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CANCER TREATMENT INTERACTIVE & BED OCCUPANCY DASHBOARD USING TABLEAU

The pathway to cancer diagnosis and staging, leading to a decision-to-treat date, can be complex for cancer patients because it involves several medical investigations and decision-making processes. The Scottish Government, through NHS Scotland, currently has two Cancer Waiting Times (CWT) standards – The 31-day and 62-day standard targets.

To ensure 'First Treatment' occurs within the CWT across all NHS boards, there is currently a 5% tolerance for CWT in Scotland. This report investigates the impact of the COVID-19 pandemic on NHS bed availability and the number of eligible cancer referrals treated within the 62-day standard wait time. The Time series analysis revealed that only two NHS boards (NHS Borders and NHS Shetlands) met the 62-day standard, while the percentage of cancer referrals treated by other HBs fell to an average of 83% during and after the COVID-19 pandemic.

Data preparation and cleansing

Two main data sets were provided for this analysis, in addition to other metadata sets. The data preparation and cleaning were done to ensure the data was properly formatted before analysis and visualisation were done. Both datasets were cleaned using Microsoft Excel and Tableau Prep.

Four Key Questions

The four key questions for NHS Scotland to consider when measuring the success of its forecasting techniques are.
1. Have we built a momentum case?
2. Are we using a variety of operational indicators and external inputs?
3. Have we explored automation?
4. Are we measuring effectiveness at a fine-grained level?

Issues with Forecasting Application

Some of the possible challenges that NHS Scotland may encounter in the application of the forecasting approach include.
1. Unforeseen events like Seasonal periods or a pandemic
2. Adequate Staffing required

3. Deployment of limited resources
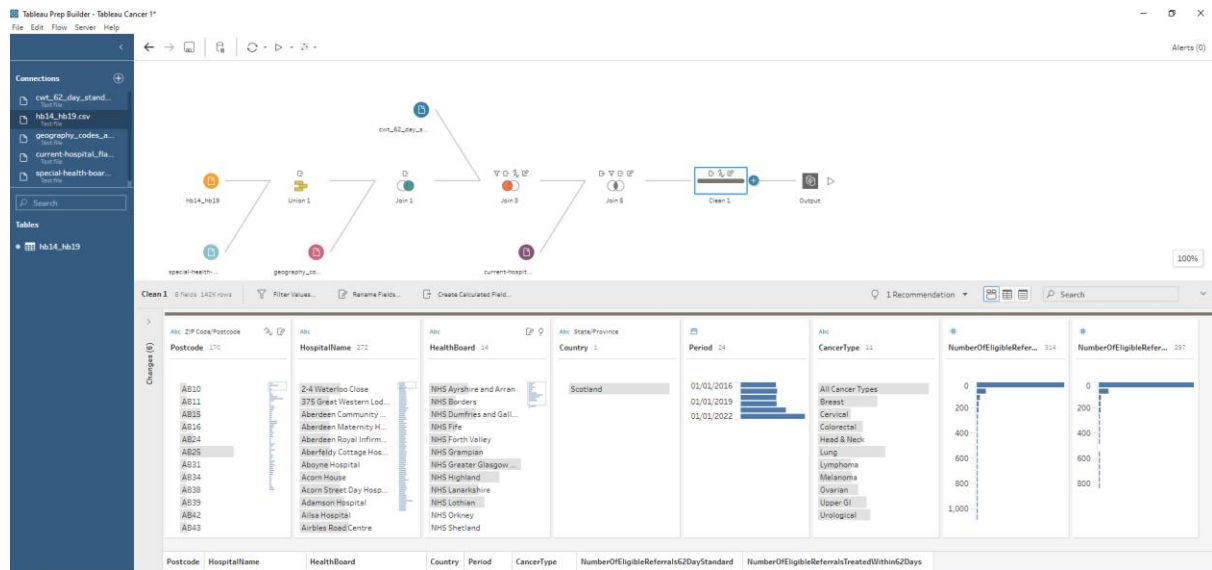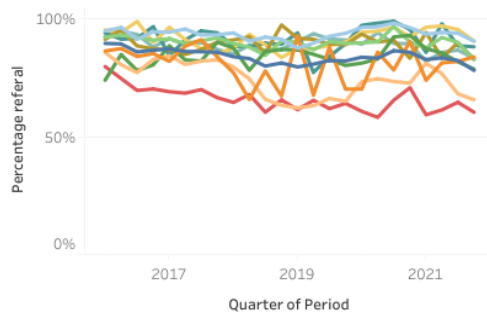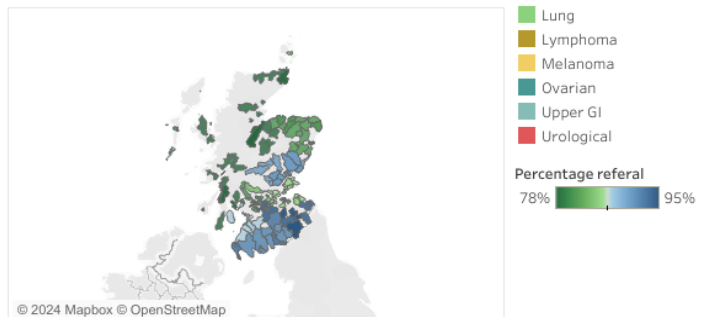4. Cost control challenges
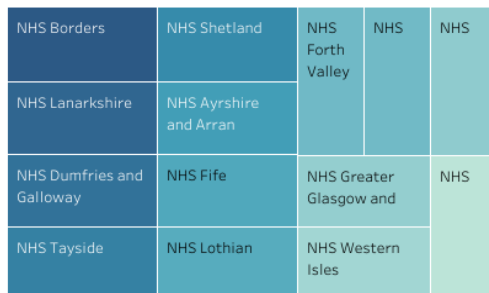

Fig 1.0: Cancer Treatment prep Builder

Time Series chart showing quarterly information on the Percentage of Referrals (calculated field) that have received treatment for All Cancer Types in Scotland

Geographic Map showing the distribution of the Percentage of referrals that have received treatment in Scotland per hospital location

Health Board Tree Map showing the percentage of referrals that have received treatment, per Health Board

Highlight Table showing percentage of referrals that have received treatment, for each cancer type, throughout the quarterly period from 2016-2021
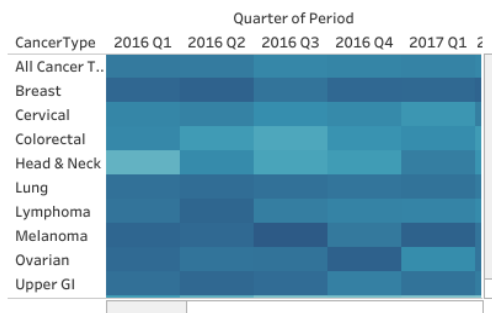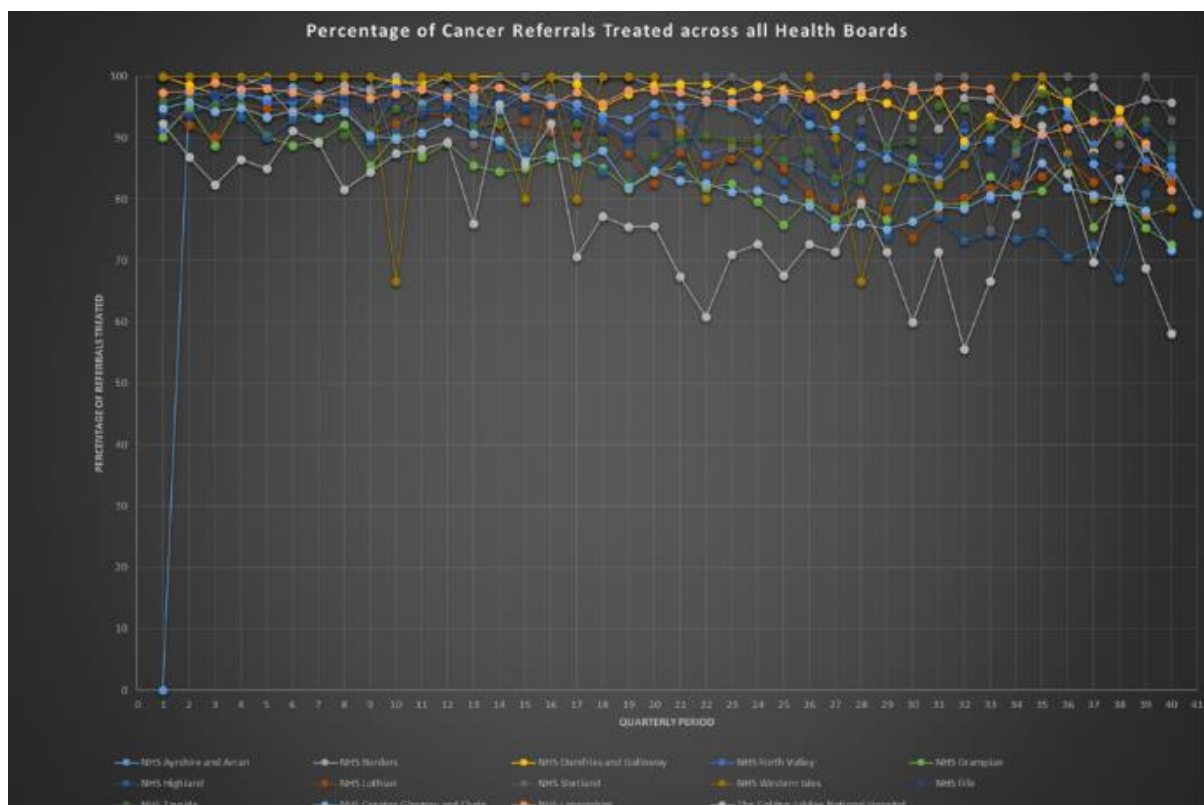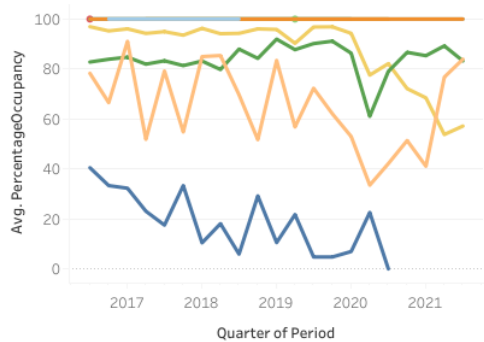

Fig 2.0: Cancer Treatment Interactive Dashboard

Fig 3.0: Percentage of cancer referrals treatment across all health boards

Time series chart for the percentage of cancer referrals treated within the 62-day CWT standard for all NHS health boards in Scotland from 2012 to 2021. The chart indicates that only the NHS Borders and NHS Shetlands HBs met the minimum 95% CWT treatment standards during the review period.
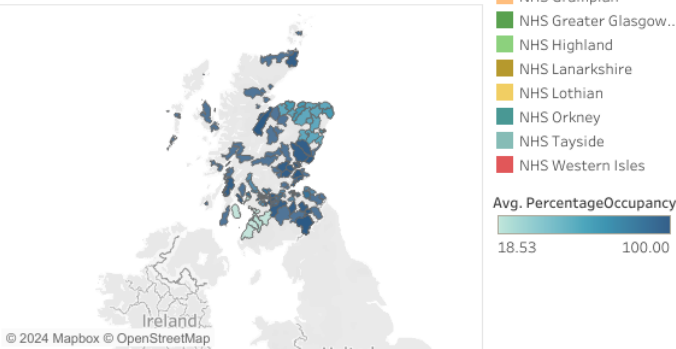
Cancer Treatment Interactive Dashboard

https://public.tableau.com/views/P2712256_Giwa-DaramolaInioluwa_cancerwaitiingtime/Dashboard1?:language=en-US&:sid=&:display_count=n&:origin=viz_share_link
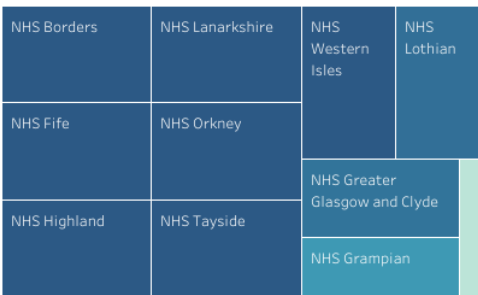
A Time Series chart showing quarterly information on percentage bed occupancy in Medical Oncology speciality in Scotland

A Geographic Map showing the distribution of the percentage bed occupancy in Scotland per hospital location

A Health Board Tree Map showing percentage bed occupancy, per Health Board

A Highlight Table showing percentage bed occupancy, for each health board, throughout the quarterly period from 2016-2021
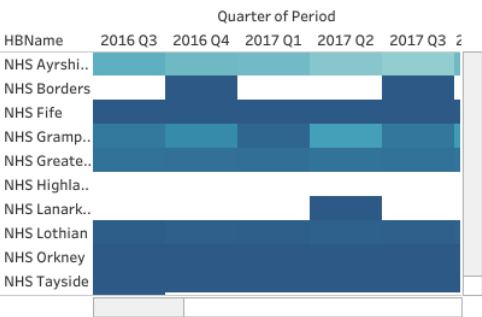
Fig 4.0: Bed Occupancy Dashboard

Bed Occupancy Dashboard
https://public.tableau.com/views/visualsforbedoccupany/Dashboard1?:language=en-US&:sid=&:display_count=n&:origin=viz_share_link