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Introduction

Managing performance within a healthcare setting is essential to ensure patients are seen in the most efficient manner possible, this requires reporting data to be of a very high quality so that correct insights can be made.

Understanding how best staff interact with data reports will play a critical part in the level of data quality seen in the underlying administration system, leveraging data presentation methods to improve user experience will be key in driving service improvement.

Aim

The aim of this project is to investigate the affects of changes to data presentation methods to the overall data quality seen within the source application. The first step is to understand the baseline performance of follow up patients within PTHB and what report developments are requested by service areas to improve useability. The below list of objectives outline the steps taken throughout this project:

- Identify and understand baseline metrics of data quality.
- Quantify user satisfaction at baseline.
- Understand useability issues at baseline.
- Develop additional reporting functionality.
- Measure data quality following improvements.
- Quantify user satisfaction at end of testing.
- Identify future improvements and learning.

Methodology

In order to understand the impact of any reporting changes the project will look at both user experience measures and also objective performance measures. This will be done using a modified user experience questionnaire both before and after changes. It will also provide a data analysis of defined metrics to understand the impact on performance measures.

Baseline Analysis

The baseline data analysis focused on the number of open follow up patients known to PTHB and specifically those over 100% past their intended visit interval.

Patients with No Target Date	0
Total Patients on FUP List	15816
Not Booked: Over 100% Overdue	4625
Not Booked: Total Overdue	6905
Booked Over 100% Overdue	217
Booked: Total Overdue	990

It highlights a very high percentage of patients in the highest category when compared to all waiters which suggests a high level of data quality errors and poor performance. Maternity showed as the poorest performing service in this regard.

This baseline also highlighted 531 waiters who had a target of 2019 or earlier which is beyond any interval set by clinical colleagues in PTHB.

Baseline reporting also only allowed patient level interrogation and lacked a summary level view of data which led to a very cluttered interface that was reflected in poor UEQ scores from all service users who responded.

[illegible]

Updated Visuals and Analysis

Following user feedback and requirements gathered a revised report was developed to provide easier user interpretation of data which increased the scores from a follow up UEQ:

[illegible]

This updated visual allowed services to more easily see where data errors were and communicate these to informatics staff who could programmatically resolve issues with a major decrease in errors seen in the data analysis:

Total Patients on FUP List	12533
Not Booked: Over 100% Overdue	2231
Not Booked: Total Overdue	4198
Booked Over 100% Overdue	183
Booked: Total Overdue	797

Conclusion

Changes in data visualisation even if small in nature can lead to increased focus on the data in question that often leads to errors being corrected. This means that it is not possible to attribute all corrections to the change in visuals without additional data points and a longer term review.

This project also highlighted the need for further review of internal design standards to make better use of modern technologies and advances in understanding what influences user experience and behaviours.