

Who's Coming Through the Door? Quantifying Care Continuity of Personal Support Services in Home Care

Qui est là? Quantifier la continuité des services de
soutien à la personne dans le cadre des soins à domicile



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Abstract

Continuity is an important contributor to care quality. Objective measurement of care continuity is required to support quality improvement and track provider organization performance. The high-intensity, long-term nature of in-home personal support and the implications of employment standards make it inappropriate to idealize a single-provider model. To measure continuity in team-based care, we propose and demonstrate the application of four accessible, complementary metrics and demonstrate how these can reveal the diversity of client experiences. These metrics can be used to drive quality improvement and create benchmarks that define appropriate levels of performance with respect to care continuity.

Résumé

La continuité est un aspect important de la qualité des soins. Une mesure objective de la continuité des soins est nécessaire pour favoriser l'amélioration de la qualité et pour suivre le rendement des organismes prestataires. En raison de la nature intensive et du caractère à long terme du soutien à la personne à domicile, ainsi que des implications liées aux normes d'emploi, il serait inadéquat de penser à un modèle de fournisseur unique. Afin de mesurer la continuité dans le cadre de soins dispensés par une équipe, nous proposons et illustrons l'application de quatre indicateurs complémentaires et accessibles, tout en démontrant comment ces indicateurs permettent de révéler la diversité des expériences client. Ces indicateurs peuvent servir à orienter l'amélioration de la qualité et à établir des points de référence qui définissent les niveaux de rendement appropriés en matière de continuité des soins.



Introduction

Home care is a vital part of the health system that supports individuals to receive care while living in their homes and communities, rather than in institutional settings. While home care encompasses a broad range of services, three-quarters of care is provided by personal support workers (PSWs) (McKay et al. 2024). PSWs provide assistance with personal care (e.g., bathing, dressing and toileting) and sometimes with instrumental activities of daily living like meal preparation (Saari et al. 2018).

Continuity of care is broadly acknowledged to be an important contributor to care quality, particularly for the kinds of intimate care provided by PSWs (Reckrey et al. 2023, 2024; Russell et al. 2013; Saultz and Lochner 2005). In home care, continuity (i.e., consistency in who provides a given healthcare service) has been related to improvements in client independence (Reckrey et al. 2024; Russell et al. 2013), caregiver trust in home healthcare providers (Goh et al. 2018; Russell et al. 2021) and a reduced likelihood of negative outcomes including falls and depressive symptoms (Reckrey et al. 2024).

Measurement of care continuity

Measurement of care continuity would be useful to provider organizations to support the provision of quality care and the creation of meaningful work experiences for providers who value client relationships (Nizzer et al. 2023). It could also be used by funders to track the performance of individual provider organizations and to provide public visibility into health system performance through aggregation at the provincial ministry and national levels (e.g., through the Canadian Institute for Health Information [CIHI]). At present, CIHI's homecare indicators provide insight into system coordination, access and experience of caregiver distress, but no metric measures the quality construct of care continuity (CIHI 2025). Indeed, across Canada, there is no indication that any province or territory uses administrative data to measure and publicly report the care continuity experienced by homecare clients. Those that do measure continuity tend to rely on clients' self-reported experiences, collected through surveys (Chau et al. 2018; Health Quality Alberta 2025; Office of the Seniors Advocate British Columbia 2023). In Ontario, in addition, in homecare service delivery models that rely primarily on contracted service providers, such as the models used in Newfoundland & Labrador, Nova Scotia and Ontario, more than one organization may serve the same client, and provincial-level self-reported client experience surveys do not provide the organization-level specificity required to support quality improvement and performance management. It is thus necessary to identify objective and transparent performance measurements to complement patient experience surveys.

While not commonly used in practice, the most commonly used objective measure of care continuity in the academic literature is the Bice-Boxerman Index (Bice and Boxerman 1977), a measure calculated based on administrative data, which was initially developed for use with physicians. It ranges from 0 to 1, with 0 representing all visits for a single patient being delivered by different providers and 1 representing all visits being delivered by "either a usual provider or a referred provider" (Bice and Boxerman 1977). This index is used internationally by health services researchers to characterize continuity for a broad range of healthcare professionals and aides (e.g., Liang et al. 2022; Mondor et al. 2017; Russell et al. 2013; Sveréus et al. 2017). When used in homecare research, a common operationalization of the metric has been to simply track the number of individual providers (Reckrey et al. 2024). This sets the ideal as the delivery of all care by a single provider, regardless of the care intensity or the times at which care is required.

The need for a care team-based model

However, having a single individual provide all care is not always feasible – particularly for personal support, which tends to be long-term and relatively high intensity. As emphasized in Gjevjon's study of high-intensity, long-term home care, clients requiring care daily or at widely separated times of day must have multiple providers to adhere to labour laws and standards (Gjevjon et al. 2014). Even for clients with lower-intensity needs, reliance on a single individual creates disruptions when the worker takes a vacation, a sick day or experiences

a personal emergency. Furthermore, given the relationship-focused nature of personal support care and precarity of the workforce (Zagrodney and Saks 2017), there is potential for clients to make excessive demands of the provider (Franzosa and Tsui 2020), which is exacerbated when clients are served by only one provider (Kalles et al. 2025).

Given these practical realities and competing considerations, idealizing single-provider care is not appropriate in home care. Instead, there is a need to embrace team-based care models – where consistent teams with strong communication provide the continuity of relationships, information, service timing and worker knowledge and skill, which clients have identified as most important to their experience of continuity (Goh et al. 2022; Woodward et al. 2004). Team-based models will be increasingly necessary given observed trends toward increasing homecare client needs and service intensities (blinded for review, McKay et al. in review). Such team-based approaches are already increasing in prevalence with a growing movement toward integrated care models (Downey et al. 2020; Goodwin et al. 2025).

Measurement of care team continuity

To enable appropriate measurement of continuity in a team-based model for personal support care, we propose four complementary metrics. These address important operational considerations related to creating and maintaining consistent care teams. Providing insight into each element rather than combining them within a single metric ensures that key contributors to client experience (e.g., turnover within the team) are visible. Stratification of these calculations by required care intensity can provide additional insights to inform performance benchmarking by provider organizations to set internal quality standards and by funders to set performance expectations for contractors (e.g., through inclusion as a key performance metric). The specificity provided by these metrics creates opportunities to set objective operational targets to direct and monitor quality improvement efforts and health system performance.

Proposed Metrics

The proposed metrics rely on basic administrative data related to care delivery, typically available within organizational scheduling systems. All metrics can be calculated based on knowledge of the date, duration and assigned provider for each client visit that is delivered.

All proposed metrics have the underlying assumption of a “care team” that provides service for each client. Metrics were calculated based on one month of care and stratified by the average number of weekly care hours that a client received. To increase operational utility by presenting insight into both common and rare experiences, the 5th, 25th, 50th, 75th and 95th percentile values for each metric were calculated.

- *PSW care team size*: To capture the number of PSWs involved in each client’s care, this is the sum of unique PSWs who provided care to an individual client within a month.
- *Number of new PSWs*: To characterize the number of new PSWs (relative to the

three-month lookback window) that a client sees, this is the sum of new PSWs who provided care within the month.

- *PSWs per weekly hour of care*: To normalize care team size by care intensity, this characterizes the number of PSWs seen within each month per weekly hour of care. Removing the effect of care intensity allows comparison of team sizes across care intensities.
- *PSW care team continuity*: To summarize care team continuity, this is calculated as the PSW care team size minus the number of new PSWs, all divided by the PSW care team size.

Sample Application

Data

The proposed metrics were tested using administrative data from 52 weeks of homecare service delivered by one contracted service provider organization and funded by Ontario Health atHome, Ontario's primary public homecare funding body. The service provider organization, which serves as the current case example, is a not-for-profit provider delivering personal support care (among other services) in predominantly urban settings in the Greater Toronto Area of Ontario, Canada. All confirmed personal support visits from July 3, 2023, to June 30, 2024, were included, excluding subcontracted and cluster site visits (e.g., visits to multiple units within a single building) for which the required scheduling details were not available. This yielded 1.1 million visits delivered to 9,003 clients by 1,651 PSWs. Clients typically experienced frequent, long-term home care. The average length of stay (by the end of the study period) was 733 days (range: 1–11,008 days), and the average frequency was 4.8 hours of care/week (range: 0.25–128.0 hours).

Results

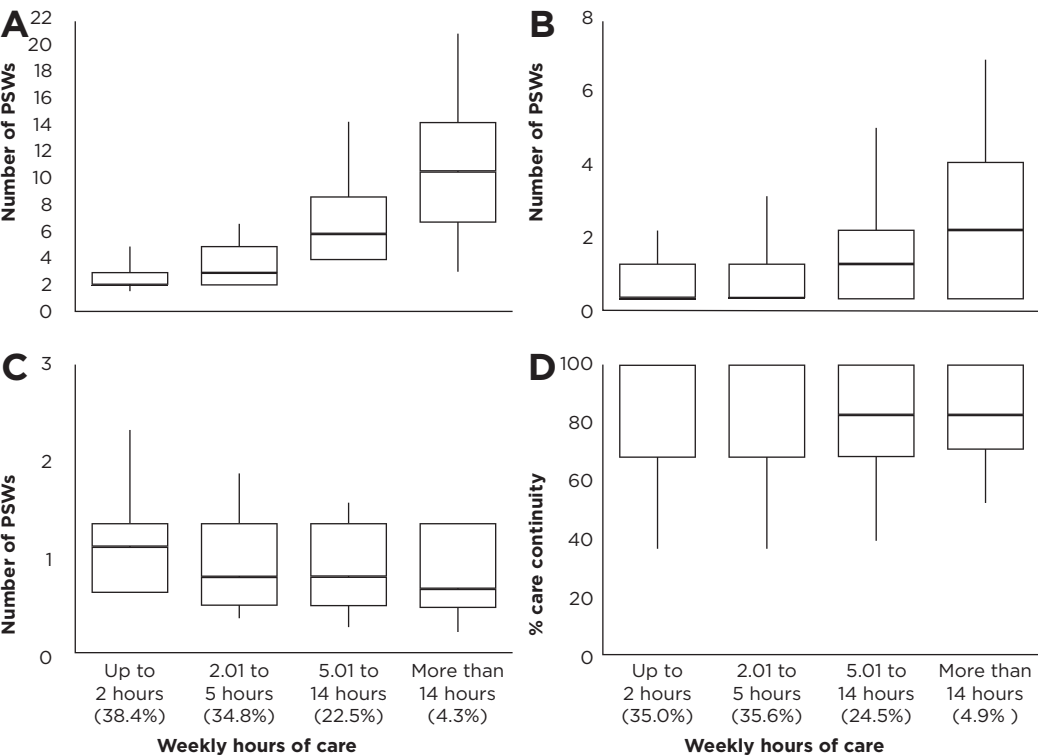
Outcomes of each proposed metric (Figure 1) showed that most clients experienced small personal support care teams, and that the personal support care team size scaled with service intensity. The monthly number of new PSWs was typically low: for the 71% of clients who received up to five weekly hours of care, the median number of new PSWs was zero, and the 75th percentile value was one. Clients with higher service needs were more likely to have one or more new PSWs each month. The median number of PSWs per weekly care hour declined as service intensity increased, as did the range within this metric. PSW care team continuity exceeded 81% for all care intensities.

Discussion

Homecare services are increasingly supporting individuals requiring long-term and relatively high-intensity services, which are best met by care teams rather than a single provider (Gjevjon et al. 2014). This paper has proposed a way to move beyond the current reliance

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FIGURE 1. Outcomes of each proposed metric calculated monthly and segmented by weekly hours of care: (A) number of unique PSWs, (B) number of new PSWs per month, (C) number of PSWs per mean weekly hours of care, (D) percentage continuity between months.



PSW = personal support worker.
Notes: Whiskers show the 5th and 95th percentile values. The variation in proportions of weekly units of care between A, C, and B, D results from the time required to establish the three-month observation window to identify familiar PSWs.

on self-reported client experience survey data (Chau et al. 2018; Gjevjon et al. 2014; Health Quality Alberta 2025; Office of the Seniors Advocate British Columbia 2023) to capture care continuity through a set of objective, readily interpreted metrics. This set of measures, calculated using administrative data, directly reflects the concerns expressed by clients and families with respect to care team continuity, while extending this concept to team-based care (Goh et al. 2022; Woodward et al. 2004). The use of these straightforward, objective metrics – whether stratified by care intensity, as demonstrated, or by other factors (e.g., clinical presentation) – provides an opportunity to concretely communicate and measure expectations related to care team size and continuity.

For the present dataset, the metrics showed that personal support care team sizes were typically low, with increases seen as service intensities exceeded five hours per week (typically indicating a need for weekend care). Continuity in providers was relatively high, with most clients seeing no new PSWs each month. However, the data also showed that a minority of clients experienced poor continuity. Similar to other characterizations of PSW care, care

team sizes tended to be larger and continuity poorer for clients who received more hours of weekly care (Reckrey et al. 2024).

These metrics give visibility into both typical and atypical experiences. This can focus the work of care provider organizations' operational teams by identifying clients experiencing low continuity or large care team sizes relative to required service intensities. For example, in this dataset, brief review of the client records with the lowest care team continuity showed many service frequency changes (for which additional PSWs may be required), long "do not send" lists of incompatible providers (requiring replacement PSWs to be introduced) and extended hospital holds (during which PSWs were assigned to other clients) – all of which were identified as operational challenges in maintaining care continuity.

Limitations

The care team sizes in this data reflected service delivery by a single provider organization; results may differ for clients receiving care from other organizations, or for clients participating in accelerated hospital-to-home or integrated care programs. For higher-intensity clients, it is increasingly common for care to be provided by a combination of provider organizations – care team sizes experienced by these clients would be higher. Exploring the application of the proposed metrics to additional organizations and program types could provide insights into variations in performance with respect to establishing and maintaining care continuity.

Implications for Healthcare Policy

This paper proposed four accessible, complementary metrics to enable the objective measurement of personal support care team size and continuity, and demonstrated their application in a large, contemporary homecare dataset. The definition of these metrics provides a starting point for conversations about current client experiences, how widespread these experiences are and what continuity benchmarks might be most appropriate. Such benchmarks must be sensitive to service intensity, operational realities and employment standards. Service provider organizations can use these metrics to drive quality improvement by monitoring care team sizes and continuity, stratifying by care intensity, clinical population, geography and equity-related considerations. At the policy and funder level, the metrics can be used to provide a measure of visibility into care team continuity as a measure of care quality. These metrics can be used to define appropriate benchmarks for inclusion in contract expectations for care provider organizations and manage performance. There is also the potential for including these metrics in national-level datasets like those maintained by CIHI to create visibility into care team continuity as an important dimension of quality in home care.

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