



Data4Good Project: Exploring the impact of staff rosters on resident wellbeing

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By Lilian Ta & Casey Merrick

The Challenge

BaptistCare NSW & ACT has been a leading provider of care to the aged and disadvantaged since 1944. In late 2021 and early 2022, a team of volunteers from Data4Good undertook a project to help BaptistCare understand the impact of



different rostering methodologies on the clinical outcomes experienced by residents in their aged care homes.

BaptistCare wanted to test the hypothesis that increasing how consistently care workers were assigned to the same group of residents would improve health outcomes for that group. If this hypothesis was proven true, BaptistCare also wanted to explore the best way to optimise this – how can staff be rostered to maximise the residents' clinical outcomes?

The Approach

In order to do this, Data4Good used correlation tests to deduce whether there was a statistically significant relationship between the number of care workers seen and distinct care workers seen with clinical indicators such as falls reported, Urinary Tract Infections (UTIs) and pressure injuries.

Experimenting with different thresholds in the number of care workers, it was established that there was a correlation between a lower number of care workers seen and a higher number of falls reported. Similarly, a correlation was found between the number of days a care worker and resident are paired together and the number of falls reported. It was also concluded that if residents are paired with a smaller number of care workers in a month and saw these care workers more often, residents are more likely to report issues related to UTIs. It was reasoned that this was due to a stronger relationship and trust between carer workers and residents gained from more frequent interactions.

The Outcome

The report will be invaluable to BaptistCare to help inform scheduling processes, the design of rostering systems, and ongoing reporting and analysis of rosters and clinical indicators. Particularly with significant changes to aged care scheduling and reporting being enacted by the Department of Health on the back of the report from the Royal Commission into Aged Care Quality and Safety, having a deeper understanding into the impacts and effects of rostering changes will be invaluable to enable BaptistCare to implement those changes while continuing to ensure the highest level of care for their residents.

Even more significantly though, the work that Data4Good volunteers have done has built a foundation that BaptistCare can leverage to continue to do deep analysis into the impacts of rostering on other clinical and non-clinical indicators, and continue to both monitor our performance as well as discover new insights and correlations.

The work that Data4Good has done is extremely clear, methodical and well-documented, which will make it easy to pick up and continue to build on and expand

as we implement new systems, refine processes, and uncover new data.

The Impact

“The work that Data4Good has done has created both immediate value, in revealing and proving the connection between roster consistency and resident outcomes, as well as enduring value, by providing us with a base approach that can be continually leveraged to generate insights and improve the experience of our residents over time.”

– Casey Merrick, Data & Analytics Manager, BaptistCare.

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Lilian started her career in Finance before moving to Data and Analytics. This was Lily's first Data4Good project and we've had great feedback from BaptistCare so congrats to our volunteer team – Lily (BA), Vitus (Team Lead), Sameer (Data Scientist) and Tye (Aged Care expert).

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Data4Good acknowledges the Gadigal people of the Eora nation, who are the traditional owners of the land on which our organisation is based. We pay our respects to elders past and present and extend that respect to other First Nations peoples.

Always was, always will be Aboriginal Land.

Data4Good 2020.

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