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Measuring Nursing Care Time and Tasks in Long-Term Services and Supports: One Size Does Not Fit All

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Abstract

Background—Although nursing care personnel comprise the majority of staff in long-term care services and supports (LTSS), a method for measuring the provision of nursing care has not yet been developed.

Purpose/Methods—We sought to understand the challenges of measuring nursing care across different types of LTSS using a qualitative approach that included the triangulation of data from three unique sources.

Results—Six primary challenges to measuring nursing care across LTSS emerged: level of detail about time of day, amount of time, or type of tasks varied by type of nursing and organization; time and tasks were documented in clinical records and administrative databases; data existed both on paper and electronically; several sources of information were needed to create the fullest picture of nursing care; data was inconsistently available for contracted providers; documentation of informal caregiving was unavailable. Differences were observed for assisted living facilities and home and community based services compared to nursing homes and across organizations within a setting. A commonality across settings and organizations was the availability of an electronically stored care plan specifying individual needs but not necessarily how these would be met.

Conclusions—The findings demonstrate the variability of data availability and specificity across three distinct LTSS settings. This study is an initial step toward establishing a process for measuring the provision of nursing care across LTSS to be able to explore the range of nursing care needs of LTSS recipients and how these needs are fulfilled.

Keywords

long term care; nursing; measurement

Introduction

Long-term care services and supports (LTSS) encompass a broad set of programs and services. Offered in a variety of settings, these programs and services are designed to meet the needs of people coping with physical, functional, cognitive and other deficits typically associated with multiple chronic illnesses and major disabilities (Institute of Medicine, 2001). For years, the most common form of LTSS in the United States was provided in nursing homes (NH) with over 1.5 million residents. NH are characterized as places of residence providing constant care with 88% over the age of 65 years and 83% receiving services to support living with impairments in three or more activities of daily living (Centers of Disease Control and Prevention, 2011; Grabel, 2000). The growing number of older adults, a shortage of NH beds, increasing costs, and improved overall health of new cohorts of elders has led to the creation of a number of alternatives during the last 20–30 years. The fastest growing segment of LTSS is provided by assisted living facilities (ALF) that lack a national definition of services which results in a diverse population of residents (Stevenson & Grabowski, 2010). Home and community based services (HCBS) also provide a wide range of LTSS for a population with diverse needs but who are still able to live safely in the community (Wieland, Boland, Baskins, & Kinoshian, 2010). This rapidly growing long term care “system” is characterized by its fragmentation, high costs, and substantial and persistent concerns about quality (Institute of Medicine, 2001). Particularly since the 2000 Report to Congress related to minimum staffing levels and NH resident outcomes (U.S. Department of Health and Human Services Health Care Financing Administration, 2000), a

sizable proportion of the quality debate has been associated with the nurse staffing and care necessary to provide LTSS.

Although HCBS and ALF have become increasingly more common as alternatives to NHs (Institute of Medicine, 2001), little information exists about staffing or the effect of staffing in these settings. Investigations of the delivery of LTSS nursing care are disproportionately conducted in NH. A 2006 systematic review identified dozens of studies of nurse staffing hours per NH resident per day (Bostick, Rantz, Flesner, & Riggs, 2006); however, there is a paucity of studies in the empirical literature addressing quality measurement in HCBS or ALF or comparison across settings (Stearns, Park, Zimmerman, Gruber-Baldini, Konrad, & Sloane, 2007). This qualitative study sought to identify the challenges of measuring hours or time and the activities (tasks) for the different types of nursing care in the major providers of LTSS including NH, ALF and the more common forms of HCBS.

Although research and measurement of the quality of care in LTSS and the quality of life of elders receiving services is limited to NH, findings are clear of the importance of all types of nursing care personnel and the amount of time devoted to care tasks (Bostick et al., 2006; Maas, Specht, Buckwalter, Gittler, & Bechen, 2008a; Maas, Specht, Buckwalter, Gittler, & Bechen, 2008b). Nursing is the predominant discipline in LTSS –60% of all NH staff—and yet, efforts to measure key aspects of nursing care have been slow to diffuse to other settings of LTSS. Despite the expected differences in case mix (i.e., more frail elders in NH than ALF) and service characteristics across LTSS settings (Stearns et al., 2007), nursing care, including type and amount, and the related processes of care need to be measured uniformly across settings. However, the method and feasibility of measuring the provision of nursing care to assess impact on patient outcomes and quality of care across diverse LTSS settings is unknown.

Investigation of the impact of nursing care on elders' outcomes can be organized using Donabedian's classic – structure–process–outcomes – paradigm for assessing quality of care (Donabedian, 1980). Structure in this context considers the *type* of nursing staff (i.e., registered nurse, licensed practice nurse/licensed vocational nurse, nursing assistant, certified nursing assistant or home health aide), and the *time* spent by each nursing clinician engaged in direct or indirect patient care activities. One of the two main staffing measures in NH research is the number of hours per resident per day (HPRD). This is usually reported in one of three ways: by the type of nursing care personnel (i.e., nurse or nursing assistant); the responsibilities of staff (direct care or administrative); or, as a total nursing staff measure (Bostick et al., 2006).

For research purposes, hours of nursing care in NH are generally extracted from the Centers for Medicaid and Medicare Services (CMS) Online Survey, Certification, and Reporting (OSCAR) database that stores federally mandated data from each CMS-certified NH that is “collected over a two week period and reported as the total full-time equivalents (FTEs) by [nursing staffing] category, multiplied by 70 hours, multiplied by 14 days, then divided by the total number of residents in the facility” (Bostick et al., 2006, p. 369). This structural measure of nursing care in NHs has been investigated with research findings generally confirming that the amount of nursing care, or higher total staffing levels, is directly

associated with better NH resident outcomes and quality (Bostick et al., 2006; Maas et al., 2008a; Maas et al., 2008b; Kim, Harrington, & Greene, 2009; Hutt, Radcliff, Liebrecht, Fish, McNulty, & Kramer, 2008; Castle & Engberg, 2008a; Castle & Engberg, 2008b; Collier & Harrington, 2008; Konetzka, Stearns, & Park, 2008). However, other studies show that nurse staffing levels are underreported in this administrative database (Feng, Katz, Intrator, Karuza, & Mor, 2005). Furthermore, these data are only federally mandated of NH and not of HCBS or ALF thus reducing the likelihood of standardized documentation across LTSS.

Meaning can be assigned to HPRD by explicating the nursing care activities or tasks that are provided for, with, and to each LTSS recipient. Measuring these *tasks* is a measure of the process. Little empirical work has been conducted in this area of research – time and task by personnel type. A Belgian study examined the care tasks performed by registered nurses and care assistants for residents of care institutions for aged people and found that overall, the most time was spent on primary care tasks but there was no significant difference between registered nurses and care assistants for the total time spent with residents (Paquay, De Lepeleire, Milisen, Ylief, Fontaine, & Buntinx, 2007). An interesting study; however, the structure of care is likely to vary across countries just as it does across LTSS settings. A more specific focus on NH nursing care processes associated, either through research evidence or expert consensus, with positive resident outcomes (i.e., improved quality of life or improved functional status) identified five tasks (Schnelle, Simmons, & Cretin, 2001). These include: (1) consistently changing wet linens for incontinent residents who could not successfully toilet if given assistance; (2) providing timely toileting assistance for incontinent residents who could successfully toilet; (3) providing feeding assistance to either physically dependent residents or those with low food intake; (4) providing exercise to all residents; and (5) providing assistance that enhances the ability of residents to dress and groom independently. Although this body of literature begins to describe the “black box” of care in NH, the tasks are those typically implemented in providing direct care by certified nursing assistants only. Little is documented on other activities provided by other types of nursing staff. Furthermore, few studies examine the actual care provided in settings other than NH or collectively across LTSS settings.

Several significant knowledge gaps remain even after a decade dedicated to improving measurements of nursing care in LTSS. The structure of nursing care has not been adequately documented in settings other than the NH or across all LTSS settings and thus, there is little knowledge of the amount of time that different types of nursing care personnel spend delivering direct or indirect care, particularly in HCBS and ALF. Additionally, the specific tasks and time spent by nurses providing care to LTSS recipients are unknown because the majority of research has only been conducted for care tasks by certified nursing assistants in NH. As a result, the amount of time measured for one clinician to complete a set of care tasks may be entirely different for a different clinician engaged in the same tasks. For example, two home health aides document that an hour was spent with a recipient of HCBS in the home, but one aide spends the entire hour assisting the individual with morning self-care and the other aide prepares breakfast, monitors and supports medication adherence, and drives the individual to an appointment. Understandably, an hour can mean different

things for different types of nursing care personnel and for the same type in different settings; it is also possible that an hour means something different in the same LTSS setting for the same personnel type. Therefore, with the longer-term goal and study aim of examining the impact of nursing care on LTSS recipient outcomes, we conducted a qualitative evaluation of the data infrastructure in three LTSS settings and obtained LTSS administrators' perspectives on the challenges of measuring nursing care structure (types of nursing care personnel and time allotted in hours for the care provided) and processes (tasks provided by nursing staff) in LTSS.

Background

This study is part of a larger scale effort as an exploratory aim to examine the impact of nursing care on health outcomes of elders in LTSS in the parent study, Health Related Quality of Life: Elders in Long-term Care (National Institutes of Health, National Institute of Aging, R01-AG025524, PI Dr. Naylor). The primary aims of the parent study are to examine the natural trajectory of changes in each of the multiple domains of health related quality of life and the possible causal relationships between and among domains. In an effort to engage members of the LTSS community, particularly the administrators in each of the participating organizations, in the development and direction of this research, an advisory committee was established. The committee meets quarterly to review study progress, discuss findings and relevance to practice, and problem solve challenges associated with the quality of the study implementation.

Accurately and efficiently measuring nursing care to operationalize the parent study exploratory aim became an issue the advisory committee adopted for further exploration. The advisory committee members committed to an investment of additional efforts to determine the feasibility of the most accurate method of measuring hours of nursing care for the different nursing care personnel within their setting (the original parent study aim), and subsequently identify the related care tasks. Acknowledging the expected contribution of this work to LTSS research and practice, the advisory committee established a longer-term aim to replicate this exploratory work with other disciplines to better specify the amount of time per care task for all care personnel in LTSS.

Methods

Design, Setting and Participants

This exploratory work as part of the parent study with LTSS organizations located in Southeastern Pennsylvania, New Jersey and in New York City, and was approved by the institutional review boards for the protection of human subjects of the parent study's academic institution and, where available, the participating LTSS organizations.

The qualitative approach employed to identify the challenges of measuring the provision of nursing care in the major providers of LTSS (NH, ALF, and the more common forms of HCBS, such as Programs of All Inclusive Care for the Elderly and member-based/private pay program) involved interviews that were triangulated with a retrospective chart review and input from the parent study's LTSS advisory committee. A qualitative design was

established because it is considered an optimal approach to obtain broad knowledge about a topic for which little previous research has been completed, as is the case for measurement of nursing care in both HCBS and ALFs and across LTSS settings (Greenhalgh & Taylor, 1997). Semi-structured interviews were used rather than a survey questionnaire or other methods to be able to generate a discussion with participants, particularly in the two settings (HCBS and ALF) where the idea of measuring nursing care hours and activities (time and tasks) for their effect on elder outcomes is still in its infancy.

Qualitative studies are not only important as preliminary investigations into an unknown area, but they can also be later integrated with subsequent quantitative work during systematic reviews of a topic (Thomas et al., 2004). The preliminary findings from the interviews were presented to the parent study's LTSS advisory committee for input and validation. A second level of interviews was completed after meeting with the advisory committee. A retrospective chart review was subsequently conducted to validate the clinical and operational perspectives obtained and to begin to understand the feasibility of measuring nursing care in and across the different LTSS settings. Methodological triangulation is viewed as a powerful technique of involving more than two methods to gather and validate data through cross verification from more than two sources (Patton, 2002).

In contrast to quantitative studies, in which eliminating selection bias is a concern, qualitative research actively pursues individuals with the most knowledge on a topic. This study used a purposive sampling technique to target individuals working in LTSS organizations participating in the larger cohort study and who were most likely to yield relevant information. In 2007, there were 13 organizations with a total of 57 individual sites across three settings (HCBS, ALF, and NH) in the parent study. The advisory committee members, parent study principal investigator (MN), and the project manager (KA) identified a key leader in each participating organization who would be knowledgeable about the structural characteristics of staffing and how it is recorded. Six key individuals were identified (1 NH, 2 ALF, 3 HCBS) and all six agreed to participate. The advisory committee as a whole was involved in the second step of this study for triangulation of the data collected in the interviews. Their input led to a second round of interviews with the same participants as the first, to probe further into the emerging themes. The retrospective chart review was subsequently completed in one HCBS with one administrator and one licensed practical nurse from the LTSS site and two members of the research team (JS and a parent study research associate responsible for data collection).

Protocol for Data Collection and Analyses

Interviews were used to identify the data infrastructure in each respondent's respective organization including: what data are collected clinically or administratively for the different types of nursing care personnel; amount of time engaged in care; content of that care (tasks); and the challenges of obtaining a complete and accurate picture of time and tasks by nursing type within their organization and across LTSS settings. Based on the literature and Donabedian's framework for examining the quality of care, a semi-structured interview guide was developed to generate an open dialogue on topics that would be consistent across LTSS settings to allow for later comparisons. Questions more specifically addressed:

availability of data by nurse personnel type; data format (i.e., federal database or locally developed paper record); methods for data entry; quality assurance processes; accessibility of the data for use in the parent study; perspective of barriers to measuring the delivery of care (time and tasks) across nursing care personnel; and perspective on challenges for integrating data across organizations within a setting (e.g., ALF) and across settings (HCBS, ALF and NH).

The team piloted the semi-structured interview together on a conference call with an individual from one of the participating LTSS organizations. The remaining five individuals who agreed to be interviewed were arbitrarily matched with five research team members to each individually complete one 30-minute phone interview. The researcher-to-interviewee match was considered arbitrary because the research team was not familiar with the operations or data infrastructure at any of the participating LTSS organizations.

Each research team member conducting an interview initiated the communication with either a call or email to establish a mutually convenient time to talk by phone. The semi-structured interview guide was emailed to each interviewee for review prior to the phone interview. At this time, one individual self-identified to be an inappropriate contact for the interview and identified another administrator in the organization who subsequently agreed to participate as a knowledgeable representative for their organization. The interviews were performed by the research team following the semi-structured guide with use of unscripted follow-up probing questions where appropriate. Sample nursing care documentation forms (blank) were obtained to provide additional information on methods for documenting time and tasks. Field notes were taken during the interviews, transcribed immediately, and all data were sent to the coordinating team members. To minimize subject inhibition, particularly when discussing operations and data availability, no audio recordings were performed.

Data were gathered, classified into two analytic domains according to our research focus – time by type and care tasks by type of nursing care personnel – and coded by two investigators (JPB, JS). The full study team independently reviewed the data and then as a group collectively discussed the emerging themes. A summary of the data infrastructure for both time and tasks and emerging themes for measuring nursing care across settings was developed. These preliminary findings were presented to the HRQoL LTSS advisory committee for the group to validate the findings and themes that emerged. Field notes from the advisory meeting were coded and incorporated by the coordinating team. A second semi-structured interview protocol was developed to probe further into the emerging themes, particularly with respect to the challenges for measurement. Interviews were completed with the same individuals and the same process was used for data collection and coding.

A chart abstraction tool was developed for use in a retrospective review of archived agency data with one of the six participating organizations in order to validate the themes specifying challenges to measuring the provision of nursing care. Four people (JS together with a LTSS administrator from one HCBS site, followed by a research associate for the parent study partnered with a different LTSS nursing staff person) abstracted data on nursing care tasks, time and by type of nursing care personnel for two elders enrolled in the parent study. Field

notes from this experience on the accessibility (sources), availability, and specificity of the data, and the challenges in abstracting it were also coded and incorporated into summaries. The research team reviewed the final coding and the challenges to measuring nursing care were determined.

Results

Descriptive Summary of Participating Organizations

Individuals who participated in the interviews and on the advisory committee represented organizations delivering LTSS in three settings: HCBS, ALF, and NH. The organizations differed by how services were financed or reimbursed, where services were delivered, and the type of nursing care available to recipients of LTSS. Table 1 provides a descriptive summary of these characteristics. To protect participating organization's identity, findings are reported by setting and not by source (i.e., interviewee versus advisory committee).

Documentation of Time by Personnel Type

Table 2 depicts the differences in documentation and availability of data on time or amount of care provided in NH, ALF and HCBS. NH administrators could clearly communicate the primary sources and detail available for the amount of care, in hours, delivered by registered, licensed, and certified nursing care personnel. In NH, a non-resident specific amount of time is calculated based on the facility's census and personnel delivering care in a day. Although these data are available electronically, several paper sources of data were reported to exist with time and personnel type details (e.g., staffing schedules) but these are not routinely considered for calculating time per resident.

ALF administrators reported that person specific records were kept daily in both paper and electronic formats. Specifically noted was the lack of documentation available from contracted nursing care personnel (i.e., care providers not employed by the LTSS organization). This concern was echoed by HCBS administrators who reported to not always be aware of nursing care contracted directly by the family. The care delivered by family or friends was also noted as a common gap in documentation. Furthermore, the number of different data sources, format (paper and electronic), and also their purpose (administrative staffing or triage logs to clinical progress notes) ranged dramatically across organizations even within the same setting, i.e., HCBS. Time for some HCBS and ALF organizations was exact and both elder and staff-specific (each task, visit, or interaction with or for the LTSS recipient was documented with a start and end time) and for other HCBS and ALF organizations and all NH organizations, time was either not always specified for all types of nursing care personnel or was only available in aggregate (i.e., number of hours of care provided by one person to a group of elders).

Documentation of Tasks by Personnel Type

Table 2 depicts the differences in documentation and availability of data on nursing care tasks for NH, ALF and HCBS. Documentation of tasks were less detailed and available than time. A commonality across organizations and settings was identified in the existence of a person specific care plan (titled differently by organization but similar in purpose).

Administrators reported the care plan to be the central source for denoting the assistance elders needed. For some organizations the areas of assistance or impairments noted in the care plan were further described in association with care tasks. However, the plans varied on the level of detail both within an organization across elder LTSS recipients and across organizations. Furthermore, the type of nursing care personnel was infrequently specified. Administrators identified several additional sources where tasks may be recorded but they expressed awareness of the disconnect between the time recorded for each LTSS recipient and the details of the care provided in the time indicated. Additionally, administrators from all settings reported that fewer details on tasks were available for personnel other than certified nursing assistants, personal care attendants or home health aides (e.g., level of involvement for a nurse practitioner or registered nurses). On the other hand, where tasks were recorded for aides and certified nurses assistants, a structure had been established based on some pre-existing list of tasks such as those included in the OMAHA or various measures of basic and instrumental activities of daily living.

Figure 1 summarizes the themes by analytic domains time and tasks, and presents the themes associated with time, tasks, and nursing care personnel type (overarching) that arose from different organizations within a setting and across settings. While the themes capture what documentation is available, collectively the figure highlights the gaps and challenges for measuring nursing care in LTSS.

Validation of the Themes

The retrospective review of archived agency data for two elders participating in the parent study provided the research team a first-hand look at the themes generated from the interviews and open forum meeting with the LTSS advisory committee. A standard chart abstraction of clinical records was not possible because of the number of sources of data and so all agency records related to the elder's care were reviewed. In an effort to capture all nursing care information, it took nearly three hours for one LTSS administrator and one research team member to review sixteen sources of data which included archived paper forms scanned in to be stored electronically. The process was repeated by two individuals more familiar with the data records—a licensed provider of nursing care and a research team member responsible for elder interviews and chart abstractions—and although it took less time, the licensed clinician identified more nursing care (total amount of time provided by nursing) than the researcher. The licensed clinician noted that familiarity with the data sources allowed for a specific search of nursing care “signals” (e.g., codes for services and also names of staff members who were not documented as nursing care personnel but were familiar to this staff person). To obtain the most accurate information on time and task by nursing personnel type, the licensed clinician interviewed staff delivering the care. This team of research and LTSS staff confirmed the complexity of measuring the provision of nursing care, validating previously introduced themes regarding data availability, completeness, and accuracy.

Discussion

As the elderly population grows and the need for LTSS intensifies, the need for high quality and proficient nursing care will also intensify. A method for measuring the provision of nursing care across different types of LTSS has not yet been developed. This exploratory study revealed the challenges for measuring the provision of nursing care particularly surrounding the variability of data availability and specificity across three distinct LTSS settings in the United States. Time and tasks are documented differently for different nursing personnel, across organizations within a setting, and across settings. We suspect the greater variability in HCBS to be driven by there being many more service environment and financing options compared to ALF and NH. We also found one similarity in documentation across settings and organizations in that each had individual care plans that could serve as the central source of all nursing care documentation in the future.

The growth in the population needing LTSS, the changing nature of their care needs, and the demand for a broader range of options through which to receive services is causing the LTSS system to evolve. This evolution not only includes a larger scope of health care workers providing care but also a shift in where LTSS are provided. Although NHs have been the primary source of LTSS care for elders in the United States (Mollica, 2001), there is a need to create community-based alternatives. HCBS, available in most states to Medicaid-eligible elders via waivers or private pay and provided by community-based agencies such as home health organizations, offer a wide range of direct (e.g. personal care) and case management services (Coleman, 1999). ALFs as an alternative to HCBS and NH have become the fastest growing segment of LTSS but there is no single accepted definition of ALF (Stone & Reinhard, 2007; Lewin, 1996). The lack of state regulations and federal oversight has allowed significant variability in the characteristics of these facilities and the residents they serve (Mitty et al., 2010; Frytak, Kane, Finch, Kane, & Maude-Griffin, 2001; Assisted Living Quality Coalition, 1998). These differences in payment for services, regulatory oversight, and availability of services will only further challenge the development of a uniform process to measure nursing care and quality across settings (Hawes & Phillips, 2007).

The evolution of the structure and processes of care delivery in a diverse array of settings, and the variability of LTSS across the globe, has outpaced our understanding of the full range of nursing care needs of LTSS recipients and the most effective way to meet these needs. Assuring high quality and cost effective nursing services across all LTSS settings requires matching the right services (and the right personnel) in the right dose (both time and task) to recipients' needs. This will not be possible without a system of documentation that is uniform across service settings. This exploratory work was undertaken to illustrate the variability in documentation of nursing care across LTSS organizations and to stimulate a research agenda that will lead to improvement. By focusing on improvements to the documentation of nursing care, and addressing the challenges for measurement across settings, future work can assess the possibility of standardizing the care plan across settings to be able to standardize the metrics for time and tasks by type of nursing care personnel. In doing so, research can be conducted of the range of nursing care needs of LTSS recipients,

the staff meeting those needs, and how this influences meaningful system specific and person-centered outcomes of quality of care and life.

Guidance from our advisory committee has helped set an agenda for this line of inquiry in years to come. In addition to developing a framework for investigating and later measuring the delivery of care by time and tasks by other clinicians such as social workers or physical and occupational therapists, several more immediate considerations should be made for future work. For example, we focused our exploration on time by personnel type and task by personnel type but the variability prevented us from furthering the investigation of documentation of nursing time for specific tasks. Conceptualization of care tasks warrants further discussion as non-billable hours of care for activities such as educating family or coordinating services should also be examined. However, these care tasks may be documented even less frequently, consistently, or uniformly than, for example, tasks associated with basic activities of daily living. Also recognizing the descriptive differences in the settings involved with this study, future research should consider factors such as financing, regulations, and types of services available, as these differences are likely also influencing time and tasks, and consequently affecting elder outcomes.

The challenges to measurement identified in this exploratory study span a broad continuum of issues from detail available to where the detail is documented. A recent study of residential care facilities for the elderly in California found similar challenges including the availability of information, the format of its availability (paper rather than electronic, organization specific, private and not public), and how up-to-date the information available is (Flores & Newcomer, 2009). It is possible that other challenges and structural differences in the data infrastructure exist that have not yet been disseminated in the peer reviewed literature and that we did not find in our exploratory study. This study's sample size for the LTSS interviews was small and while we included different types of LTSS organizations, we purposely skewed our sample of interviewees to have more HCBS and ALF than NH participants. The decision to do so was twofold: there is more variability in the financing, regulatory oversight, and provision of services in HCBS and ALF than in NH and there is less research on LTSS nursing care in HCBS and ALF than for NH. While having limited our sample to six organizations prevented the opportunity to reach saturation in our interview data, we attempted to overcome this limitation with the inclusion of input from our 25 person advisory committee, spanning almost 60 unique sites of LTSS. Recognizing the variability of data collection standards across LTSS nationwide, we feel it may not be possible to identify all sources of variance such as how data is collected and where it is stored. Also in acknowledgement of the different outcomes considered meaningful to different LTSS stakeholders, we focused this exploratory work on structure and processes without specifying any specific outcome of interest.

Conclusion

This exploratory study of the structure, process and challenges of measuring nursing care across LTSS identified both convergent and divergent themes when focusing on the documentation of time, tasks, and types of nursing care personnel. Significant variability exists between and within LTSS settings but challenges are not insurmountable with further

work. A concentrated effort is needed to standardize measurement of the provision of care in LTSS. Only in achieving this will the quality of care be uniformly addressed to meet the needs of LTSS recipients.

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Figure 1.

Five domain specific themes and six overarching themes of the challenges to measuring the provision of nursing care across LTSS.

Table 1

Descriptive Summary of the Participant Organizations (Interview Participants N = 6; Advisory Committee N = 25)

LTSS Setting	Financed By (alphabetical)	Service Environment	Nursing Care Personnel
<ul style="list-style-type: none"> ▪ HCBS ▪ ALF ▪ NH 	<ul style="list-style-type: none"> ▪ Dual Medicare-Medicaid ▪ Medicaid only ▪ Private pay 	<ul style="list-style-type: none"> ▪ Home ▪ Community-based center ▪ Retirement community or service-based living facility ▪ Residential institutionalized facility 	<p>Various combinations of:</p> <ul style="list-style-type: none"> ▪ Registered nurse ▪ Licensed nurse ▪ Certified nursing assistant ▪ Nurses aides (i.e., home health aides) ▪ Contracted nursing care personnel (either by elder or by agency)

Note. LTSS=long-term care services and supports; HCBS=home and community based services; ALF=assisted living facilities; NH=nursing home.

Table 2

Differences in Documentation and Availability of Data on Time and Tasks for Nursing Homes, Assisted Living Facilities and Home and Community Based Long Term Services and Supports

LTSS Setting	Time For The Amount Of Care In Hours (data format)	Nursing Care Tasks
Nursing Home	Non-resident specific amount of time (an average) based on the facility's census and personnel delivering care in a day (electronic and paper)	
Assisted Living	Person specific, exact, record of time for nursing care personnel employed by the organization Availability of documented amount of care in number of hours for contracted nursing care inconsistently available (several electronic and paper sources)	Care plan available for all residents/adults but specific tasks not specified for all nursing care personnel
Home and Community Based Services	Person specific, exact, record of time for some nursing care personnel but varied by organization No documentation of nursing care organized or contracted directly by the family (several electronic and paper sources)	