

Hospital Care in Scotland

“We’re all bunged up”

Key Performance Indicators (KPI)

What KPIs did we choose and why?

Looked at hospital care as a process

Simplified process to Patient Admission, Hospital Activity and Patient Discharge

Looked to capture as many metrics around these 3 categories as the data allowed, so tracking a patient's journey through the system

Where possible we benchmarked KPIs to a pre-COVID average (2018/19) to provide context for current state

All KPIs on the dashboard can be reported for *All Scotland* and by individual *Health Boards*

Key Performance Indicators (KPI)

Admission KPIs

Hospital admissions by age, deprivation, medical speciality and admission type: captures who is being admitted to hospital and why

A&E admission times within 4 hour target: indicates how quickly patients are being attended to once presenting at A&E

Waiting lists: a measure of the rate at which patients are being processed through the system

COVID admissions: captures the lingering impact of COVID on NHS resources

Hospital Activity

Bed occupancy: a measure of capacity and the ability of health care system to deal with a rise in patient levels

Length of stay (of patient in hospital): another measure of capacity - the longer the stay, the fewer patients can be attended to over a period

Patient Discharge

Delayed discharge bed days by age and reason for delay: a capacity measure of patients in hospital who are medically fit to leave

Visualisations & target audience

Line graphs

Extensive use of line graphs in the dashboard. Data have been presented in a standard format, scaled to post-pandemic average values

Able to show trends chronologically. The slope of the line captures the rate of change

Map

Enables the geographical plotting of information

Provides regional context to the data

Is immediately visually appealing to the user

Dashboard audience

Has been designed for a non technical user group: you don't have to be a doctor or a statistician to use the dashboard

We view the target audience to be those working in healthcare or who are interested in the current state of the NHS in Scotland

During this presentation we will demonstrate the results via the interactive dashboard

Dashboard findings and insights - Discharges

To make more sense of the current situation, we should really tell the story in reverse.

So we start with Discharges...

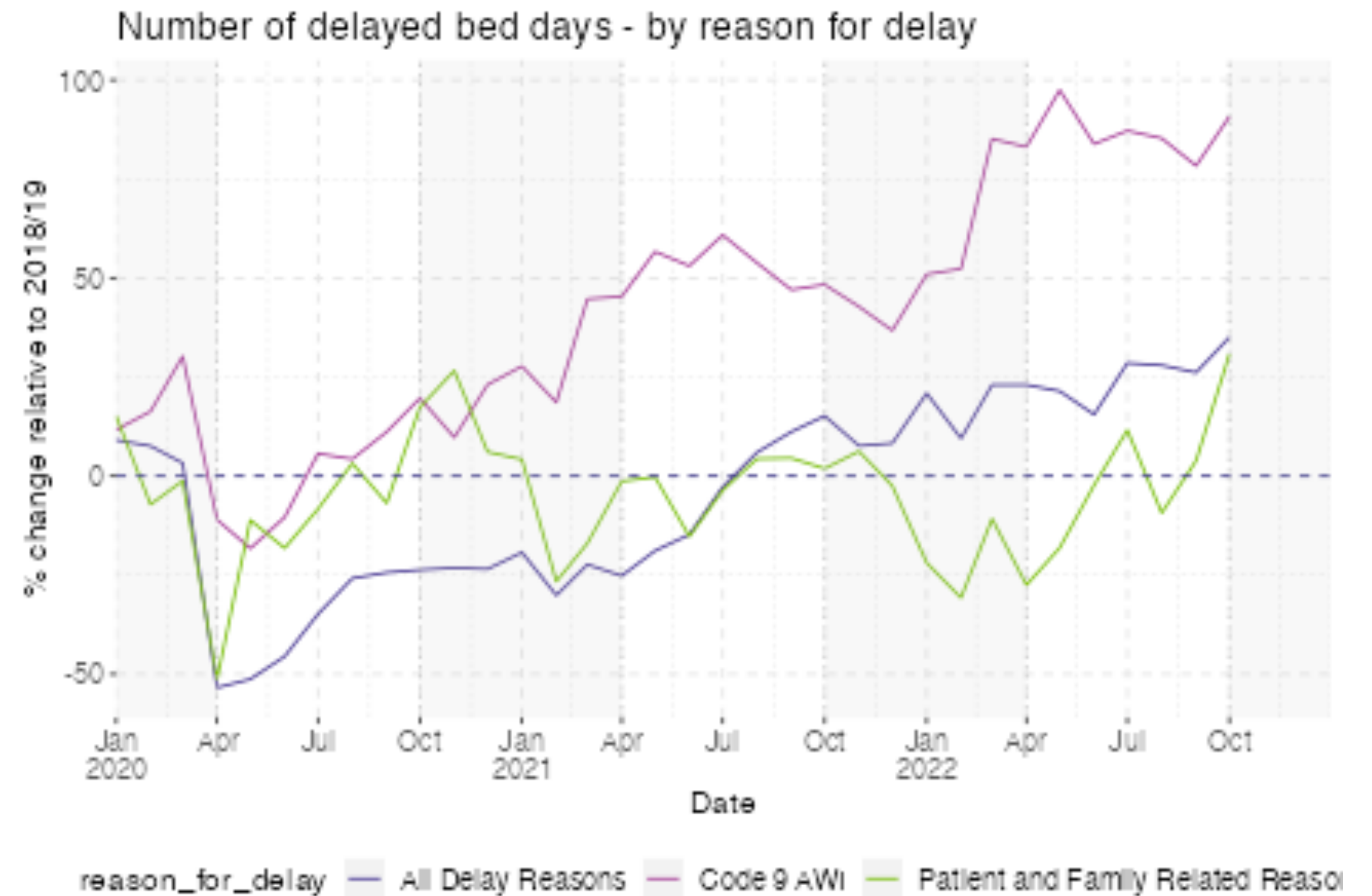
Discharges

The data indicates that the NHS are increasing slow to discharge patients

Overall, the number of delayed bed days is close to 30% higher than pre-pandemic

Health & Social Care factors are driving this increase.

These findings tie in with well documented reduction in capacity of Social Care in the UK over the last decade.



Dashboard findings and insights - Hospital Activity

Hospital activity

Length of average hospital stay is higher now than pre-pandemic:

- elective inpatients are trending to pre-pandemic levels
- emergency inpatients are staying for longer and still rising in June 2022 (Summer not Winter)

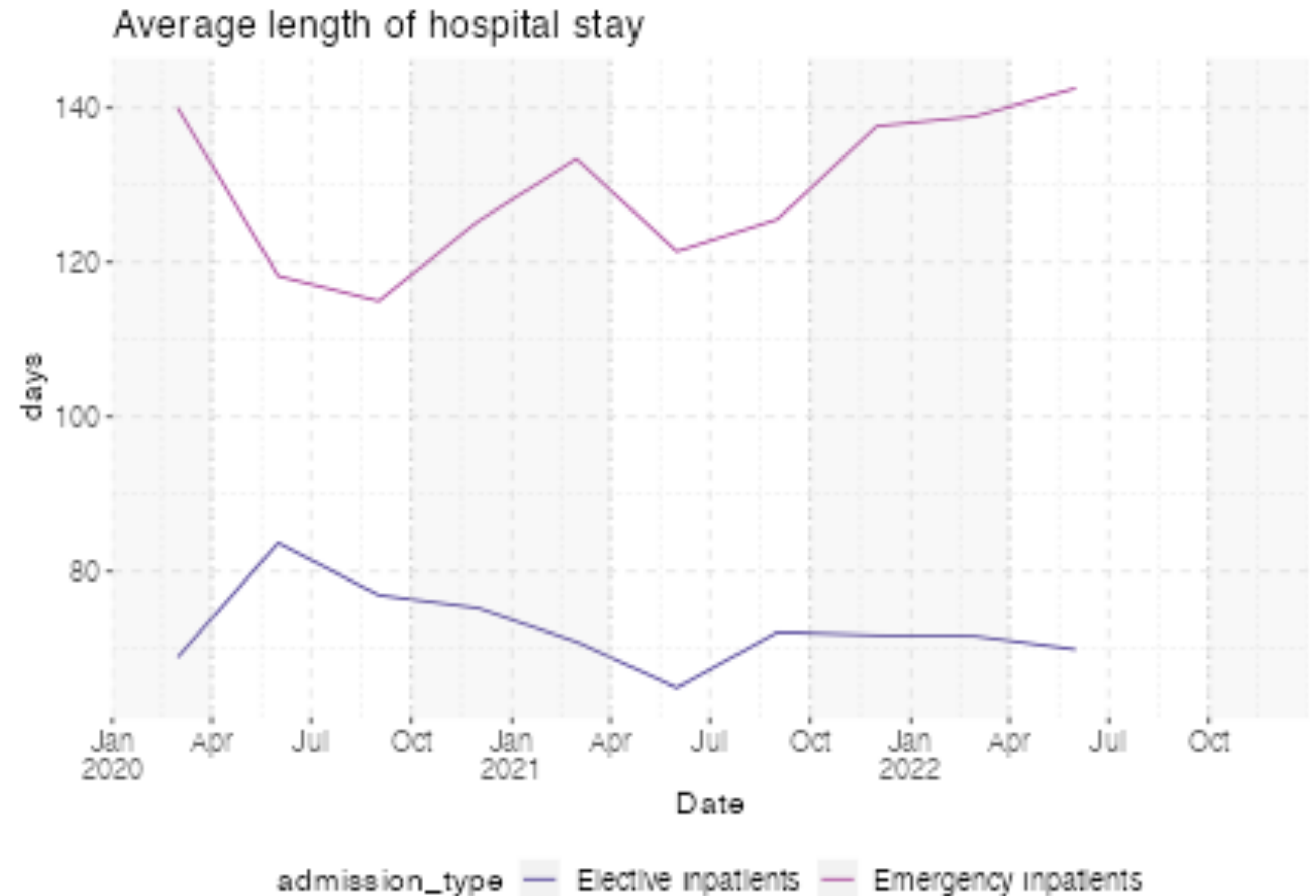
Occupancy levels regularly breach 85%

- deemed to be risk threshold where bed contingency is in danger of being overwhelmed by demand

Hospitals are full of patients with a slow turnaround

Thousands of COVID patients are still being admitted to hospital and occupying beds (see Admissions tab)

This is despite inpatient admissions across all specialties being down significantly (see Admissions - Demographics tab)



Dashboard findings and insights - Seasonal Statistics

Seasonal Statistics

We used statistical tests to see if winter is a significant factor in variability.

We first applied a smoother to the date to remove long term trends. This helps to reveal the seasonal pattern. Then we applied statistical tests to check for a significant difference between summer and winter.

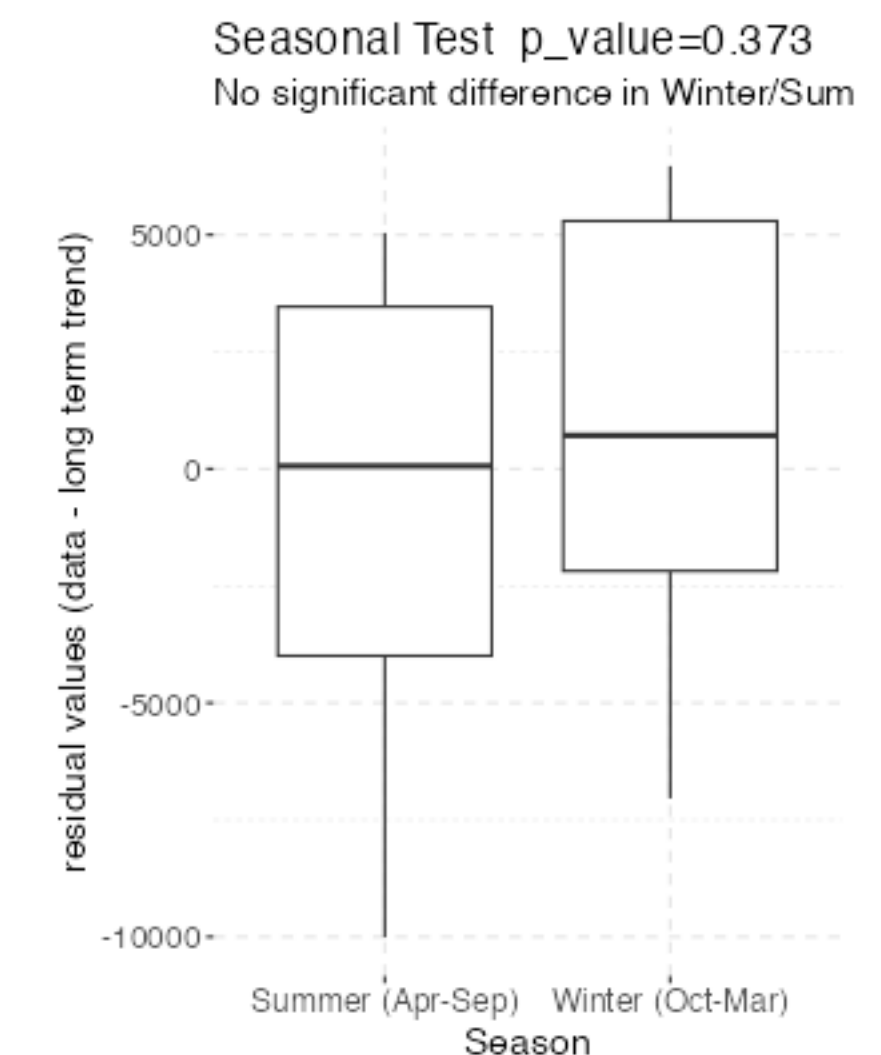
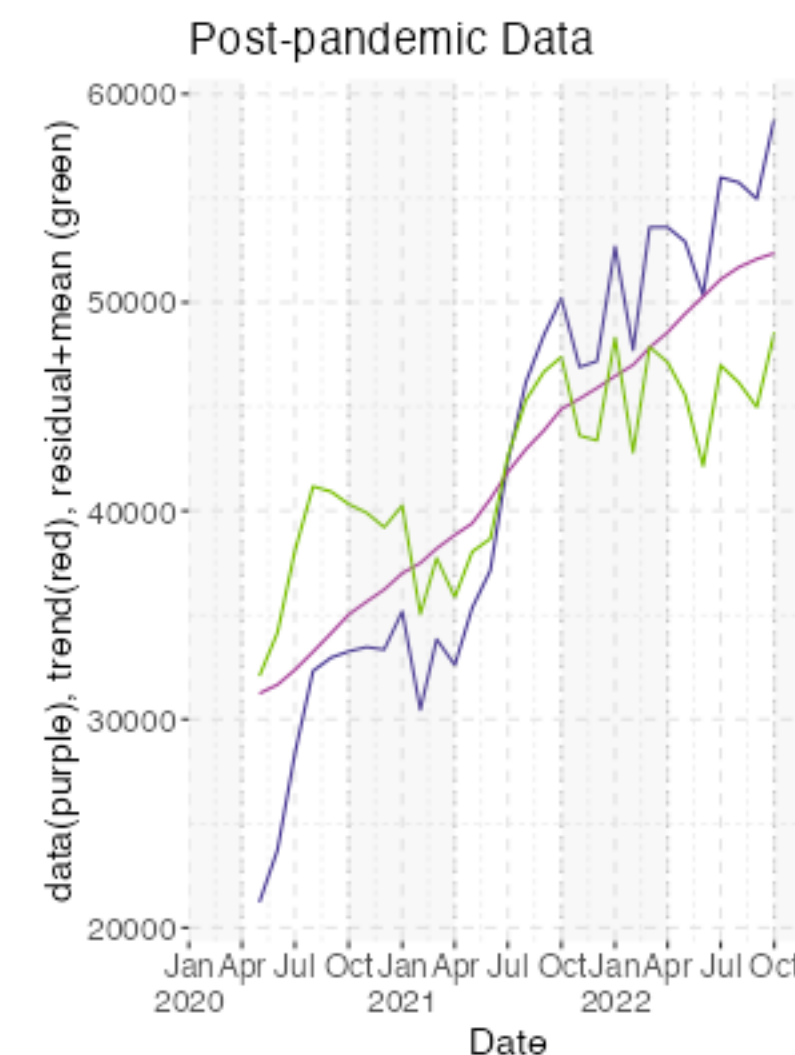
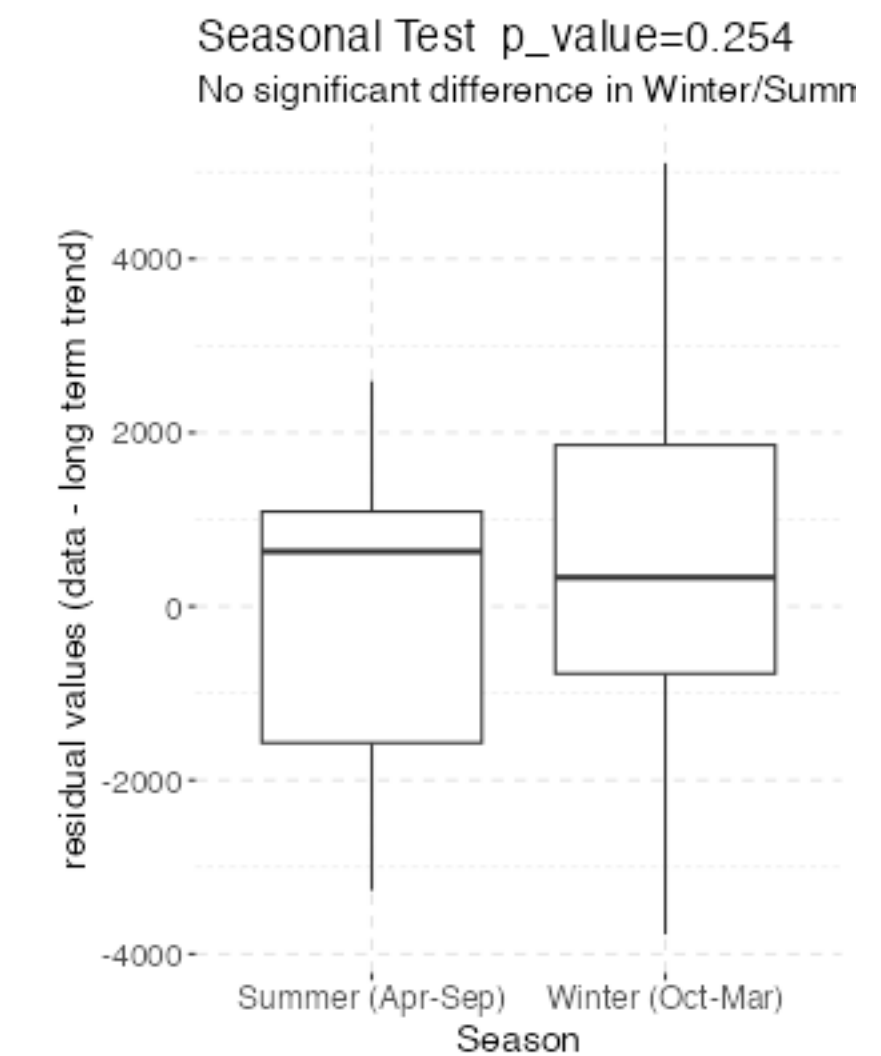
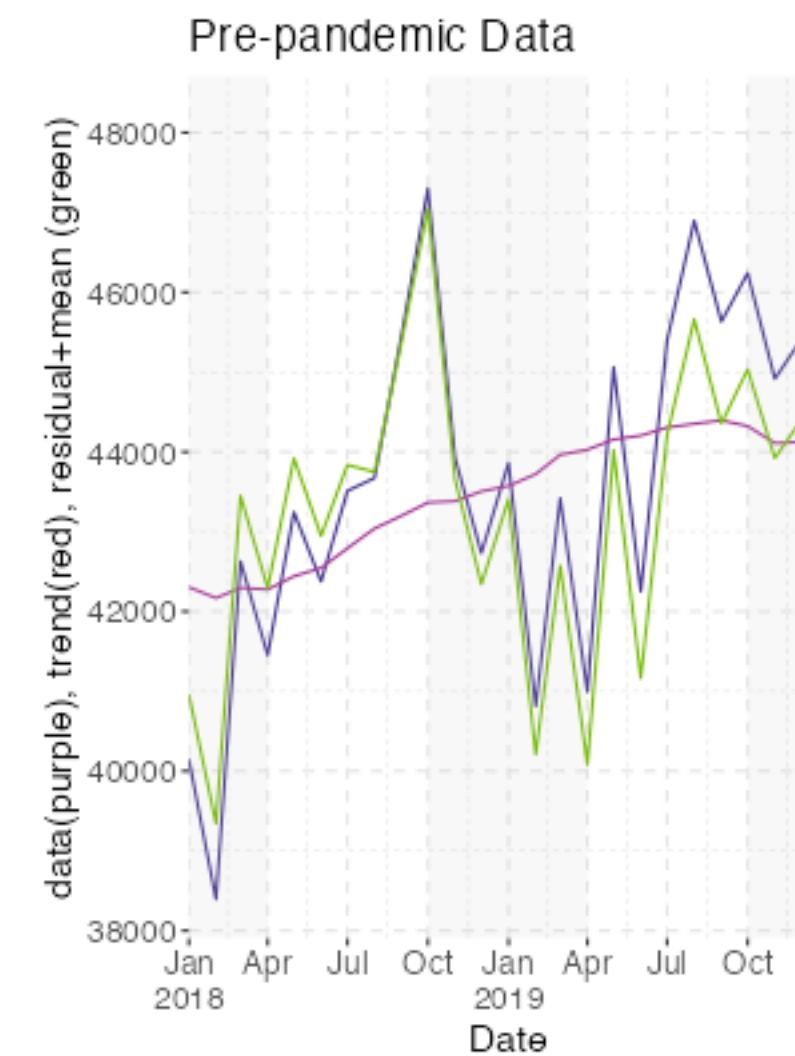
A significant seasonal pattern can be seen when looking at some of the discharge delay data:

Complex delay reasons (adults with incapacity)

Similar pattern across larger Health Boards such as NHS Lothian and NHS Glasgow and Clyde

For the majority of the data sets we analysed, winter/summer was not a significant factor in the variability post pandemic.

No significant seasonal difference found in most of the datasets we analysed.



Dashboard findings and insights - Admission demographics

Admission - demographics

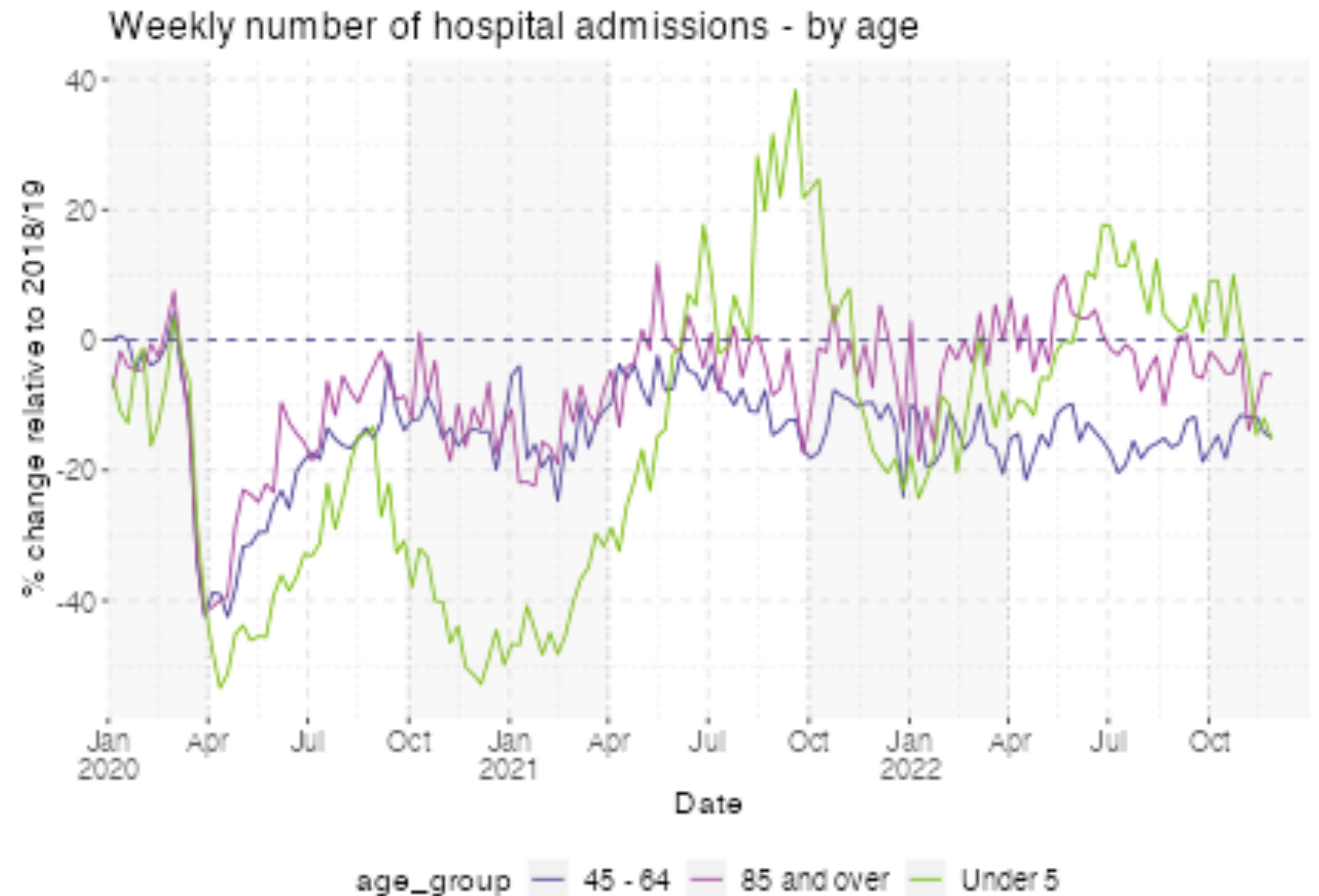
Overall, hospital admissions are down on pre-pandemic levels

- elective admissions are down 20% from pre-pandemic levels
- emergency admissions are yet to fully recover to pre-COVID levels

Examining the index of deprivation showed that admissions of those in most deprived areas are much lower than the least deprived. There is a relationship here between hospital regions as the low SIMD areas are linked to urban areas with large hospital boards - e.g like NHS Glasgow and Clyde.

Admissions by specialty are down across the board for
Elective admissions

Only Cancer, Cardiology, Gynaecology and Paediatrics show signs of recovery for Emergency admissions



Dashboard findings and insights - Admissions

A&E

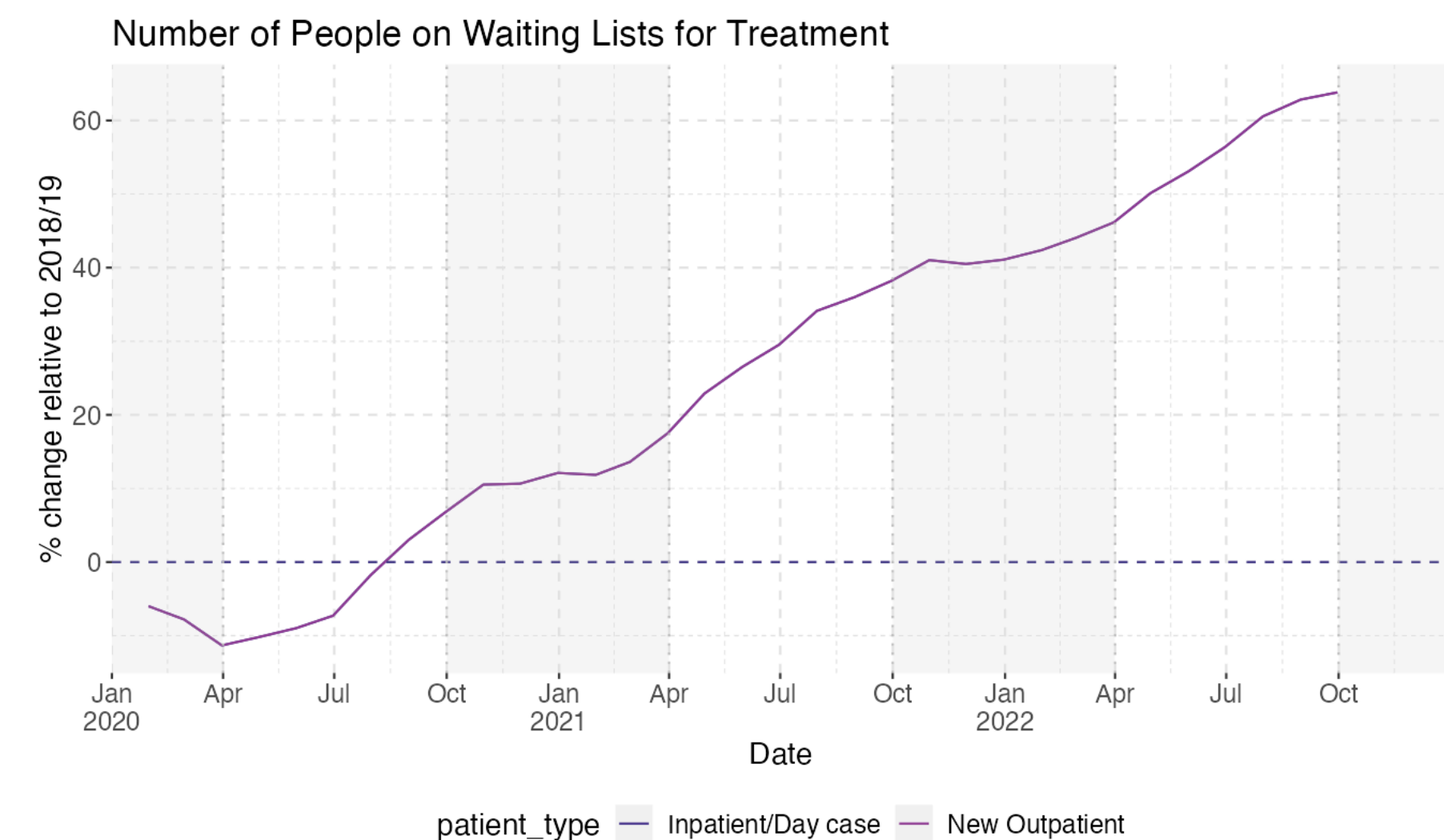
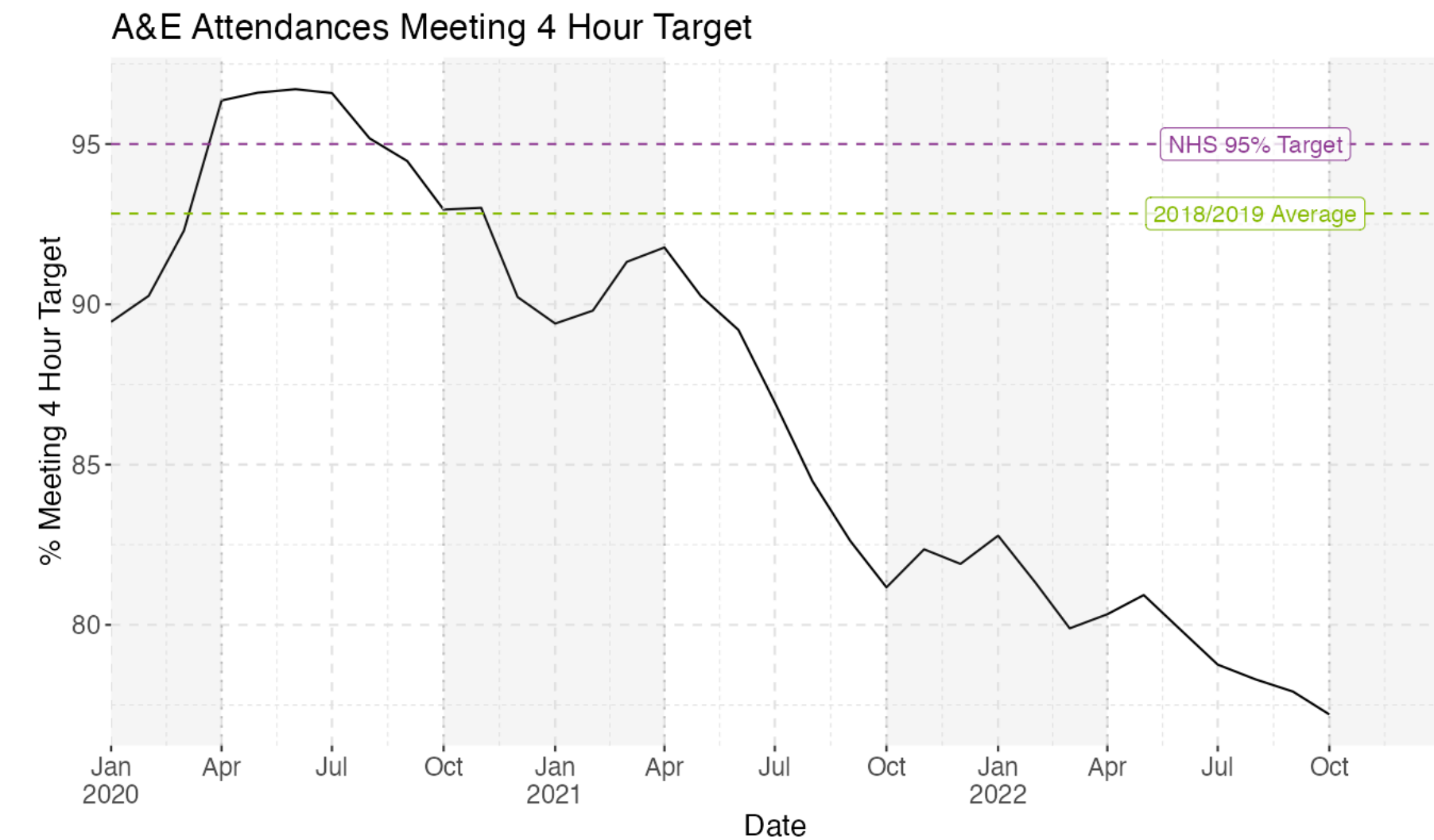
- Significant fall in A&E attendances meeting 4 hour target
- Below 80% across Scotland whereas pre-pandemic average > 90%

Covid Admissions

- Still significant in volume
- Spikes in admissions putting strain on various parts of hospital

Treatment Waiting Times

- showing a steady rise across all health boards
- number of people on waiting lists continues to increase



Dashboard findings and insights - Summary

Summary findings

The rate of discharging patients from hospital has slowed considerably - delayed bed days are close to 30% higher than pre-pandemic

Data from Summer 2022 shows length of hospital stay is rising

The result is higher bed occupancy and so lower bed availability

This explains the lower patient volumes (admissions) as there are available fewer beds

With slower admissions, A&E waiting times rise as people wait to be seen.

The pandemic increased waiting lists as attention and resources was focused on COVID patients.

It seems the NHS is struggling to process this back-log alongside its BAU patient intake.

The pipe is too narrow for the increased volume of patients.

Whether this restriction is due to staffing levels, insufficient beds, staff exhaustion and/or another limited resource, it's not clear from the data we have seen.

The NHS crisis is not limited to winter. It's presently an all-year condition.