



## **The Impact of Junior Doctor Strikes on the Functioning and Overall Care of Patients in the Emergency Department**

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**Abstract**

**Objectives:** *To see how the junior doctor strikes affected the baseline function of the emergency department.*

**Method:** *This is a retrospective investigation into the emergency department at Wythenshawe Hospital. Data was collected from electronic patient record system (HIVE) ED metrics exploring waiting times, bounce-back rates, and admission rates.*

**Results:** *We saw a decrease in all waiting times during the strike weeks compared to the weeks preceding and after the strikes, and decreased bounceback rates with only a slight decrease in mean daily patient count.*

**Conclusions:** *The emergency departments were maintained during the junior doctor strikes, and most parameters even showed an increased efficiency. Supported by similar studies done around the world in other doctor strikes.*

**Key Words:** *Junior doctors, strikes, emergency department, waiting times, patient count.*

**Introduction**

This project is to explore the impact and effects of junior doctor strike action, how this affected the emergency department and to highlight the importance of the strikes. It is crucial to investigate how these strikes affected the hospital. Especially because of the media coverage portrayal of the strikes and how this has influenced public views and opinions.

Junior Doctor refers to any doctor that is neither a consultant nor a fully qualified General Practitioner (GP) (McKay & Majeed, 2016). Meaning they could be anywhere in their 5–8-year training. The average age junior doctors qualify as a GP or consultant was 36.9 years of age in 2012 (Royal College of Physicians, 2012) which means in the context of striking that anyone under this age has had pay cuts leading to dissatisfaction in their careers.

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On the 20th of February 2023, the BMA Ballot for Junior Doctors closed with a turnout of 36,955 of the 47,600 eligible voters, with 98% of them voting in favour of strike action. The goal of this strike period was primarily pay restoration, this was due to the estimated 26% pay cut since 2008 (Lacobucci, 2023). The strike was confirmed by the official report from the National Medicinal Director and Chief Operating Officer of the NHS, informing the trusts and medical directors of the junior doctor strike from the 13th to the 15th of March, then again from the 11th to the 15th of April (Powis & Sloman, 2023).

Exploring the details of the Junior doctor strikes will allow a proper insight into the reasons, the process, and the outcomes of the strikes, in order to get a full picture of the current situation and problems within our healthcare system. As the strikes have been surrounded by fear and guilt from both the public and those involved in the strikes (Kar, 2023), this project will allow us to begin to see if there was a valid reason for this. It will also help address the debate on the ethicality of junior doctor strikes due to the responsibility and duty to the patients.

## **Methods**

This is a retrospective investigation looking at the effects on the emergency department at Wythenshawe Hospital. The emergency department was chosen as this was one of the public's main worries leading up to the strikes and reported in the media as the biggest area of concern (Gillespie, 2023). It is also something that would have an immediate impact and change that can be observed, unlike other departments.

Data was gathered using the Emergency Department Key metrics and reports on the electronic patients record system HIVE (HIVE is the patient database used at Hospitals grouped under Manchester University NHS Foundation Trust) over the time of the first two strikes. The two junior doctor strike dates investigated were the 13th to the 15th of March 2023 and the 11th to the 15th of April 2023. This was compared to the weeks directly before and after the strikes to introspect on the immediate differences.

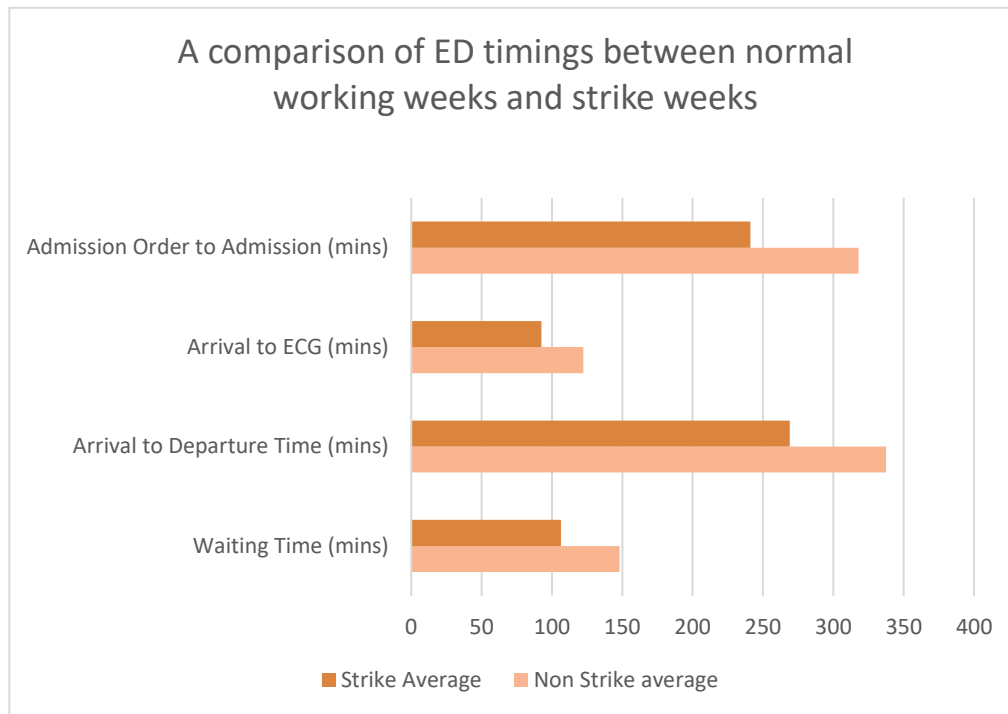
There was a vast amount of information but listed below are the areas chosen to be investigated for this study.

	<b>Definition</b> <i>-From the ED Metric HIVE</i>	<b>Reason</b>
<b>Mean Number of Patients Daily</b> -Calculated by the number of arrivals over the week/7	-A count of the number of ED Arrivals -Excludes urgent cares	-To know if people avoided the ED -To see if there was a disproportionate amount of people who attended as that would affect the validity of the results
<b>Waiting Time, Arrival to Clinician</b>	-Average arrival to clinician first seen time -Excludes negative times	-To investigate the amount of time spent before assessment from a clinician. -Seeing the effects when operating with a reduced number of junior clinicians
<b>Arrival to Departure time</b>	-The average arrival to ED departure time -Excludes psychiatric patients, patients who expired in the ED and negative times	-Checking the differences in total time, will help look at the total efficiency of the department
<b>Arrival to ECG</b>	-The average arrival to ECG time -Excludes negative times	-Having a specific test helps measure the access and decision making
<b>Admission rates from ED</b>	-The percentage of ED visits that are admitted without first visiting an SDEC	-To compare and see if this decreases or increases. -Could show a general trend if doctors under or over-admit.
<b>Admission decision to Admission</b>	-Average decision to admit to admission time -Excludes psychiatric patients and negative times	-Can indicate the effects on the hospital as a whole
<b>48hr and 72hr Bounce Back rate</b>	-Excluded urgent care and admitted pts, -Includes psychiatric pts and ED visits that were admitted to observation. -The bounce back is attributed to the last emergency department from the patient's first encounter and on the date of the first encounter. -Patients with a bounce back of fewer than 2 hours will be considered transfer patients and will be excluded unless the last emergency department of their first encounter is the same as the first ED of their second encounter	-This can look at the accuracy and appropriateness of management and care -This can be due to many factors such as patient satisfaction or even misdiagnosis. -Overall, it can show the effectiveness of the ED normally and during strikes.

**Table 1:** Definitions of each metric and the reason for use. Adapted from the HIVE ED Metric.

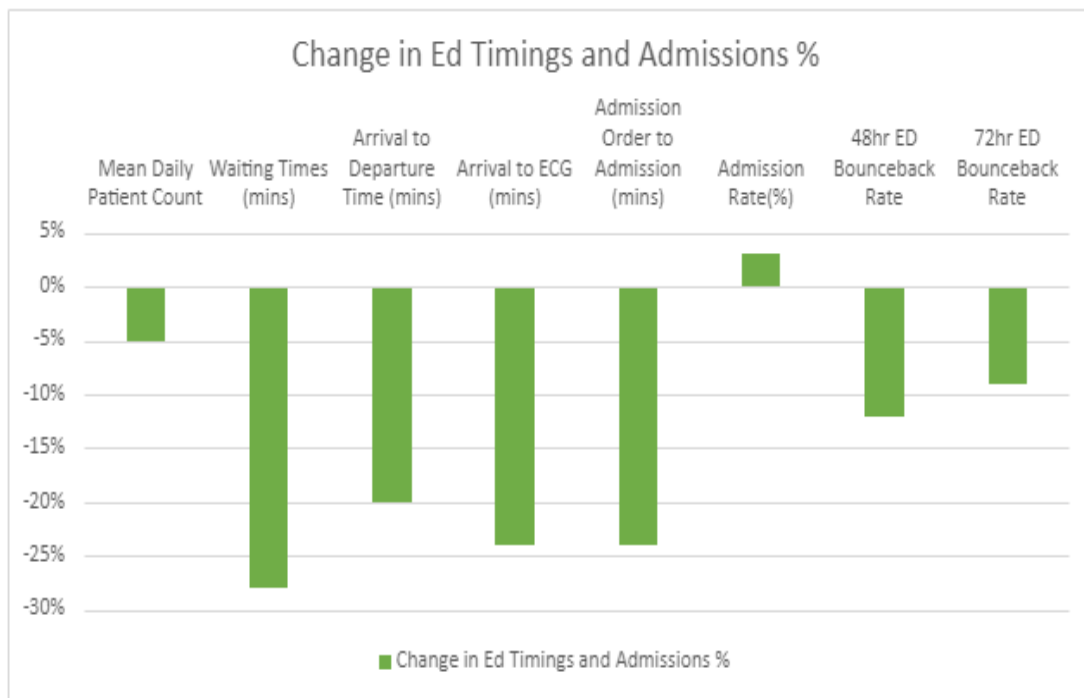
## Results

The average number of patients for a strike day was 892 patients whereas a non-strike day was 943 patients. This is also seen when comparing the week of the strike to the week before and after, with only a 5% change. Both figures (figure 1 and Figure 2) below were calculated to include the days in the week which were not a part of the strike. Below we can see the strike week averages.



**Figure 1:** A comparison of Emergency Department timings between normal weeks and strike weeks. Using data collected from the ED Metrics. This shows the difference in Minutes.

Figure 1 demonstrates that there was a 24% increased efficiency (decreased waiting time in minutes) in admission order to admission during the strike weeks in comparison to normal working weeks. Similarly, 24% increased efficiency (decreased waiting time in minutes) in arrival to ECG time during the strike weeks in comparison to normal working weeks. Additionally, 20% increased efficiency (reduction in time in minutes for completion of ED visit) in arrival to departure from the ED during the strike weeks as compared to normal weeks. Finally, there was a 28% reduction in overall ED waiting times.



**Figure 2:** Shows percentage change in the Emergency Department timings. Using data from HIVE ED Metric

In Figure 2 data showed a 5% decrease in mean daily patient count during the strike week compared to a non-strike week. As for waiting times (mins) there was a mean decrease of 28% during the strike week as compared to the normal working week. Time taken from Arrival to Departure from the ED (in mins) also saw a decrease in 20% during the strike week. Time taken from arrival in the ED to getting ECG done saw a 24% decrease and time between admission order to admissions (mins) saw a 24% decrease as well during the strike week. Overall admissions rate from the ED however saw a 3% increase during the strike week. As for 48hr and 72hr Bounceback rates, there were 12% and 9% decrease respectively during the strike week.

## Discussion

There was little change in the mean daily patient count (5%), it did not differ dramatically as seen in the 2016 Junior Doctor strikes (Furnivall, et al., 2017). The fact there was minimal change is useful as it means that when comparing the other aspects of the emergency department the results will not be largely affected by a significant change in patients' numbers.

Indicating an overall improved proficiency, which goes beyond just maintaining the functioning. This suggests that the presence of the consultants and staff brought in to stabilise the emergency department effectively managed during the strikes. It also highlights that during a normal working week, there are factors that stop it from optimal function, which should also be investigated further. This could be an indication that the overworking of junior doctors has meant a deterioration of their ability to cope fully with the high demands of the emergency department. Which as previously mentioned is one of the reasons for the strikes.

In the Results, we can see the changes in emergency department timings and admissions which shows the percentage changes and highlights the extent of the changes seen when comparing the weeks. One of the significant changes was the waiting time, which is the time taken for a patient to see a clinician upon arrival. To explore this further, the average time in mins on a normal working week was 148 mins (average waiting time for a day in a normal working week was 148 mins), compared to an average strike week specifically which was 107 mins (average waiting time for a strike day was 88 mins). There was also a slight increase in patient admissions (3%) during strike weeks. Overall, there was a decrease in all wait times, slightly increased number of admissions and a decrease in bounce-back rates with patients during the strike weeks.

The findings above indicate an overall improved proficiency, which goes beyond just maintaining the functioning. This suggests that the presence of the consultants and staff brought in to stabilise the emergency department effectively managed the functioning of the ED during the strikes. It also highlights that during a normal working week, there are factors that stop it from optimal function, which should also be investigated further (referrals between different specialities liaised by junior doctors taking more time as compared to direct consultant to consultant referrals could be one of the reasons). This could be an indication that the overworking of junior doctors has meant a deterioration of their ability to cope fully with the high demands of the emergency department leading to burn out which as previously mentioned is one of the reasons for the strikes.

These results are supported by data globally from strike action. Strike Action in junior staff does not only happen in the UK, which allows us to draw similarities to other countries. In Australia, having increased seniority of front-line ED staff during a period of strikes was associated with increased efficiency of patient processing (Harvey, et al., 2008). In Korea, in 2020, emergency medicine specialists managed the strikes with fewer consultations in a significantly faster time whilst replacing a team of normally four to six physicians with two specialists (Sim, et al., 2021). In Spain, striking residents were replaced with staff

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physicians which overall resulted in fewer tests ordered and shorter lengths of stays in the ED (Salazar, et al., 2001).

The fact that there is a very consistent compilation of data locally as well as globally suggests that the functioning of emergency departments in various hospitals is normally maintained during strike action. This, in addition to having information on the effect of the recent strike, allows us to see the immediate impact of the strikes. Overall, this could put the public and the media at ease, in terms of being worried about patient safety in Emergency settings. However, it is important to not let this comfort us too much as there are major concerns about the effects of the strikes moving forward and this is not only from the government but the consultants themselves. One stated that “Morale is slipping and staff are exhausted” when speaking about their fears about the continuation of strikes, and others also reported that there is “no way that is sustainable” (Wilkinson, 2023). It is obvious that these are going to have a huge impact on an already overworked and understaffed NHS workforce, but hopefully, negotiations can take place and this can be resolved in due time.

### **Limitation**

Longitudinal effects cannot be explored (long term outcomes of admissions and referrals made during strike weeks), however, it can show more information when considering the reasons and ethics behind healthcare workers striking.

### **Conclusion**

To conclude, the investigation into Wythenshawe Hospital ED showed increased proficiency and functioning. This was shown by a global decrease in initial waiting times, a reduction in bounce-back rates and an overall reduction in time spent in the Emergency department. The fact that the emergency department was not simply maintained but actually improved highlights that there could be a failure in the baseline functioning of the department- highlighted by the discontent of the junior doctors, the low morale, and potentially indicating a lack of resources provided to operate at its full potential. This would be an important avenue to explore to investigate what is preventing the emergency department from working at a higher efficiency. Junior doctors have promised 3 days of striking every month of their mandate until their demands are met and have suggested that pay demands could increase from 35% to 49% after pay talks broke down

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after the government offered 5% raise (Wooller, 2023). This shows a strong front and highlights the likelihood of these strikes continuing until they are taken more seriously (BMA, 2023). With the possibility of consultants also striking over the summer, there is an actual likelihood that these strikes are going to have a longstanding impact on public health, which can only be truly explored after the final resolution of these strikes. This is a small investigation compared to what needs to be explored to determine the effects of the strikes, however, it can be used to compare the strikes as they continue over the summer.

To emphasize, both junior doctors and consultants have stressed that this is not just about pay, but “protecting the future of the NHS” Dr Vishal Sharma (BMA, 2023). There are fears that as workplace dissatisfaction increases so will the rate of staff leaving. Causing a domino effect on the pressure put on the remaining staff and consequently putting patients at risk. As aforementioned just because it has been maintained so far, does not mean this is sustainable and does not mean it is not having a long-term impact on patient safety. It is limited to the emergency department across the first two junior doctor strikes. The question is how long can this last before patient safety is compromised?

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