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Nurturing children where it is needed: towards equity-driven nutrition investment to help children thrive in early childhood education and care settings

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Every infant and child has the right to adequate nutrition. Inadequate nutrition contributes to the loss of children's developmental potential and can impact long-term health outcomes negatively.^(1,2) Inadequate supply of nutrients increases the risk of impaired cognitive development in children.⁽¹⁾ Children and families experiencing lower socio-economic status have a higher risk of living with unhealthy weight.⁽³⁻⁵⁾ There is an upward trend in the proportion of children with overweight and obesity as the Accessibility/Remoteness Index of Australia (ARIA) status becomes more remote.^(5,6) Cross-sector agencies in Queensland, Australia are developing an approach for mapping geographic areas most likely to benefit from targeted nutrition support in ECEC settings. Understanding the food environment is essential for delivering tailored nutrition support. The aim of this study was to use publicly available data to identify geographical areas experiencing disproportionate levels of disadvantage and developmental vulnerability and the relationship with NQS rating and meal provision in ECEC. This information can guide targeted resourcing for a settings-based approach supporting adequate food and nutrition in early childhood. Data for Socio-economic indexes for areas (SEIFA), Australian Early Development Census (AEDC) proportions of vulnerability, Australian children's education & care quality authority (ACECQA) national quality standards (NQS) ratings for QA2, remoteness area, and meal provision practices (meals or lunchboxes), was captured for 2250 long daycare (LDC) and kindergartens in Queensland, Australia. Consolidated data was imported into R Studio and aggregated at a SA2 level to ensure data independence. Categorical data was transformed to counts representing the sum of each category in the associated SA2. Geo-mapping of SA2 locations according to SEIFA for lunchbox only services and those supplying 'any' meals was conducted. 2086 of the 2250 services had complete SEIFA data. Regression analysis demonstrated a statistically significant negative relationship (all $p < 0.001$, $R^2 = 0.32-0.40$) between SEIFA and AEDC data for developmentally vulnerable on the health and wellbeing domain, DV1 (developmentally vulnerable in one or more domains) and DV2 (developmentally vulnerable in two or more domains). Amongst the 236 services located in SEIFA decile 1, 21% are classified as exceeding, 65% meeting and 8.5% working towards NQS QA2. Of these, 52.1% provide meals. In contrast, SEIFA decile 10 ($n = 188$) had 34% exceeding, 60% meeting and 3% working towards NQS QA2; with 70.2% of services providing meals. The majority ($n = 84$, 70.4%) of services in 'remote' and 'very remote' areas were in SEIFA decile 1-4. Aggregating data sets from publicly available assets provides a more comprehensive overview of at-risk geographical clusters. These data can support government decision-making on resource allocation to ECEC settings, as it facilitates identification of areas that must be prioritised for targeted strategies to enhance food and nutrition provision for children aged 0-5 years.

References

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