

Group 3 – Dashboard Project

Presented By: Group 3



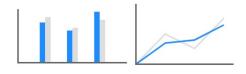
Create a dashboard using R-Shiny and PHS open data on secondary care to investigate what has been happening from 2020 onwards in the acute hospital sector

Key Focus Areas:

- 1. To what extent is the 'winter crises' the media predicts real?
- 2. How has winter impacted Scotland's NHS in the past?
- 3. Potential impact in winter 2022
- 4. How might the pandemic influence the potential scenario?

Consider: Temporal, Demographic & Geographic Aspects.







Media Predictions

- A&E Waiting Times Increasing
- Delayed Discharges
- Overwhelming Bed Demand
- Increased Admissions
- Covid Influence



'It's going to get worse': view from inside the NHS as winter approaches

Amid warnings of 'unprecedented' demand for hospital beds, six health workers describe how pressures are affecting them

Bed cuts 'fuelling' Scotland's NHS crisis





25th - 26th April 22nd April 23rd -24th April 27th of April 28th April Dashboard & Initial **Brief Review** Client **Analysis Identified Datasets Dashboard Presentation** Review of project **Development &** Predictability, geospatial Generated global scripts, brief, consolidation visualisations & Dashboard **Analysis** of key questions and joined datasets, cleaned and inferential stats. demonstration, findings wrangled, ready for analysis. targets. overview, proposed next Dashboard design and steps. functionality, initial data analysis & visualisations

Project Timeline



Following our review of the project brief, we developed a dashboard that focused on NHS Performance Vitals (KPI's):

- % Bed Occupancy
- A&E Waiting Times
- Delayed Discharge
- Admissions



Dashboard Demonstration

Key Findings

Key Findings & Observations:

- 1. % Bed Occupancy Varies & During Pandemic Occupancy Dropped
- 2. Delayed Discharge Most Vulnerable Admissions Increases
- 3. Delayed Discharge Main Reasons related to Health & Social Care
- 4. A&E On average hospitals don't always meet 4 hr target.
- 5. That further data would enhance predictability modelling.
- e.g. Staffing Numbers, vaccination.



Conclusions

- What the media predicts has some substance but using data provides a more accurate insight into these winter predictions.
- The pandemic did have an impact on secondary care in the acute hospital sector.
- If the pandemic continues we could see similar trends as shown in past years.





End of Presentation – Questions?