ABSTRACT

The mission of the ACLS and LACLS Committee includes developing resources for practitioners and caregivers who use the Cognitive Disabilities Model (CDM) and related assessments to provide optimal care for persons with cognitive disabilities. In August, 2011, the Committee agreed to collaborate with Gloria Massey Chinea, administrator at Alma Joy Villa (AJV) Residential Care Facility for the Elderly in Oxnard, California, and the residents in the facility and their families in a demonstration project documenting the provision of a functional activity assessment and intervention program guided by the CDM. This collaboration included education of facility staff, residents, and their families in two training sessions. The first training session provided an overview of the CDM including how the Allen cognitive scale informs understanding of functional cognitive abilities of people and helps identify activities that fit these abilities. A comprehensive functional evaluation of each resident was completed utilizing interview, consultation with family and staff, LACLS-5, ADM-2 assessments and skilled observation. Individualized activity care plans were developed for each resident. The second training session interpreted the results of the assessment findings and described interventions guided by CDM principles to support abilities in ACL 3 and 4. Presenters modeled strategies for staff and family in a greeting card activity session with residents. Protocols and materials for several adapted craft and social activities designed around the particular interests of residents were developed and provided for future use. Training sessions and assessment administrations were videotaped and permission secured for future use in the development of resources by the Committee. A final report was provided to the facility. Nine months after project completion, a follow up inquiry was conducted to determine project impact on AJV staff, residents, and their families including video interviews. Material gained from the project resulted in various presentations, workshops and resources supporting the ACLS and LACLS Committee’s mission.

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Function is what people do.

Our ability to learn to function is built into our brain and occurs automatically from the time we are born.

No one had to tell us to stand up, or walk, or start to babble. We initiated these things on our own, and other people kept us safe when we tried to stand up and walk, and gave us smiles and hugs when we babbled, so that we continued to develop these skills.

While each of us is a unique person from the start, the way in which our brains are designed with various cognitive abilities that allow us to process information and function is very similar person to person.
Unfortunately, some diseases or disorders of the brain cause us to lose some of our cognitive abilities. The loss may be temporary, ongoing, or progressive.

These cognitive disabilities often affect our ability to perform the activities we need and want to do, so that we experience frustration or even failure. These difficulties may be observed by others as we no longer are able to perform activities in our customary way.

This slide lists some conditions that might cause a cognitive disability.
The Cognitive Disabilities Model was developed by Claudia Allen, an occupational therapist, and her colleagues in the late 1960’s, to help persons who were hospitalized due to a mental disorder.

Allen observed that these persons often were unfairly blamed when they did not perform their everyday activities in customary ways as being unmotivated, careless, or manipulative. She believed that they were doing the best they could, but that they were unable to do these activities in the customary way because of limitations in their ability to process information.

Over time, Allen and others identified a hierarchy of predictable patterns of performance that appeared to reflect the varying degrees of loss of cognitive capacities that then negatively impacted people’s ability to function.

This hierarchy of performance patterns became known as the Allen Cognitive Scale. Over time, several standardized assessments based on the Allen scale were developed by Allen and others to assist practitioners who worked with people with cognitive disabilities.

Today the Allen scale and assessments are widely used by occupational therapists to measure both functional cognitive abilities of people and the cognitive complexity of the activities that they may do.
People will experience their **Best Ability to Function** when three conditions are met:

The person *Can* do the activity, that is, they possess the *capacity*, physical and cognitive, to perform the activity.

The person *Will* do the activity, that is, they *choose* to do the activity because they value it.

The person *May* do the activity, that is, the environment *supports* performance and does not hinder it.

The evidence that a person is experiencing their Best Ability to Function is when their performance in a valued activity is **safe, successful, and satisfying.**
The brain’s job is very complex. It automatically monitors and maintains vital body functions, such as blood pressure, temperature, heart rate, and digestion, while also being more or less available and under our conscious control to do activities we choose to do.

In the cognitive disabilities model, the term functional cognition is used to refer to the brain’s information processing capacity as it is applied to doing activities.

This capacity includes many processes that work together in concert, including perception, attention, memory, intention, and performance skills, that is, those skills we have learned over our lifetime.

All parts of the brain work together in an integrated or global fashion all the time. The Allen Cognitive Scale of Levels and Modes describes the relative complexity of the global information processing capacity that is available for use at a particular moment in time.

Because it is global and integrated, functional cognition is not the same thing as intelligence, or IQ, which is an educational construct. Domain-specific deficits such as a short term memory problem or a perception disturbance such as color blindness, are considered to be additional impairments.
Memory and learning is fundamental to information processing. The complex process of attending to, storing, and retrieving information happens automatically and continuously in our brains. Various types of memory have been identified by neuroscientists based on how each type supports function. Four types of memory that directly influence activity performance are shown on this slide.

Working memory is the term for the mental processes needed to participate in an activity that requires continuous evaluation and adjustment to changing conditions, such as fishing. Working memory allows us to learn new things and solve new problems. It is often adversely impacted by conditions such as dementia.

Procedural memory is used during performance of highly practiced activities such as dressing or shaving that are part of our daily routine. This type of memory is relatively durable and may be preserved when working memory is impaired. When people lose the ability to learn new things, they may still be able to perform familiar and routine activities like shaving. Procedural memories may include complex and skilled activities such as playing the piano or executing a golf swing.

Declarative memory is used when we recall facts, names, and dates; for example, while using procedural memory to shave, this man may remember that his dad taught him how to shave. Declarative memory may allow a person to talk about doing an activity that they no longer have sufficient working memory to do. This may lead others to think they are more capable than they are.

Immediate memory is measured in seconds. It allows us to remain aware of and oriented to whatever we are doing as we do it, and is in use all the time. When immediate memory fails, a person typically will require continuous assistance to perform activities.
The Allen cognitive scale describes the quality and complexity of available functional cognitive abilities a person has at a given point in time.

The scale consists of 6 cognitive levels. Cognitive level 1 represents the fewest and simplest available functional cognitive abilities and more complex abilities are added with each succeeding level up the scale.

The title of each cognitive level describes the prominent voluntary motor actions observed throughout that level.

The Allen cognitive scale is a cumulative scale. Level 6 includes all functional cognitive abilities described in level 1 through level 6, hypothetically those of a typical adult brain. In this respect, the Allen scale is similar to developmental scales that describe the sequence in which people generally acquire cognitive and physical abilities in typical growth and development.

When functional cognitive abilities are lost due to progressive brain conditions such as Alzheimer’s disease, it has been observed that they are typically lost in the order described by the Allen scale, that is, level 6 abilities first, then level 5, then 4, and so on.

Sometimes people experience a temporary loss of functional cognitive abilities and when the condition that produced the loss is resolved, these abilities return. In these cases, functional cognitive abilities often are observed to return in the sequence described by the hierarchy of levels.
Over time, the Allen cognitive scale was expanded to more accurately describe 26 observable patterns or *modes of performance*.

The expanded Allen cognitive scale divides each level into 5 *modes of performance*, which are indicated by an even numbered decimal after the level for cognitive levels 1 through 5.

Each mode title describes an important adaptive behavior that characterizes the mode, for instance, “Sitting” without assistance is possible at mode 2.0.

For this presentation we will look more closely at the 6 cognitive levels only. References that fully describe the modes of performance are provided at the end of this presentation.
We will now briefly review the 6 cognitive levels in the Allen scale starting with the most complex abilities represented by Level 6, Planned Actions.

Cognitive level 6 is hypothesized to describe a typical adult brain with no impairment in functional cognition.

This slide depicts an activity that uses functional cognitive abilities associated with cognitive level 6: a 3-day motorcycle race through the desert. This is a potentially dangerous activity that requires planning to optimize the chances that the rider will not be hurt.

This man is getting ready by thinking of all the precautions he needs to take to safely survive harsh conditions: he is bringing adequate water, first aid supplies, extra gasoline for his bike, a helmet, and arranging for a rescue vehicle. He needs to access and read the trail map, interpret his GPS position, and train beforehand so that he possesses the stamina needed to endure three days riding on desert backroads in hot conditions.
Typically, adults have the capacity to use the functional cognitive abilities described by cognitive level 6 when required to learn new activities. This includes interpreting symbolic information (such as maps, written materials, and other conceptual data) to plan a new course of action that will achieve their identified purpose while avoiding unwanted complications, hazards, or failure. They are able to imagine several possible plans and compare them to establish the best course of action to take. There is no limit to their attention span or the amount of information that they may consider over time.

Using this level of complex information processing is fatiguing and our ability to sustain use of cognitive level 6 functional cognitive abilities may be temporarily negatively impacted by a number of factors including fatigue, illness, low blood sugar, or exposure to a toxic substance. When these complications occur, people do not think optimally and may begin to use abilities described in cognitive level 5 or lower levels. Treating the cause of such complications, that is, resting, taking a nap, eating, or reducing the toxic exposure, these losses may be restored.

People with cognitive level 6 cognitive abilities are observed to learn new activities by themselves and may not require supervision to ensure their safety.
When functioning within cognitive level 5, persons learn new activities through direct experience and experimentation, also known as exploratory actions. This is considered a mild functional cognitive disability. In addition to remembering the methods they discover through their trial and error process, they may also learn new activities by imitating serial instructions demonstrated by others.

This young man demonstrates exploratory learning as he carves a pumpkin for the first time: he experiments with holding and stabilizing the pumpkin as he varies the force and angle at which he carves the pumpkin with the tools. He coordinates use of both hands while using fine motor movements to improve the details of his work, pays attention to the results, and repeats the strategies that work.

When functioning within cognitive level 5, he may not use written instructions, diagrams or other symbolic information to plan a pattern before he begins, or imagine how to avoid potential problems, such as covering the surrounding area to expedite cleanup. These behaviors require use of abilities associated with cognitive level 6. This behavior may make him appear to be hasty or impulsive, and he may therefore be at greater risk to make errors that cannot be fixed. Persons who function within level 5 may not recognize that they need assistance or ask for advice until they experience a negative outcome.

People functioning within cognitive level 5 benefit from stand-by assistance to identify hazards and ensure their safety in new or potentially hazardous activities.
People functioning within cognitive level 4 demonstrate *goal directed actions* as they initiate and complete routine activities such as dressing, shaving, brushing their teeth, and other well learned activities such as making a sandwich or riding the bus to a familiar location.

In familiar environments, when all the usual supplies and tools are available, people functioning within level 4 typically are able to complete their routines without much supervision. However, if an unusual problem occurs, for instance, if this man runs out of shaving cream, or his razor has been placed in a new location out of sight by the housekeeper, he may be unable to solve the problem to complete the task. When faced with new or unexpected problems, persons functioning within cognitive level 4 may immediately ask for assistance from others, but if this is unavailable, they are likely to abandon the activity. People who function at this level typically prefer familiar activities and may choose to avoid novel tasks.

People functioning within cognitive level 4 also demonstrate diminishment of their fine motor abilities, so this man may be at greater than usual risk for cutting himself. A careful observer may also note that he neglects to shave the parts of his face that he cannot see in the mirror, such as under his chin, unless reminded. Similarly he may neglect other relevant information in his immediate work environment that is not visible or tangible. In addition, he appears unable to sustain attention for periods longer than an hour without fatigue, and he demonstrates a slower than usual work pace.

Though they may recognize problems, the cause of these performance problems is not clear to them. People functioning within cognitive level 4 experience their Best Ability to Function in familiar environments set up by others to ensure success and safety, and where others plan new activities, solve new problems, and supervise or eliminate the need to do potentially hazardous activities.
People functioning within cognitive level 3 engage in familiar *manual actions* with objects that are interesting to them. This man enjoys moving the knobs back and forth along the tracks of the game board, but he is longer able to initiate a sequence of familiar actions to complete a short term goal such as dressing himself.

Manual actions that capture people’s interest at this level of function may be idiosyncratic or dependent on the objects within their reach. They may enjoy doing these actions for periods of up to a half hour. People functioning at this level stop doing actions when they lose interest, use up the objects, or the objects are removed.

People functioning within cognitive level 3 typically are disoriented to the time and date, and may not be able to deduce from their surroundings that they are in a hospital or care facility.

Caregivers can elicit participation in daily routines such as dressing and bathing by setting up needed objects in view and within reach and prompting the person to begin or the sequence of actions of donning their garments or bathing a part of their body.

Because they have no awareness of their cognitive disability, people functioning within cognitive level 3 may resist offered assistance. They experience their Best Ability to Function in secure and predictable environments with assistance from caregivers who set up and prompt familiar actions with safe objects to complete daily self-care and other manual actions of interest.
People functioning within cognitive level 2 appear to be aware of and interested in initiating and controlling postural actions in space. If they have the physical abilities to do so, they are able to alter their position by spontaneously sitting, standing, lying down, and walking. They may follow commands to move their body to assist with familiar activities such as toileting, bathing, or to do simple exercises.

This woman is pacing the hallways of her residence without an apparent destination in mind. She is at greater than usual risk of falling because she appears to pay attention only to large objects such as doors, walls, and furniture that are directly in front of her at eye level.

Her attention span is very short, about a minute or two, but she may be directed by others to sit, stand, walk to the toilet or dining area with short commands and physical guidance. Her verbal abilities are usually limited to one word or very short sentences, and she may sing familiar songs.

To prevent wandering and getting lost, she requires a secure environment where she is able to use her abilities to ambulate safely on flat surfaces, and where assistance is provided to complete daily self-care routines to ensure her health and safety.
People who function within cognitive level 1 are no longer able to sit or stand and are therefore in bed. They react with automatic actions to internal sensations such as hunger, pain, and discomfort by moving their body or changing their facial expression. Strong sensory cues from their environment, such as music, the smell of food, and the movement of the mobile suspended directly above this man’s bed will provoke responses such as turning their head, swallowing, and visually tracking moving objects.

This man’s level of arousal may be altered by introducing various strong stimuli. Playing music, placing photos of loved ones or moving objects to look at within view, and massaging body parts with oil are examples of sensory stimulation that may produce positive responses such as smiling and relaxation.

This man’s ability to communicate is limited to his facial expressions and non-verbal sounds, but these may be interpreted as positive or negative by observant caregivers.

This functional level may be observed in persons with advanced progressive dementias, severe head trauma or stroke, or for short periods in catatonic states. Total care is required 24 hours a day to ensure adequate nutrition and hydration, and to avoid unwanted complications such as pressure sores and falling out of bed.
We have just reviewed the Allen cognitive scale as it describes the available functional cognitive abilities of people. The Allen scale is also used to identify the *cognitive complexity of information* that may be processed successfully at each cognitive level. The simplest information is described by the modes in cognitive level 1 and the most complex information is processed at cognitive level 6.

Using the Allen cognitive scale to measure both functional cognitive abilities of people and the cognitive complexity of information they process is analogous to a child who demonstrates reading abilities that are typical for children in the first grade at school. This child is demonstrating *first grade reading abilities*.

The book he reads which consists of a few sentences per page with a large picture depicting a simple story line, is found in the *first grade reader* section of the school library. In this example, both the abilities of the child and the complexity of the book are described by the same scale: *first grade level*. The key to the child’s successful performance is that the complexity of the information within the activity, known as the *cognitive activity demands*, matches his available reading abilities.

The Allen scale is used by practitioners to identify the cognitive complexity of the activities that a person needs or wants to do, to determine if a person with known cognitive abilities will likely be able to do the activity successfully. When activity complexity does not match a person’s available abilities, the practitioner may adapt the activity, teach a required skill, or recommend a different activity that is a better FIT with the person’s available functional cognitive abilities.
The 6 cognitive levels provide general performance expectations for people with cognitive disabilities, which may then be used by caregivers to anticipate needed assistance to maintain safety, such as who will need to be prompted to locate and use the railing when descending stairs, or who will need to be prompted to use the grab bar during toileting activities.

Some general expectations for realistic activities when people are functioning within cognitive levels 1 through 3 are described in this slide.
People functioning within cognitive level 4 have the ability to initiate familiar activities but require assistance with set up in lower modes; they typically follow their routine in higher modes in familiar environments. Assistance to solve new problems, plan non-routine activities, such as making medical appointments, renewing prescriptions, and planning a budget, makes living with others who are willing to assist preferred for their health and safety.

People functioning within cognitive level 5 are often able to live independently and work in jobs with predictable procedures. In higher modes within level 5 people begin to understand the need to observe valued precautions such as driving defensively. They may also be able to consider and prioritize the needs of others over their own needs, in order to be effective caregivers of others.

Because people functioning in cognitive level 6 are able to imagine and compare outcomes of possible courses of action, they may be able to plan new activities without assistance. They are typically able to understand the need to observe precautions in inherently hazardous jobs to avoid undesirable outcomes.
To identify how cognitively complex an activity is, practitioners analyze the component parts of the activity.

This analysis might include: What motor actions are required in the activity? Are the actions repeated, variable? What objects are required, how many? What are the results? Are these results visible, immediate, tangible, or intangible? What problems might occur? Are they correctable? Is there a sample to copy? How are instructions given? What are the activity’s requirements for duration, pacing, timing? What is the activity context? How does the context influence the activity? And so forth.

The two activities pictured here, preparing a fruit tart in a kitchen and fishing in a lake, at first may appear to be dissimilar, but in fact share a similar level of cognitive complexity when analyzed using the Allen scale. Both activities contain serial stepped procedures that require fine motor manipulation of small objects, continuous adjustments with specialized tools, and consideration of intangible variables including heat, weather, and the passage of time. Both activities may require several hours to complete. These attributes of information are theoretically processed successfully at modes 5.2 and higher on the Allen scale, and are understood to have a cognitive complexity of 5.2.

Establishing equivalent cognitive complexity between tasks through analysis allows practitioners to predict a person’s probable performance in an activity that may not be directly observed to judge whether desired activities are realistic, that is, apt to be completed successfully. For instance, it is reasonable to predict that a person with functional cognitive abilities of 4.4 would encounter difficulties in performing both of these activities. That same person would likely be able to learn to play dominoes or make a sandwich with a demonstration, both activities with the cognitive complexity of 4.4 on the Allen scale.
When cognitive activity demands do not FIT a person’s available functional cognitive abilities (Can Do), and their preferences (Will Do), or are not supported by their context (May Do) there is a MISFIT. The consequences of a misfit are always negative; this slide illustrates two types of misfit.

If cognitive activity demands are too simple and do not require a person to fully use available functional cognitive abilities, the person may experience a diminished sense of autonomy, self respect, or perhaps the loss of their abilities through disuse over time. The photo on the left depicts what this might look like in a facility where the elderly residents are not allowed to participate in meaningful activities that use their abilities. Paradoxically, this problem may be created by a context that over helps their clients.

Conversely, when cognitive activity demands are too complex and exceed a person’s Can Do abilities, the person is at greater than usual risk to make errors with serious consequences. The photo on the right illustrates what might happen if a person who is functioning within level 3 were expected to be able to shower safely on his own. This person would be unaware of the danger in grabbing the shower curtain rod to stabilize himself an might fall. When faced with activity demands that are too complex, people many react negatively with a flight or fight response.

When cognitive activity demands fit abilities, people have the opportunity to experience their Best Ability to Function, which is safe, successful, and satisfying.
The ACLS-5 is one of several assessments developed within the cognitive disability model to measure functional cognitive abilities.

This short screening assessment provides opportunities to learn and solve problems in three increasingly complex stitching tasks on a punched leather or cardboard form.

The ACLS-5 is a standardized assessment that utilizes a dynamic administration process and is not timed. It provides an initial estimate of available functional cognitive abilities, which is then verified with further assessments.

There is a considerable body of evidence supporting use of this screening assessment, most with previous versions of the assessment.

(Note: See www.allencognitive.org for list of supporting evidence.)
The three stitching tasks in the ACLS-5 introduce cognitive activity demands associated with cognitive levels 3, 4, and 5 on the Allen scale. Therefore, this assessment measures functional cognitive abilities within these three cognitive levels.

The ACLS-5 does not assess functional cognitive abilities associated with cognitive levels 1, 2, and 6.

The score is an estimate of a person’s currently available functional cognitive abilities. The estimate is used by practitioners to guide selection of further assessments to confirm the findings.
Allen Diagnostic Module assessments (ADMs) are standardized, craft based activities that provide opportunities for a person to learn and solve new problems while making a useful object such as a box, key chain, notebook, drinking mug, bookmark, visor, or greeting card.

ADMs were developed by occupational therapists to verify ACLS-5 scores and were extensively pilot tested on adults in mental health settings.

Administrators encourage the person being assessed to select an activity that interests them to elicit their best effort. Demonstrations or written instructions introduce both familiar and novel procedures with contain predictable problems whose solutions require processing information of identified cognitive complexity on the Allen scale. The scores generated by these assessments are theoretically linked (criterion referenced) to the Allen scale.
The ADM Placemat seen here is representative of ADM assessments that have activity demands within cognitive levels/modes 3.0 to 4.6.

This slide shows the standard set up for the Placemat for an individual assessment, which includes a completed sample within reach to copy, a canvas mat, a bin with felt shapes, and a bottle of white glue within 24” of the person.

The actions required to do this activity include repeated grasping, pulling, squeezing, and placing objects. The actions are demonstrated to the person by the administrator. The visual cues available to guide the person’s actions are ¼ inch or larger, except for the canvas threads.

The two steps of the activity include pulling out threads around perimeter of the canvas mat to make a ½ inch wide fringe, and gluing felt shapes onto the mat to match the completed sample design. This activity is usually finished within 15 to 30 minutes.
The ADM Key Fob is representative of ADMs with activity demands within cognitive levels/modes 4.0 to 5.2. This activity is more cognitively complex than the Placemat.

The supplies include a completed sample, leather rounder, metal key ring, leather lace, and plastic beads of 6 different colors, separated by color in a bin.

There are 4 steps in this activity, and the first step, attaching the key ring to the rounder with the cord is not demonstrated to the person. Instead, the person is requested to solve this problem by referring to the completed sample, which requires exploratory learning. The activity is typically completed within 30 to 45 minutes.

Research by Sarah Austin, PhD, OTR/L (2009) supports the internal validity of the hierarchy of rating criteria for both the ADM Placemat and the Key Fob assessments for scores within 3.0 and 4.8.
ACLS-5 and ADM-2 scores must be interpreted by practitioners by considering many other factors that may have influenced the person’s performance.

Such factors include familiarity with steps or procedures which may have improved performance. Complications such as fatigue, pain, medication side effects, sedation or cognitive clouding may negatively impact performance. Motivation and emotional upset may also influence performance: if a person does not want to do the assessment they may not give it their best effort.

Validated scores may be used to monitor changing functional abilities in conditions for which decline is expected, such as dementia, or for which improvement is anticipated, such as in recovering from a head injury or depressive episode.

A pattern of similar scores in several assessments may indicate that abilities are stable. This may help in identifying realistic intervention goals and expectations.
Understanding a person’s abilities makes it possible to identify activities that fit their abilities and to identify when adaptations and assistance are needed to correct a Misfit. Educating caregivers in when, how to provide appropriate assistance allows persons with cognitive disabilities to use their available abilities and to participate safely in the activities they value. Some examples of targeted assistance include:

Eating: opening packages, cutting up food, monitoring compliance with special diets, providing choices, and monitoring intake
Grooming: setting up supplies, adapting methods, checking results
Dressing: selecting garments, setting out garments in donning sequence, storing clothing or laundry bins in visible locations
Bathing: setting out supplies, prompting sequence of steps, providing shower seats to minimize fall risk, prompting use of grab bars.
Orientation: posting calendars, providing watches, reminding people of the date and time
Leisure interests: simplifying and adapting processes and teaching methods, substituting activities that fit available abilities
Social interactions: pre-setting phone numbers, scheduling social calendar, initiating interactions, speaking more slowly, standing in front or eye level, selecting content of interactions
Summary

- Cognitive Disabilities Model goal: optimize use of available abilities for persons with cognitive disabilities

- The Allen scale is used to create a Fit between a person’s functional cognitive abilities and the cognitive activity demands of valued activities to create opportunities for persons to experience their Best Ability to Function

- Outcome: safe, successful, satisfying participation in valued activities in supportive environments
References have been updated to include recent publications.

For extended bibliography and additional resources related to the cognitive disabilities model, visit [www.allencognitive.org](http://www.allencognitive.org).
Activities that Support Best Ability to Function

In-service presented to caregivers, family, and residents
Alma Joy Villa Residential Care Facility for the Elderly
Demonstration Project
Oxnard, California - December 4, 2011

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Training Session 2: Activities that Support Best Ability to Function
This demonstration project grew out of the mission statement of the ACLS & LACLS Committee, a not for profit organization founded by occupational therapists to support compassionate care by the community of international healthcare professionals who serve clients, their families and caregivers within the cognitive disabilities model.

The activity recommendations you will hear today are the result of understanding the abilities of the residents here at Alma Joy Villa within the cognitive disabilities model.
To quickly review this unique approach, we want to remember that function is anything that people do, and that all of our abilities to function reside in our brain.

While each individual is unique, the way in which our brains work is very similar person to person.
As we age, we may acquire brain conditions that restrict our ability to function. Some of those conditions are listed here.

When this happens, it is highly likely that there will be some loss of our functional cognitive abilities.

These losses, which we term “cognitive disabilities” are observable and experienced when people perform activities.
Claudia Allen is the occupational therapist who worked with many other practitioners to develop the Cognitive Disabilities Model to help persons with cognitive losses use their remaining abilities.

The Allen scale she helped develop is used to measure available functional cognitive abilities of people and at the same time measures the cognitive complexity of the activities that they need or want to do.
The goal of the cognitive disabilities model is to promote the **Best Ability to Function** for people who have cognitive disabilities. This occurs when:

The person **Can** do the activity, that is, they possess the capacity, physical and cognitive, to perform the activity.

The person **Will** do the activity, that is, they choose to do the activity because they value it.

The person **May** do the activity, that is, the environment supports performance, it is feasible and safe.
The power of purposeful activity is that it maintains our abilities, both cognitive and physical.

Purposeful activity reminds and orients us to who we are.

Lastly, purposeful activity helps us feel connected to our families, friends, and larger community.
There are many types of purposeful activities. The three types of activities listed here are particularly useful as they target different abilities and have many benefits.

*Manual activities* engage multiple sensory systems, including visual, tactile, and auditory systems, as well as use previously acquired manual skills. Manual activities often provide a sense of immediate satisfaction because of the tangible outcomes they produce.

*Social activities* allow us to use our verbal abilities to communicate through talking and listening activities and this fosters and maintains our social connections and our sense of personal identity.

Because dementia and similar conditions are often associated with limitations in memory, *orientation activities* in which the content of the activity reinforces one’s sense of place, time, and personal history, reinforce awareness and foster a sense of security.
The manual activity of making a birthday card, for instance, can maintain a person’s cognitive and physical abilities as they set a short term goal, match features of objects to a sample, use familiar tools such as scissors, a pen or glue stick, and use their communication skills to write down a written message on the card.

At the same time, the person making the card is reminded that she is a mother who has a child with a birthday, that she is a person who loves that child, who has writing skills, and who remembers making birthday cakes in the past for her children.

This activity also connects her to her family through a conscious, familiar, socially appropriate act, which invites a response.
When we looked at the data generated from administering various Allen assessments to the residents here, we found that folks seemed to be functioning in the middle of the Allen Scale, that is, within cognitive levels 3 and 4.
To review about what this means: Allen cognitive level 4 is considered a moderate functional cognitive impairment.

When a person functions within cognitive level 4, they are goal directed and enjoy completing what is familiar and routine, such as doing their immediate self-care, and familiar tasks that they have always enjoyed, whether it is working cross word puzzles, knitting, or watching a particular television program. They understand what they can see and touch.

They pay attention best for shorter periods, up to an hour, and work more slowly than they used to.
In Allen cognitive level 3, the cognitive losses now constitute a severe impairment.

People seem not to form a goal or intention to begin or complete a task like they used to, but they enjoy doing manual actions with objects, like winding yarn into a ball, folding napkins, or taking peas out of the pod. They are usually able to do this for periods of up to a half hour.

People who function within level 3 need assistance from others to begin and to complete familiar activities such as dressing, by getting out the clothes and putting them in a line on the bed, and perhaps prompting them to continue to dress.

People may experience a temporary decline in available abilities from level 4 to level 3 if they get sick, are fatigued, or are in pain.
In addition to the functional cognitive impairments described by the cognitive levels, as people age they may experience additional difficulties, such as difficulty recalling names, or events, becoming more easily fatigued than in the past, or not being able to see or hear as well as they used to.

Often they are less able to move around easily because of arthritis, pain, or balance problems.
When a pattern of performance in activities that is described by Allen cognitive level 3 or 4 is observed in a person, caregivers and family members can expect to need to assist them in several ways.

Caregivers may need to initiate activities or simplify activities by adapting or doing a step or part of the activity for the person.

Caregivers may need to set out supplies for the person, demonstrate new actions, and prompt or cue the person what to do. Caregivers may need to be available to solve problems that may arise that are new, and to anticipate problems that might occur and take steps to avoid them.
While people are unique individuals, we can make some general observations about the kind of assistance that will typically be required for persons functioning within cognitive levels 3 and 4 during activities.

For persons functioning within level 4, caregivers will support performance best by selecting activities that fit available abilities at level 4. These include: (read slide)

Example of a short sequence of steps: selecting a paper square, applying glue, and placing it to match a sample.

Examples of familiar actions: folding towels, picking up and placing eating utensils to set the table, brushing and arranging one’s hair in a familiar style.
More assistance is required to complete activities when people function within cognitive level 3.

Activities that consist of repeating a familiar action or a short 2-action sequence (i.e. pick up and place object) with familiar objects are most successful. Caregivers need to set up the materials in view and demonstrate the required actions. If the actions are interesting, people functioning within level 3 typically enjoy doing them for periods of up to 30 minutes or until they lose interest or get tired.

Examples of familiar actions that are repeated include: stringing beads, rolling yarn, pushing down on a cookie cutter, sweeping floor with a broom, brushing one’s own hair, shelling peas, placing stickers on a card, and coloring with a marker within the lines.
We have identified several activities that are manual crafts, and suggestions for social activities that we would like to share with you for future use here at Alma Joy Villa.

All of the activities have multiple benefits and have been designed to be successful for people functioning within levels 3 and 4 with some assistance.

A protocol including the supplies, preparation, set up, instructions and assistance for each activity will be provided in a notebook.

When we are done with this presentation, we will demonstrate how to set up and provide assistance while we make the greeting card that is pictured in this slide.

(Quilt Block Greeting Card activity was demonstrated with residents for staff and family members.)
The following activities have been developed for your use during the upcoming holiday season. These activities reflect the expressed interests of the residents and have been designed with one exception (Magazine tree ornament) to be successful at cognitive levels 3 and 4.

A full description of this activity including how to provide assistance for success at cognitive levels 3 and 4 is provided in a separate document.
Gift bags to share cookies (ACLs 3 and 4)

Benefits: orient to season, social connections

➢ Preparation:
  - Cut paper squares, make sample
  - Set up supplies within reach

➢ Provide assistance:
  - ACL 4: Demonstrate sequence of steps on another bag. Encourage to copy sample, assist with problems. Instruct person to place x cookies in bag.
  - ACL 3: Demonstrate one action at a time. Cue to begin or continue actions. Accept results. Draw visible line on inside of bag. Instruct person to fill the bag with cookies up to the visible line.

A full description of this activity including how to provide assistance for success at cognitive levels 3 and 4 is provided in a separate document.
Magazine tree ornament (ACL 4)

Seasonal gift or decoration
Benefits: orient to season

- **Preparation:**
  - Secure magazines with photos, bead garland & ball or other topper
  - Make sample; set up supplies within reach

- **Provide assistance:**
  - ACL 4: Demonstrate folding sequence
  - Repeat instruction and assist as needed
  - Demonstrate taping covers together to create tree
  - Demonstrate positioning garland and topper

A full description of this activity including how to provide assistance for success at cognitive level 4 is provided in a separate document.
Making rolled cookies (ACLs 3 and 4)

Seasonal desserts or gifts
Benefits: orient to season, personal history
   Connects to others (socials, gifts)
➢ **Preparation:** Make dough & chill or use
   prepared dough. Assemble tools.
   Pre-heat oven. Set up work space.
➢ **Provide assistance:**
   ACL 4: Demonstrate series of steps.
   Provide choice of cutters/decorations
   ACL 3: Cue to place, press down on
   cookie cutter, place decorations on top,
   place finished cookies in gift bag

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A full description of this activity including how to provide assistance for success at
cognitive levels 3 and 4 is provided in a separate document.
The unique interests of each resident provides the starting place to plan a social event. Classic film shorts or TV episodes for periods of up to 30 minutes to an hour are preferred for a cinematic event. Photos of resident’s previous travels or magazine photos of food may trigger memories to name and talk about previous experiences and preferences. Music may be appreciated passively through listening or more actively through singing or playing instruments, and talking about previous experiences. Familiar games or new games that use matching cues engage abilities in Level 4. Persons functioning within cognitive level 3 may enjoy matching color and number or stacking cards or dominoes.
This Reference list has been updated to include current publications.
Extended bibliography and additional resources related to the cognitive disabilities model may be found at www.allencognitive.org
Allen Cognitive Group/
ACLS and LACLS Committee

A not for profit organization promoting the Cognitive Disabilities Model, related assessments and products

For resources, free downloads, educational videos, visit www.allencognitive.org
Activity Protocols
Adapted craft, baking, and social activities
for persons functioning within ACL 3 and 4
Card and Photo Display Hanger
Developed for use with persons functioning within ACL 3 and 4
Catherine A. Earhart, BA, OT Cert., OTR/L

Supplies
- Greeting cards and family photos on cardstock weight paper
- Cord or thick yarn
- Ribbon - 3/8 inch wide
- Tools - scissors, hole punch, masking or scotch tape

Preparation of materials prior to activity (to make one hanger)

1. Punch 2 holes about 3” apart near top edge of each card or photo.
2. Cut one 48” length of cord or yarn.
3. Wrap tape around ends of cord or yarn to make a tip to push through holes.
4. Cut 6” lengths of ribbon.
5. Make a sample by weaving the cord tip through the holes of each card/photo, spacing them evenly on the cord, and tying a ribbon between each card. The sample may include up to 10 cards/photos depending on size of display area.

Instructions

1. Set up prepared cards, cord, and ribbon needed to make one display in front of the person within reach.
2. Introduce the activity by showing the completed sample and explaining: “We are making a hanger to display your favorite photos and cards. You can hang it up when you are done.”
3. Demonstrate putting one card on the person’s cord while saying: “Watch while I show you how to put the cards on the cord. Push the tip of the cord through the first hole in the card from back to front and pull it through. Next, push the tip of the cord through the second hole from front to back and pull it through. Push the card along the cord. Do this for each card.”
4. When person attaches all cards or photos, demonstrate how to space the cards on the cord if the person does not do this step spontaneously. Demonstrate how to tie a ribbon onto the cord between each card or photo using an overhand knot if the person does not do this step spontaneously.
5. Hang completed display at eye level on a wall, fireplace, or other surface with tape or pin.
**Assistance**

**ACL 3:** Demonstrate actions one at a time and check results. Remind person to pick up objects and to resume actions as necessary. Remind person what the object is for at the end of the activity. Hang display for the person.

**ACL 4:** Demonstrate short action sequences with simple explanations. Provide choice of cards, photos, and ribbon if possible. Encourage person to compare their work to the sample to solve problems or demonstrate the solution to problems on request. Assist person with hanging their display.
Greeting Cards
Developed for use with persons functioning within ACL 3 and 4
Catherine A. Earhart, BA, OT Cert., OTR/L

Supplies

- Greeting cards 5” x 6 1/2”, white and colored with envelopes
- Decorative papers
- Stickers
- Scissors/paper cutter
- Glue stick
- Pen or pencil for writing a message

Preparation prior to activity

1. Using scissors or paper cutter, cut decorative paper into squares and rectangles smaller than 5” x 6 ½” for use as backgrounds

2. Using scissors, cut paper shapes or photos from magazines or used greeting cards into cut outs at least ¾” square in size to arrange on the background.

3. Make several samples that illustrate various arrangements of stickers and paper cut outs:
   - Persons functioning within ACL 3 are unlikely to attempt to copy a sample card but may position stickers or cut outs in rows or fill up the space on the card.
   - Persons functioning within ACL 4 may successfully copy a sample consisting of a background with arrangements of up to 5 stickers or cutouts.

4. Use a separate card to demonstrate applying glue to paper and placing paper cutouts and stickers on cards.

Instructions and assistance

ACL 3

*Position person* within reach of one greeting card, precut background papers, up to 5 stickers or precut figures, one glue stick, and a completed sample. Demonstrate and describe the following actions on a separate card:
1. **Attach the background paper:** Demonstrate actions on a separate card while saying: “Pick up the glue stick and put the glue around the edge on the back of the (background) paper. Put the paper on the card. Press it down. Now you do it.” Place glue stick in person’s hand or prompt to begin actions as necessary. Prompt to continue actions or point to papers or card as necessary.

2. **Attach cutouts or stickers:** Demonstrate actions on a separate card while saying: “Pick up a cutout/sticker. Put glue on the back/peel off the paper on the back of the sticker. Place it on the card.” Repeat demonstrations and instructions as needed. Assist with peeling paper from stickers. Prompt to continue actions or point to location on card.

3. **Write a message inside card (Caregiver):** “Would you like to send this card to someone? Do you want me to write a message to them in the card?” Write message for person. “Would you like to sign your name?” Place card in front of person and provide writing tool as needed.

**ACL 4**

*Position person within reach of supplies: provide choice of greeting cards, precut background papers, stickers or cutouts, one glue stick, and several completed samples. Demonstrate and describe the following short sequence of steps on a separate card:*

1. **Attach the background paper and stickers/images:** “Use the glue stick to put glue around the edge of a background paper, place the paper on the card, and press it down until it is firmly attached. Then pick out the stickers and cutouts and make a design like one of the samples. Or you may make your own design.” Repeat demonstration, assist with problem solving as needed.

2. **Write a message inside the card:** “Would you like to send this card to someone? Write your message inside the card and sign your name.” Provide writing implements and assist as necessary.
Magazine Tree Ornament
Developed for use with persons functioning within ACL 4
Catherine A. Earhart, BA, OT Cert., OTR/L

Supplies to make one ornament

- One magazine with color photos (ie Bon Appetit, Gourmet, Avon catalog)
- One round, glittered, Styrofoam ornament or other small topper ornament with 2” pipe cleaner or straightened paper clip attached
- Two 30” string of small beads or other decorative garland
- Scotch tape

Preparation prior to activity

- Make a sample tree from one magazine following the instructions below
- Position materials to make one ornament on flat working surface within reach
- Have an extra magazine for demonstrating the folding sequence

Instructions

1. Folding pages
   Demonstrate while describing the steps as follows:
   - “Starting with first page, pick up the upper right corner of the page and fold it over and down to meet the center spine of the magazine. Press down on the folded edge you just made.”
   - “Pick up the lower right corner of the page and fold it over and up to meet the edge of the folded page, creating a point on the right side of the page. Press down on the folded edge you just made.”
   - “Pick up the point and fold it over to meet the lower left center spine of the magazine. Press down on folded edge you just made.”
   - “Turn this completed page to the left and press it down.”
   - “Continue to fold all the pages like this, including the front and back covers.”
   - Repeat this demonstration and provide assistance as needed.

2. Taping covers together
   Describe or do this step for the person: “Pull the two covers together, with the edges matched. Put several pieces of tape over the folded edges to secure the covers in this position.”

3. Adding decorations
   Describe adding decorations and assist as needed.

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“Wrap the beaded garlands around tree. Push the paper clip/pipe cleaner with topper down into the center spine of the tree.”

**Folding sequence:**

**Step 1.** Fold top right corner to center spine, press folded edge

**Step 2.** Fold bottom right corner to edge of folded page to make point, press folded edge

**Step 3.** Fold point to center spine, press folded edge

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Making and Sharing Cookies in Decorated Gift Bags
Developed for use with persons functioning at ACL 3 and 4
Catherine A. Earhart, BA, OT Cert., OTR/L

Making cookies:  activity set up for ACL 3                Making cookies:  activity set up for ACL 4

Making rolled cookies

Supplies
• Prepared and chilled cookie dough (traditional sugar or shortbread recipe or prepared dough found in refrigeration section of grocery store)
• Flat, lightly floured work surface
• Rolling pin, spatula, knife, baking sheet, small bowl with flour
• Cookie cutters or small metal cans with lids and bottoms removed
• (Optional) Prepared frosting, food coloring, decorations such as: dried fruit, nuts, chocolate chips, candies, sugar sprinkles

Preparation of materials and work space prior to activity
1. Sprinkle flat work surface lightly with flour. Position several cookie cutters, a small bowl of flour, and spatula within reach of person(s). Roll out chilled dough ½ to 1/3 inch thick on work surface.

2. Ensure that person(s) have washed their hands before beginning activity. Position person(s) within reach of dough and tools set up to match ACL 3 or 4 depending on person.
   • ACL 3: provide one cookie cutter, one bowl of decorations within reach
   • ACL 4: provide choice of cookie cutters and decorations within reach

3. Preheat oven per recipe.

Instructions and assistance

ACL 3

1. Cutting cookies: Demonstrate while describing the following actions: “Dip this cookie cutter in the bowl of flour, then put it on the dough. Push down. Lift the cutter. Leave the cookie on the board. Now you try it.” Hand the cutter to the person. Repeat demonstration, prompt person to begin or continue
actions, point to location on dough, and stop dangerous actions as needed. (Optional: Demonstrate placing a nut, chocolate chip, or other candy on top of each unbaked cookie.)

2. **Placing cookies on baking sheet and baking cookies (caregiver):** Transfer cookies to prepared baking sheets and bake in oven as directed by recipe. Remove cookies from oven and let cool on baking sheet or rack.

3. **Placing decorations on frosted cookies (optional):** Caregiver applies frosting on cookies. Position person within reach of frosted cookies and bowl with decorations such as nuts, raisins, or chocolate chips. Demonstrate and describe picking up a decoration and placing it on top of a frosted cookie. Repeat demonstration, prompt person to begin or continue actions, stop dangerous actions as needed.

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**ACL 4**

1. **Cutting cookies:** Demonstrate while describing the steps as follows: “Choose a cookie cutter, and dip it into the bowl of flour. Place the cutter on the rolled dough, and push it down. Lift the cutter slowly, so the cookie stays in place. Repeat this until all the dough is cut.” Repeat demonstration and instructions as needed.

2. **Placing cookies on baking sheet.** Position cookie sheet within reach. Demonstrate while describing the steps as follows: “Push the spatula under the cookie and lift it up. Place the cookie on the baking sheet.” Repeat the demonstration of steps, adding: “Space the cookies about 2 inches apart like this.” Repeat demonstrations and instructions as needed. (Optional: Demonstrate placing a nut, chocolate chip, or other candy on top of each unbaked cookie.)

3. **Baking cookies (caregiver):** Place cookie sheets in preheated oven, and bake as directed by recipe. Remove cookies from oven and let cool on baking sheet or rack before decorating.

4. **Decorating cookies (optional):** Position cooled cookies, prepared frosting, knife, and choice of several decorations within reach of person(s). Demonstrate while describing the steps of spreading prepared frosting using a knife or spatula on top of a cookie and placing decorations on top. Repeat demonstrations and instructions as needed.

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**Decorating gift bags for sharing cookies**

![Image of a decorated gift bag]
Supplies

- Paper bags
- Paper decorations, colored paper cut into 1 inch squares
- Glue stick
- Precut ribbon for bow
- (Optional) Note cards and pen

Preparation of materials and work space prior to activity

1. Make a sample gift bag by gluing paper decorations such as pre-cut 1 to 1 ½ - inch squares in a simple design to one side of the bag. Simple designs copied successfully at ACL 4 include:
   - One line of two different colored squares alternating in center of bag
   - Two rows of two different colored squares alternating in center of bag
   - Five rows of two different colored squares with 1, 3, 5, 3, and 1 squares per row as shown in figure.
2. Position completed sample, bag, glue, and paper decorations within reach of person (s).

Instructions and assistance

ACL 3

1. **Decorating bags:** Demonstrate while describing actions as follows: “This is a gift bag for cookies to share with your family. To decorate the bag, pick up a square and put glue on the back. Place the square on the bag and push it down until it sticks. Now you try it”. Repeat demonstration, prompt person to begin or continue actions, point to location for square on bag, and stop dangerous actions as needed.
2. **Filling bags:** Caregiver draws a visible line on inside of each bag to indicate when bag is full. Position bags and completed cookies within reach of person (s). Assist person to don gloves. Demonstrate and describe the steps as follows: “Pick up a cookie and place it in the bag like this. Repeat this until the cookies reach the line. Now you do it.” Repeat demonstration, prompt person to begin or continue actions, stop dangerous actions as needed.

ACL 4

1. **Decorating bags:** Demonstrate while describing the steps as follows: “Here is a bag that you can decorate and fill with cookies as a gift for your family. To make a bag like this sample, pick up a square and put glue on the back. Place the square on the bag and push it down until it sticks. Continue to glue the squares on so they look like the sample. If you prefer, you may make your own design.” Repeat demonstration and instructions as needed.
2. **Filling bags:** Position bags and completed cookies within reach of persons. Provide person (s) with gloves and assist with donning if needed. Demonstrate and describe the steps as follows: “Put (number) cookies in the bag. Optional: “Put the notecard in the bag.” “Tie the ribbon on the handle in a bow (or knot).” Repeat demonstrations and instructions as needed.
3. **Making gift cards (optional):** Make a sample note card with handwritten name and simple greeting. Position the completed sample, note cards, and pen or pencil within reach of person (s). Say, “Write the name of your family member on the card like this. You may add a greeting if you want, and sign your name.”

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**Quilt Block Greeting Card**  
Developed for use with persons functioning within ACL 3 and 4  
Catherine A. Earhart, BA, OT Cert., OTR/L

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**Activity set up - ACL 3 and ACL 4**

**Quilt Block card sample - ACL 4**

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**Supplies**

- Greeting cards - 5” x 6 1/2”, white or colored cardstock with envelopes  
- Decorative paper  
- Scissors/paper cutter  
- Glue stick  
- Pen or pencil for writing message

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**Preparation prior to activity**

1. Using paper cutter or scissors, cut decorative paper into 6 squares from three complementary but contrasting patterned paper. Combinations may be seasonal or themed if desired. Cut squares as follows:
   - Pattern A: one square each measuring 3 ½ “ and 2 “ square  
   - Pattern B: one square each measuring 3 “ and 1 ½” square  
   - Pattern C: one square each measuring 2 ½” and 1” square

2. Clip the 6 squares together with one card to make a Quilt Block card kit.

3. Make a sample card by applying glue around the edges of the back of the largest paper square and placing it, glue side down, in the center of the card. Press down all edges so paper is firmly affixed. Continue to glue paper squares onto the card, in order from largest to smallest in this fashion. Position papers so that opposite sides match the preceding square as shown to create the quilt block pattern. Persons functioning in ACL 3 are unlikely to try to copy the sample but may stack papers or place them randomly on the card.

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**Instructions to make one card**

**ACL 3**

1. **Position person at flat working surface within reach of supplies:** one greeting card, one prepared kit of 6 pre-cut squares spread apart so all are clearly visible, a glue stick, and completed sample.

2. **Demonstrate actions** while saying: “To make this greeting card, pick up the largest paper square. Apply glue along the back edge of the paper. Place the square in the center of the card. Press down. Now pick up the next largest paper square and glue it on top of the other paper square like the sample. "Keep gluing on the next largest square like this until all the squares are used.”

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3. **Provide assistance as needed**: Repeat demonstrations, place glue stick in person’s hand, prompt person to start or continue actions, point to supplies or location on card.

4. **Write a message inside card (Caregiver)**: “Would you like to send this card to someone? Do you want me to write a message to them in the card?” Write message for person. “Would you like to sign your name?” Place card in front of person and provide writing tool as needed.

**ACL 4**

1. **Position person at flat working surface within reach of supplies**: one greeting card, one prepared kit of 6 pre-cut squares spread apart so all are clearly visible, a glue stick, and completed sample.

2. **Demonstrate actions while saying**: “To make a greeting card that looks like this sample, pick up the largest paper square and apply glue with the glue stick along the back edge of the paper square. Place the square in the center of the card and press it down so that all the edges are attached firmly.”

3. "Continue to glue the paper squares on in order from largest to smallest so that they look like this sample.”

4. **Provide assistance as needed**: Repeat demonstrations, demonstrate solutions to problems.

5. **Write a message inside the card**: “Would you like to send this card to someone? Write your message inside the card and sign your name.” Provide writing implements and assist as necessary.
The Alma Joy Villa Collaborative Project Report

Background
The ACLS and LACLS Committee is pleased to report on a collaborative project this past year with the residential care facility, Alma Joy Villa, Oxnard California. This project was conceived from a collegial discussion between a director of our federally recognized 501c3 charitable organization and an occupational therapist whose mother is a resident at Alma Joy Villa. Identifying appropriate yet satisfying activities to engage in was an ongoing challenge for the facility and the daughter. Meanwhile, the Committee had identified as part of our mission to develop training videos for professionals and occupational therapy curriculums in the use of the various assessments within the cognitive disabilities model. The use of actual administrations of the assessments was identified as crucial in developing therapists’ skills in the clinical reasoning process involved in administration, interpretation and treatment planning using the cognitive disabilities model. The possibility that a solution to both challenges might exist in Alma Joy Villa RCFE and the ACLS and LACLS Committee collaborating led to our Committee president, Linda Riska-Williams and director of development, Catherine Earhart meeting with Alma Joy Villa RCFE administrator, Gloria Massey Chinea and residents on August 14, 2011. Our shared common values and missions became obvious as both parties related dedication to providing excellent training for staff, educated quality care to the residents, maximizing optimal functional performance through identification and support of best ability to function in a safe and compassionate environment. With the approval of concerned family members and the residents a mutually beneficial agreement unfolded.

Agreement
1. The Alma Joy Villa facility would allow video-taping administration of occupational therapy assessments by Linda Riska-Williams and Catherine Earhart, directors of the ACLS and LACLS Committee and release use to the ACLS and LACLS Committee.
2. Residents would with written consent participate in these assessments and with further permission would be video-taped and release use of these videos to the ACLS and LACLS Committee. See release form attached.
3. Interpretation of the assessments would be used to identify AJV residents’ patterns of performance and make recommendations for appropriate activities and adaptations for each resident to maximize safe, successful and satisfying participation in valued activities.
4. An initial training session would be provided to the staff to provide a general understanding of the cognitive disabilities model and how it could assist them in better understanding the abilities and needs of the residents they served.
5. A follow-up training session would be provided to present the interpretation of the assessments and how this information could be applied to the residents' individual care plans and the selection of appropriate activities.

Process

1. A one hour staff training session was provided by the Committee on August 19, 2011. This training highlighted the purpose of the collaboration, basic information on the cognitive disabilities model and how information gained from the assessments could make a difference in being able to select and engage residents in appropriate activities.

2. Video-taping occurred on four consecutive Sundays allowing residents’ family members to observe if desired. The Allen Cognitive Level Screen-5 or Large Allen Cognitive Screen-5 was administered per protocol followed by an Allen Diagnostic Module activity to verify the screen score and observe for a pattern of performance. Questions from family members were answered and general implications of scores were discussed immediately after taping of the test administrations.

3. On one occasion a resident declined video-taping however consented to participating in some of the assessment process. This level of participation was honored.

4. During visits to Alma Joy Villa the Committee directors observed the residents in public portions of their daily routine, and engaged in conversations with the facility administrator, residents and family members resulting in a greater understanding of the individual residents’ abilities, interests, life experiences.

5. On December 4, 2011 a two-hour follow-up presentation was attended by staff and family. Patterns of performance observed during video-taping, observations of residents, their experiences and interests informed recommendations for select appropriate activities at AJV. Specific activity instructions, set up, presentation and level of assistance were reviewed for several activities followed by an actual activity group modeled by Committee directors in which the residents constructed a greeting card that could be shared with family or friends.

Results

The Alma Joy Villa Collaborative Project was a very successful activity. The ACLS and LACLS Committee met its goal of obtaining video of actual administrations of two assessments used within the cognitive disabilities model. These videos are being developed into training videos.

Alma Joy Villa RCFE received 2 training sessions to increase their knowledge of how the use of the Allen Cognitive Levels can assist them in selecting appropriate activities in order to support the residents’ best ability to function.

It was a pleasure and a privilege to collaborate with Gloria Massey Chinea, husband and staff. We are extremely grateful as well to the residents and their families for participating in this worthwhile endeavor.

ACLS and LALCLS Committee

The ACLS and LALCLS Committee is a federally recognized 501c3 not for profit charitable organization, EIN: 26-2294039. Our mission is to develop, maintain, and promote the Allen Cognitive Level Screen and to support education and research related to this assessment for the benefit of healthcare professionals who serve clients with differing cognitive abilities, their families, and caregivers.
Presentations & workshops: Material from the AJV project has been included in multiple presentations, trainings, posters, and workshops at national and international venues including:

- Occupational Therapy Association of California Conference 2011
- Occupational Therapy Association of California Conference 2013
- Allen Cognitive Network Cognitive Symposium 2012
- Allen Cognitive Network Cognitive Symposium 2014
- WFOT (poster) Japan 2014
- Yonsei University (workshop) South Korea 2014
- National OT Conference (podium) Australia 2015
- Toronto (workshop) Canada 2016

Teaching resources: Videos of assessment administration, case studies, and web based resources from the AJV project assist educators who teach the cognitive disabilities model at multiple universities.

Staff remembers CDM principles learned in training: “They are doing the best they can.”

Staff sets up and supervises activities in activity box over a period of three months until all of the supplies are used.

Staff organizes more social events based on interests of the residents. A family member reports: “There are parties for everything.”
Marilyn was an accomplished sewer and used to enjoy crafts of all kinds when younger. Her daughter secures supplies and sets up an ADM Bargello Bookmark activity with ACL 4 activity demands. Marilyn makes bookmarks for all her family members at Christmas.

Pearl used to be an accomplished painter but was now coloring in color books. Her family purchases supplies and engages an art therapist to supervise Pearl as she paints. Pearl completes a picture for her son, who proudly shares the results with others.

Murray is an avid football fan who used to enjoy watching games with friends in his home. With help from the AJV staff, he becomes the host for tailgate parties held in the TV room for all the residents during football season. He writes a note on a card he makes to his wife for the first time thanking her for visiting him.
Jane’s daughter Diane adapts five of Jane’s valued activities to match Jane’s current ACL 3.6 functional cognitive abilities

**Knitting:** Jane used to be an accomplished knitter but could no longer remember where she was in a pattern. Diane purchases large beads and cord and demonstrates beading actions for Jane each evening at the end of their visit. Jane enjoys making necklaces “for others” every day.

**Walking outdoors:** Jane used to enjoy taking outdoor walks but is now apt to get lost or fall. Diane takes Jane on a daily walk to a nearby park first with a walker, and later in a wheelchair, where they sit on a bench and watch others.

**Exercise:** Jane used to exercise regularly. Now she is at risk for falling. Diane purchases a stationary leg exerciser and takes it to the park each day. She prompts Jane to do leg lifts and pedal for short periods while monitoring her tolerance.

**Gardening:** Jane enjoyed gardening in the past. Diane points out and names flowers and plants on their walks. She tells Jane stories about what she used to grow.

**Socializing:** Jane used to have many friends and enjoyed keeping in touch with them. She is no longer able to engage in a reciprocal conversation due to short term memory problems. Instead of conversation, Diane tells Jane stories about previous events and people in Jane’s life.

**Reading:** Jane used to be an avid reader but no longer can remember what she reads. Diane (left) writes down a collection of Jane’s memories and reads “The Story of Jane” to her on rainy days. Jane smiles in recognition as she listens. Video interview with Diane here.
The Perfect Fit: Creating Sustainable Communities of Participation for Elderly Persons with Dementia

Poster Presentation
16th International Congress of the World Federation of Occupational Therapists, Yokohama, Japan
June 18, 2014
Based on the Alma Joy Villa Collaborative Project 2011-2012

ACLS & LACLS Committee
The Perfect Fit: Creating Sustainable Communities of Participation for Elderly Persons with Dementia

Catherine A. Earhart, BA OT Cert. OTR/L & Linda Riska-Williams, MA OTR/L

Allen Cognitive Group/ ACLS & LACLS Committee  Camarillo, California, USA

Abstract
A group of occupational therapists used the cognitive disabilities model (CDM) in collaborating with a community based care center to optimize participation in meaningful activities of four elderly residents with progressive dementia. Caregivers were equipped to recognize patterns of performance and to modify activity demands and assistance to support residents' changing abilities.

Residents
Jane, age 92, retired bank worker, used to knit and read, now holds a book in her lap
Marilyn, age 77, retired homemaker, used to paint with oils, now colors in cartoon books
Pearl, age 80+, retired businessman, football fan, now fills out crossword puzzles
Murray, age 92, retired bank worker, used to knit and read, now holds a book in her lap

Methods
Release point forms for permission to video tape administration of Allen assessments and use material for educational purposes
Power point presentations to orient staff and families about global cognitive abilities and interventions within the cognitive disabilities model
Evaluation of abilities with CDM assessments: Allen Cognitive Level Screen-5, Allen Diagnostic Module-2 (ADM) Placemat, skilled observations

Interventions (August - September 2011)
Communicating Results: Scores on assessments and observations of performance suggest Jane functioned at ACL 3; and Marilyn, Pearl, and Murray at ACL 4. These results were explained in power point presentations to staff and families. Guidelines for adapting activity demands to fit residents' abilities at ACL 3 and ACL 4 were described. Specific examples of realistic activities and assistance were offered.
Staff and Family Training: Participation in a hands-on demonstration activity enabled staff and family members to recognize typical performance patterns of their loved ones and to practice providing appropriate assistance so support successful performance.
Activity Development: Therapists developed and provided materials and instructive protocols for ten culturally relevant crafts activities with activity demands at Allen cognitive levels 3 and 4. Supplies for these activities were placed in an Activity Box stored in the living area for easy access by staff and family members. Ideas for social gatherings based on residents' interests were compiled and placed in a resource manual, such as Old Movie Nights and "Tail Gate" parties which included making and sharing cookies with assistance at cognitive levels 3 and 4.

Outcomes (June 2012)
Facility: At 9 month follow-up visit, facility staff reported that all supplies in the Activity Box were accessed during the holiday season by staff and families, until materials were used up. Staff reported continued awareness of CDM principles ("The residents are doing the best they can."). Family members reported increased frequency of social events designed to celebrate and orient residents that were built around residents' interests and values.
Family: Guided by CDM principles, Jane's daughter modified talking and reading activities and initiated bead making tasks that fit Jane's ACL 3 abilities. Marilyn's daughter helped Marilyn sew ADM bookmarks to give as gifts at Christmas. Pearl's family engaged an art instructor to supervise painting with Pearl. Murray enjoyed "Tail Gate" parties socials during football season. Family members expressed gratitude ("You made a big difference", "You gave me a structure.")

Challenges
Replenishing supplies in the Activity Box was challenged by funding and preparation time. As health conditions of residents declined, staff spent more time assisting with their daily routines of self care leaving less time for activities.

Summary
Occupational therapists possess knowledge and skills to create sustainable communities of participation for individuals with changing abilities and their caregivers. Principles and tools associated with the cognitive disabilities model provide therapists with effective methodologies to guide this endeavor.

References

Contact  www.allencognitive.org