**NHS A&E Wait Times Dashboard (2004–2024)**

**Project Overview**

This project explores over 20 years of NHS Accident & Emergency (A&E) data in England. The goal was to understand trends in patient demand, waiting time performance, and system pressure across Type 1, 2, and 3 emergency departments.

Using Excel and Power BI, I created a fully interactive dashboard to visualise patient flow, long waits, and performance against the 4-hour target. The project simulates the kind of real-world analysis used by public health analysts and operations teams.

**Tools & Technologies**

- Excel – Data cleaning, time formatting, ratio calculations

- Power BI – Visualizations, KPI cards, slicers, trend analysis

- DAX – Custom metrics: % seen in 4 hours, % long waits

- GitHub – Project documentation and portfolio hosting

**Dataset**

- Source: NHS England – Quarterly & Annual Time Series

- Timeframe: Q1 2004 – Q1 2024

- Metrics Tracked:

- A&E attendances by department type (Type 1, 2, 3)

- % of patients seen within 4 hours

- Number of patients waiting over 4 and 12 hours

- Quarterly breakdowns

**Key Insight**

**1.**A&E Attendances Increased Over 50% (2004 → 2024)

Attendances rose steadily from ~4.5 million to nearly 7 million per quarter over 20 years.

Rising demand stresses existing infrastructure and staffing levels.

2.(4-Hour Target Performance Declined from ~95% to ~55%)

From 2004–2015, ~95% of patients were seen within 4 hours. By 2022–2024, that fell below 60%.

These signals increasing operational strain and patient flow issues.

3. Long Waits (4+ and 12+ Hours) Spiked Post-2019

Long waits were rare before 2019. By 2022, 4+ hour wait numbered in the hundreds of thousands; 12+ hour wait rose sharply.

These delays can worsen patient outcomes and indicate bottlenecks in care delivery.

4.COVID-19 Temporarily Suppressed Demand, Then Backlogs Grew

During early 2020, attendances briefly dropped. But post-lockdown, demand surged along with delayed care and staffing shortages.

\*Pandemic impacts remain visible across multiple metrics.

**Dashboard Features**

- Line Charts: 4-hour performance over time

- Combo Chart: Attendances vs. long waits

- KPI Cards: Summary of total attendances, % on time

- Slicer: Filter dashboard by year

**What I Learned**

- Handling messy real-world healthcare data

- Creating clean, insightful dashboards for decision-makers

- Using DAX for time-based metric creation

- Communicating system-wide performance visually

**Suggested Use Cases**

This project can support NHS performance analysts, policy teams, or students learning healthcare analytics. It’s built to simulate how public data can be used to uncover systemic trends and inform high-level planning.