



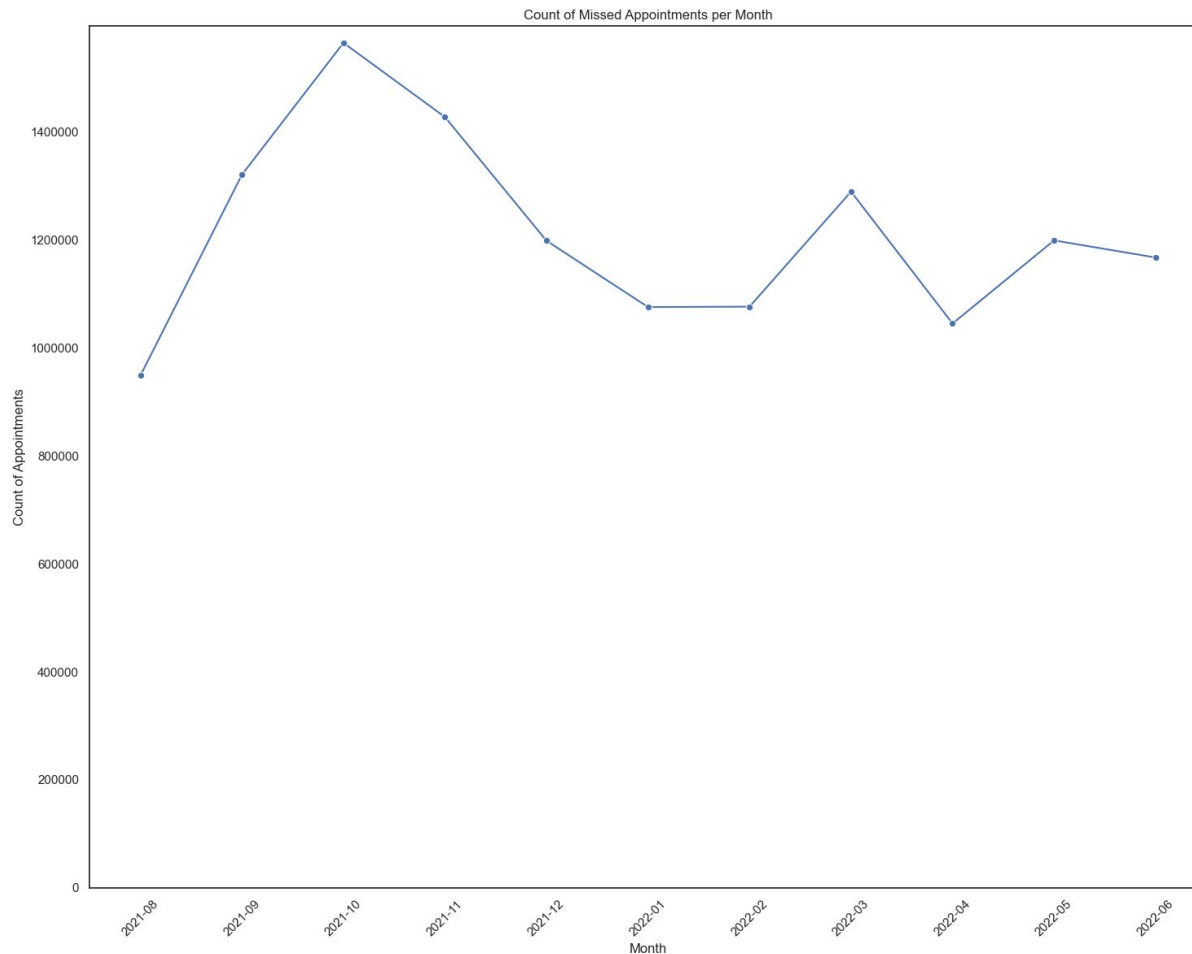
# Why do patients miss appointments?

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Assignment\_Presentation

August 2024



# Are missed appointments problem?



In 2019, approximately 7.2 million GP appointments were missed annually in England

2021 -2022 between 1-1.4m per month

9% of appointments are either missed or unrecorded.

In 2019, missed appointments cost the UK taxpayer

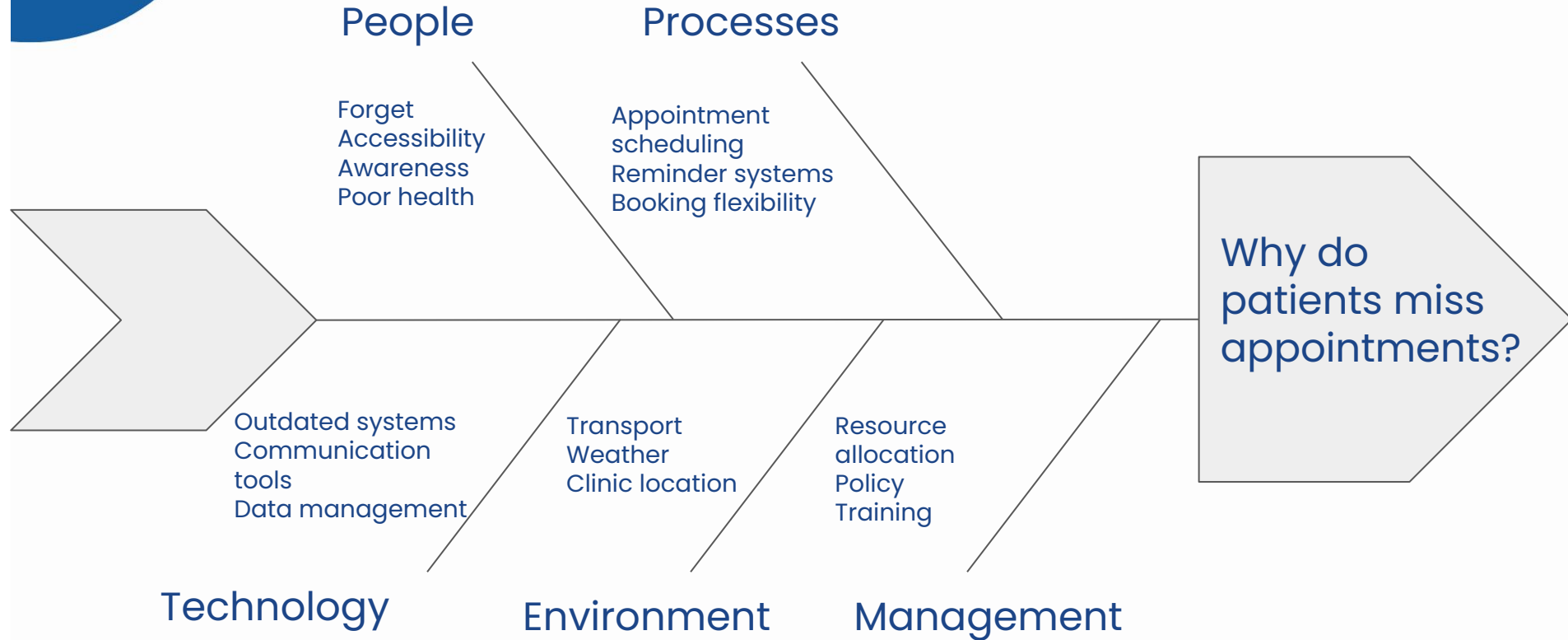
£216 million

# Do we fully understand the problem?

*“While it is frustrating when patients do not attend, the reasons why this happens should be investigated rather than simply resorting to punishing them. Financially penalising patients inevitably impact the poorest and most vulnerable in the community.”*

**(British Medical Association (BMA) chair Professor Philip Banfield, GP Practice News 2022)**

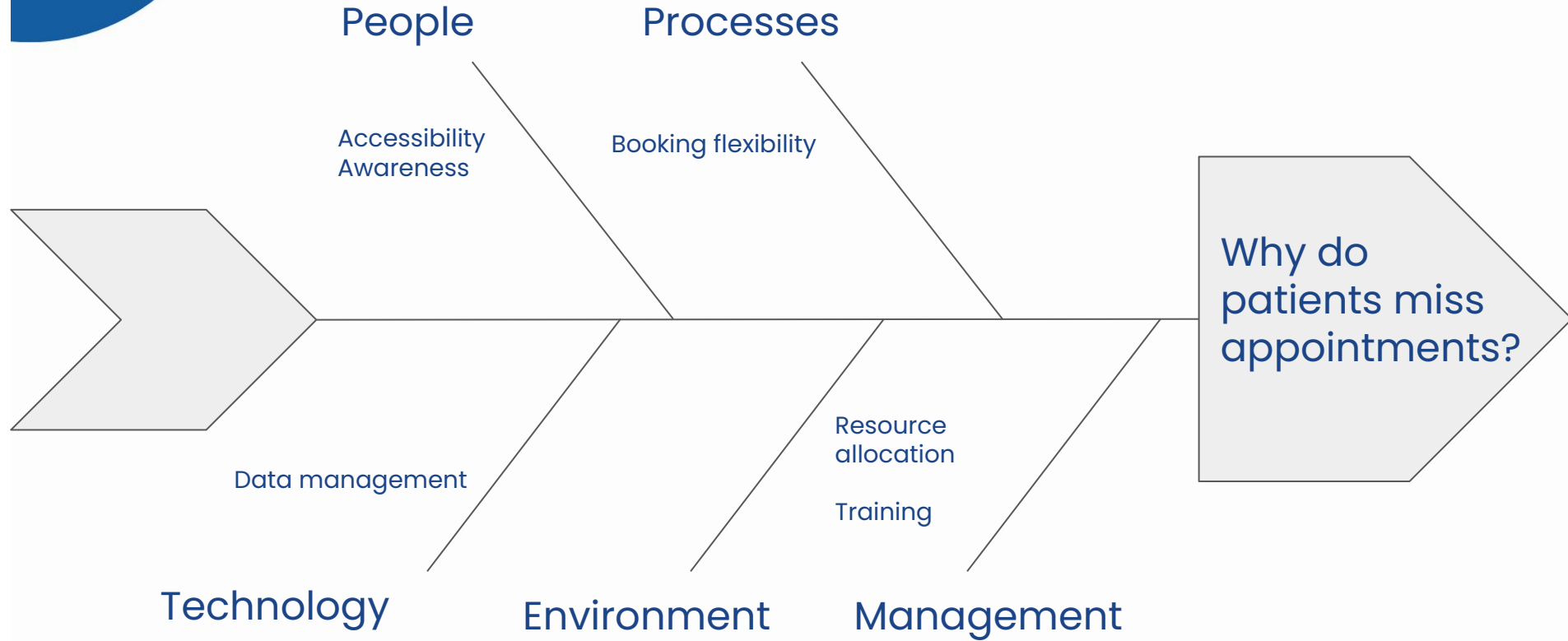
# Breaking down the problem



# Breaking down problem using the datasets provided

Dataset	Time Period	No of Records	Total No of Appointments recorded	Key Data included
Actual Duration [AD]	1st December 2021 and 30th June 2022	137,793	167,980,692	Appointment duration Appointment location
National Category [NC]	1st August 2021 and 30th June 2022	817,394	296,046,770	Service setting Context type National category
Appointments Regional [AR]	1st January 2020 and 1st June 2022	596,821	742,804,525	Appointment status Hcp type Appointment mode Appointment waiting times

# Breaking down the problem

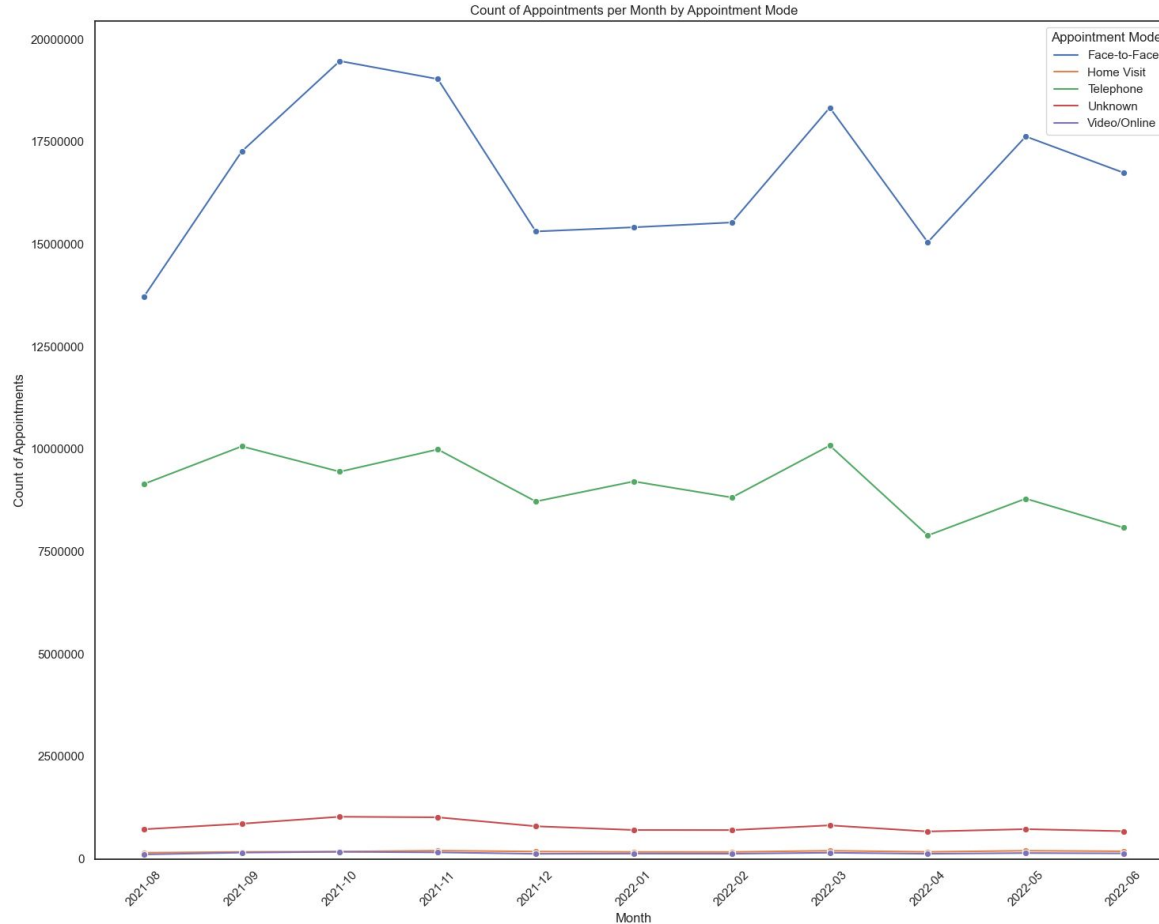


# Breaking down the problem

Problem area:	1 Accessibility	2 Booking Flexibility	3 Resource Allocation	4 Data Management	5 Training	6 Awareness
Possible problem	Difficulty in reaching the appointment location.	Limited options for rescheduling or cancelling appointments	Insufficient resources allocated to patient communication and reminders.	Poor data management leading to lost or miscommunicated appointment information	Insufficient training for staff on managing patient appointments and follow-ups.	Lack of understanding about the importance of keeping appointments.
Analysis question	How is the number of missed appointments affected by type of appointment?	Could there be limited options for rescheduling or cancelling appointments due to capacity issues?	How do the number of missed appointments differ by average waiting time?	How much data is unmapped in the datasets?	Which healthcare professionals miss the most appointments?	How could X(twitter) be used to raise awareness about missed appointment more effectively?



# 1. Accessibility: Number of appointments by appointment mode

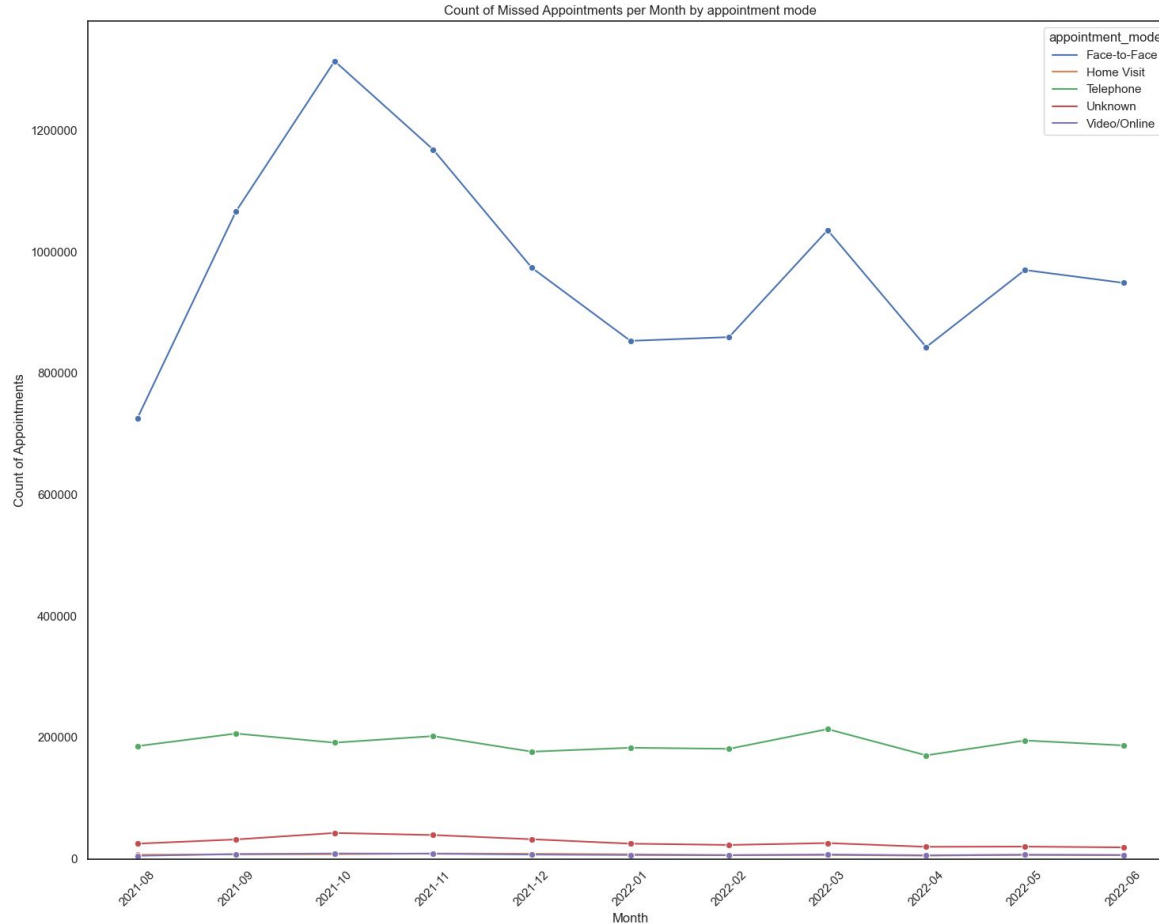


## Insights:

Face to Face appointments most frequent followed by Telephone appointments.

Video / Online appointments very low

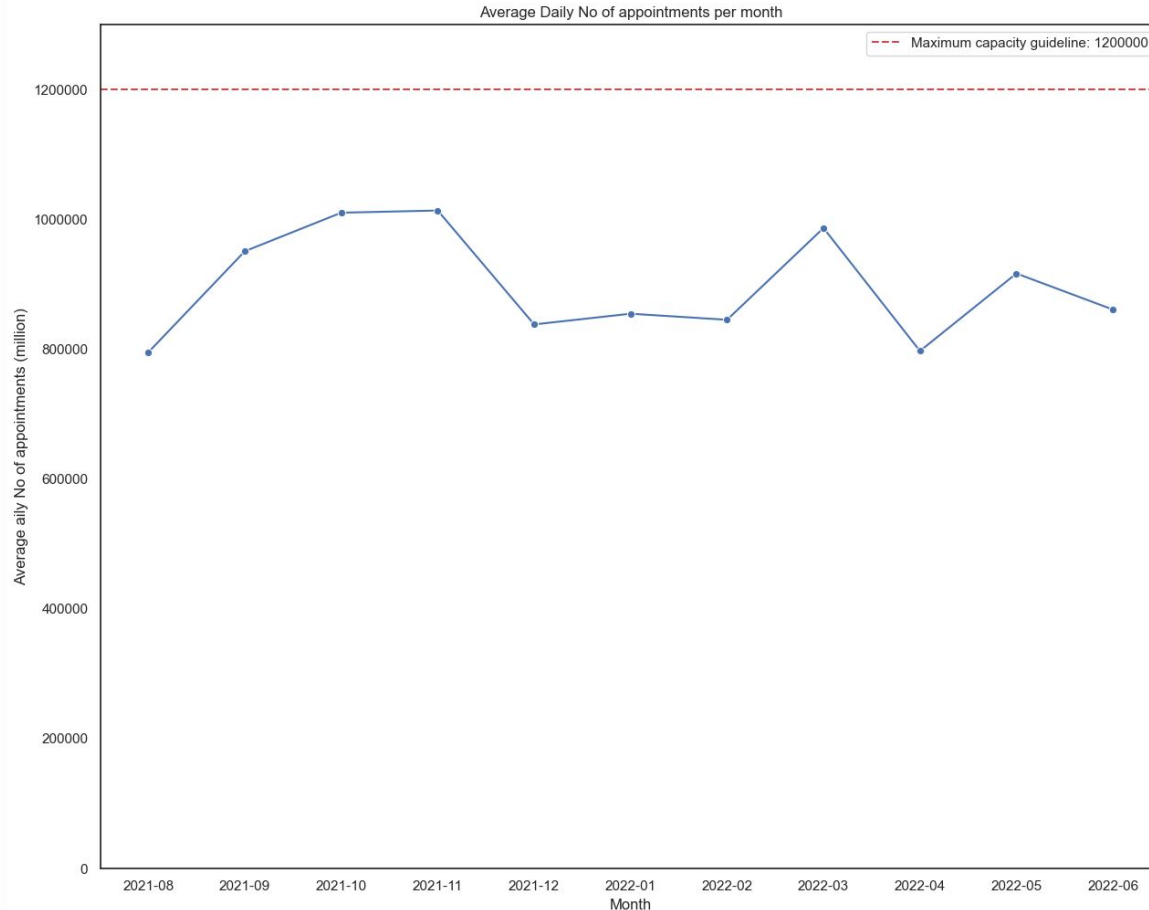
# 1. Accessibility: Number of missed appointments per month by appointment mode



**Insight:**  
Proportion of Telephone appointments missed is lower than face to face appointments

**Recommendation:**  
Can the NHS conduct more Telephone or Video / Online appointments?

## 2. Booking Flexibility: Average daily number of appointments per month:



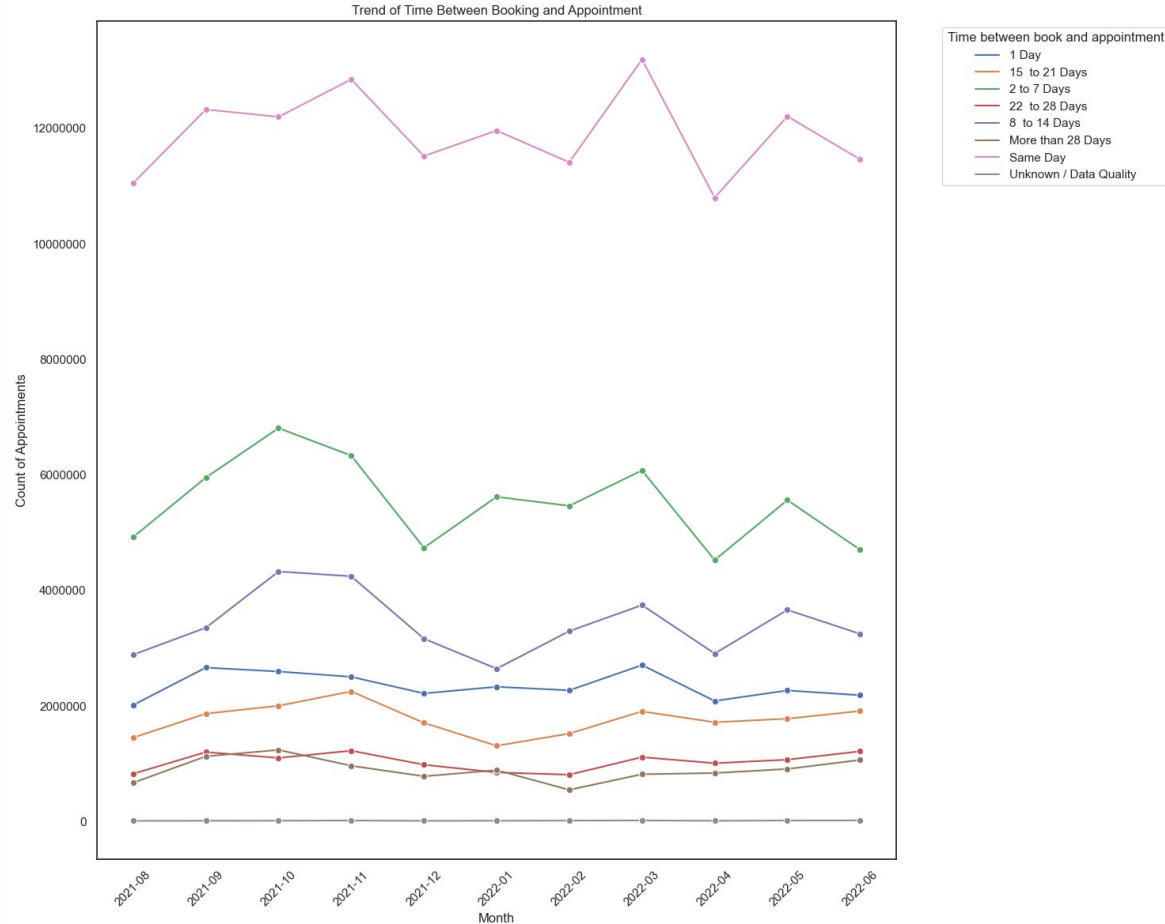
### Insight:

November 2021 had the highest average daily appointments which did not go above the NHS daily appointment capacity guideline of 1,200,000

### Recommendation:

Assume the problem of missed appointments is not related to a capacity problem

### 3. Resource Allocation: Number Appointments per Month by average waiting time

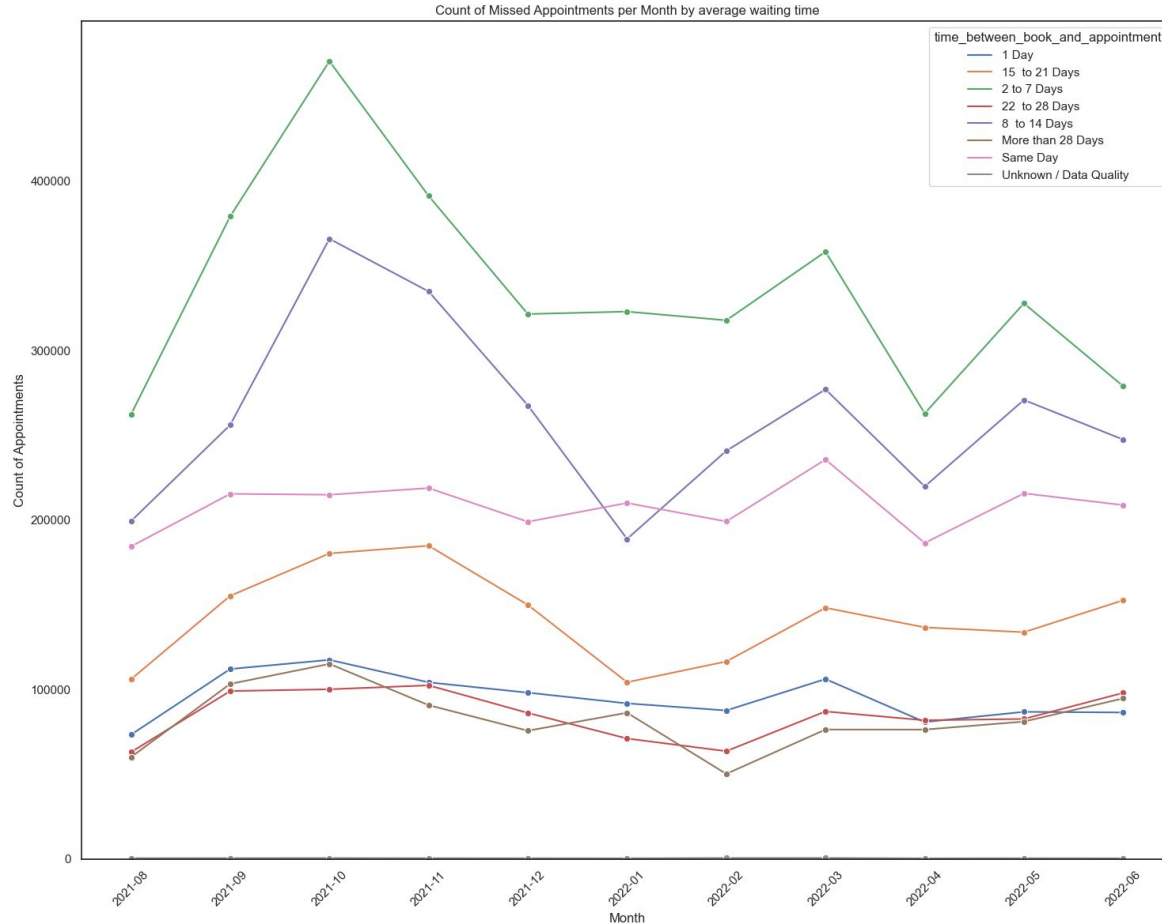


#### Insights:

Same day appointments account for the most number of appointments

2 to 7 day and 8 to 14 days are more frequent waiting times than next day appointments.

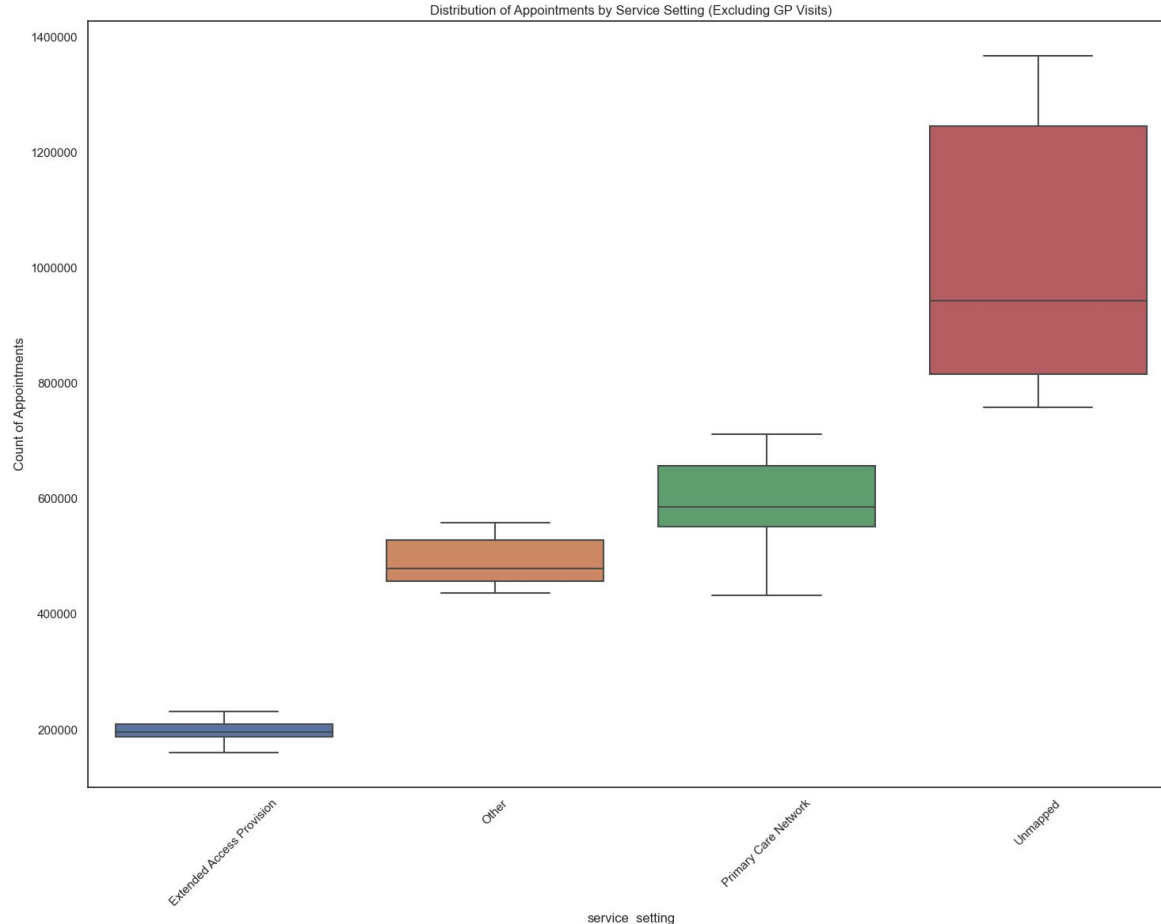
### 3. Resource Allocation: Number of Missed Appointments per Month by average waiting time



**Insight:**  
Same-day appointments, despite being the most frequent, were missed less often than those with longer waiting periods.

**Recommendation:**  
Explore how appointment reminders are issued to patients with longer appointment waiting periods

## 4. Data Management: No of appointments by service setting (excluding GPs)



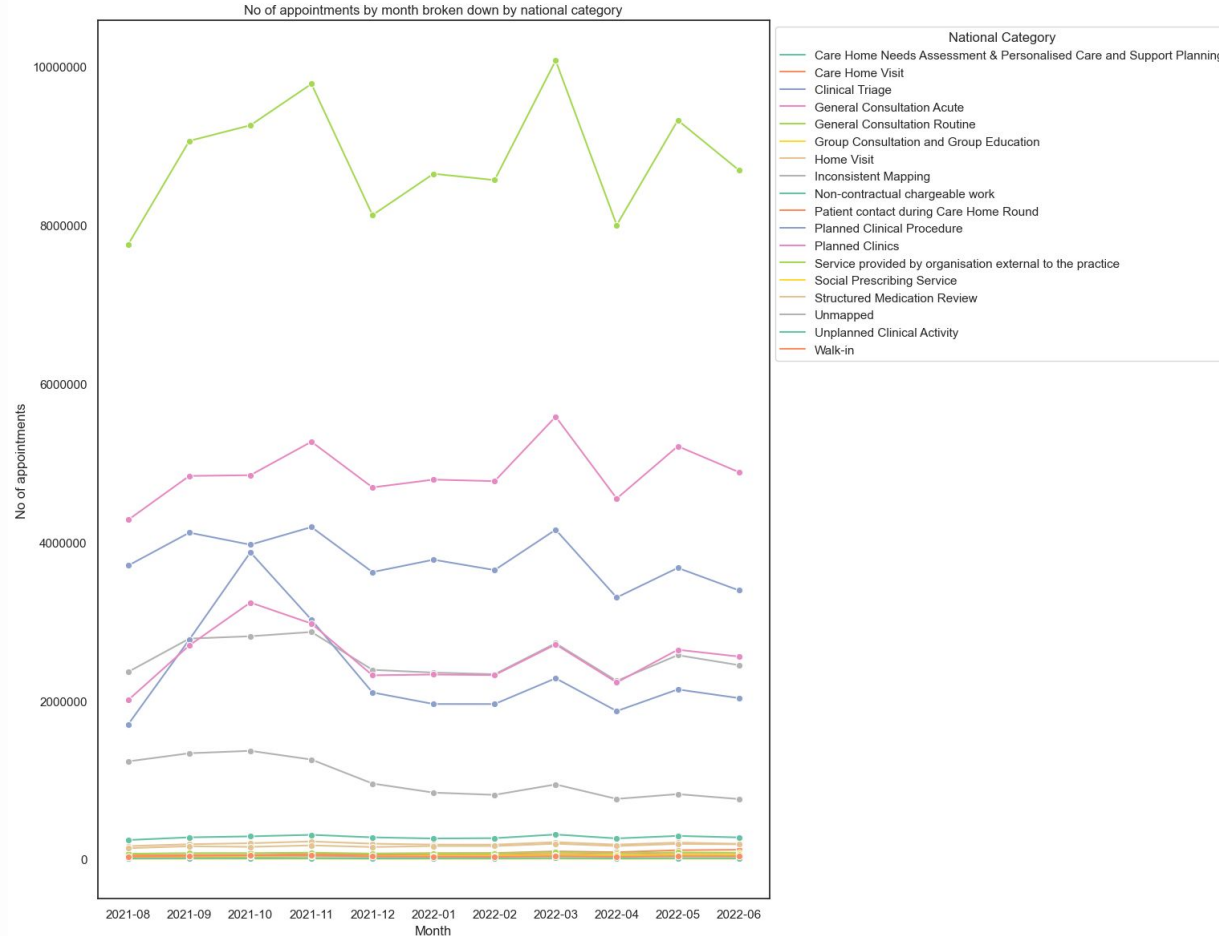
### Insight:

Large number of unmapped service settings

### Recommendation:

Suggest investing in improving data management practices

## 4. Data Management: Number of appointments by National Category:



### Insight:

$\frac{1}{3}$  of all appointments are general practice routine appointments

13% of appointments are incorrectly mapped,

### Recommendation:

Further investigation could be made by NHS into data handling practices.

## 5. Training: Number of appointments by healthcare professional type

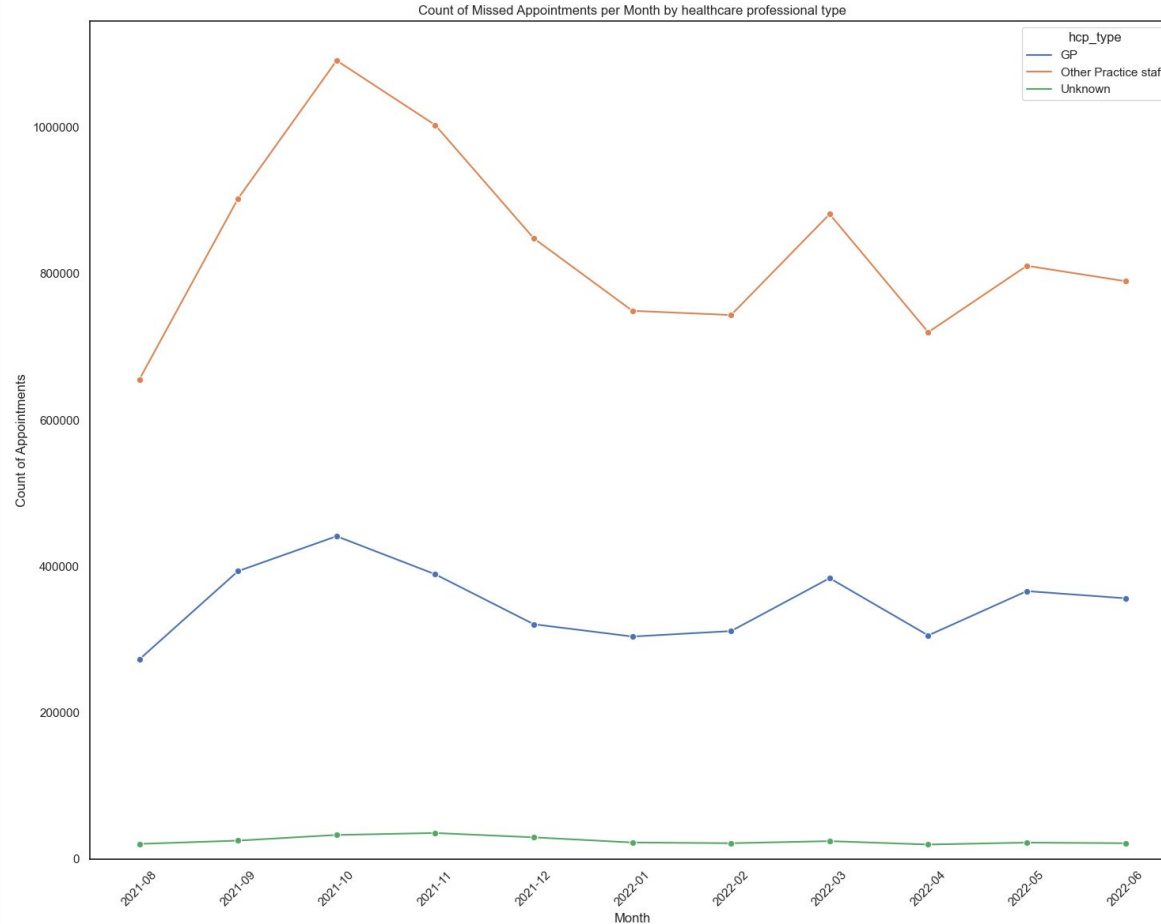


### Insights:

The number of appointments are split evenly between GP and other practice staff



## 5. Training: Number of missed appointments per month by health care professional type



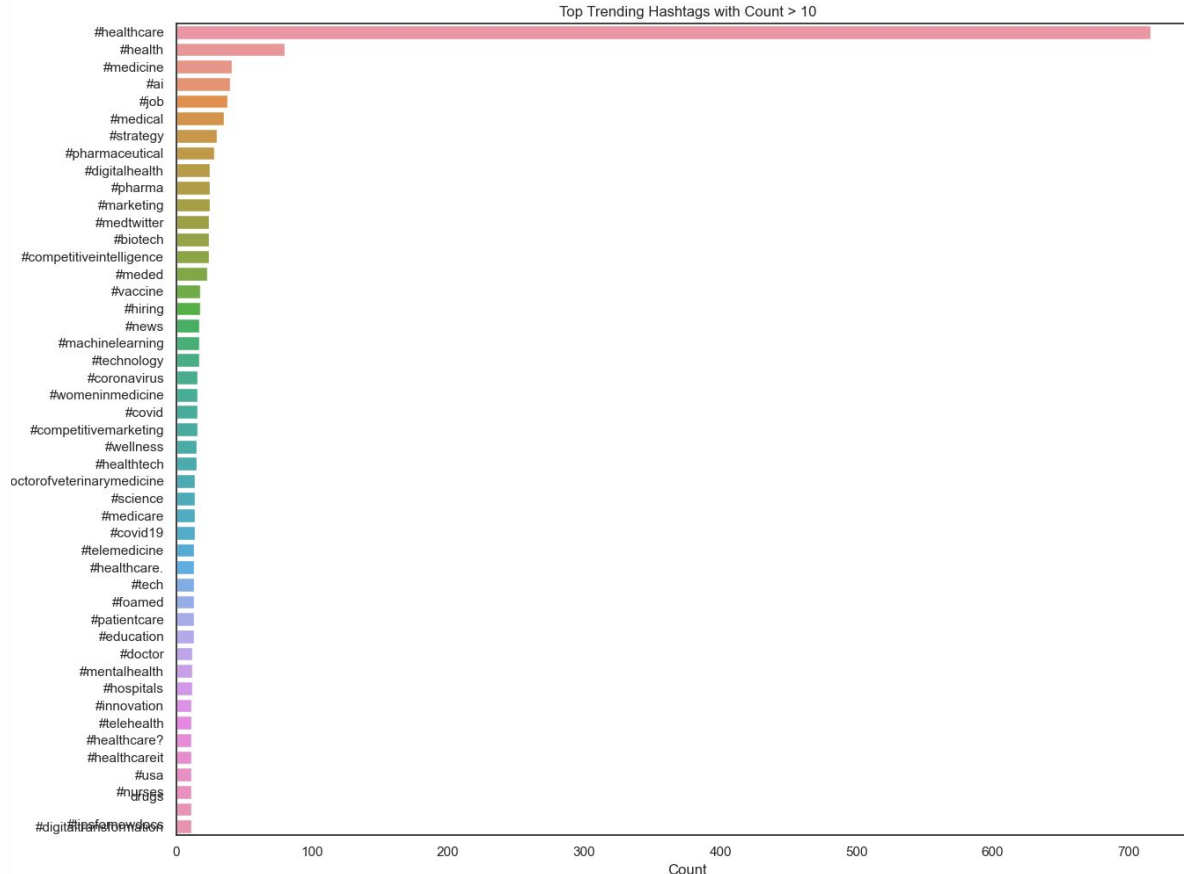
### Insight:

Other practice staff experience a much larger proportion of missed appointments than GPs

### Recommendation:

The NHS should explore why more appointments are missed by other practice staff. Is it a training problem or something else?

## 6. Awareness: The most frequently used hashtags relating to healthcare in the UK



### Insight:

The most frequently used hashtag is #healthcare with 716 occurrences, followed by #health (80), #medicine (41), and #ai (40).

### Recommendation:

The NHS should consider using these popular hashtags to increase the reach and engagement of their tweets when raising awareness of missed appointments

# Conclusions

1. Assume **no capacity issue** in the networks
2. Same-day appointments missed less often than those with **longer waiting periods.**
3. **Telephone appointments** have a much lower % rate of missed appointments
4. **Other practice staff** experience much higher rate of missed appointments to GPs
5. Most frequently used hashtag is **#healthcare** with 716 occurrences, followed by #health (80), #medicine (41), and **#ai (40).**

# Recommendations for further exploration

1. More telephone, Video / online appointments
2. Improve appointment reminders for longer appointment waiting periods
3. Investigate why other practice staff have more missed appointments.
4. Use most popular hashtags to raise missed appointment awareness
5. Wider API integration in Python to overlay other data such as population data, weather data, transport data