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Benchmarking for long-term care

Benchmarking is the practice of establishing performance standards ("benchmarks") and measuring providers against them. By defining a clear "level of excellence," benchmarking drives continuous improvement and enables comparisons across providers. Benchmarking can be either expert (consensus-based) or data driven. Data driven benchmarking is grounded in empirical performance to ensure benchmarks are realistic and achievable and draws on full population data to spread best practices.

Originally introduced by Kiefe et al. (1998) as a data-driven method, the **Achievable Benchmarks of Care (ABC)** define benchmarks based on the performance of top-ranked providers (also see Weissman et al. (1999)). Providers are ranked by their Adjusted Performance Fraction - an estimate that shrinks extreme rates toward the mean to prevent small-volume facilities from unduly influencing the benchmark. The ABC is then the size-weighted average performance of the top-ranked providers covering at least 10% of the population.

ACAC work in this area

We estimated ABCs for indicators used to monitor the quality of care in long-term care facilities in Australia and identified characteristics of long-term care facilities associated with attaining the estimated benchmarks.

Our approach

We estimated data-driven ABCs for 12 risk-adjusted quality indicators (Table 1) from 2746 long-term care facilities using 2019 data from the Registry of Senior Australians (ROSA) National Historical Cohort. These indicators, from the ROSA Residential Care Outcome Monitoring System (Inacio et al., 2020), span medication use, mortality, and hospitalisations.

What we found

- The estimated ABCs revealed substantive variation in the quality of care among 2746 long-term care facilities nationally.
- We found that the identified ABCs were a fraction (between < 1% to 75%) of the national indicator performance averages (Table 1). For example, the ABC for fractures was 1.3% as compared to the national average of 5.3%, the ABC for falls was 3.9% as compared to the national average of 13.1%, and the ABC for ED presentations was 5.1% as compared to the national average of 21.0%. These differences highlight the potential for substantial sector improvement across indicators.
- We also found that there are specific features of long-term care facilities, such as being smaller and government-owned, that made them more likely to attain ABCs.

Implications and recommendations based on our findings

- These data-driven, demonstrably attainable targets offer practical performance goals. They can inform national quality reporting, identify specific areas for targeted improvement initiatives, and guide incentive programs such as public recognition of long-term care facilities that attain the ABC. This can drive improvements to improve outcomes for residents of long-term care facilities. Service providers and decision-makers can utilise ABC to interpret performance at the facility, sub-national and national levels.
- The ABCs provide a *quality level achievable under the right circumstances*, noting that not all event occurrences represented by the quality indicators are wholly under the control of the long-term care facilities.
- For quality indicators of events with low prevalence but high potential harm, such as premature mortality and hospitalisations for medication-related adverse events or pressure injuries, long-term care facilities need to prevent occurrence of these events to attain the ABC. For such quality indicators, we recommend assessing the no-event benchmark over multiple years because failing to achieve the ABC in a specific year does not necessarily imply non-excellence of the long-term care facilities.
- Other factors to consider when interpreting benchmark achievement include the size, provider type, and location of long-term care facilities.

For full details, access our peer-reviewed publication:

Schwabe, J., Caughey, G. E., Jorissen, R., Comans, T., Gray, L., Westbrook, J., Braithwaite, J., Hibbert, P., Wesselingh, S., Sluggett, J. K., Wabe, N., & Inacio, M. C. (2024). **Setting standards in residential aged care: identifying achievable benchmarks of care for long-term aged care services.** *International Journal for Quality in Health Care*, 36(4), mzae105. https://doi.org/10.1093/intqhc/mzae105

For full details, access our deidentified analysis code:

https://osf.io/gfc5v/

Other references

Inacio, M. C., Lang, C., Caughey, G. E., Bray, S. C. E., Harrison, S. L., Whitehead, C., Visvanathan, R., Evans, K., Corlis, M., Cornell, V., & Wesselingh, S. (2020). The Registry of Senior Australians outcome monitoring system: quality and safety indicators for residential aged care. *Int J Qual Health Care*, *32*(8), 502-510. https://doi.org/10.1093/intqhc/mzaa078

Kiefe, C. I., Weissman, N. W., Allison, J. J., Farmer, R., Weaver, M., & Williams, O. D. (1998). Methodology matters-XII. Identifying achievable benchmarks of care: concepts and methodology. *International Journal for Quality in Health Care*, *10*(5), 443-447. https://doi.org/10.1093/intqhc/10.5.443

Weissman, N. W., Allison, J. J., Kiefe, C. I., Farmer, R. M., Weaver, M. T., Williams, O. D., Child, I. G., Pemberton, J. H., Brown, K. C., & Baker, C. S. (1999). Achievable benchmarks of care: the ABC^{TM}s of benchmarking. *Journal of Evaluation in Clinical Practice*, *5*(3), 269-281. https://doi.org/https://doi.org/10.1046/j.1365-2753.1999.00203.x

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Table 1: Achievable Benchmarks of Care for 12 Quality Indicators of Australian Long-Term Care Facilities in 2019.

Indicator	Definition Proportion of long-term residents who …	Average Performance (%)	Benchmark Performance (ABC, %)
High Sedative Load	… experienced high sedative load.	44.7	26.8
Antipsychotic Use	… have been prescribed an antipsychotic.	20.8	10.5
Chronic Opioid Use	… are chronic opioid users, defined as use for at least 90 days or 120 non-consecutive days.	26.3	12.6
Antibiotic Use	… were dispensed an antibiotic.	63.4	47.8
Premature Mortality	… died from premature causes, i.e., their main cause of death is 'external' and considered potentially avoidable	0.7	0.007
Falls	… experienced one or more falls resulting in requiring medical attention.	13.1	3.9
Fractures	… had a fracture.	5.3	1.3
Medication-related Adverse Events	… had a medication-related hospitalisation / emergency department visit	3.3	0.4
Weight Loss and Malnutrition Hospitalisations	… had a hospitalisation / emergency department visit for/with malnutrition/weight loss diagnosis.	2.4	0.1
Delirium and/or Dementia Hospitalisations	… had a diagnosis of dementia and had a dementia- and/or delirium-related hospitalisation / emergency department visit.	4.0	0.2
Emergency Department Presentations	… were admitted to an emergency department within 30 days of entry/re-entry to care.	21.0	5.1
Pressure Injuries	… had a hospitalisation / emergency department visit for or with pressure injury diagnoses.	3.2	0.2