yes, humour is definitely a coping mechanism, without a shadow of a doubt, yes. Definitely.' Staff 2, Trust I

Some participants described support arrangements were generally more informal. These arrangements included things like allowing call handlers complete alternative tasks that were considered less stressful. Others noted that valuable support can seem inconsequential and does not have to involve allowing an employee to do alternative duties. However, just seeming to be supportive can have a positive effect on someone's wellbeing.

'Yes. It seems very, very, backwards but… I don't know why, it's just we're quite good at detaching from it. Everyone checks on everyone else and makes sure everyone is okay.' Staff 5, Trust G.

Examples like this illustrate the importance of informal support, however this may be inconsistent and not spread evenly among the workforce.

Staff also used particular tools to tackle mental health and wellbeing issues. Some perceived Cognitive Behavioural Therapy (CBT) to be superior to counselling, but others did not.

'I think the CBT has helped me more so, because that gives you the tools […] rather than - Counselling doesn't really give you that.' Staff 4, Trust C.

6.4 Discussion

6.4.1 Strengths and limitations

While the issues raised are extremely important, they have to be seen, and understood, through the prism of the interviewees being a self-selected sample, who were keen to talk about their experiences and perceptions of health and wellbeing. Thus, their keenness to participate in, and give their time for, the interviews can be seen as an indication that they already had strong opinions on this issue. The experiences of staff were captured through telephone interviews, which was a necessary change to the planned focus groups as a result of the COVID-19 pandemic.

6.4.2 Knowledge and perceptions of wellbeing interventions

Ambulance staff acknowledged that the work they do may be harmful to their physical health and mental wellbeing, but also mentioned that existing health conditions and personal circumstances impacted on their work life. The interviewees gave a picture of variable recognition by managers of the need for support and

access to support. Inconsistent application of policies e.g. absence, working pattern and referrals to services, made staff feel undervalued, although some staff felt valued by those at work.

The interviews illustrate the direct impact of the line manager on perceptions of wellbeing support, and strengthen the case for line managers to ensure a proactive approach to mental health and wellbeing. That means early intervention to prevent mental health and wellbeing problems escalating. In this respect, managers need more training to recognise early signs of challenges to the mental health and wellbeing of their staff [1]. Coming into work despite mental health and wellbeing problems remaining unresolved also links to an organisational culture, which was perceived to stigmatise such concerns. It can have a knock-on effect on their job satisfaction and loyalty to the organisation [69].

The interviewees focussed on Trust-provided wellbeing services, but participants were able to describe coping strategies such as exercise, peer support and black humour. Mind (2019)[33] recognised the need for good peer support in cases where individuals were not confident in making a disclosure to the employer, and the links between good physical and mental health are well documented.

There is a case for mental health and wellbeing to be more bespoke to staff needs. The interviewees recognised that not all offerings work for all staff, and therefore a wide variety of services should be part of the employers offer to staff. These should include where there has been exposure to a traumatic event, and where there is cumulative distress. There is variability in recognition of the emotional toll of some incidents and supporting staff to disclose the need for support.

Efforts to reduce presenteeism, which is counter-productive for both staff and the organisation, should be explored across physical and mental health conditions. Improving support for fatigue, shift work management and expanding lifestyle interventions were also felt to be important.

6.4.3 Conclusion

The nature of ambulance work necessitates effective support for the mental health and wellbeing of staff. This includes training staff in early detection of mental health problems and a culture within an organisation. Early intervention and bespoke mental health and wellbeing services are two key components in delivering effective support to ambulance staff, especially so in the light of the COVID-19 pandemic.

7. Understanding knowledge and perceptions of wellbeing support by survey

Aims

TO UNDERSTAND THE KNOWLEDGE AND PERCEPTIONS OF UK AMBULANCE STAFF OF WELLBEING INTERVENTIONS AVAILABLE THROUGH THEIR EMPLOYER AND INFORMAL SUPPORT ARRANGEMENTS.

TO DEVELOP AN UNDERSTANDING OF THE FACTORS THAT INFLUENCE THE PERCEPTION OF A SUCCESSFUL OUTCOME FROM INTERACTING WITH A MENTAL WELLBEING INTERVENTION.

7.1 Introduction

The findings from the telephone interviews with staff (section 6 above) were followed up with a short survey for all UK ambulance service staff. Themes from the interviews were carried forward into the survey item design, and aimed to identify which interventions staff are aware of, how these were implemented and received by staff and define commonalities and differences across staff groups.
We also asked respondents to rate their wellbeing against a standard scale to enable comparisons to national data. This survey also included questions to understand how staff protected their wellbeing during the pandemic and identified any wellbeing needs.

7.2 Methods

Together with employee interviews, this survey aimed to capture the knowledge and perceptions of UK ambulance staff of wellbeing interventions available through their employer and informal support arrangements. The survey was designed to consider the different staff and learner groups within UK NHS ambulance services, focussing on those which have been identified from previous research to be at risk of poor wellbeing[2]. The groups are proposed to be comprised of the following broad staff categories:

- Group 1 - student paramedics, newly qualified paramedics, paramedics and unregistered emergency clinicians with less than five years' experience in a UK ambulance service;
- Group 2 - paramedics (including advanced clinicians) and unregistered emergency clinicians with at least five years' experience in a UK ambulance service; and
- Group 3 - NHS111 call centres (including clinicians); 999 call centres (including clinicians)

A cross-sectional survey was developed using the Qualtrics platform hosted by the University of Lincoln. Research leads at the UK ambulance services were asked to distribute the survey via their internal

networks to all employed ambulance staff, regardless of their role. Recruitment was also supported by the stakeholder group who had links with Unison, Ambulance Charities and the College of Paramedics.
The inclusion criteria were deliberately wide as the survey intended to reach out to all ambulance staff.

Inclusion criteria

- Member of staff in a UK NHS ambulance service of any job role who are therefore eligible to receive EWS
- Student paramedic on placement within a UK NHS ambulance service
- Able to access the online survey
- Able to provide informed consent

Exclusion criteria

- Not a paid member of staff in a UK NHS ambulance service
- Student paramedic not on placement within a UK NHS ambulance service

The survey requested demographic information so that, where possible, differences in response based on ambulance service and respondent characteristics could be made. The respondents were asked to complete the validated Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) in order to assess their current mental wellbeing, which was used with permission for this study. This scale was developed for use in adults (aged 16 and over) in the UK, and involves 14 questions with multiple choice answers on five-point scale. Scores range from 14 to 70 and higher scores indicate greater positive mental wellbeing. The WEMWBS has been compared with a measure of depression, the Centre for Epidemiological Studies Depression Scale (CES-D). This suggest that a WEMWBS score of ≤40 could indicate high risk of depression as defined by the CES-D, however, the WEMWBS was not developed to measure mental health and should not be used for screening purposes[70]. The options for response range from 'none of the time' to 'all of the time'. The scale measures the wellbeing of the respondents rather than any cause of wellbeing causality and is not designed for identifying individuals with low or high mental wellbeing.

The survey aimed to find information on respondents' awareness of wellbeing services available within and external to their Trust, along with satisfaction levels if they used these services. As the survey was active during the height of the COVID-19 pandemic, specific questions were asked about what ambulance staff would require most to assist with their mental health during the pandemic. There was a free text box at the end of the survey for respondents to provide additional comments.

Data were descriptively analysed, and the Chi-squared (χ^2) non-parametric test was used for comparisons between groups of staff.

7.3 Results

7.3.1 Demographics of respondents

There were 3067 respondents to the wellbeing survey between 22nd June 2020 and 23rd September 2020. All English ambulance services were invited to take part in the survey and staff from each of the ten services provided responses, the demographic data for the participants is shown in table 10.

The survey respondents identified age ranges from eighteen to over 65, there was no upper limit requested, and the highest number of respondents were in the 25-34 age bracket (28.7%). Most of the respondents identified having less than five years' service (45%) in their ambulance Trust.

Although only English ambulance services were invited to participate in the study, there were responses from staff in the devolved nations, likely due to sharing of the survey links via social media. Most of the responses were received from Trust B (25.8%); with Trust G providing 19.9% of the responses. There was a null response from 79 (2.6%) participants to their employing Trust.

There were fifteen options for job role offered to respondents as the nature of job description varies between ambulance Trusts. There was also the option to choose 'other', and provide this information as free text. Most respondents identified themselves as a qualified Paramedic (28.5%), with 7.1% stating they were a newly qualified Paramedic. There was also 478 (15.7%) call centre staff that responded to the survey ('emergency medical dispatcher'; 'EOC'; 'NHS 111 call taker' and Patient Transport Services call operator'). The majority of respondents worked within ambulance service operations (53.9%), with 999 contact centre staff making up the second highest category (13.2%). Seventy-nine participants (2.6%) did not disclose which department their role was based in and 153 (5.0%) responded 'other'.

Table 10: Survey participant characteristics

		Respondents	%
Age	18-24	349	(11.4)
	25-34	880	(28.7)
	35-44	657	(21.4)
	45-54	805	(26.2)
	55-64	333	(10.9)
	65+	21	(0.7)
	Prefer not to say	22	(0.7)
	Total	**3,067**	**(100.0)**
Sex	Male	1,436	(46.8)
	Female	1,599	(52.1)
	No response	32	(1.0)
	Total	**3,067**	**(100.0)**
Length of service (in NHS ambulance Trust)	Less than one year	322	(10.5)
	1-5 years	1,027	(33.5)
	6-10 years	502	(16.4)
	11-15 years	413	(13.5)
	16-20 years	406	(13.2)
	> 20 years	397	(12.9)
	Total	**3,067**	**(100.0)**
Employing NHS ambulance Trust	B	791	(25.80)
	G	611	(19.90)
	F	347	(11.30)
	J	259	(8.40)
	C	253	(8.20)
	E	210	(6.80)
	H	146	(4.80)
	I	116	(3.80)
	D	96	(3.10)
	A	88	(2.90)

	No response	79	(2.60)
	Devolved Administration K	25	(0.80)
	Devolved Administration M	24	(0.80)
	Devolved Administration L	22	(0.70)
	Total	**3,067**	**(100.0)**
Job role identified by participants	Student paramedic	95	(3.1)
	Newly qualified paramedic (usually within two years of qualification)	217	(7.1)
	Paramedic	874	(28.5)
	Advanced paramedic	107	(3.5)
	Ambulance technician	298	(9.7)
	EM dispatcher	162	(5.3)
	EOC (Emergency operations (999) contact centre)	129	(4.2)
	NHS 111 call advisor	171	(5.6)
	Patient Transport Services call operator	16	(0.5)
	Patient Transport Services	81	(2.6)
	Manager	271	(8.8)
	Administrator	94	(3.1)
	Doctor	8	(0.3)
	Nurse	36	(1.2)
	Emergency Care Assistant (ECA)	265	(8.6)
	Other	243	(7.9)
	Total	**3,067**	(**100.0)**
Main working department within the ambulance service	NHS111	227	(7.4)
	Education	38	(1.2)
	Emergency Operations Centre (EOC) (999 contact centre)	405	(13.2)
	Corporate services management (e.g. HR, finance, audit)	92	(3.0)
	Estates (maintenance and works)	7	(0.2
	Clerical and administrative	51	(1.7

	Ambulance operations (including management and Hazardous Area Response Team (HART))	1,652	(53.9
	Medical/ Clinical department	171	(5.6
	Patient transport services / Non-emergency patient transport	192	(6.3
	Other	153	(5.0
	No response	79	(2.6
	Total	**3,067**	**(100.0)**

In order to understand how different staff experienced or were supported by wellbeing services, the job roles were grouped. After various analyses of groups, the groups with most relevance to the survey, and therefore included in this report as displayed in Table 11.

Table 11: Job roles, grouped as either 'face-to-face patient care' roles or 'remote patient care and support service' roles

Face-to-face patient care	Remote patient care and support services
Ambulance Operations	NHS111
Medical/ Clinical Departments	Education
Patient Transport Services	Emergency Operations Centre
	Corporate Services Management
	Estates
	Clerical and Administrative
	Other

7.3.2 Impact of COVID-19

As the survey was open during the first wave of the pandemic, 360 staff (from 3067 responses) stated they had been redeployed during the pandemic (109 did not respond). Of the 360 that were redeployed, only 245 stated which department they were redeployed to. The most frequent department for redeployment to was ambulance operations (27.3%) or the emergency (999) operations centre (EOC, 15.9%). Again, there was a number of respondents identifying 'other' (33.%).

There were 372 (12.1%) staff who identified that they were working from home during the pandemic, 350 of these provided a reason for home working in Table 12.

Table 12: Reasons for home working during the study period

Reason	Respondents	(%)
To comply with Government social distancing measures	231	(66.0)
I am in a high-risk group, as determined by Government guidelines	111	(31.7)
To self-isolate with symptoms, known exposure or household isolation	8	(2.3)
Total	**350**	**(100.0)**

The feelings of guilt associated with self-isolation that were identified from staff interviews were further explored in the survey with a follow up question presented only to those that had identified that they were working from home, and one hundred of the 350 home-workers responded. Sixty-nine (69%) responded that they either 'agreed' or 'strongly agreed' that they had feeling of guilt[71] due to this.

The pandemic also affected day-to-day activities undertaken by respondents to support their wellbeing (Table 13). Before the pandemic, the main activities that staff engaged in to promote wellbeing were socialising, speaking with colleagues, and physical health interventions (exercise, sleep and healthy eating). Socialising with family and friends reduced dramatically during the pandemic, with no difference between the groups, however, prior to the pandemic face-to-face patient care staff reported socialising less than those in the other roles (p=0.001, see appendix).

Table 13: Activities to promote wellbeing before and during the pandemic ("What do you regularly do to support your wellbeing?")

Activity	Before pandemic		During pandemic	
	n	(%)	n	(%)
Socialise with family or friends	2,253	(73.5)	602	(19.6)
Speak with colleagues	1,938	(63.2)	1,815	(59.20
Physical activity e.g. running, walking, cycling, gym, gardening	1,865	(60.8)	1,503	(49.0)
Try to get enough sleep	1,849	(60.3)	1,695	(55.3)
Try to eat healthy food	1,714	(55.90	1,492	(48.6)
Reduce alcohol intake	667	(21.7)	536	(17.5)
Practice mindfulness or meditation	496	(16.2)	547	(17.8)
Attend counselling	352	(11.5)	174	(5.7)
Attend psychologist	84	(2.7)	43	(1.4)
Other (please specify)	56	(1.8)	54	(1.8)
Total	**3,067**		**3,067**	

However, there was only a small reduction in the number of staff who reported that talking with colleagues promoted their wellbeing from pre-pandemic levels, and this remained an important activity for staff both before and during the pandemic. Disruptions to sleep, alcohol intake and healthy eating activities were also reported as a result of the pandemic. Furthermore, a number of staff reported that attendance at counselling or psychologists had reduced during the pandemic. Respondents were then asked what they would most like help with (Table 14).

Table 14 : Responses to the question: "During the pandemic, what would you most like help with NOW for your wellbeing?" (multiple options could be selected per respondent), the number per group of roles and χ^2 test result for comparison of the two groups are also shown. Statistically significant differences are shown in bold.

			Face-to-face patient care	Remote patient care and support services	
	N	(%)	N (%)	N (%)	χ^2
Mental health (e.g. stress, anxiety, depression)	1,163	(37.9)	538 (28.7)	235 (19.75)	**<0.001**
Falling asleep or staying asleep	1,012	(33.0)	631 (33.64)	377 (31.95)	0.391
Calming a racing mind	897	(29.2)	529 (28.2)	364 (30.85)	0.102
Physical activity	803	(26.2)	484 (25.8)	306 (25.93)	0.980
Healthy eating	747	(24.4)	411 (21.91)	329 (27.88)	**<0.001**
Personal protective equipment (PPE)	555	(18.1)	416 (22.17)	125 (10.59)	**<0.001**
Help with worries at home e.g. finances or caring for family members	520	(17.0)	297 (15.83)	215 (18.22)	0.120
Dealing with what I've seen or heard	458	(14.9)	299 (15.94)	151 (12.8)	**0.014**
Returning to work after absence	268	(8.7)	163 (8.69)	100 (8.47)	0.821
Support in a new role	230	(7.5)	133 (7.09)	88 (7.46)	0.963
Is there anything else that you would like to tell us about your wellbeing needs?	213	(6.9)	138 (7.36)	76 (6.44)	0.329
Alcohol consumption	179	(5.8)	121 (6.45)	58 (4.92)	0.091

Most respondents, at the time they responded to the survey, identified that they would like help with their mental health (37.9%). Other categories which scored highly were 'falling asleep' and 'calming a racing mind'. There were significant differences between the two staff groups with more staff providing face-to-face patient care wanting help with PPE, 'dealing with what I've seen or heard' and their mental health, the remote patient care and support services group did however identify a greater desire for help with healthy eating. In all other aspects there was no difference between the staff groups.

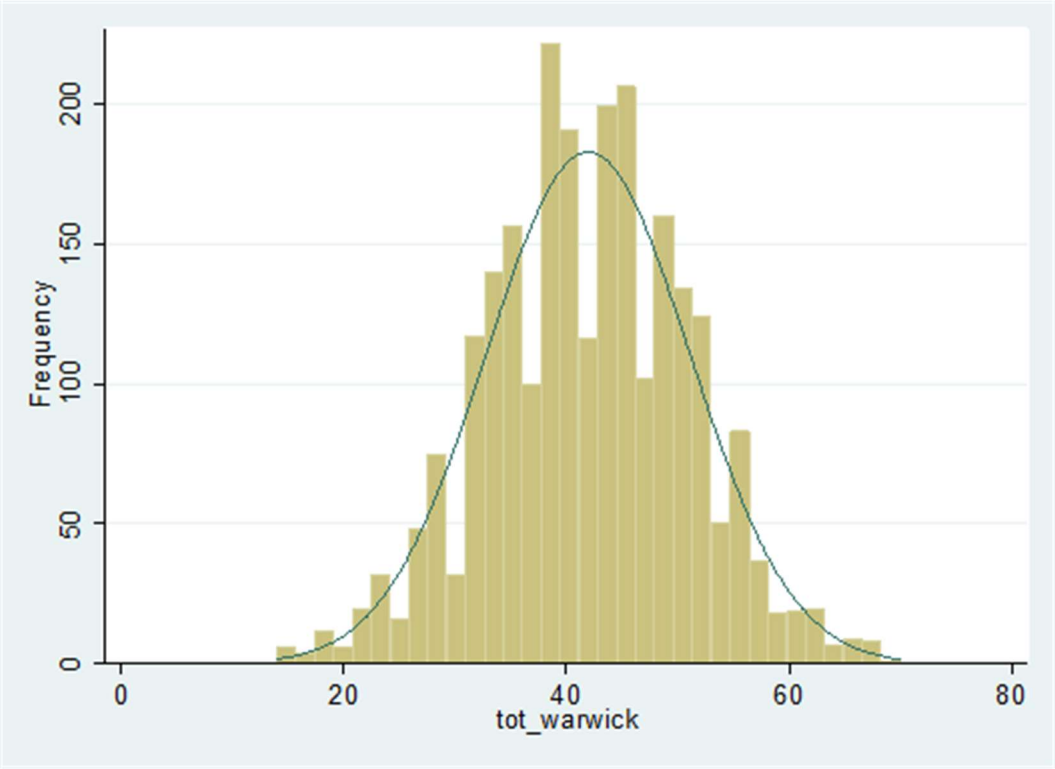
7.2.3 Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)

Warwick–Edinburgh Mental Wellbeing Scale (WEMWBS) © NHS Health Scotland, University of Warwick and University of Edinburgh, 2006, all rights reserved.

The WEMWBS was completed fully by 2469 participants (81%). The results from this section of the survey were broken down into two different groups; either face-to-face patient care or remote patient care and support service roles (Table 11 for details).

A high WEMWBS score of between 51-70 indicating good wellbeing was calculated for 16.5% of the respondents, a moderate score of between 33 and 50 for 653/2469 (67%) and a low score, indicating poor wellbeing, for 16.5% respondents. A score of ≤40 could indicate high risk of depression. The distribution of the scores is shown in Figure 8.

Figure 8: Frequency of WEMWBS scores of survey respondents.



When multivariable logistic regression tests were applied to identify demographic factors associated mental wellbeing, length of service and age were shown to be significant in that those staff in the younger or older age groups had better overall scores. Similarly, those with both fewer and longer lengths of service had higher WEMWBS scores, as shown in Table 15 and the appendix.

Table 15: Demographic data compared to WEMWBS scores

	Low WEMWBS score (14-32)		Moderate WEMWBS score (33-50)		High WEMWBS score (51-70)		Total	χ^2
	N=368	(%)	N=1653	(%)	N=448	(%)	N=2469	
Age								
18-24	35	(13.3)	179	(67.8)	50	(18.9)	264	<0.001
25-34	107	(15.5)	491	(71.1)	93	(13.5)	691	
35-44	92	(17.3)	344	(64.5)	97	(18.2)	533	
45-54	95	(14.0)	460	(67.7)	124	(18.3)	679	
55-64 and over	**35**	**(12.0)**	**172**	**(59.1)**	**84**	**(28.9)**	291	
How many years have you worked in the ambulance service?								
Less than 1 year	**28**	**(11.2)**	**164**	**(65.9)**	**57**	**(22.9)**	249	0.003
1 to 5 years	113	(14.2)	546	(68.5)	138	(17.3)	797	
6 to 10 years	77	(18.4)	276	(66.0)	65	(15.6)	418	
11 to 15 years	**38**	**(11.2)**	**237**	**(69.7)**	**65**	**(19.1)**	340	
16 to 20 years	56	(17.0)	228	(69.1)	46	(13.9)	330	
Greater than 20 years	**56**	**(16.7)**	**202**	**(60.3)**	**77**	**(23.0)**	335	

It was not possible to stratify staff by their WEMWBS to their knowledge, access (previous or planned), or experience of employee wellbeing services due to the low response rates to these question sets.

7.3.4 Knowledge and experiences of available employee wellbeing services

Employee counselling, physiotherapy / occupational therapy, staff / peer support networks and cycle to work schemes were those identified most frequently as those staff were aware of. The differences in awareness between job roles are shown in Table 16. However, not all Trusts offer all of the services, which may account for low levels of awareness eg chaplaincy, Schwartz rounds, or Blue Light Champions. In total 72 of respondents indicated that they knew of none of the listed wellbeing services provided by their employer.

Table 16: Awareness of Trust Wellbeing offers, across both staff groups. Significant differences (p<0.05) are shown in bold.

Wellbeing services	Face-to-face patient care N (%)	Remote patient care and support services N (%)	χ^2
Trauma Risk Management	579 (30.86)	341 (28.9)	0.227
Post incident care	472 (25.16)	262 (22.2)	0.054
Blue Light Champions	337 (17.96)	225 (19.07)	0.451
Employee counselling	1008 (53.73)	709 (60.08)	**0.001**
Chaplaincy	372 (19.83)	251 (21.27)	0.274
Physiotherapy / Occupational Therapy	1073 (57.2)	648 (54.92)	0.196
Staff / peer support network	935 (49.84)	602 (51.02)	0.692
Psychologist	134 (7.14)	93 (7.88)	0.389
Mindfulness services, apps or classes	182 (19.9)	81 (13.35)	**0.004**
Exercise classes or groups	87 (4.64)	62 (5.25)	0.382
Pet therapy	61 (3.25)	90 (7.63)	**0.000**
Schwartz rounds	30 (1.6)	23 (1.95)	0.479
Cycle to work scheme	933 (49.73)	608 (51.53)	0.386
Subsidised gym membership	95 (5.06)	76 (6.44)	0.096
Cognitive Behavioural Therapy (CBT)	179 (9.54)	150 (12.71)	**0.003**
Employment Assistant Programmes (EAP Services)	329 (17.54)	262 (22.2)	**0.002**
Eye tests	174 (9.28)	431 (36.53)	**0.000**
Weight management	124 (6.61)	135 (11.44)	**0.000**
Smoking cessation	110 (5.86)	97 (8.22)	**0.008**
Wellbeing space	195 (10.39)	209 (17.71)	**0.000**
Other (please specify)	24 (1.28)	18 (1.53)	0.510
None	33 (1.76)	39 (3.31)	**0.004**

When considering what staff have identified as their wellbeing needs during the pandemic (Table 14), the reported likelihood of accessing the available services was generally low. Due to the low numbers of respondent across all the options for these subset of questions (options were only presented where respondents had identified that they knew about a service), services were group to understand any differences between the staff roles. Table 17 shows the number of staff who stated that they were ‘very likely’ or ‘somewhat likely’ to use the various schemes. More staff in patient facing roles were likely to use post incident care (PIC) or Trauma Risk Management (TRiM). In line with the desire from non-patient facing and support staff described earlier, significantly more staff in this group felt it was likely that they would use some of the primary prevention services. However, the percentages of staff who were ‘neither likely or unlikely’ or ‘somewhat unlikely’ / ‘very unlikely’ to use any of the listed services was far in excess of any

likely use, with every service (except 'other') having the majority of respondents indicating that they were 'very unlikely' to use the services during the pandemic (see appendix).

Table 17: Staff who indicated that they were very likely or somewhat likely to use services they were aware of (question: "How likely is it that you will access any of these services during the Covid-19 pandemic?"). Significant differences (p<0.05) between staff groups are shown in bold.

	Face-to-face patient care N (%)	Remote patient care and support services N (%)	χ^2
Post incident care, Trauma Risk Management	**175(5.8)**	**31(1.7)**	**0.0001**
Staff / peer support network, Chaplaincy, Pet therapy, Schwartz rounds	286(4.31)	169(4.25)	0.898
Blue Light Champions, Cognitive Behavioural Therapy (CBT), Mindfulness services, apps or classes,	208(4.11)	146(4.85)	0.116
Physiotherapy / Occupational Therapy, Psychologist, Employee counselling, Employment Assistant Programmes (EAP Services),	396(7.04)	217(6.55)	0.376
Smoking cessation, Wellbeing space, Exercise classes or groups, Subsidised gym membership	**163(1.48)**	**262(4.09)**	**0.0001**
Cycle to work scheme	122(10.67)	56(8.47)	0.131
Other (please specify)	5(0.26)	8(0.68)	0.078

When considering previous experiences of Trust wellbeing services, the services most frequently successfully accessed were physiotherapy / occupational therapy, counselling and EAP service. Whilst awareness of PIC and TRiM was high across all staff, likely future use or previous use was significantly higher in patient-facing staff. Thirty-nine percent (653/1684) of respondents reported they had successfully accessed physiotherapy / occupational therapy, with 7.4% (125/1684) staff reporting that they 'had tried, but failed' to access this. Seventeen percent (154/897) of respondents reported successfully accessing TRiM, with an increased percentage (23.6%) reporting successfully accessing PIC, however, for both TRiM and PIC, 5.6% and 7% of respondents respectively had tried, but failed to access these services. This correlates with the experiences of the staff interivewees who identified barriers with accessibility of TRiM.

The service with the highest rate of successful access was eye tests at 42.4% (247/583). Many staff who were aware of services such as chaplaincy (569/603, 94.4%), or Blue Light champions (510/543, 93.4%), or smoking cessation (190/200, 95%) had never tried to access these services in the past. Very few staff reported that they had tried to access services during the pandemic (see appendix), but where staff had indicated previously successfully gaining access to a service, there were then asked about the service meeting their needs (Table 18).

Table 18: Levels of satisfaction with wellbeing services when accessed before the pandemic.

	Very satisfied (%)	Slightly satisfied (%)	Neither satisfied nor dissatisfied (%)	Slightly dissatisfied (%)	Very dissatisfied (%)	Total number of respondents
Physiotherapy / Occupational Therapy	53.1	26.7	8.4	7.1	4.8	622
Employee counselling	50.8	29.1	9.8	6.1	4.2	457
Staff / peer support network	59.7	27.8	9.7	2.5	0.3	360
Eye tests	77.3	10.5	9.2	2.6	0.4	229
Cycle to work scheme	73.3	20.4	4.5	0.9	0.9	221
Mindfulness services, apps or classes	39.5	39.5	14.5	6.5	0.0	200
Post incident care	41.0	33.3	17.9	5.1	2.6	156
Trauma Risk Management	39.7	27.7	17.7	11.3	3.5	141
Employment Assistant Programmes (EAP Services)	31.9	34.0	24.5	7.4	2.1	94
Wellbeing space	43.3	34.4	17.8	1.1	3.3	90
Cognitive Behavioural Therapy (CBT)	41.7	31.9	13.9	4.2	8.3	72
Weight management	59.6	19.1	14.9	6.4	0.0	47
Subsidised gym membership	75.6	17.1	7.3	0.0	0.0	41
Psychologist	50.0	32.5	10.0	5.0	2.5	40
Exercise classes or groups	58.6	24.1	17.2	0.0	0.0	29
Pet therapy	82.8	6.9	10.3	0.0	0.0	29
Blue Light Champions	48.0	20.0	28.0	4.0	0.0	25
Chaplaincy	84.0	12.0	4.0	0.0	0.0	25
Schwartz rounds	70.0	10.0	10.0	0.0	10.0	10
Other (please specify)	60.0	30.0	10.0	0.0	0.0	10
Smoking cessation	80.0	0.0	20.0	0.0	0.0	5

Highest levels of satisfaction reported by staff were for chaplaincy, pet therapy and smoking cessation, however, very few staff had accessed these services. For the five services with the highest levels of previous access, satisfaction rates were over 80%, however directed secondary interventions such as PIC and TRiM had lower reported levels of satisfaction.

7.3.4 Services outside of NHS Ambulance Trusts

A number of externally-provided wellbeing services are available to UK ambulance staff, with some being made available directly as a result of the pandemic, which were arranged, championed and shared by bodies such as BASICS, the College of Paramedics and AACE. Staff were asked about their knowledge of these services (Table 19). The Ambulance Staff Charity (TASC) was the service that most staff in both groups were aware of, followed by Mind Blue Light and general NHS (GP) support. Despite high levels of awareness, very few staff indicated that they were likely to use the services during the pandemic (30/442

face-to-face patient care staff would use TASC). In addition, very few staff indicated that they had used services previously (Table 20).

Table 19: Responses to "Please tell us which wellbeing services targeted to supporting NHS ambulance staff outside of your Trust you are aware of?" for staff working in the 10 English Ambulance Services.

	Face-to-face patient care	**Remote patient care and support services**
	N (%)	**N (%)**
The Ambulance Staff Charity (TASC)	442 (37.46)	833 (43.18)
Mind Blue Light resources	324 (27.46)	662 (34.32)
Our Blue Light resources	104 (8.81)	121 (6.27)
Peer support groups that meet face	95 (8.05)	145 (7.52)
Social media support groups	170 (14.41)	272 (14.1)
Head First (NHS Employers)	46 (3.9)	65 (3.37)
General NHS support (GP referral)	258 (21.86)	489 (25.35)
BASICS wobbleline	26 (2.2)	71 (3.68)
Other (please specify)	22 (1.86)	34 (1.76)

Table 20: Use of external wellbeing provision by all respondents

	Never tried		Have tried, but failed		Successfully accessed		
	N	(%)	N	(%)	N	(%)	**Total**
The Ambulance Staff Charity (TASC)	1,133	90.4%	49	3.9%	71	5.7%	**1,253**
Mind Blue Light resources	861	88.7%	28	2.9%	82	8.4%	**971**
Our Blue Light resources	193	88.5%	4	1.8%	21	9.6%	**218**
Peer support groups that meet face-to-face	192	82.4%	4	1.7%	37	15.9%	**233**
Social media support groups	317	73.4%	8	1.9%	107	24.8%	**432**
Head First (NHS Employers)	103	95.4%	3	2.8%	2	1.9%	**108**
General NHS support (GP referral)	401	54.8%	53	7.2%	278	38.0%	**732**
BASICS wobbleline	92	97.9%	1	1.1%	1	1.1%	**94**
Other (please specify)	32	58.2%	3	5.5%	20	36.4%	**55**

Given the low numbers of staff reporting using these services, data on satisfaction and likelihood to recommend services to colleagues are not presented.

7.4 Discussion

The interviews conducted during the study provided us with greater understanding of the factors that influence the perception of a successful outcome from a mental wellbeing intervention. For instance, there was a greater demand for support for non-work-related problems than work-related issues. These included, amongst other things, depression, bereavement and divorce support available to staff. However, there was a low level of awareness among staff of the employee assistance programmes that offer support for these concerns. There may therefore be benefit in increasing awareness of support directly to staff, or indirectly through signposting from managers, or peers.

Using data from the 2011 Health Survey for England, the UK average WEMBS score is 52 for men and women[72]. In our sample the average is closer to 40, indicating a lower wellbeing score than the 2011 English general population. However, there is no data for the time period we collected our data, which may be very different to the 2011 population due to the effects of COVID-19. The normal distribution in the WEMBS scores did reassure that the sample of staff (3067) was representative, but similar to the interviews the staff were volunteering to complete this survey in their own time and were not a random sample.

7.4.1 Knowledge and experiences of available employee wellbeing services

The experiences expressed in the telephone interviews contrasted with the generally low levels of satisfaction with mental health and wellbeing services both before and during the pandemic. Before the pandemic, there were statistically significant differences between clinical and non-clinical staff in satisfaction levels with: (post-incident care & TRiM; Blue Light Champions, Cognitive Behavioural Therapy (CBT), mindfulness services, apps or classes; Smoking cessation, Wellbeing spaces, Exercise classes or groups, Subsidised gym membership; and other services. Of these, the highest satisfaction levels were for post-incident care & TRiM. However, only 4.2 per cent of clinical staff and 2.3 per cent of non-clinical staff were satisfied with these services ($p = 0.001$). Conversely, non-clinical staff (3.0 per cent) were significantly more likely to be satisfied with Blue Light Champions (peer support), Cognitive Behavioural Therapy (CBT), Mindfulness services, apps or classes than clinical staff (2.1 per cent) ($p=0.011$).

When respondents were asked about their likely behaviours after the pandemic, there were statistically significant differences between clinical and non-clinical staff in their levels of planned interactions with Blue Light Champions, Cognitive Behavioural Therapy (CBT), mindfulness services, apps or classes ($p=0.011$); and Smoking cessation, Wellbeing space, Exercise classes or groups, Subsidised gym membership ($p=0.001$). What these figures also show is that there were low numbers of respondents who had actually accessed the services, although there was a high level of awareness about them. When considering the requirement upon staff to disclose a need for a service, there may be concerns about stigma, although in

this work and in Mind's recent survey staff reported an improvement in openness about wellbeing within Ambulance Services, this may still be a factor in accessing available services. However, externally-provided services were often well known (TASC and Mind), but had even lower levels of access reported, which means there may be other reasons for the lack of engagement among staff with services.

Staff reported high levels of awareness of TRiM and PIC, however the effectiveness and safety of these approaches in the ambulance setting are not well understood. Additionally, few staff reported an awareness of available psychologist services. It is not clear from the data if this is due to an absence of these services or low levels of awareness, and the same could be suggested of Schwartz rounds where implementation may be limited to part of the Trust rather than universally, with consequent low accessibility.

7.4.2 Impact of COVID

During the staff interviews, a member of staff who was self-isolating after being identified as a close contact of someone with COVID-19 resulted in the development of the question set related to guilt at being asked to work from home[71]. Sixty-six percent of staff who identified as self-isolating agreed or strongly agreed that with the statement: "I feel guilty for not being able to do my usual duties due to the pandemic."

Despite acknowledging that the things they do support wellbeing were disrupted by the pandemic, few staff had identified that they planned to engage with offers of wellbeing support. Staff did identify factors outside of employment as an area for support (17% of respondents), which included help with finances. From work on suicide prevention, we understand that debt can have an impact on a persons wellbeing, but no specific finance management offers were listed as available services, as these fell under general employee assistance programmes. It is therefore hard to quantify the specific need or suitability of the offers in this area.

8 Data Integration

This project presented a complex research question with four main aims. A mixed methods approach, as defined by Johnson et al (2007), combining an analysis of qualitative and quantitative methods, provided rigour to the study. Due to the challenges of undertaking the project within the restrictions of the COVID-19 pandemic the planned exploratory sequential mixed methods study, became more complex. This was due to the data being collected concurrently, resulting in a convergent design for phase 2 of the project. The approach to the integration of the study data does not directly follow the options described by O'Cathain (2010)[40], but can be described as 'following a thread'.

Themes and subthemes were identified in each of the work packages, their presence and their components are described against each work package in Table 21 below.

Table 21: Integration of the themes and their components described in each dataset

Theme	Sickness absence data	Documentary analysis and key informant interviews	Employee interviews	Employee survey
Policy development - conflict	NA	Interviews - what is included or omitted in policy required senior Trust approval.	NA	NA
Policy development – delivery resource	Heterogeneity of absence rates between service may be linked to service policy and delivery.	Interviews - requirement for counsellors experienced in sector. Interviews – small teams for large and dispersed workforce.	Accessing services can be challenging and variable. Staff valued but pressurised to perform by managers in a conflict with organisation values. Lack of timeliness in access.	Low awareness of available services. Lack of timeliness in access. Inconsistent offer.
Policy development - types of actions	NA	Policy - majority of actions were primary prevention. Policy - variation between trusts.	Value in prevention activity and in reactive services.	Recognition that universal secondary interventions may not be appropriate.
Wellbeing responsibility	NA	Interviews - tension between organisational and individual responsibility. Interviews -	Individual responsibility for wellbeing acknowledged. Employer felt responsible for	Low levels of awareness among staff, previous and planned access of services. Individual actions to support

		practical challenges with remote and dispersed workforce.	delivering support, but not always active promotion.	wellbeing are being taken both prior to and during COVID,
Suicidality and mental health - work-related	NA	Interviews - personal response to work-related stressors varies and is impacted by others response to major stressors. Interviews - chronic stress an issue.	Staff had depression, trauma, abuse and violence at work. Acceptability and accessibility of TRiM variable.	Need for mental health support (37.9% respondents) identified. Lower satisfaction with secondary support (TRiM, PIC and EAP) than primary actions.
Suicidality and mental health - non-work related	NA	Interviews - previous roles e.g. Armed forces PTSD. Interview - alcohol dependence issues in workforce. Interviews – demand for support for non-work related problems outstrips work-related.	Support for issues like bereavement and divorce available and accessed.	High awareness and access of Employee Assistance programmes
Suicidality and mental health - suicide prevention	NA	Policy - few policy mentions (25 in total across 4 Trusts). Policy – no suicide prevention support. Interviews - recognised suicide ideation common, interventions are implemented and perceived to be successful.	NA	NA
Culture of openness vs stigma and discrimination	NA	Interviews and Policy - shift in culture towards acceptability	Interviews - shift towards acceptability. Peer and manager support important.	NA
Healthy lifestyle and physical health	Seasonality in absence data may be linked to 'winter illnesses'	Interviews - gimmicks not felt to help acute mental ill health, but valued to support overall workforce mental health. Interviews - high levels of MSK injury.	Gesture of goodwill. Expand offer for impact. Aging and physical decline associated with role.	High awareness and planned access for cycle to work schemes. High awareness of eye tests in remote patient care and support service roles.

Financial wellbeing	NA	Policy – absence of guidance / policy.	NA	17% staff would like help with 'worries at home eg finances or caring for family members'
Sleep and Fatigue	NA	Policy – absence of guidance / policy.	Issues with unsocial shifts and shift patterns. Sleep (napping) as a coping mechanism.	33% staff would like help with falling asleep
Disability	NA	Policy – absence of guidance / policy.	NA	One hundred and eleven respondents were working from home due to being "in a high-risk group, as determined by Government guidelines"
Absence/ attendance / presenteeism	High absence rates. Variability in rates between Trusts. Absence rates can be predicted in clinical staff.	High rate of musculoskeletal and mental health absence. 8/10 trusts had attendance or absence management policies / documents.	Inconsistent approaches by managers. COVID-19 self-isolation guilt.	NA
Coping strategies /adjustment	NA	Interviews – changing needs of aging workforce considered.	Exercise, black humour, peer support, napping.	Attempted access of services high – Trust and external. Better WEMWBS in higher/lower ages and shorter/longer lengths of service.
Impact of COVID-19	Unknown impact on prediction models	Interviews – accessibility / delivery of services a potential challenge. Interviews – increased staff recruitment increasing demand. Interviews – future planning for impact of COVID-19 needed.	Support sessions in place cancelled / changed.	12.1% staff working from home, majority felt guilt. Change in activities that support good wellbeing, particular reduction in socialising. During pandemic face-to-face patient care staff identified need for help with Mental health, PPE and 'dealing with what I have seen or heard'. Few staff reported accessing services during pandemic.

The matrix view of the themes from this study support the understanding of the ways in which ambulance work influences staff wellbeing. Absence rates were variable over time with strong seasonality, but it is not clear how COVID-19 absence will affect the predictability of absence in the sector. Absence rates signal the wellbeing of the workforce. In this study, some staff reported feeling valued at work, while some described working under pressure to meet organisational targets at the expense of their wellbeing. Participants described personal issues (e.g. divorcee, financial difficulties, bereavement, alcohol use, and the impact of previous employment) that impacted on work and attendance.

Apparent in the data were variations in service policy and delivery, differing levels of awareness of available resources to support wellbeing, different levels of focus on primary or secondary interventions across different trusts, and inconsistency of the ‘offer’ across different trusts. Challenges in supporting ambulance staff include a remote and dispersed workforce; the stigma associated with mental health; and the impact of managers and leaders.

9 Discussion

9.1 Defining wellbeing

"Defining wellbeing", according to Atkinson (2016: 2)[72] "is commonly recognised as a major problem". The problem of what employment practices are connected to and facilitate wellbeing is difficult, because people (as well as the research literature) attach different meanings to it. This point was raised using an interview with Trust J's wellbeing lead:

> *"people interpret it [wellbeing] in very different ways. People's understanding of what it means to them is very different because we are all different*".

The divergent meanings that are attached to wellbeing are also in a constant state of flux. There has been a substantial growth in employment wellbeing discourse in recent years. The lead for one Trust reflected on this during their interview:

> *"traditional HR policies, like discipline and conduct, grievance, etc. are now having a section added into them around staff's health and wellbeing, and where to direct people. But then, like your sickness absence, your menopause, your stress, those sorts of things will be actually in their own section as health and wellbeing policies".* (Trust F)

This study adopted a broad definition, and allowed respondents to define wellbeing themselves.

9.2 Challenges to wellbeing in ambulance services

Ambulance staff are likely to encounter some very stressful, intense and emotionally draining situations[5] which can exact a toll on their physical and mental health [6].

Organisational culture influences the response to the mental health and wellbeing challenges faced by its staff[13]. COVID-19 has placed additional challenges for ambulance staff in their professional lives, in the form of social distancing regulations and the risk of infection from patients to themselves and their families. Not only has COVID-19 impacted significantly on the mental health and wellbeing of ambulance staff, but it has also challenged the way that ambulance Trusts support them.

How staff deal with the adverse impacts on their mental health and wellbeing that result from experiencing stressful situations depends in part on the structures and processes that exist to support them[6]. It also depends upon the organisational culture within their ambulance trust [13].

For instance, concentrating on response times focuses resources primarily on the time taken for vehicles to arrive at the scene of an incident which may distort clinical priorities. The impact on staff wellbeing may be overlooked if the priority is on getting ambulances and staff to incidents as fast as possible. For example,

fewer breaks between incidents, may take its toll on staff physical and mental health. A focus on response time targets also neglects other important aspects of patient experience, such as reassurance and interpersonal skills[73]. It also detracts from the professionalisation and greater skillset of ambulance staff[13,14].

The HEE Wellbeing commission report recommended that "NHS service managers should develop incident protocols for when staff are placed in a situation that would disproportionately impact on their wellbeing, and Wellbeing Guardian Principle Two was written in the context of ambulance crew attending suicide of colleague. These types of incidents can be very challenging for colleagues, and work by AACE and colleagues that has now been published should support these recommendations and be included within the plans and strategies for supporting staff wellbeing.

9.3 Characteristics of successful employee mental wellbeing services

Organisational culture, attitudes and behaviours of managers and leaders as well as mental health and wellbeing service provision were perceived to be important but were also seen as variable in different ambulance trusts. Previous studies examining cultural change in the ambulance services identified managerial ineffectiveness as key factor in why such drives failed[74].

This was consistent with findings from the staff telephone interviews where management attitudes were important in creating either a culture of openness or stigma in relation to mental health and wellbeing. Interviewees consistently discussed "management" as a factor in their experiences at work, and it should be recognised that those in management roles are also employees under the same organisational structures and pressures as the interviewed staff, although their experiences were not directly captured in this study.

Staff sometimes felt unsupported and undervalued. They felt pressures to return to work before being fully ready, partly because of organisational concerns about staff shortages (worsened by COVID-19) or the need to meet organisational targets. This led to a failure to recognise how presenteeism might affect individuals' ability to deliver effective ambulance care where presenteeism may be harmful if the organisation cannot adapt to the presentee[69,75].

Conversely, management practices that showed concern about staff in an open organisational culture, where personnel felt free to discuss concerns about mental health and wellbeing with each other meant that problems were detected and addressed earlier.

Providing more training for managers in early recognition of mental health and wellbeing problems (NHS Employers 2014) could address the finding that ambulance service managers were underprepared or unresponsive to these challenges. This may also increase the knowledge of staff of the services that are available to them. This returns to the idea of organisational or individual responsibility, in that individuals

are required to disclose a need for help, and those that receive that disclosure must be prepared to identify the appropriate actions to prevent, address and deal with employee concerns.

9.4 Wellbeing during COVID-19

The impact of the COVID-19 pandemic on healthcare workers has been profound. Health and wellbeing leaders were preparing for challenges in accessing face-to-face services needed for staff, an increasing workforce as more staff were brought in to deal with the crisis, and working with an unknown future demand, planning for a fatigued, morally injured and distressed workforce. Staff who were already receiving support indicated that this reduced, changed or stopped, creating further challenges. Work from Mind in 2021 showed that some ambulance staff reported not seeking help as they did not feel that their condition warranted it, but staff reported a need for help. Face-to-face patient care staff identified need for help with mental health, PPE and 'dealing with what I have seen or heard', yet few staff reported accessing services during pandemic. This pent-up demand for services may cause future issues with accessibility.

9.5 Study limitations

The study planned to explore the wellbeing experience of staff who were preparing to leave or had recently left the NHS ambulance service, but due to difficulties in reliably identifying this population for inclusion, this was not carried out.

The study was planned prior to COVID, and this resulted in both changes to the planned methodology and changes to the final package of work to incorporate the unique timing of the data collection period. An exploratory sequential design was initially planned for whole study, including the exploration of staff experiences of wellbeing interventions through interviews followed by the design and delivery of a quantitative survey (phase two of the project). However, as the UK began to experience the effects of the COVID-19 pandemic, interviews were delayed and the chance to use the survey to capture information relating to the experiences of staff across the UK during the pandemic meant that data were collected concurrently. COVID-19 also affected the exploratory aspect of the study through a change from planned staff focus groups to telephone interviews in line with government and healthcare guidelines.

Those individuals agreeing to be interviewed and to complete the survey did so on a voluntary basis and therefore do not represent a random sample of NHS ambulance staff.

10 Recommendations

Recommendation One: Increase accessibility, consistency and timeliness of wellbeing interventions

The concerns about the how staff can and do access employee wellbeing offers should be addressed though allocation of adequate resourcing to increase timely access and consistency of wellbeing interventions.

Recommendation Two: Increase wellbeing offer coverage

There is strong empirical evidence that shift work disturbs sleep[76]. The wellbeing offer could improve coverage of employee wellbeing issues if they also had action plans around good sleep hygiene, financial aid and management of changes to income.

Recommendation Three: Support and train line managers to care for their staff

Whilst some staff felt well supported by their line managers, others felt improvements could be made to the support provided. Line managers must be trained in the early identification of staff wellbeing concerns, and must be supported to be able to act and recognise their role in reducing presenteeism where this is harmful. This should include encouraging line managers to signpost staff to appropriate resources as well as building an understanding of leaders training or development needs.

Recommendation Four: Incorporate staff suicide prevention and postvention in trust wellbeing offer

Despite there being empirical evidence that staff suicide in the ambulance service is a significant problem, along with the experiential knowledge offered by wellbeing leads, policy and guidance on suicide prevention and postvention in this area was lacking. The AACE, together with NHS England and Improvement has recently produced national guidance on this, which should be incorporated into Trust policy and plans.

Recommendation Five: Provide psychological support by specifically trained staff

The identified lack of preparedness among staff providing psychological support for ambulance staff through their employer, means that specific training programmes or modules should be developed to ensure appropriate training is provided for counselling staff.

Recommendation Six: Promote a social model of disability and emphasise universal/inclusive design in the work environment

We encourage employers to promote a social model of disability and place a greater emphasis on the principles of universal and inclusive design in workplace environments.

Recommendation Seven: Repeat sickness absence modelling using up-to-date data

The impact of COVID-19 on staff sickness and absence should be modelled. However, it is likely that national policies for healthcare staff isolation will mean that data will not be comparable to previous years. Investigating the variability between services may be valuable to understand if the impact of policy differences between services persists during the pandemic.

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With thanks to all of those who have given their time to be interviewed, and complete the study survey. Further thanks are owed to the NHS Ambulance Service Trust research departments and the NIHR CRN for support in facilitating the study delivery.

We would also like to thank the members of the steering group who supported the development of the project:

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