

Activities of Daily Living Assessment: Encompassing Qualitative and Quantitative Data

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Abstract

Life care plans are designed to outline the evaluatee's rehabilitation and future medical needs. It is imperative to have an accurate understanding of the injury's impact on a person's ability to complete activities of daily living (ADLs) and instrumental activities of daily living (IADLs). Assessment of ADLs and IADLs should include standardized measures, combined with clinical observation. This information is then interpreted within the context of a person's environment, personal traits, habits, routines, values, and motor and processing skills to provide a wholistic assessment.

Keywords: activities of daily living, objective testing, comprehensive assessment, ADLs

Why is comprehensive assessment of activities of daily living important?

The primary goal of a life care plan is to "assist the evaluatee in achieving optimal outcomes by developing an appropriate plan of rehabilitation, habilitation, prevention, and reduction of complications. This includes recommendations that contribute to the evaluatee's health, wellness, and quality of life." (International Academy of Life Care Planners, 2022, p. 11). To achieve that goal, voluminous subjective and objective, qualitative and quantitative data, is collected through both primary and secondary sources. This provides the basis for life care planners' opinions for projected services and items in the life care plan. Data collection sources can be either primary or secondary. Primary data sources, such as assessment of the evaluatee, including objective and clinical observations, are collected by the life care planner. Secondary sources are those collected by someone else and include medical record review and information documented by others. Subjective reports of symptoms and function are commonly reported and used to project items and services in the life care plan. Subjective reports provide qualitative data while objective methods, such as standardized assessments, provide quantitative data. Given the monetary outcome of the life care planning process in

litigation, use of quantitative methods, which are valid and reliable, enhance the life care plan (Kendall & Casuto, 2005).

Following an accident or injury, activities of daily living (ADLs) and instrumental activities of daily living (IADLs), which comprise most tasks in which individuals participate, can become difficult to complete. ADLs consist of toileting, transferring, eating and swallowing, feeding, grooming and hygiene, dressing, sexual activity, and bathing. IADLs consist of care of others and pets, child rearing, communication, driving, financial management, home establishment and management, meal preparation and clean up, religious and spiritual expression, safety and emergency maintenance, and shopping (AOTA, 2020c). These are complex tasks which are routinely taken for granted by able bodied individuals. Following an injury or accident, ADLs and IADLs can become difficult to complete in the same manner as before the injury. Having an accurate understanding of which ADLs and IADLs are impacted and more importantly, why they have become impacted becomes a strong basis for the inclusion of items in the plan. This critical analysis impacts various areas of life care plan recommendations, including durable medical equipment, wheelchairs and accessories, aids for independent functioning, orthotics, prosthetics, projected therapeutic evaluations, projected therapeutic modalities, home furnishings and accessories, transportation, architectural renovations, home care, and attendant care hours. It is imperative to have comprehensive data, an accurate assessment of ADLs and IADLs, and a thorough analysis of the evaluatee's environmental and personal factors because this information may impact a large portion of the life care plan's recommendations.

It is best practice to have a basis for the recommendations in the life care plan, as outlined in Consensus and Majority Statement 58 (Johnson et al., 2018). The importance of gathering data and providing a basis for inclusion of items is also mentioned in Consensus and Majority Statements 49, 59, 60 and 84 (Johnson et al., 2018). The newly revised 4th edition of the Standards of Practice for life care planners also outline various standards in which comprehensive assessment and data collection applies:

STANDARD: 9 - The life care planner performs comprehensive assessment through the process of data collection involving multiple elements and sources.

STANDARD: 10 - The life care planner analyzes data using a consistent, valid, and reliable process.

STANDARD: 11 - The life care planner uses a consistent, valid, and reliable approach to determining evaluatee's needs (International Academy of Life Care Planners, 2022).

Therefore, the use of objective ADL data combined with an understanding of the nuances of the evaluatee's natural environment, analyzed through the backdrop of the life care planner's training, education, and experience, presents a strong basis and rationale for the inclusion of goods and services. Clearly, an accurate assessment of the evaluatee's current level of function is a key component in providing valid and reliable recommendations related to the injury.

The current life care planning Standards of Practice, 4th edition (International Academy of Life Care Planners, 2022), and Consensus and Majority Statements (Johnson et al., 2018) provide foundation and guidance for the essential task of comprehensive assessment to provide a strong basis for projected items in a life care plan. The purpose of this

article is to expand on earlier research regarding inclusion of objective testing and assessment and outline the importance of combining this objective testing with clinical observation while considering the context of the evaluatee's environment and personal factors.

Literature Review

The primary depositories for research in life care planning, *The Journal of Life Care Planning* and *The Journal of Nurse Life Care Planning*, as well as the main textbook in life care planning, *Life Care Planning and Case Management Handbook*, 4th edition (Weed & Berens, 2019) were reviewed for information on ADL evaluation and assessments as part of their inclusion in creation of a life care plan. Search terms included ADL, activities of daily living, and function.

Mitchell and Mitchell (2019) reviewed multiple assessments, covering the life span including but not limited to the Canadian Occupational Performance Measure, 4th edition (2005), the Functional Independence Measure (FIM) (1997), WeeFIM System II (1998), Work-Well Systems FCE, version 2 (2006), and Test of Visual Motor Skills (TVMS- 3) (2010). Additionally, ADL and IADL checklists developed by the authors were included which provide an outline from which the life care planner can assess the evaluatee's functional level.

A recently published article by Busby Thomas (2023) outlines several checklists, scales and assessments including the Katz Index of Activities of Daily Living, Lawton Instrumental Activities of Daily Living Scale, FIM, Functional Assessment Measure (FAM), and the Functional Autonomy Measurement System (SMAF). Many of these checklists are used in an inter-disciplinary format including nursing, occupational therapy, physical therapy, and social work.

Luckett (2017) indicated that both objective measurements and observation techniques need to be used to form the basis for the life care plan. The article focused primarily on upper extremity impairments and reviewed the need for grasp strength testing using a Jamar Dynamometer which includes standardized norms. Additionally, observations of ADLs were reviewed in depth including dressing, transfers, functional mobility, and bed mobility (2017).

A standardized assessment is presented by Caragonne and Sofka (2016) in the *Journal of Nurse Life Care Planning*, called the Determination of Need Protocol (DON) which is used to assist in providing a standardize method to determine attendant care hours. The DON is described by the authors as a "valuable tool that provides an efficient, standardized, and easy-to-use method for appraising needs for attendant care and establishing the barriers to function in eleven task areas." The eleven areas encompass both ADLs and IADLs and after completion of the tool, provides a recommended number of attendant care hours required for the evaluatee. Given the paucity of recent research highlighting the importance of using objective testing and observations, this article aims to contribute to this discussion.

Discussion

The need to form a strong basis for opinions in the life care plan has been established and towards this goal, objective testing can contribute additional data. A multitude of ADL checklists and assessments exist "...to measure the quality of the client's performance or performance deficits while completing occupations or activities relevant to desired

occupations, noting the effectiveness of performance skills and performance patterns” (The American Occupational Therapy Association, 2020).

Depending on the background of the life care planner, different assessments may be chosen. The Shirley Ryan Ability Lab based in Chicago maintains a thorough list of assessments including their purpose, area of assessment, administration mode, cost, normative data, reliability, and validity (Shirley Ryan Ability Lab, 2023). This Rehabilitation Measures Database can be accessed here: <https://www.sralab.org/search?contains=assessments>.

Busby Thomas (2023) provided descriptions of several ADL assessments. Additional examples of commonly used evaluations to assess ADLs or occupations, a term utilized by occupational practitioners to describe both ADL and IADLs, and performance skills are as follows: Assessment of Motor and Process Skills (AMPS) (Fisher, 1995), Barthel Index (Mahoney & Barthel, 1965), Global Assessment of Functioning (Endicott et al., 1976), Rivermead Motor Assessment (Lincoln, 1979), Batelle Developmental Inventory, 3rd Edition (Newborg, 1988), Pediatric Evaluation of Disability Inventory Computer Adaptive Test (Haley & Coster, 2020), Routines Based Interview (McWilliam, 2010), Loewenstein Occupational Therapy Cognitive Assessment (Katz et al., 1989), and the Executive Function and Performance Test (Baum et al., 2008). A standardized assessment tool should gather data to identify strengths and deficits and substantiate the evaluatee’s subjective reports. The data can be used as a cornerstone to form the basis of recommendations in the life care plan.

Simultaneously during the process of collecting the objective data, clinical observations occur “which provide a more comprehensive picture of client performance” (James & Pitonyak, 2019). These observations are considered qualitative data and have no subjective interpretation (James & Pitonyak, 2019). The years of experience, clinical background and experience of the life care planner is an integral component of these observations. This process begins the moment a clinician speaks to an evaluatee on the telephone. The very first assessment of an individual’s sensory, motor, cognitive and social interaction skills occur during the first conversation. A more detailed analysis of these performance components as they relate to the larger, more complex tasks of ADLs and IADLs occurs during the home visit or assessment. Some components of the more “basic” ADL tasks may be assessed by observing an evaluatee’s movement around their home because most of these tasks involve some level of mobility and transfers. If they have severe impairments, some or most of these skills will be performed for them by a caregiver. The more complex IADLs are partially built on an individual’s ability to engage in the more basic ADLs. For example, if an evaluatee has increased upper extremity spasticity and cognitive deficits, although they may be able to feed themselves with adaptations, they will be unable to grasp a regular pen and manage their own financial affairs accurately.

It is important to not only assess a person’s ability to manage ADLs and IADLs but to perform activity analysis, a process in which the task is broken down into its component parts. “Activity analysis addresses the typical demands of an activity, the range of skills involved in its performance, and the various cultural meanings that might be ascribed to it” (Schell et al., 2019).

Activity analysis requires an understanding of the differing systems which are concurrently operating during any given task in addition to the components of each of these systems. Combining this broad view of the systems involved with an intimate knowledge of the details necessary to complete these tasks requires a skilled clinician. Gates et al. (2016)

exemplifies the body of knowledge necessary to understand ADL tasks and their components by providing quantification of range of motion required for eight upper extremity ADL tasks.

An ADL assessment may indicate the individual requires assistance with bathing but will not indicate why, which system(s) or subcomponents are the culprit for the evaluatee's inability to perform the task. A plethora of performance skills, including both motor and process skills, are required to perform ADL and IADLs including range of motion, strength, motivation, cognitive-perceptual ability, endurance, mobility, and attention, to name only a few. Cognition alone can then be broken down again into its component parts such as memory, concentration, organization, problem solving and attention as can both range of motion and strength. Clinical observation of these tasks can occur using very natural methods. Requesting demonstrations of whether the evaluatee can don and doff their shoes or sweatshirt can provide large quantities of data regarding range of motion, sitting balance, planning, organization, strength, and ability to follow commands, among many other skills.

It behooves the life care planner to appreciate the complexities of each of the ADL and IADL tasks. The clinical skill of accurate observations during the objective testing and interview may lead to further recommendations and a more thorough life care plan.

The home evaluation, including clinical observations, may be done in the home or via telehealth (Barros-Bailey et al., 2023) to provide yet another source of primary data upon which to make recommendations. The benefit of an in-home evaluation is described by Taylor and Kielhofner (2017) as follows,

The primary advantage of collecting data within a natural environment is the ability to gather data that are authentic and ecologically valid. Natural environments do not introduce extraneous variables that might otherwise be imposed by an artificial laboratory or clinical environment (p.301).

If the life care planner does not have access to the evaluatee, this data can be collected as a secondary source by someone other than the life care planner (Barros-Bailey, 2020), such as therapy notes, and standardized assessments such as the FIM or the Outcome and Assessment Information Set (OASIS-D) (Centers for Medicare & Medicaid Services, 2019). This secondary data provides descriptions of the individuals ADL and IADL status, and in some cases, their use of assistive devices.

The life care planner should have an awareness of the evaluatee's values, beliefs, spirituality, and culture because they influence the evaluatee's goals, desires, and engagement in various activities (The American Occupational Therapy Association, 2020). Values, beliefs, and spirituality form a complex, interwoven basis from which evaluatees engage in ADL and IADLs throughout their life span. The context in which an evaluatee engages in these activities can also be highly influenced and variable depending on their cultural background. Differing views on the importance of health, the cause of disease, and the methods in which they aim to address these deficits is essential to make appropriate, individualized recommendations for the life care plan. Whereas in the United States, individualism and independence is highly valued, in other cultures, a more collectivist approach is taken where the value of the family and the group supersedes any one individual needs (Black, 2019). This influence of culture becomes evident when determining level of environment of care or attendant care hours in a life care plan. People who live in a collectivist culture tend to provide more assistance with ADLs and IADLs at an earlier age than those who function within an individualistic envi-

ronment. Deciphering the appropriate amount of assistance required because of the injury and aging, while weighing that culture's natural progression to provide ADL and IADL care to the individual, requires an astute clinician.

Also playing a key role in ADL and IADLs' is an evaluatee's environment, defined as the "physical, social and attitudinal surroundings in which people live" (The American Occupational Therapy Association, 2020, pp. 9–10). The layout and set up of the living space may help an evaluatee live safely and independently. Conversely, a poorly designed layout can create more dependence. Evaluating the environment, including terrain and dimensions, and understanding the living space becomes paramount when recommending wheelchairs, scooters, walkers, bathroom equipment, grab bars and home care services such as lawn maintenance and household maintenance. A thorough assessment and an understanding of the interplay between environment and ADLs becomes important.

The evaluatee's ADL and IADL roles, habits, routines, and rituals can also assist or detract from their ability to engage in these tasks (The American Occupational Therapy Association, 2020). The patterns of activity developed throughout the lifespan, either healthy or maladaptive, can influence an evaluatee's ability to engage in daily tasks. An awareness of these extraneous factors provides a deeper understanding of the evaluatee and may provide a greater understanding of the sequelae of the injury or accident on that individual. Asking the evaluatee to describe their typical day may provide surprising insight into the individual and their unique personality.

Conclusion

A thorough assessment of ADLs and IADLs has significant impact on multiple areas of the life care plan. During an ADL and IADL assessment, the life care planner should assess the level of assistance needed and gather valuable information regarding capabilities and deficits in motor and process skills. In addition, information regarding environment, habits, roles, rituals and culture should be considered when making recommendations for the life care plan. A comprehensive assessment, with data collected from objective testing and observations that considers unique aspects of the evaluatee's life, is considered best practice in life care planning, provides a stronger basis for recommendations, and results in a tailored, individualized plan.

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