The Rehabilitation Professional, 24(1), pp. 31–36

Use of the FCE in Estimation of Client Care and Services

Cloie B. Johnson and Nick Choppa

The present article will address the value and need for the Functional Capacity Evaluation in the rehabilitation counseling process. It is suggested that Rehabilitation Counselors must work in concert with others completing Functional Capacity Evaluation to assist in the development of rehabilitation plans. Further, these Evaluations may assist in aiding workers to adequately understand their applicable restrictions.

Keywords: Functional Capacity Evaluation, Return-to-Work, Work Capacity

The Rehabilitation Counselor and/or Case Manager look to the medical community to define the nature and extent of an impairment (Choppa & Johnson, 2008). The Rehabilitation Counselor and Case Manager then translate the limitations and restrictions applying them to the world of work and ability for independent living including coordination of care (McGowen & Porter, 1967; Choppa & Johnson, 2008).

Often times the treating or consulting physician is able to provide recommendations for future evaluations, therapeutic modalities, and surgical interventions required, but when it comes to determining the need for household services and additional adaptive equipment, this can also effectively be determined by the use of the functional capacity evaluation.

As Becker et al. (2015) outlines in their manuscript, the use of functional capacity evaluations have been a long-standing tool to determine an individuals current and future anticipated limitations and abilities in various postural and functional domains. Understanding the methodology of the functional capacity evaluation supports the Rehabilitation Counselor and Case Manager in a translation of the limitations in direct application to an individual's ability to work, and/or help at home, the need for future care and services.

Rehabilitation Counselors and Case Managers have a unique perspective of working with various stakeholders in the course of their work. These may include contact with the evaluee, the physician, collateral sources such as family members and employers to analyze tasks and needs. The analysis of tasks also known as job analyses is an integral part of the domain of Rehabilitation Counselors and Case Managers. When looking at an individual's work, counselors often assess functional abilities required to perform the essential functions of the job (Field, Johnson, Schmidt, & Van de Bittner, 2006). When coordinating home services for future care, the Rehabilitation Counselor and/or Case Manager may perform an environmental assessment of the home and assess how the individual is impacted by their environment including what assistance, if any they require for the performance of independent activities of daily living, chores, maintenance, etc.

The American Time Use Survey (ATUS) measures the amount of time people spend doing various activities, such as paid work, childcare, volunteering, and socializing. ATUS is sponsored by the Bureau of Labor Statistics and conducted by the U.S. Census Bureau. The Census Bureau collects and processes the data. This data is reported by the Bureau of Labor Statistics (http://www.bls.gov/tus/). Data collection began in January 2003, and the first estimates were published on September 14, 2004. Households that have completed their final (8th) month of the Current Population Survey (CPS) are eligible for the ATUS. From this eligible group, households are selected that represent a range of demographic characteristics. One person age 15 or over is then randomly chosen from the household to answer questions about his or her time use. This person is interviewed for the ATUS two to five months after his or her household's final CPS interview. Researchers, journalists, educators, sociologists, economists, government lawmakers, lawyers, and individuals are users of time-use information. The survey produces nationally-representative estimates of the U.S. population's time use by labor force status, demographic characteristics, and other factors. Analysts are able to compare Americans' time use with similar data from many other countries that have time-use surveys. Analyses of ATUS data or survey methods have appeared in the Journal of

Economic Perspectives, Survey Methodology, and other publications. When assessing needs for future home care, chore and maintenance services Rehabili-

tation Counselors and Case Managers may rely on this information in the process of making recommendations for replacement services. Home chores according to the American Time Use Survey include such tasks as:

- *Caring for and helping household members. Time spent doing activities to care for or help any child (under age 18) or adult in the household, regardless of the person's relationship to the survey respondent or the functional or mental health status of the person being helped, is classified here. Caring and helping activities for household children and adults are coded separately in subcategories.*
- *Primary childcare activities include time spent providing functional care; playing with children; reading with children; assistance with homework; attending children's events; taking care of children's health care needs; and dropping off, picking up, and waiting for children. Passive childcare did as a primary activity (such as "keeping an eye on my son while he swam in the pool") also is included. A child's presence during the activity is not enough in itself to classify the activity as childcare. For example,"watching television with my child" is coded as a leisure activity, not childcare.*
- *Caring for and helping household members also includes a range of activities done to benefit adult members of households, such as providing functional and medical care or obtaining medical services. Doing something as a favor for or helping another household adult does not automatically result in classification as a helping activity. For example, a report of "helping my spouse cook dinner" is considered a household activity (food preparation), not a helping activity, because cooking dinner benefits the household as a whole. By contrast, doing paperwork for another person usually benefits the individual, so a report of "filling out an insurance application for my spouse" is considered a helping activity.*
- *Caring for and helping nonhousehold members. This category includes time spent in activities done to care for or help others—both children (under age 18) and adults—who do not live in the household. When done for or through an organization, time spent helping nonhousehold members is classified as volunteering rather than as helping nonhousehold members. Care of nonhousehold children, even when done as a favor or helping activity for another adult, is always classified as caring for and helping nonhousehold children, not as helping another adult.*
- *Consumer purchases. Time spent purchasing or renting consumer goods, regardless of the mode or place of purchase or rental (in person, via telephone, over the Internet, at home, or in a store) is classified into this category. Subcategories in this section include those for time spent purchasing gasoline, time spent purchasing groceries, and time spent purchasing other food items, as well as that for time spent in all other shopping activities.*
- *Eating and drinking. All time spent eating or drinking (except that done as part of a work or volunteer activity), whether alone, with others, at home, at a place of purchase, or somewhere else, is classified as eating and drinking. Time spent purchasing or talking related to purchasing meals, snacks, and beverages are not counted as part of this category but is counted instead as time spent making consumer purchases.*
- *Educational activities. Time spent taking classes for a degree or for personal interest (including taking Internet or other distance-learning courses), time spent doing research and homework, and time spent taking care of administrative tasks related to education (such as registering for classes or obtaining a school ID) are included in this category. For high school students, before-school and afterschool extracurricular activities (except sports) also are classified as educational activities. Educational activities do not include time spent for classes or training received as part of a job. Time spent helping others with their education-related activities is classified as an activity involving caring for and helping others.*
- *Government services and civic obligations. This category captures time spent obtaining and using government services (police, fire, social services), such as applying for welfare, and time spent purchasing government-required licenses or paying fines or fees. Civic obligations include government required duties—such as serving jury duty or appearing in court—as well as activities that assist or influence government processes, such as voting and attending town hall meetings.*
- *Household activities. Household activities are activities done by people to maintain their households. This category includes time spent in housework; cooking; lawn and garden care; pet care; vehicle maintenance and repair; home maintenance, repair, decoration, and renovation; and household management and organizational activities (such as filling out paperwork, balancing a checkbook, or planning a party). Food preparation, whether or not reported as done specifically for another household member, is always classified as a household activity unless it was done as a volunteer, work, or income-generating activity. For example, "making breakfast for my son" is coded as a household activity, not as childcare.*
- *Household services. Time spent arranging for and purchasing household services provided by someone else for pay is classified here. Household services include housecleaning; cooking; lawn care*

and landscaping; pet care; tailoring, laundering, and dry cleaning; vehicle maintenance and repairs; and home repairs, maintenance, and construction.

- *Personal care. Personal care activities include sleeping, grooming (such as bathing or dressing), health-related self-care, and personal or private activities. Receiving unpaid personal care from others (for example, "my sister put polish on my nails") also is captured in this category.*
- *·Professional and personal care services. Time spent obtaining, receiving, and purchasing professional and personal care services provided by someone else for pay is classified into this category. Professional services include childcare, financial services and banking, legal services, medical and adult care services, real estate services, and veterinary services. Personal care services include services received from day spas, hair salons and barbershops, nail salons, and tanning salons. Activities classified here include time spent paying, meeting with, or talking to service providers, as well as time spent receiving the service or waiting to receive the service.*
- *Religious and spiritual activities. Religious activities include activities those normally associated with membership in or identification with specific religions or denominations, such as attending religious services; participating in choirs, youth groups, orchestras, or unpaid teaching (unless identified as volunteer activities); and engaging in personal religious practices, such as praying.*
- *Socializing, relaxing, and leisure. This category includes face-to-face social communication and hosting or attending social functions. Time spent communicating with others via telephone calls, texting, mail, or e-mail is not part of this category. Leisure activities include watching television; reading; relaxing or thinking; playing computer, board, or card games; using a computer or the Internet for personal interest; playing or listening to music; and other activities, such as attending arts, cultural, and entertainment events.*
- *Sports, exercise, and recreation. Participating in—as well as attending or watching—sports, exercise, and recreational activities, whether team or individual and competitive or noncompetitive, falls into this category. Recreational activities include yard games like croquet or horseshoes, as well as activities like billiards and dancing.*
- *Telephone calls. This category captures time spent in telephone communication; it also includes texting and Internet voice and video calling. Telephone and Internet purchases of consumer goods are classified into the category of consumer purchases. Telephone calls identified as related to work or volunteering are classified as either work or volunteering.*
- *Traveling. Nearly all time spent traveling is classified here. When a respondent reports doing another activity while traveling—for example, eating breakfast while riding the bus to work—the travel activity is recorded as the main activity. Walking and biking are considered traveling when they are used to get from one destination (an address or a building) to another, but not when the primary purpose is exercise. Travel did as an essential part of one's job—for example, driving a taxi—is recorded as work, not travel.*
- *Volunteer activities. This category captures time spent volunteering for or through an organization.*
- *Working and work-related activities. This category includes time spent working, doing activities as part of one's job, engaging in income-generating activities, not as part of one's job, and job search activities. "Working" includes hours spent doing the specific tasks required of one's main or another job, regardless of the location or time of day. "Work-related activities" include activities that do not obviously work but are done as part of one's job, such as having a business lunch or playing golf with clients. "Other income-generating activities" are those done "on the side" or under the informal arrangement and are not part of a regular job. Such activities might include selling homemade crafts, babysitting, and maintaining a rental property.*

Another source utilized is *The Dollar Value of a Day* (DVD). This source began with the combined efforts of two economists, Kurt Kreuger and John Ward. DVD was first published in 1996 and was based on the National Human Activity Survey (NHAPS) of the Environmental Protection Agency (EPA). For its first four years, DVD relied upon time use data from the 1996 NHAPS survey. Wage rates based on U.S. Department of Labor surveys that were updated each year were applied to time amounts. During that period, DVD contained 56 tables along with detailed information about the occupational wage data that was used. No issues were produced between 1999 and 2003 when ATUS data became available. Starting with the 2003 edition of DVD, 119 tables were included and many new categories became available, reflecting the increase in information that became available through ATUS. The Dollar Value of a Day, 2014 (DVD, 2014) combines the 2003 to 2014 samples of the U.S. Census Bureau's American Time Use Survey with hourly wage information from the Bureau of Labor Statistics' Occupational Employment Statistics. The result is a daily valuation of activities for 200 demographic groupings of persons in the United States. The DVD 2014 contains 200 demographic groupings along with an estimate of the household production that people perform for their exclusive benefit as op-

posed for the benefit of other household members or their household. Specific categories include:

Household Production which includes the following subcategories of time use:

Inside Housework;
Food
Cooking & Clean-up;
Pets,
Home & Vehicles;
Household Management;
Shopping;
Obtaining Services; and
Travel for Household Activity.

Caring and Helping includes:

Household Children;
Household Adults;
Non-Household Adults;
Travel for Household Members; and
Travel for Non-Household members.

Personal Time

Eating and Drinking
Personal Health Care
Grooming
Sleeping
Private, Personal, NA

Leisure

Socializing
Passive Leisure
Active Leisure
Attendance Leisure
Religious Activities
Volunteering
Travel Related to Leisure

Work and Education

Working at Job
Educational Activities
Commuting to Work or School

While these tables may be helpful for a general sense of activities, the Rehabilitation Counselor or Case Manager must apply their specialized knowledge, training and experience combined with their clinical judgment (Choppa et al., 2004). A more accurate assessment of their needs can be accomplished by not simply applying the data to the individual but looking at the individual as an N of 1, and understanding the individual (Choppa & Johnson, 2008). Illustratively, consider the following example:

John Worker is a 52 year old married man with two teenage children. He is involved in a motor vehicle accident sustaining right shoulder strain, right torn bicep and lumbar injury. The bicep and lumbar injury both required surgical intervention and post-surgical rehabilitation. Mr. Worker is right hand dominant.

Records and the clinical interview with the Rehabilitation Counselor revealed Mr. Worker's past education and employment histories as well as an exploration of his off work activities. He has an Associate degree and has a singular work history as a drafter. He routinely prior to the injury enjoyed sharing household duties with his wife of twenty years. He also took major responsibility for outdoor yard work, landscaping, automobile and home maintenance and repairs. He noted his sleeping pattern although interrupted since the injury was typically 7-8 hours per night pre-injury.

After rehabilitation he continues to experience pain and limitations, he does not wish to remain on pain medication and seeks a release to work. His physician requests a performance based functional capacity evaluation (FCE).

- Mr. Worker undergoes an FCE and the results indicate the following:
- Mr. Worker was capable of performing flex trunk positions on an occasional basis.
- Kneeling and squatting were recommended on a seldom basis for full descents, and on an occasional basis for partial descents.
- Crawling was not recommended.
- Stair/step functions were recommended on a seldom basis for Mr. Worker.
- Ladder climbing was not recommended.
- Mr. Worker was found capable of performing upright postures and positions on an occasional to the frequent basis for standing, and occasionally for ambulation.
- Seated postures and positions were recommended on an occasional basis.
- Mr. Worker was recommended to perform proximal right upper extremity functions for elevation and reaching on an occasional basis.

The Physical Therapist recommended that Mr. Worker demonstrated the capacity for full time work at the Sedentary to Light work level with the need for adaption and accommodation secondary to identified biomechanical dysfunction. Specifically, deficits were identified in the gross left lower extremity. Deficits were identified in the gross right shoulder/scapular quadrant. Compensatory trunk and center of gravity positions were noted due to the lumbar dysfunctions during ambulation, ascending and descending.

The Physical Therapist recommended referral for differential diagnosis concerning symptoms in the right neck and shoulder and gross right upper extremity. He furthermore recommended consideration of adaptions and accommodations with regard to current employment.

Notably, the Physical Therapist documented that Mr. Worker's identified deficits showed application barriers which will negatively affect vocational options, avocational interests, and options undertaken in the quality of life functions. The Primary Care Physician received and reviewed the FCE report and did not have any objections.

The Rehabilitation Counselor/Case Manager recommended Mr. Worker undergo an ergonomic evaluation and be provided appropriate equipment to ensure a successful return to work and to avoid exacerbation of symptoms. This recommendation also precludes any loss of earning capacity. Also recommended after analysis is the following excerpt from the report:

Mr. Worker's condition and sequelae will require ongoing service needs over his lifetime to enable him to maintain his life roles and responsibilities as an adult man. Based on the limitations noted there are recommendations for current and future household services.

Household services are those activities which are normally performed to maintain oneself and one's family, and typically consist of such task groups as childcare, housecleaning, meal preparation and clean up, laundry, minor maintenance, lawn and garden care, transportation, shopping, and record keeping. Mr. Worker participated in all aspects of household services, and it is expected he would have continued to do so. Unfortunately, his limitations preclude him from all aspects he previously performed.

According to a study based on the National Survey of Families and Households, "Housework and Wages" (Hersch & Stratton, 2000) the time spent in household work on average per week for married men reports 29.83 hours per week are used to perform the duties of meal preparation, dishes, cleaning, shopping, laundry, outdoor and maintenance, auto repair, bills and driving others.

According to the U.S. Bureau of Labor Statistics (BLS), American Time Use Survey (ATUS) 2013 results, men between the ages of 45 and 54 spend 1.21 hours per day, .93 hours per day age 55-64, 1.14 hours per day age 65-74 and 75 and over an average of 1.01 hours per day performing household activities, purchasing goods and services, caring for and helping household members, caring for and helping non-household members. This ranges from an average of 6.51-8.47 hours per week.

Lastly, according to "Dollar Value Per Day" from The Dollar Value of a Day, 2006 edition, married males who work full-time, wife works and youngest child ages 13 to 17, average 14.97 hours per week in household production, caring and helping and other secondary child care activities, after youngest child turned 18, an average of 15.54 hours per week in household production, caring and helping and other secondary child care activities would be typical for males over age 55 that work full time with no children under age 18. Once retired the average would be 26.04 hours per week.

While not practical to replace Mr. Worker's contributions hour for hour, it is appropriate to provide replacement services for him in light of his noted limitations in the FCE. Mr. Worker performed routine household services to include cooking, housekeeping, laundry, minor maintenance, and shopping keeping. It would be unrealistic to attempt to replace all of the services he provided for his household and family minute for minute. The utilization of replacement services by a licensed and bonded agency will afford Mr. Worker the ability to resume his usual activities to the extent possible and prevent further aggravation of symptoms related to the injuries sustained.

Providers, costs and frequencies of a replacement for the identified service were researched and are reflected in the following table. It is comprised of information obtained from the available medical records, my clinical interview, Dr. PCP and the Physical Therapist's recommendations, and my specialized knowledge, training, experience and clinical judgment. The costs noted are derived from my day to day clinical practice, Mr. Worker's current providers and/or representative geographically appropriate providers. The costs are indicative of the charges for items and services from sources routinely available to Mr. Worker now and in the future.

Item:	Yard work and home maintenance
Frequency:	Average 4 hours per month
Duration:	Current Age to Life Expectancy
Average Cost:	$40.00 per hour
Total Cost:	$53,568.00

The Vital Statistics Reports, Vol. 63, No. 7, November 6, 2014, were used to provide a life expectancy of an additional 27.9 years. Figures are noted in current dollars and are not reduced to present value. The total cost associated with the above services is $53,568.00.

In summary, the utilization of a functional capacities evaluation can be helpful when assessing an individual's ability to work, live independently, facilitate transportation and coordinate future care and services. Working in collaboration with the professional who performs a functional capacity evaluation to explore an individual's needs falls within the appropriate medical foundation of life care plan and vocational assessment.

References

American Time Use Survey User's Guide: Understanding ATUS 2003 to 2014, June 2015, Available at http://www.bls.gov/tus/atususersguide.pdf

Becker, T., Ogle, W., Chadbourne, J., & Andrews, K., (2015). Prevalence of own design functional capacity evaluation regarding work physiology science. *The Rehabilitation Professional, 23*(4), 173–218.

Choppa, A., Johnson, C. B., Fountaine, J., Shafer, K., Jayne, K., Grimes, J. W., & Field, T. F. (2004). The efficacy of professional clinical judgment: Developing expert testimony in cases involving vocational rehabilitation and care planning issues. *Journal of Life Care Planning, 3*(3), 131–150.

Choppa, A., & Johnson, C. (2008). Response to estimating earning capacity: Venues, factors, and methods. *Estimating Earning Capacity Journal: A Journal of Debate and Discussion, 1*(1), 5–40.

Field, T., Choppa, A., & Weed, R. (2009). Clinical judgment: A working definition for the rehabilitation professional. *The Rehabilitation Professional, 17*(4), 185–193.

Field, T., Johnson, C., Schmidt, R., & Van de Bittner, E. (2006). *Methods and protocols: Meeting the criteria of general acceptance and peer review under Daubert and Kumho.* Athens, GA: Elliott & Fitzpatrick.

Hersch, J., & Stratton, L. S. (2000). Housework and wages. *Journal of Human Resources.* Available at http://ssrn.com/abstract=248133 or http://dx.doi.org/10.2139/ssrn.248133

Kruger, K., & Ward, J. (2014). Expectancy Data: The dollar value of a day: 2013 dollar valuation. Shawnee Mission, KS.