

# Level of Care Pilot Comparative Analyses

**Report 1 for the Colorado Assessment and Support Plan Pilot  
Prepared for the Colorado Department of Health Policy and Financing**



HCBS STRATEGIES INCORPORATED

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# EXECUTIVE SUMMARY

## Executive Summary

The Colorado Department of Health Care Policy and Financing (the Department) contracted with HCBS Strategies to pilot its new assessment and support planning process for Medicaid-funded long-term services and supports (LTSS). The Department undertook this effort because of concerns about the reliability and validity of the items in the current tool used for eligibility determinations, the Uniform Long-Term Care (ULTC) 100.2; the lack of consistent collection of all necessary data; and the ability of the current tool to support a person-centered process, including the development of a person-centered Support Plan.

The first two phases of this pilot collect data necessary to replicate current level of care (LOC) criteria used for establishing eligibility for Medicaid home and community-based services (HCBS) waivers and create objective criteria where none exist. This report compares individual ULTC 100.2 items and matching items in the new process, which includes Functional Assessment Standardized Items (FASI). The next report will summarize the effort to replicate or create new LOC. The findings in this report will be helpful in informing the variations of eligibility criteria that should be tested in the next phase.

During this phase, case managers at Single Entry Point (SEP) agencies, Community Centered Boards (CCBs), and Department of Human Services (DHS) assessed participants using both the ULTC 100.2 and items from the new process. Data was collected for 84 participants.

The ULTC 100.2 items and comparable items in the new process were collapsed into binary measures (i.e., only having two choices) that only indicated whether a participant scored as being impaired enough that the item counted towards meeting LOC. In the ULTC 100.2, these binary variables are (a) did not meet LOC (a score of 0 or 1) and (b) met LOC (a 2 or 3). The level of agreement across the items ranged from 50% to 94% with the lowest levels of agreement being for wheelchair mobility and the highest being for bathing. The data also showed surprising patterns, including people scoring as being completely independent on the new tools but scoring in the two most impaired categories in the ULTC 100.2.

The report discusses some of the challenges with the structure of the items and training for the ULTC 100.2 and how this might account for some of the differences for all the items. For example, case managers are trained that the ULTC 100.2 scoring for mobility should exclude the use of equipment (e.g., a cane or walker). This results in case managers scoring individuals only needing equipment such as a cane or a walker to walk independently as being impaired on the ULTC 100.2 mobility item, but as being independent or only needing set up help on the FASI mobility items.

The findings highlight the fundamental flaws of the ULTC 100.2 and reinforce the need to change this tool. The findings also demonstrate how challenging it will be to replicate the LOC decisions using the ULTC 100.2 because of these flaws.

## Background

The Colorado Department of Health Care Policy and Financing (the Department) contracted with HCBS Strategies to pilot its new assessment and support planning process for Medicaid-funded long-term services and supports (LTSS). The Department undertook this effort because of concerns about the reliability and validity of the items in the current tool used for eligibility determinations; the lack of consistent collection of all necessary data; and the ability of the current tool to support a person-centered process, including the development of a person-centered Support Plan. Senate Bill 16-192, which was enacted after the Department began this effort, added a legislative mandate to create a new LTSS assessment tool. A report that describes the approach for developing these new processes and an overview of the processes can be found at <https://drive.google.com/file/d/1hwCLxMFZFz1LrdwN2HBagsPshBGvKa-j/view?usp=sharing>.

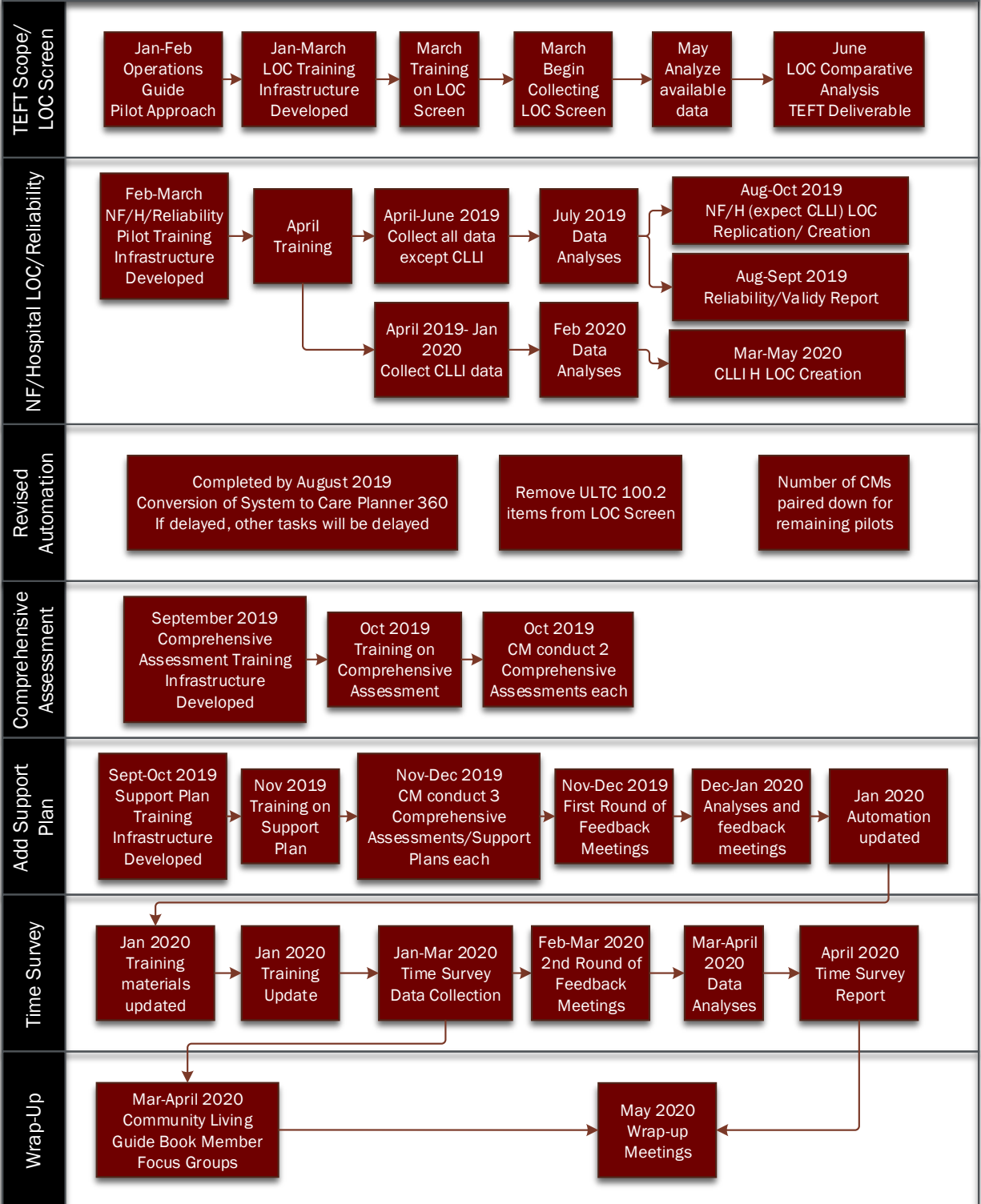
The pilot consists of the following phases that are shown in **Exhibit 1**:

- The first phase will collect data for analyses necessary to fulfill key business operations, notably, determining eligibility for Medicaid LTSS in Colorado. This phase has two components:
  - The level of care (LOC) pilot only collected data using the LOC Screen, which includes both current assessment tool items from the ULTC 100.2 and the items designed to replace them. The purpose of this pilot was to compare the items across the current and new tools and comply with Center for Medicare & Medicaid Services' (CMS) Testing Experience Functional Tools (TEFT) grant. This report presents the findings from this phase.
  - The Nursing Facility (NF)/Hospital (H)-LOC and Reliability pilot collects data necessary to fulfill the following functions:
    - Replicating the NF-LOC for adults
    - Establishing a more objective NF-LOC criteria for children
    - Establishing objective and prospective H-LOC for all of Colorado's relevant HCBS waivers
    - Testing the reliability, including the inter-rater reliability, of select items in the new assessment that may be used for NF-LOC, H-LOC, and resource allocation and that have not previously been tested for reliability.
- The second phase assesses the workflow of the process using the automation that is intended to be used in the field, Care Planner 360, an automated care planning platform in the Aerial Case Management Data System provided by Medecision.

# BACKGROUND

## Work Flow For the Assessment/Support Plan Pilots

Revised 6-11-19



# BACKGROUND

The overall approach of the pilot should allow the case managers to become familiar with the new assessment and support planning processes in stages that build upon each other rather than requiring that they learn the entire process at once. The LOC pilot allowed case managers to have significant exposure to scoring the items that are most central to establishing LOC: Activities of Daily Living (ADLs), behavior, and memory/cognition. The next phase introduces the rest of the assessment items.

The primary goal of the first two pilot phases is to replicate current LOC criteria and create objective criteria where none exist. While determining these LOC thresholds will primarily rely on the items collected during the LOC pilot, data collected in the second pilot will likely help explain eligibility changes for some people and help determine what actions to take. This will be done by establishing a highly flexible modeling file that will be used to test many variations of eligibility criteria.

This report only compares individual ULTC 100.2 items and matching FASI items rather than modeling eligibility. These findings will be helpful in informing the variations of eligibility criteria that should be tested.

It is important to note that while the data indicate substantial differences across the tools, these differences may not require a change to determining eligibility because even if eligibility changes for a single item, participants may still be made eligible based on other items.

## Methodology

The purpose of the LOC pilot was to allow the case managers to become skilled at collecting data that was central to determining LOC eligibility. These data also provided a first look at how items from the current tool, the ULTC 100.2, and items from the new assessment process compare. It was also important to be able to collect data to meet CMS grant data collection and reporting requirements.

### ITEMS

To replace the ULTC 100.2, the Department needed to collect information using new items that could be used to replicate eligibility criteria. Thus, the pilot collected data on both the ULTC 100.2 and new items.

Most of the new items used for eligibility came from a CMS-funded effort that was part of the Testing Experience and Functional Tools (TEFT) Demonstration Grant. This effort developed a database of items called the Functional Assessment Standardized Items (FASI).

After cross-walking the FASI and ULTC 100.2 items and eligibility thresholds, several areas for which new items were needed to capture information on subtle sub-criteria within the ULTC 100.2 were identified. For example, the ULTC 100.2 toileting item contains the phrase, “or is unable to keep self and environment clean”. It is possible for a case manager to interpret this as an independent criterion and score individuals who are otherwise independent on toileting, but having difficulty keeping either themselves or their environments clean, as exceeding the eligibility threshold. Assessment items were added to assess whether these sub-criteria impact eligibility.

### CASE MANAGERS

Case managers were drawn from the existing pool of case managers at the Single Entry Points (SEPs), Community Centered Boards (CCBs), and the Department of Human Services (DHS) who currently conduct assessments. An invitation that emphasized the importance of this effort and the compensation available went out to all case managers. One hundred and twenty-three case managers expressed a desire to participate. Information on the number of assessments these case managers conducted in the past year and the populations they assessed was obtained, and this information was utilized to select a pool of 68 case managers based on the following criteria:

- The total number of assessments they had conducted in the past year.
- The populations they had assessed. Almost all case managers who assessed children and/or people with mental health issues were selected to ensure enough assessments with these individuals were conducted.



# METHODOLOGY

- The geographic area they served, to have a range of agencies and representation in urban, rural, and frontier settings.

This pool of 68 case managers also included four additional case managers who, after not being selected, indicated that the number of assessments they would be conducting would be substantially higher than the information from the past year predicted.

Case managers participated in a day-long training that was held in-person at five sites across the state. Because of severe weather issues (Colorado's first "Bomb Cyclone") one of these trainings had to be conducted via webinar. Several case managers withdrew from the pilot because they left their agencies or had other family or work pressures they did not originally anticipate. At the end of this phase, 60 case managers were participating in the pilot.

## PARTICIPANTS

Participants were selected from scheduled ULTC 100.2 initial assessments or reassessments. Because we wanted all case managers to have a chance at conducting at least one pilot assessment, we targeted assessments for 25 individuals in the following three categories: Individuals with intellectual and developmental disabilities (IDD), older adults and adults with physical disabilities elderly, blind, and disabled (EBD)), and individuals with mental health conditions. We also targeted ten assessments with children.

Case managers were instructed to offer all participants with whom they have scheduled assessments the opportunity to participate in the pilot to prevent them from introducing a selection bias (e.g., only selecting cases that would take less time to assess). Because older adults and individuals with intellectual and developmental disabilities (IDD) represent a larger portion of the selected case managers' caseloads, we authorized assessments for a smaller portion of these individuals.

All assessments were conducted between March 12 and April 2, 2019. Upon conclusion, 84 of the targeted 85 assessments were completed; one assessment from the EBD population fell through at the last minute.

# ACTIVITIES OF DAILY LIVING (ADLS)

## Activities of Daily Living (ADLs)

### USE OF OBSERVATION, SELF-REPORT, AND PROXY

Case managers were asked to code whether they used observation, the participant's self-report, or the report of a proxy, typically a caregiver but could also be another individual the participant chose to be at the assessment, to determine how to score an ADL. In determining support needs on an ADL, direct observation was generally found to be more valid than the other two approaches<sup>1</sup>. While direct observation of the actual performance of an ADL may not be possible because of privacy (notably for bathing or toileting) or safety (such as having a participant, who has difficulty transferring demonstrate a transfer), observation of similar movements (e.g., having someone raise their hands over their head to try to identify potential challenges in washing hair) can be used to assist in the scoring. In these cases, the case manager could combine information from observation with information from the participant and/or a proxy to determine a score.

Even if the case manager could directly observe a participant performing an ADL, it is often helpful to obtain information from the participant and available proxies because performance can often vary and there may be factors that increase dependency (e.g., more difficulty later in the day when the participant is fatigued).

*Exhibit 2* presents the case managers' reports of the approaches they used to score ADLs for the 84 participants in this sample. In addition to summarizing the percentage of assessments for which the approach was used, the exhibit also presents the percentage of assessments using all three approaches, two of the three, and only one.

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<sup>1</sup> Mlinac, M. E., & Feng, M. C. (2016). Assessment of Activities of Daily Living, Self-Care, and Independence. *Archives of Clinical Neuropsychology, 31*(6), 506-516. doi:10.1093/arclin/acw049

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 2: Methods Used by Case managers to Code ADLs**

ADL	% Using Observation	% Using Self-Report	% Using Proxy	% Using 1 Approach	% Using 2 Approaches	% Using All 3
Bathing	7%	64%	62%	68%	31%	1%
Upper Body Dressing	5%	64%	60%	71%	29%	0%
Lower Body Dressing	5%	65%	57%	73%	27%	0%
Footwear	6%	64%	60%	70%	30%	0%
Toilet Hygiene	4%	61%	56%	80%	20%	0%
Toilet Transfer	4%	62%	54%	81%	19%	0%
Menses Care	17%	54%	45%	86%	13%	1%
Walk 10 Feet	38%	66%	47%	58%	33%	9%
Walk 50 Feet	21%	64%	49%	70%	26%	4%
Walk 150 Feet	12%	66%	50%	74%	25%	1%
Walk Outside Home	38%	68%	49%	79%	17%	4%
Wheel 50 Feet	31%	44%	69%	63%	31%	6%
Wheel 150 Feet	13%	44%	69%	75%	25%	0%
Transfer- Roll Left & Right	11%	64%	50%	75%	25%	0%
Transfer- Sit to Lying	7%	62%	52%	80%	19%	1%
Transfer- Lying to Sitting on Side of Bed	7%	62%	52%	79%	21%	0%
Transfer- Sit to Stand	26%	62%	54%	62%	35%	4%
Transfer- Chair/Bed to Chair Transfer	10%	63%	51%	77%	21%	1%
Car Transfer	7%	64%	51%	77%	23%	0%
Eating	5%	63%	56%	77%	21%	1%
Tube Feeding	10%	60%	51%	81%	18%	1%
Average across all ADLs	14%	61%	54%	74%	24 %	2%

Case managers used self-report the most (61% of the time across all the ADLs), followed by proxy report (54%). On average, observation was only documented as being used 14% of the time across all ADLs. Scoring based on observation was highest for the mobility items, which were as high as 38%. However, because case managers are highly likely to see the participant walk, observe that the participant is unable to walk, or observe that there is some difficulty with walking, even this number appears very low.

Case managers only used one source of information most of the time (74% across all ADLs) and this source of information was typically self-report or proxy. Case managers reported using all three sources of information very rarely (2%).

This pattern of conducting assessments likely hurts the reliability and validity of both the ULTC 100.2 and the new items, including the FASI items. If these findings remain consistent across the entire pilot, the Department should launch a robust effort to train case managers to use multiple sources of information, especially observation. In doing so, the Department will need to recognize that conducting a robust assessment using multiple sources of information will likely take longer than just using one source of information.

# ACTIVITIES OF DAILY LIVING (ADLS)

## OVERVIEW OF THE STRUCTURE OF THE CODING OF THE ADLS

### ULTC 100.2

The ULTC 100.2 ADL items included a definition of the ADL (e.g., bathing is defined as, “The ability to shower, bathe or take sponge baths for the purpose of maintaining adequate hygiene”) and responses options that range from 0 to 3 that correspond to:

- Score 0: No support needed
- Score 1: Minimal support needed
- Score 2: Moderate support needed
- Score 3: Total Support needed

Except for the response option for 0 (“The client is independent in completing activity safely”), the exact language for the other response options was different for each ADL.

### FASI

FASI generally consisted of two parallel items for each ADL. The first item asked about the participant’s usual performance in the past three days. The second item asked about the participant’s most dependent episode experienced in the past 30 days.

For both items, the level of impairment was coded as follows:

**06. Independent-** Participant completes the activity by him/herself with no assistance from helper.

- ✓ Participant DOES NOT require assistance or preparation prior to engaging in the activity
- ✓ Participant DOES NOT require review or follow-up after the activity has been completed
- ✓ Participant completes the activity without assistance from a support person
- ✓ Participant has not required support for the item in the past 30 days

**00. Age Appropriate Dependence-** Only used for children ages 4-17. - The participant requires a level of support consistent with his/her age.

- ✓ Requires assistance that is consistent with a child of the same chronological age who does not have a disability
- ✓ If assistance that is required is related to a disability related issue, DO NOT use this score. Instead, select the score that most accurately reflects the level of support needed.

**05. Setup or Clean-up Assistance-** Helper sets up or cleans up; participant completes activity. Helper assists only prior to or following the activity.

- ✓ Participant REQUIRES assistance or preparation prior to engaging in the activity
- ✓ And/or Participant REQUIRES review or follow-up after the activity is complete
- ✓ Participant then completes the activity without assistance from a support person
- ✓ Includes cueing via telephone to set-up or clean-up

# ACTIVITIES OF DAILY LIVING (ADLS)

**04. Supervision or Touching Assistance (Including cueing and/or visual prompts)-** Helper provides verbal cues or touching/steadying assistance as participant completes activity. Assistance may be provided throughout the activity or intermittently.

- ✓ Support person monitors some or all parts of the activity
- ✓ Support person provides cues, verbal direction or visual prompts during some or all steps of an activity
- ✓ Support person provides NO physical assistance beyond simple touch cues during the activity

**03. Partial/Moderate Assistance-** Helper does less than half the effort. Helper lifts, holds, or supports trunk or limbs, but provides less than half the effort.

- ✓ The participant functionally contributes more than half the effort for the activity

**02. Substantial/Maximal Assistance-** Helper does more than half the effort. Helper lifts or holds trunk or limbs and provides more than half the effort.

- ✓ The participant functionally contributes less than half the effort for the activity

**01. Dependent-** Helper does all of the effort. Participant does none of the effort to complete the task OR the assistance of 2 or more helpers is required for the participant to complete the activity.

- ✓ Participant DOES NOT contribute functionally to any part of the activity
  - ✓ The participant may contribute symbolically to the activity
  - ✓ Support person completes the activity for the participant
- OR
- ✓ Two or more support persons are required to complete the task

**07. Not Attempted- Participant refused-** Participant refuses support to complete the task. The activity was completed unsuccessfully by the participant, but the participant refuses support in this area and the activity is not completed by another person OR the participant refuses to answer *and there is no other source of information*.

**08. Not Attempted due to short-term medical condition or safety concerns-** For example, when a participant is undergoing treatment for an acute exacerbation of a mental, physical, or behavioral health issue and does not perform a task due to temporary safety concerns related to their illness or condition.

**88. Not applicable-** Participant does not engage in this activity regularly; support not required. The activity is not completed by another person.

Because the FASI items were not designed nor tested for children under age 18, the age-appropriate dependence category was created for this assessment. The next phase will assess whether this change impacted the reliability of these items.

# ACTIVITIES OF DAILY LIVING (ADLS)

## Comparing the ULTC 100.2 and FASI ADL Items

A participant can meet LOC using the ULTC 100.2 if she or he receives a score of moderate or total support (score of 2+) in at least 2 of 6 ADL's or at least moderate support (score of 2+) in either Behaviors or Memory/Cognition. Because the critical comparison between the ULTC 100.2 and FASI items for this effort was whether the switch to the new item may impact eligibility, the ULTC 100.2 response options were collapsed into binary categories:

- Do not exceed ULTC 100.2 threshold – a score of 0 or 1
- Exceed ULTC 100.2 threshold – a score of 2 or 3

A challenge with the structure of the current ULTC 100.2 items is that for some of the ADLs, the response option for a score of 2 contains additional criteria that are not in the ADL definition. For example, the response option for toileting introduces the construct of keeping the toileting environment clean. In the discussion of the ADLs below, we always present the definition for each ADL and present components of the response options if they include new criteria.

Some of the ULTC 100.2 items consist of multiple criteria embedded within a single item that are broken into separate items in FASI. For example, the ULTC 100.2 toileting item includes both toilet transfer and adjusting clothing and cleaning oneself. In these cases, we provide comparisons to all relevant FASI items.

For each of the ADLs, a table is provided (**Exhibit 4** for bathing) that presents the frequency for the FASI item followed by the percentage of participants who received that score who exceed the ULTC 100.2 impairment threshold. In comparing the items across tools, it is expected that participants scoring as independent or needing only setup or clean-up assistance on the FASI would not exceed the ULTC 100.2 threshold and that everyone who scores as partial/moderate assistance or more impaired would exceed the threshold (see **Exhibit 3a**). In talking with case managers, it became clear that some interpreted the supervision/touching assistance response as being sufficient to exceed the ULTC 100.2 threshold, while others did not. Thus, it is expected that some, but not all, of the participants receiving these scores would exceed the threshold.

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 3a: Expected Outcomes when Comparing FASI and ULTC 100.2 ADL Items- Responses Included in Analyses**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent		0%		0%
Age appropriate dependence		0%		0%
Setup or Clean-up Assistance		0%		0%
Supervision or touching assistance		Between 0%-100%		Between 0%-100%
Partial/moderate assistance		100%		100%
Substantial/maximal assistance		100%		100%
Dependent		100%		100%

Also provided are the responses scored as activity not attempted- refused, activity not attempted-health/safety, and not applicable as part of this table (see **Exhibit 3b**). These responses were excluded from the analyses because they do not provide enough information to make a comparison with the binary ULTC 100.2 item. Because of this, case managers were trained to only use these responses if there was no other information for scoring the support needed to safely complete the task.

**Exhibit 3b: Expected Outcomes when Comparing FASI and ULTC 100.2 ADL Items- Responses Not Included in Analyses**

Not included:	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Activity not attempted-refused				
Activity not attempted-health/safety				
Not applicable				

A second table is also provided (**Exhibit 5** for bathing) that collapses the response options for the FASI items into two categories: exceeds and does not exceed the eligibility threshold. Because in comparing the ULTC 100.2 and FASI response options it was not clear where to draw the line for the FASI threshold, we present thresholds for two different cutoffs: 1) supervision/touching assistance or more impaired and 2) a more stringent threshold of needing partial assistance or being more impaired. The second table provides the following summary information:

- The amount of agreement across the FASI and ULTC 100.2 thresholds. For example, a score of 90% would mean that 90% of the time case managers gave the participants scores on the ULTC 100.2 and corresponding FASI items that resulted in the same outcome (either

# ACTIVITIES OF DAILY LIVING (ADLS)

exceeding or not exceeding the threshold). This concept is similar to measuring the correlation across the two items.

- The percentage of people who exceed one threshold who did not exceed the other.

## BATHING

The following are the definitions for bathing:

- **ULTC 100.2:** The ability to shower, bathe or take sponge baths for the purpose of maintaining adequate hygiene.
- **FASI:** The ability to bathe self in shower or tub, including washing, rinsing, and drying self. Does not include transferring in/out of tub/shower.

The major difference between the items is that while the FASI item explicitly excludes getting in and out of the tub or shower (which is typically the most challenging part of bathing), the ULTC 100.2 item is vague about this issue. The definition of bathing does not address it. Scoring option 1, “The client requires oversight help or reminding; can bathe safely without assistance or supervision but may not be able to get into and out of the tub alone,” implies that this should be considered, however, this is not a factor that is mentioned in the other scoring choices. Thus, case managers may interpret whether to consider the assistance needed getting in and out of a tub or shower differently.

**Exhibit 4** shows that while everyone scored as needing substantial assistance or higher on the FASI item exceeded the ULTC 100.2 LOC threshold, one of the eight people (12%) who were scored as needing partial/moderate assistance did not exceed the threshold and another person scored as independent did exceed the threshold.



# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 4: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Bathing**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	31	3%	28	0%
Age appropriate dependence	2	50%	2	50%
Setup or Clean-up Assistance	5	0%	3	0%
Supervision or touching assistance	7	57%	10	40%
Partial/moderate assistance	8	88%	10	100%
Substantial/maximal assistance	20	100%	19	100%
Dependent	10	100%	11	100%
<b>Total</b>	<b>83</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 5** shows a high level, but nowhere near perfect, agreement across the FASI and ULTC 100.2 items when they are collapsed into binary choices, with the level of agreement being slightly higher when using the lower supervision cutoff for the Usual Performance measure. The level of agreement is slightly lower for the Most Dependent measure.

**Exhibit 5: Level of Agreement Among Binary Summary ULTC 100.2 and FASI Measures for Bathing Items**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	93.80%	90.10%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	92.60%	92.60%
% who score supervision or higher who do <u>not</u> exceed ULTC 100.2	8.89%	16.00%
% who exceed ULTC 100.2 who do <u>not</u> score supervision or higher	8.89%	0.00%
% who score partial assistance or higher who do <u>not</u> exceed ULTC 100.2	2.63%	5.00%
% who exceed ULTC 100.2 who do <u>not</u> score partial assistance or higher	11.90%	9.52%

Almost 9% of the people who exceeded the FASI supervision threshold did not exceed the ULTC 100.2 threshold. Conversely, almost 9% of the individuals who exceeded the ULTC 100.2 threshold did not exceed the FASI threshold. When using the more stringent partial/moderate assistance threshold for FASI, less than 3% did not exceed the ULTC 100.2 threshold, however, nearly 12% of the participants who exceeded the ULTC 100.2 threshold did not exceed the more stringent FASI criteria.

# ACTIVITIES OF DAILY LIVING (ADLS)

## DRESSING

The following are the definitions using for dressing:

- **ULTC 100.2 Item:** The ability to dress and undress as necessary. This includes the ability to put on prostheses, braces, anti-embolism hose or other assistive devices and includes fine motor coordination for buttons and zippers. Includes choice of appropriate clothing for the weather. Difficulties with a zipper or buttons at the back of a dress or blouse do not constitute a functional deficit.
- FASI separates dressing into three different items:
  - **Upper Body Dressing FASI Item:** The ability to put on and remove shirt or pajama top. Includes buttoning, if applicable.
  - **Lower Body Dressing FASI Item:** The ability to dress and undress below the waist, including fasteners. Does not include footwear
  - **Footwear FASI Item:** The ability to put on and take off socks and shoes or other footwear that are appropriate for safe mobility.

Case managers' interpretations about how to score the ULTC 100.2 dressing item may differ based on whether and how they consider assistive devices in scoring the ULTC 100.2 items. While case managers are trained to score with or without the use of equipment, the current assessment does not enforce this requirement in its structure, allowing for case managers to score differently regarding assistive devices.

**Exhibits 6 through 11** present the analyses that compares each of the individual FASI items to the single ULTC 100.2 dressing item.

# ACTIVITIES OF DAILY LIVING (ADLS)

## Dressing: Upper Body

**Exhibit 6: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Upper Body Dressing**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	40	10%	38	11%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	8	25%	7	29%
Supervision or touching assistance	6	33%	9	22%
Partial/moderate assistance	12	58%	8	38%
Substantial/maximal assistance	11	82%	14	86%
Dependent	6	100%	7	100%
<b>Total</b>	<b>84</b>		<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	0		0	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 7: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Upper Body Dressing Items**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	79.50%	75.90%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	81.90%	81.90%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	32.35%	36.84%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	20.00%	20.00%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	24.14%	24.14%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	26.67%	26.67%

# ACTIVITIES OF DAILY LIVING (ADLS)

## Dressing: Lower Body

**Exhibit 8: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Lower Body Dressing Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	43	7%	40	8%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	7	14%	5	20%
Supervision or touching assistance	3	33%	7	14%
Partial/moderate assistance	9	67%	7	57%
Substantial/maximal assistance	12	83%	12	83%
Dependent	9	100%	11	100%
<b>Total</b>	<b>84</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>100%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	0		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 9: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Lower Body Dressing Items**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	86.70%	80.70%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	87.90%	86.70%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	21.21%	0.30%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	13.33%	13.33%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	16.67%	16.67%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	16.67%	16.67%

# ACTIVITIES OF DAILY LIVING (ADLS)

## Dressing: Footwear

**Exhibit 10: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Footwear Dressing Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	44	9%	39	8%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	6	33%	6	33%
Supervision or touching assistance	2	50%	5	20%
Partial/moderate assistance	7	43%	7	29%
Substantial/maximal assistance	10	80%	12	75%
Dependent	12	92%	13	92%
<b>Total</b>	<b>82</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>98%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	2		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 11: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Footwear Dressing Items**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	80.70%	77.00%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	80.70%	80.70%
% who score supervision or higher who do <b>not</b> exceed ULTC 100.2	25.81%	35.14%
% who exceed ULTC 100.2 who do <b>not</b> score supervision or higher	20.69%	17.24%
% who score partial assistance or higher who do <b>not</b> exceed ULTC 100.2	24.14%	28.13%
% who exceed ULTC 100.2 who do <b>not</b> score partial assistance or higher	24.14%	20.69%

### Most Impaired Score on Any of the Three Dressing Options

Because the ULTC 100.2 item includes all aspects of dressing, creating an item that combines the three FASI items most closely replicates the construct the ULTC 100.2 measures. This was accomplished by creating an item that selected the score across the three items for which the participant scored as being most dependent.

**Exhibit 12** shows how this item compares with the ULTC 100.2 threshold for dressing. One of the six individuals (17%) who only needed setup or clean-up assistance on any of the dressing items was scored as exceeding the ULTC 100.2 threshold even though the definition for that item

# ACTIVITIES OF DAILY LIVING (ADLS)

would appear to preclude setup or clean-up assistance. This may be explained by case managers complying with instructions to select scoring option 1 or 2 in the ULTC 100.2 if dressing cannot be completed in a “reasonable amount of time.” Conversely several participants who needed partial/moderate assistance or substantial/maximal assistance were scored as not being impaired enough to exceed the ULTC 100.2 threshold.

**Exhibit 12: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Highest Dressing Item Score**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	35	0%	32	8%
Age appropriate dependence	0	0%	0	0%
Setup or Clean-up Assistance	6	17%	4	20%
Supervision or touching assistance	6	63%	9	14%
Partial/moderate assistance	8	71%	10	57%
Substantial/maximal assistance	14	93%	12	83%
Dependent	14	100%	16	100%
<b>Total</b>	<b>83</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 13** shows that the rates of agreement among the binary versions of the FASI and ULTC 100.2 items are substantially lower than was found for bathing. The highest agreement was found when using the Usual Performance item and the more restrictive partial/moderate assistance threshold.

The case managers appeared to score the ULTC 100.2 item more narrowly than the combined FASI items, with far more people who exceeded the FASI threshold not exceeding the ULTC 100.2 threshold than vice versa.

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 13: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Highest Dressing Item Score**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	83.10%	77.10%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	88.00%	85.50%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	30.95%	38.30%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	3.33%	3.33%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	22.22%	26.32%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	6.67%	6.67%

## TOILETING

The items for toileting differ across the two tools:

- **ULTC 100.2 Item:** The ability to use the toilet, commode, bedpan or urinal. This includes transferring on/off the toilet, cleansing of self, changing of apparel, managing an ostomy or catheter and adjusting clothing.
  - **Scoring Option 2:** The client needs physical assistance or standby with toileting, including bowel/bladder training, a bowel/bladder program, catheter, ostomy care for safety or is unable to keep self and environment clean.
- **FASI** has two items that correspond to toileting:
  - **FASI Toilet Hygiene:** The ability to maintain perineal/feminine hygiene, adjust clothes before and after using toilet, commode, bedpan, urinal. If managing ostomy, include wiping opening but not managing equipment.
  - **FASI Toilet Transfer:** The ability to safely get on and off a toilet or commode.

**Exhibits 14-15** present the findings for the comparison of the ULTC 100.2 toileting item to the FASI toilet hygiene, while **Exhibits 16-17** presents the comparison to the FASI toilet transfer item. Because the ULTC 100.2 item combines both hygiene and transfer, both **Exhibits 18-19**, which compare the ULTC 100.2 toileting item to the highest score received on either item contained in the FASI, are also provided.

# ACTIVITIES OF DAILY LIVING (ADLS)

## Toilet Hygiene

**Exhibit 14: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Toilet Hygiene**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	45	2%	42	2%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	6	17%	6	17%
Supervision or touching assistance	5	60%	7	43%
Partial/moderate assistance	6	83%	4	50%
Substantial/maximal assistance	6	50%	9	56%
Dependent	12	100%	13	100%
<b>Total</b>	<b>81</b>		<b>82</b>	
<b>Total as % of all assessments</b>	<b>96%</b>		<b>98%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	1		0	
Not applicable	2		2	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 15: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Toilet Hygiene**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	90.00%	86.25%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	88.75%	87.50%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	20.69%	30.30%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	8.00%	8.00%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	16.67%	23.08%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	20.00%	20.00%



# ACTIVITIES OF DAILY LIVING (ADLS)

## Toilet Transfer

**Exhibit 16: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Toilet Transfer Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	62	16%	59	15%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	2	0%	2	0%
Supervision or touching assistance	2	50%	4	25%
Partial/moderate assistance	5	80%	4	75%
Substantial/maximal assistance	3	67%	3	67%
Dependent	5	100%	7	100%
<b>Total</b>	<b>80</b>		<b>80</b>	
<b>Total as % of all assessments</b>	<b>95%</b>		<b>95%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	4		4	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 17: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Toilet Transfer Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	83.50%	82.30%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	83.50%	84.80%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	20.00%	27.78%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	45.45%	40.91%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	15.38%	14.29%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	50.00%	45.45%

## Most Impaired Score on Either FASI Toileting Item

**Exhibit 18**, which compares the binary version of the ULTC 100.2 toileting item against a measure that combines the highest score on the FASI toilet hygiene and toilet transferring items, suggest inconsistency in the ULTC 100.2 scoring:

- Two people (4% of the people in this category) who were scored as being independent on both toilet transfer and toilet hygiene were scored as exceeding the ULTC 100.2 threshold.

# ACTIVITIES OF DAILY LIVING (ADLS)

- One (17%) of the six people scored as only needing setup or clean-up assistance exceeded the ULTC 100.2 threshold.
- Two (29%) of the seven participants scored as needing partial/moderate assistance did not exceed the threshold for the ULTC 100.2.
- Three (60%) of the five people scored as needing substantial/maximal assistance did not exceed the threshold for the ULTC 100.2.

**Exhibit 18: Comparison of the FASI Frequency to the Binary ULTC 100.2 Item for the Combined Toilet Hygiene and Toilet Transfer Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	47	4%	42	4%
Age appropriate dependence	0	0%	0	0%
Setup or Clean-up Assistance	6	17%	6	17%
Supervision or touching assistance	5	60%	7	29%
Partial/moderate assistance	7	71%	6	50%
Substantial/maximal assistance	5	40%	8	50%
Dependent	13	100%	14	100%
<b>Total</b>	<b>83</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 19** shows that using the Usual Performance item and setting the threshold as needing supervision or more assistance resulted in the most agreement with the ULTC 100.2 toileting item.

**Exhibit 19: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for the Combined Toilet Hygiene and Toilet Transfer Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	88.00%	81.90%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	86.70%	85.50%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	23.33%	34.26%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	11.54%	11.54%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	20.00%	25.00%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	23.08%	19.23%

# ACTIVITIES OF DAILY LIVING (ADLS)

## Other ULTC 100.2 Toileting Sub-Criteria

The major difference between the FASI and ULTC 100.2 items is that the ULTC 100.2 definition includes transferring on and off the toilet while the FASI toilet hygiene item excludes transferring. In addition, the ULTC 100.2 item also contains the following constructs that are not part of the FASI item:

- The ULTC 100.2 definition appears to suggest that if someone can manage an ostomy or catheter without assistance, he or she should be scored as independent. However, some case managers may consider these as assistive devices and score someone based on their performance if they did not use the device.
- Some case managers may consider the ability to keep the environment clean as a separate criterion for the ULTC 100.2, while others may base the score solely on the ADL definition.

To assess whether any of the sub-criteria in the ULTC 100.2 impact LOC eligibility, items were included to directly assess them:

- How often does the participant need assistance to keep him/herself clean after toileting? (Findings are presented in **Exhibit 20**).
- How often does the participant need assistance to keep toilet environment clean? (Findings are presented in **Exhibit 21**).

Also provided are the following related FASI items:

- **Bladder Toileting Program**- Is a toileting program (e.g., scheduled toileting or prompted voiding) currently being used to manage the participant's urinary continence? (**Exhibit 22**).
- **Managing Bladder Equipment** - Does the participant require assistance with managing equipment related to bladder incontinence (e.g., urinal, bedpan, indwelling catheter, intermittent catheterization, incontinence pads/ undergarments)? (**Exhibit 23**).
- **Bowel Program**- Is a bowel program currently being used to manage the participant's bowel continence? (**Exhibit 24**).
- **Managing Bowel Equipment**- Does the participant require assistance with managing equipment related to bowel incontinence (e.g., ostomy, incontinence pads/ undergarments)? (**Exhibit 25**).

The modeling process will determine if any of these items are necessary to replicate LOC.

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 20: Comparison of the Scores to the Binary ULTC 100.2 Item for Keep Self Clean After Toileting Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Never	41	0%
Daily	35	71%
Weekly	5	20%
Monthly or less	3	0%
<b>Total</b>	<b>84</b>	
Total as % of all assessments	100%	
<b>Not included:</b>		
Not applicable	0	
<b>Overall Total</b>	<b>100%</b>	

**Exhibit 21: Comparison of the Scores to the Binary ULTC 100.2 Item for Keep Environment Clean After Toileting Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Never	23	0%
Daily	31	68%
Weekly	23	22%
Monthly or less	7	0%
<b>Total</b>	<b>84</b>	
Total as % of all assessments	100%	
<b>Not included:</b>		
Not applicable	0	
<b>Overall Total</b>	<b>100%</b>	

**Exhibit 22: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Bladder Toileting Program Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Yes	12	58%
No	72	26%
<b>Total</b>	<b>84</b>	
Total as % of all assessments	100%	
<b>Not included:</b>		
Not applicable	0	
<b>Overall Total</b>	<b>84</b>	

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 23: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Managing Bladder Equipment Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Yes	24	75%
No	20	10%
Total	44	
Total as % of all assessments	52%	
<b>Not included:</b>		
Not applicable	40	
Overall Total	84	

**Exhibit 24: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Bowel Program Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Yes	10	70%
No	74	26%
Total	84	
Total as % of all assessments	100%	
<b>Not included:</b>		
Not applicable	0	
Overall Total	84	

**Exhibit 25: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Managing Bowel Equipment Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Yes	22	77%
No	20	15%
Total	42	
Total as % of all assessments	50%	
<b>Not included:</b>		
Not applicable	42	
Overall Total	84	

## MENSES CARE

The pilot also captured information on a new item, menses care, that is not measured in either the ULTC 100.2 or FASI. This item was constructed to be similar to FASI items. The definition of menses care is, “Able to use tampons, sanitary napkins, or other menses care items; wash hands after changing tampons or sanitary napkins; change tampons or sanitary napkins as required to keep the blood from soaking through clothes; and properly dispose of tampons or sanitary napkins.”

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 26** presents summary data which suggests that menses care is a need for about 1/5 (17) of the assessments and that more than 1/3 (6) of the people needing menses care cannot do so independently.

**Exhibit 26: Summary of Responses to Menses Care Item**

FASI Codes	Usual Frequency	Most Dependent Frequency
Independent	11	11
Age appropriate dependence	0	0
Setup or Clean-up Assistance	0	0
Supervision or touching assistance	1	1
Partial/moderate assistance	0	0
Substantial/maximal assistance	0	0
Dependent	5	5
<b>Total</b>	<b>17</b>	<b>17</b>
<b>Total as % of all assessments</b>	<b>20%</b>	<b>20%</b>
<b>Not included:</b>		
Activity not attempted-refused	0	0
Activity not attempted-health/safety	0	0
Not applicable	67	67
<b>Overall Total</b>	<b>84</b>	<b>84</b>
<b>Overall Total as % of all assessments</b>	<b>100%</b>	<b>100%</b>

## MOBILITY

There is a single item for mobility in the ULTC 100.2, while six FASI mobility constructs were included in the pilot tool:

- **ULTC 100.2 Definition:** The ability to move between locations in the individual’s living environment inside and outside the home. Note: Score client’s mobility without regard to use of equipment other than the use of prosthesis.
  - **Scoring Option 2:** The client is not safe to ambulate or move between locations alone; needs regular cueing, stand-by assistance, or hands on assistance for safety both in the home and outside the home.
- **FASI** contains the following mobility items:
  - **Walk 10 feet:** Once standing, the ability to walk at least 10 feet in a room, corridor or similar space.
  - **Walk 50 feet with two turns:** Once standing, the ability to walk at least 50 feet and make two turns.
  - **Walk 150 feet:** Once standing, the ability to walk at least 150 feet in a corridor or similar space.
  - **Walk Outside the Home-** Code the participant's level of independence for walking OUTSIDE OF THE HOME based on the furthest distance that the

# ACTIVITIES OF DAILY LIVING (ADLS)

participant could walk "Independent" above. If no distance was selected as "Independent", code for walking 10 feet outside the home

- **Wheel 50 feet with two turns:** Once seated in a wheelchair/scooter, the ability to wheel at least 50 feet and make two turns.
- **Wheel 150 feet:** Once seated in wheelchair/scooter, the ability to wheel at least 150 feet in a corridor or similar space.

Case managers are trained that the ULTC 100.2 instruction “Score client’s mobility without regard to use of equipment other than the use of prosthesis” indicates that anyone using equipment (e.g., a cane or walker) would score 2 or higher, therefore, the item would count towards LOC.

In contrast, FASI assesses the need for assistance with mobility with the use of assistive devices. It asks a series of questions that assess walking and wheeling (when the person uses a wheelchair) separately and whether the need for assistance increases as the length walked or wheeled increases or changes in the environment in which the mobility occurs.

## Walking

**Exhibit 27** shows that 91% (76) of the 84 people assessed walked.

### **Exhibit 27: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Participant Walks Item**

Does participant walk?	Frequency	% of Responses
Yes	76	91%
No, and walking is not indicated	6	7%
No, but walking is indicated in the future	2	2%

Of those who walked, about 85% (64 individuals) were able to walk independently for ten feet using the FASI item (see **Exhibit 28**). However, nearly a fifth of these people (12 individuals) exceeded the ULTC 100.2 threshold for mobility. Everyone who was scored as needing supervision or greater support exceeded the ULTC 100.2 threshold.

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**Exhibit 28: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Walk 10 Feet Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	64	19%	57	14%
Age appropriate dependence	2	0%	2	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	2	100%	6	67%
Partial/moderate assistance	4	100%	7	71%
Substantial/maximal assistance	3	100%	4	100%
Dependent	0	0%	0	0%
<b>Total</b>	<b>75</b>		<b>76</b>	
<b>Total as % of all assessments</b>	<b>89%</b>		<b>90%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	9		8	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 29** shows that while there is more than 80% agreement across these items when they are converted into binary measures, unlike the other ADLs, when there is disagreement it is because the ULTC 100.2 mobility scores are much more liberal than this FASI item.

**Exhibit 29: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Walk 10 Feet Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	83.50%	84.90%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	80.80%	82.20%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	0.00%	23.53%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	57.00%	61.90%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	0.00%	18.18%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	67.00%	42.86%

When measuring the ability to walk 50 feet, very few of the participants who were scored as independent exceeded the ULTC 100.2 threshold. However, a sizeable number of the participants who were scored as needing supervision/touching assistance, partial/moderate assistance or even substantial/ maximal assistance were not scored as exceeding the ULTC 100.2 threshold.



# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 30: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Walk 50 Feet Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	44	5%	50	10%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	13	46%	12	58%
Partial/moderate assistance	7	57%	6	50%
Substantial/maximal assistance	9	89%	5	100%
Dependent	0	0%	0	0%
<b>Total</b>	<b>74</b>		<b>74</b>	
<b>Total as % of all assessments</b>	<b>88%</b>		<b>88%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	10		10	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

Although the FASI walk 50 feet item has roughly the same level of agreement to the ULTC 100.2 mobility item as the walk 10 feet item, the disagreements in scoring go both ways (see **Exhibits 29** and **31**).

**Exhibit 31: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Walk 50 Feet Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	82.20%	82.20%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	83.60%	79.50%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	37.93%	34.78%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	10.00%	25.00%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	25.00%	27.27%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	40.00%	60.00%

The FASI item that assessed the ability to walk 150 feet performed similarly to the 50 feet item when compared to the binary version of the FASI mobility item (see **Exhibit 32**).

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 32: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Walk 150 Feet Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	45	7%	40	10%
Age appropriate dependence	1	0%	0	0%
Setup or Clean-up Assistance	0	0%	1	0%
Supervision or touching assistance	9	44%	13	58%
Partial/moderate assistance	6	50%	5	50%
Substantial/maximal assistance	5	80%	7	100%
Dependent	3	67%	3	0%
<b>Total</b>	<b>69</b>		<b>69</b>	
<b>Total as % of all assessments</b>	<b>82%</b>		<b>82%</b>	
<b>Not included:</b>				
Activity not attempted-refused	1		1	
Activity not attempted-health/safety	2		1	
Not applicable	12		13	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 33: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Walk 150 Feet Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	80.90%	81.20%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	82.40%	82.60%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	43.48%	42.86%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	18.75%	5.88%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	35.71%	33.33%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	43.75%	41.18%

The FASI walking outside the home item displayed a similar pattern to the 50- and 150-foot items (see **Exhibit 34**) but produced substantially lower levels of agreement with the ULTC 100.2 binary item than the other two measures (see **Exhibit 35**).

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 34: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Walk Outside the Home Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	47	15%	42	10%
Age appropriate dependence	0	0%	0	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	13	31%	15	40%
Partial/moderate assistance	8	38%	9	22%
Substantial/maximal assistance	4	100%	6	83%
Dependent	0	0%	1	100%
<b>Total</b>	<b>72</b>		<b>73</b>	
<b>Total as % of all assessments</b>	<b>86%</b>		<b>87%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	1		1	
Not applicable	11		10	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 35: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Walk Outside of Home Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	70.80%	71.20%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	77.80%	75.30%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	56.00%	54.84%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	38.89%	22.22%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	41.67%	50.00%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	58.82%	55.56%

## Wheeling

It was surprising to find that two of the 16 people (12.5%) who used a wheelchair/scooter did not exceed the ULTC 100.2 mobility threshold (see **Exhibit 36**) because these people should have been scored on their ability to walk without the wheelchair/scooter.

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 36: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Use Wheelchair/Scooter Item**

Does the participant use a wheelchair/scooter?	Frequency	% who exceed mobility LOC
Yes	16	87.50%
No	68	22.10%

This finding became even more puzzling because these two individuals who did not exceed the ULTC 100.2 mobility threshold used motorized wheelchairs/scooters (see **Exhibit 37**). This may be explained if the equipment being used is a scooter instead of a motorized wheelchair. In this case a participant could ambulate independently inside and outside but use a motorized scooter for ambulating outdoors (e.g. for convenience at the grocery store).

**Exhibit 37: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Type of Wheelchair/Scooter Item**

Type of wheelchair/scooter	Frequency	% who exceed mobility LOC
Manual	10	100.00%
Motorized	6	66.70%

The finding that two people using wheelchairs who were classified on the FASI items as being independent in using that wheelchair who did not exceed the ULTC 100.2 mobility threshold suggests that some case managers were scoring the ULTC 100.2 mobility item based on their performance with the assistive device (See **Exhibits 38 and 40**).

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 38: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Wheel 50 Feet Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	7	71%	6	67%
Age appropriate dependence	0	0%	0	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	3	100%	3	100%
Partial/moderate assistance	0	0%	1	100%
Substantial/maximal assistance	2	100%	1	100%
Dependent	4	100%	5	100%
<b>Total</b>	<b>16</b>		<b>16</b>	
<b>Total as % of all assessments</b>	<b>19%</b>		<b>19%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	68		68	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 39: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Wheel 50 Feet Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	68.80%	75.00%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	50.00%	56.20%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	0.00%	0.00%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	35.71%	28.57%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	0.00%	0.00%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	57.14%	50.00%

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 40: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Wheel 150 Feet Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	6	67%	5	60%
Age appropriate dependence	0	0%	0	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	2	100%	2	100%
Partial/moderate assistance	0	0%	1	100%
Substantial/maximal assistance	3	100%	2	100%
Dependent	5	100%	6	100%
<b>Total</b>	<b>16</b>		<b>16</b>	
<b>Total as % of all assessments</b>	<b>19%</b>		<b>19%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	68		68	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 41: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Wheel 150 Feet Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	75.00%	81.20%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	62.50%	68.80%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	0.00%	0.00%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	29.00%	21.00%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	0.00%	0.00%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	43.00%	36.00%

## TRANSFERRING

Similar to mobility, the ULTC 100.2 includes a single item for transferring, while FASI includes several items.

- **ULTC 100.2 Definition:** The physical ability to move between surfaces: from bed/chair to wheelchair, walker or standing position; the ability to get in and out of bed or usual sleeping place; the ability to use assisted devices for transfers. Note: Score client's mobility without regard to use of equipment."
- **FASI** assesses transferring using the following items that measure increasingly challenging components of transferring:

# ACTIVITIES OF DAILY LIVING (ADLS)

- **Roll left and right-** The ability to roll from lying on back to left and right side and return to lying on back on the bed (see **Exhibits 42** and **43**).
- **Sit to lying-** The ability to move from sitting on side of bed to lying flat on the bed (see **Exhibits 44** and **45**).
- **Lying to sitting on side of bed-** The ability to safely move from lying on the back to sitting on the side of the bed with feet flat on the floor, and with no back support (see **Exhibits 46** and **47**).
- **Sit to stand-** The ability to safely come to a standing position from sitting in a chair or on the side of the bed (see **Exhibits 48** and **49**).
- **Chair/Bed-to-Chair Transfer -** The ability to safely transfer to and from a bed to a chair (see **Exhibits 50** and **51**).
- **Car transfer-** The ability to transfer in and out of a car or van on the passenger side. Does not include the ability to open/close door or fasten seat belt (see **Exhibits 52** and **53**).

The two ULTC 100.2 response items that establish whether the participant meets the LOC threshold (i.e., receiving a score of 2 rather than 1) are particularly problematic:

- **Scoring Option 1:** The client transfers safely without assistance most of the time but may need standby assistance for cueing or balance; occasional hands on assistance needed.
- **Scoring Option 2:** The client transfer requires standby or hands on assistance for safety; client may bear some weight.

Case managers had different interpretations regarding whether someone who only needed supervision should be scored as 1 or 2 and the response options could be read to support either interpretation.

The level of agreement between the FASI item and the individual transferring items range from 79% to 87%, with the highest level of agreement being with the chair/bed-to-chair transfer item using the supervision threshold (see **Exhibits 50** and **51**). After these tables a measure that compares the greatest level of impairment on any of the transferring items is presented.

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 42: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Roll Left & Right Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	64	17%	60	17%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	7	71%	7	29%
Partial/moderate assistance	4	75%	6	100%
Substantial/maximal assistance	2	100%	3	67%
Dependent	6	100%	7	100%
<b>Total</b>	<b>84</b>		<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	0		0	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 43: Breakdown of 100.2 and LOC Screen Scores Across Different Scenarios for LOC Roll Left & Right Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	83.10%	80.70%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	79.50%	84.30%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	15.79%	26.09%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	40.74%	37.04%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	8.33%	6.25%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	59.26%	44.44%



# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 44: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Sit to Lying Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	65	17%	60	15%
Age appropriate dependence	2	0%	2	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	5	100%	5	60%
Partial/moderate assistance	5	80%	6	83%
Substantial/maximal assistance	2	100%	5	80%
Dependent	4	100%	5	100%
<b>Total</b>	<b>83</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 45: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Sit to Lying Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	85.20%	84.00%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	79.00%	82.70%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	6.25%	19.05%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	42.31%	34.62%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	9.09%	12.50%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	61.54%	46.15%

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 46: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Lying to Sitting on Side of Bed Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	67	19%	59	15%
Age appropriate dependence	2	0%	1	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	2	100%	6	33%
Partial/moderate assistance	3	100%	6	83%
Substantial/maximal assistance	4	100%	5	100%
Dependent	4	100%	5	100%
<b>Total</b>	<b>82</b>		<b>82</b>	
<b>Total as % of all assessments</b>	<b>98%</b>		<b>98%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	2		2	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 47: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Lying to Sitting on Side of Bed Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	83.80%	82.70%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	81.20%	85.20%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	0.00%	22.73%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	50.00%	34.62%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	0.00%	6.25%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	57.69%	42.31%

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 48: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Sit to Stand Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	59	12%	50	8%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	1	100%	0	0%
Supervision or touching assistance	6	50%	13	39%
Partial/moderate assistance	4	75%	5	60%
Substantial/maximal assistance	8	100%	9	100%
Dependent	1	100%	2	100%
<b>Total</b>	<b>80</b>		<b>80</b>	
<b>Total as % of all assessments</b>	<b>95%</b>		<b>95%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	1		1	
Not applicable	3		3	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 49: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Sit to Stand Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	84.80%	82.30%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	84.80%	86.10%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	21.05%	34.48%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	34.78%	17.39%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	7.69%	12.50%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	47.83%	33.33%

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 50: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Chair/Bed-to-Chair Transfer Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	62	15%	56	11%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	0	0%	0	0%
Supervision or touching assistance	6	67%	8	63%
Partial/moderate assistance	3	100%	3	33%
Substantial/maximal assistance	6	50%	9	100%
Dependent	5	100%	6	100%
<b>Total</b>	<b>83</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 51: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Chair/Bed to Chair Transfer Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	86.60%	86.60%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	84.10%	84.10%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	11.11%	23.81%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	33.33%	22.22%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	0.00%	11.11%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	48.15%	40.74%

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 52: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Car Transfer Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	47	2%	42	10%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	1	17%	1	0%
Supervision or touching assistance	5	60%	9	33%
Partial/moderate assistance	11	83%	8	38%
Substantial/maximal assistance	7	50%	11	73%
Dependent	4	100%	5	80%
<b>Total</b>	<b>76</b>		<b>77</b>	
<b>Total as % of all assessments</b>	<b>90%</b>		<b>92%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	1		1	
Not applicable	7		6	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

**Exhibit 53: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Car Transfer Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	78.70%	75.00%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	80.00%	78.90%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	40.74%	45.45%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	23.81%	18.18%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	36.36%	37.50%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	33.33%	31.82%

**Exhibit 54** compares the binary ULTC 100.2 transferring item to the greatest level of impairment on any of the transferring items. Surprisingly, almost a tenth of the participants classified as being independent on all of the transferring items (4 individuals) were classified as exceeding the ULTC 100.2 threshold. Conversely, sizeable numbers of people needing hands-on assistance with one or more of the transferring items did not exceed the ULTC 100.2 threshold.

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 54: Comparison of the FASI Scores to the Binary ULTC 100.2 Item on the Item that Combines all the Transferring Items**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	45	9%	40	8%
Age appropriate dependence	0	0%	0	0%
Setup or Clean-up Assistance	1	0%	1	0%
Supervision or touching assistance	9	33%	11	18%
Partial/moderate assistance	10	40%	10	50%
Substantial/maximal assistance	8	88%	10	70%
Dependent	10	90%	11	91%
<b>Total</b>	<b>83</b>		<b>83</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>99%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		1	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

The level of agreement for these two items was relatively low (see **Exhibit 55**) with the greatest agreement using the FASI partial assistance or greater threshold. The ULTC 100.2 threshold was slightly more restrictive than the partial or higher threshold and substantially more restrictive than the supervision or higher threshold.

**Exhibit 55: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Highest Transfer Score Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	78.30%	74.70%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	81.90%	83.10%
% who score supervision or higher who do <b>not exceed ULTC 100.2</b>	37.84%	42.86%
% who exceed ULTC 100.2 who do <b>not score supervision or higher</b>	14.81%	11.11%
% who score partial assistance or higher who do <b>not exceed ULTC 100.2</b>	28.57%	29.03%
% who exceed ULTC 100.2 who do <b>not score partial assistance or higher</b>	25.93%	18.52%

## EATING

The following are the definitions for the eating items in the two tools:

- ULTC 100.2:** The ability to eat and drink using routine or adaptive utensils. This also includes the ability to cut, chew and swallow food. Note: if a person is fed via tube feedings or intravenously, check box 0 if they can do independently, or box 1, 2, or 3 if they require another person to assist.

# ACTIVITIES OF DAILY LIVING (ADLS)

- **FASI: Eating-** The ability to use suitable utensils to bring food to the mouth and swallow food once the meal is presented on a table/tray. This includes modified food consistency.

The major difference between the two items is that the ULTC 100.2 includes cutting and chewing food, while FASI would score someone who has difficulty with cutting and chewing based on their performance eating food that would not necessarily require chewing.

The definitions for the ULTC 100.2 also introduce variability into the scoring:

- **Scoring Option 1:** The client can feed self, chew and swallow foods but may need reminding to maintain adequate intake; may need food cut up; can feed self if food brought to them, with or without adaptive feeding equipment.
- **Scoring Option 2:** The client can feed self but needs line of sight standby assistance for frequent gagging, choking, swallowing difficulty; or aspiration resulting in the need for medical intervention. The client needs reminder/assistance with adaptive feeding equipment; or must be fed some or all food by mouth by another person.

A major challenge with scoring might be (1) whether the case manager assumes the participant does or does not use adaptive utensils when scoring the participant and (2) if the case manager scores based solely on the food the participant actually eats versus any type of food that could be eaten. For example, if a participant typically eats soft food and uses adaptive utensils to assist with grip, a case manager who scores based on the amount of difficulty eating a steak without the aid of any adaptive utensil would likely assign a different score than a case manager who scored based on the food the participant actually eats with the assistance of adaptive utensils that are typically used. Because of a lack of clarity in these definitions, case managers had different interpretations about whether to consider adaptive equipment when scoring an item and if and when standby assistance would justify a score of 1 versus 2.

Given these differences, the scoring of the ULTC 100.2 and FASI eating items is surprisingly consistent. The differences likely explain the few people who were scored as being independent or needing only setup or clean-up assistance who exceeded the ULTC 100.2 threshold (see **Exhibit 56**).

# ACTIVITIES OF DAILY LIVING (ADLS)

**Exhibit 56: Comparison of the FASI Scores to the Binary ULTC 100.2 Item for Eating Item**

FASI Codes	Usual		Most Dependent	
	Frequency	% Exceeding ULTC 100.2 Threshold	Frequency	% Exceeding ULTC 100.2 Threshold
Independent	58	5%	57	5%
Age appropriate dependence	1	0%	1	0%
Setup or Clean-up Assistance	7	29%	5	20%
Supervision or touching assistance	5	20%	6	17%
Partial/moderate assistance	2	100%	3	67%
Substantial/maximal assistance	6	100%	7	100%
Dependent	4	100%	3	100%
<b>Total</b>	<b>83</b>		<b>82</b>	
<b>Total as % of all assessments</b>	<b>99%</b>		<b>98%</b>	
<b>Not included:</b>				
Activity not attempted-refused	0		0	
Activity not attempted-health/safety	0		0	
Not applicable	1		2	
<b>Overall Total</b>	<b>84</b>		<b>84</b>	
<b>Overall Total as % of all assessments</b>	<b>100%</b>		<b>100%</b>	

The level of agreement when using binary measures of the two items was as high as 93% (see **Exhibit 57**). It was highest for the Usual Performance item using the FASI partial/moderate assistance or greater need threshold. However, when using the supervision or greater need threshold, disagreements went both ways. When there was a disagreement, it was typically that the person exceeded the ULTC 100.2 threshold, but not the FASI partial assistance threshold.

**Exhibit 57: Level of Agreement among Binary Summary ULTC 100.2 and FASI Measures for Eating Item**

Scenario	Usual	Most Dependent
Agreement - ULTC 100.2 and FASI supervision or greater need threshold	89.00%	87.70%
Agreement - ULTC 100.2 and FASI partial or greater need threshold	92.70%	92.60%
% who score supervision or higher who do <b>not</b> exceed ULTC 100.2	23.53%	31.58%
% who exceed ULTC 100.2 who do <b>not</b> score supervision or higher	27.78%	23.53%
% who score partial assistance or higher who do <b>not</b> exceed ULTC 100.2	0.00%	7.69%
% who exceed ULTC 100.2 who do <b>not</b> score partial assistance or higher	33.33%	29.41%



## Behaviors

The ULTC 100.2 has a single item that assesses the need for supervision due to a behavior issue that, if scored 2 or 3, classifies the participant as exceeding LOC:

- **ULTC 100.2 Definition-** The ability to engage in safe actions and interactions and refrain from unsafe actions and interactions (Note, consider the client's inability versus unwillingness to refrain from unsafe actions and interactions).
  - The following are the scoring responses for the items that score just below meeting LOC (1) or meeting LOC (2):
    - **Scoring Option 1:** The client exhibits some inappropriate behaviors but not resulting in injury to self, others and/or property. The client may require redirection. Minimal intervention is needed.
    - **Scoring Option 2:** The client exhibits inappropriate behaviors that put self, others or property at risk. The client frequently requires more than verbal redirection to interrupt inappropriate behaviors.
  - The following types of behavior are embedded in this item:
    - Danger to self
    - Danger to others
    - Causing deliberate property damage

In talking with case managers, it became clear that they often also included aggressive verbal behavior when scoring this item.
- **New Assessment Items-** Because the FASI does not contain measures that were comparable to this, these items were based on the State of Minnesota's assessment process, MnCHOICES. The following are the items chosen to replicate the ULTC 100.2 constructs:
  - **Injurious to Self-** Participant displays disruptive or dangerous behavioral symptoms not directed towards others, including self-injurious behaviors (e.g., hitting or scratching self, attempts to pull out IVs).
  - **Physically aggressive or combative-** Participant displays physical behavior symptoms directed toward others (e.g., hits, kicks, pushes, or punches others, throws objects, spitting).
  - **Verbally aggressive towards others** - Participant displays verbal behavioral symptoms directed towards others (e.g., yelling, screaming, threatening, cursing, excessive profanity, sexual references).
  - **Property destruction** - Participant engages in behavior, or would without an intervention, to intentionally disassemble, damage or destroy public or private property or possessions.

There are four scoring options for each behavior issue:

- No history and no concern about this behavior/Behavior is present but is consistent with chronological age

# BEHAVIORS

- Has history, no symptoms or interventions in past year, no concern about reoccurrence
- Has history, no symptoms or intervention in past year, case manager has concerns about re-occurrence
- Currently requires intervention and/or displays symptoms and behavior is not consistent with chronological age

The ULTC 100.2 item also factors in the type and frequency of intervention necessary to “interrupt” these behaviors. Therefore, additional information to be able to replicate this component of the criteria was collected. If “Currently requires intervention and/or displays symptoms and behavior is not consistent with chronological age” is selected, the following additional information is collected:

- Intervention type:
  - **Cueing/Verbal prompt** – Responds to simple verbal or gestural redirection
  - **Physical Prompts** – Responds to simple cueing using physical touch or leading
  - **Planned Intervention** – Requires a planned intervention approach using positive reinforcement, extensive supervision, restriction of rights (all settings), or other intervention to be carried out by staff or unpaid caregivers.
  - **Other, describe** – Requires other approaches
- Intervention frequency:
  - **Never** - Intervention is not needed
  - **Less than monthly to once per month** - Intervention occurs once per month or less. This option may also indicate that the behavior is intermittent and/or cyclical
  - **More than once per month and up to weekly** - Intervention occurs twice or more per month, up to once per week
  - **More than once per week and up to daily** - Intervention occurs twice or more per week, up to once per day
  - **2+ times per day (at least 5 days per week)** - Intervention occurs 2 or more times per day, at least 5 days per week

**Exhibits 58 through 73** provide the following information:

- The frequencies for each behavior and the percentage of people for each category meeting a binary version (i.e., does not exceed the threshold (score of 0 or 1) or exceeds the threshold (score of 2 or 3)) of the ULTC 100.2 behavior item (the first exhibit for each behavior).
- The level of agreement between a binary version of the new item in comparison to a binary version of the ULTC 100.2 item (the second exhibit for each behavior). Two versions are provided:
  - The first compares the binary ULTC 100.2 to a binary item that counts both “Has history, no symptoms or intervention in past year, case manager has concerns about

# BEHAVIORS

re-occurrence” and “Currently requires intervention and/or displays symptoms and behavior is not consistent with chronological age” as exceeding the threshold.

- The second compares the binary ULTC 100.2 to a binary item that counts only “Currently requires intervention and/or displays symptoms and behavior is not consistent with chronological age” as exceeding the threshold.
- The distributions of interventions taken to disrupt the behavior and how often these interventions are required (the third exhibit for each behavior).

## INJURIOUS TO SELF

**Exhibit 58: Comparison of the Injurious to Self Scores to the Binary ULTC 100.2 Behavior Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No history and no concern about this behavior	49	25%
Has history, no concern about reoccurrence	11	46%
Has history, case manager has concerns about re-occurrence	3	67%
Currently requires intervention and/or displays symptoms	21	91%
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 59: Summary Percent Agreement Between LOC Screen Behavior Cutoff Scores for Injurious to Self**

Scenario	%
% Agreement with ULTC 100.2 using cutoff of has history, no symptoms or intervention in past year, case manager has concerns about re-occurrence or currently requires intervention	76.20%
% Agreement with ULTC 100.2 using cutoff of currently requires intervention	75%

# BEHAVIORS

**Exhibit 60: Distribution for Intervention Types for Injurious to Self**

Intervention	Frequency	% for Intervention	% for Behavior
<b>Cueing</b>	<b>12</b>	<b>100%</b>	<b>57%</b>
Less than monthly to 1 per month	1	8%	5%
More than 1 per month to weekly	1	8%	5%
More than 1 per week up to daily	2	17%	10%
2+ time per day (at least 5 days/week)	8	67%	38%
<b>Physical Prompts</b>	<b>8</b>	<b>100%</b>	<b>38%</b>
Less than monthly to 1 per month	1	13%	5%
More than 1 per month to weekly	1	13%	5%
More than 1 per week up to daily	2	25%	10%
2+ time per day (at least 5 days/week)	4	50%	19%
<b>Planned intervention</b>	<b>15</b>	<b>100%</b>	<b>71%</b>
Less than monthly to 1 per month	2	13%	10%
More than 1 per month to weekly	2	13%	10%
More than 1 per week up to daily	3	20%	14%
2+ time per day (at least 5 days/week)	8	53%	38%
<b>Other</b>	<b>2</b>	<b>100%</b>	<b>10%</b>
Less than monthly to 1 per month	1	50%	5%
More than 1 per month to weekly	0	0%	0%
More than 1 per week up to daily	0	0%	0%
2+ time per day (at least 5 days/week)	1	50%	5%

## PHYSICALLY AGGRESSIVE OR COMBATIVE

**Exhibit 61: Comparison of the Physically Aggressive or Combative Scores to the Binary ULTC 100.2 /Behavior Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No history and no concern about this behavior	52	25%
Has history, no concern about reoccurrence	6	83%
Has history, case manager has concerns about re-occurrence	7	43%
Currently requires intervention and/or displays symptoms	19	90%
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 62: Summary Percent Agreement Between LOC Screen Behavior Cutoff Scores for Physically Aggressive or Combative**

Scenario	%
% Agreement with ULTC 100.2 using cutoff of has history, no symptoms or intervention in past year, case manager has concerns about re-occurrence or currently requires intervention	71.40%
% Agreement with ULTC 100.2 using cutoff of currently requires intervention	73%

# BEHAVIORS

**Exhibit 63: Distribution for Intervention Types for Physically Aggressive or Combative**

Intervention	Frequency	% for Intervention	% for Behavior
<b>Cueing</b>	15	100%	71%
Less than monthly to 1 per month	2	13%	11%
More than 1 per month to weekly	4	27%	21%
More than 1 per week up to daily	3	20%	16%
2+ time per day (at least 5 days/week)	6	40%	32%
<b>Physical Prompts</b>	9	100%	43%
Less than monthly to 1 per month	1	11%	5%
More than 1 per month to weekly	2	22%	11%
More than 1 per week up to daily	3	33%	16%
2+ time per day (at least 5 days/week)	3	33%	16%
<b>Planned intervention</b>	11	100%	52%
Less than monthly to 1 per month	0	0%	0%
More than 1 per month to weekly	1	9%	5%
More than 1 per week up to daily	5	45%	26%
2+ time per day (at least 5 days/week)	6	55%	32%
<b>Other</b>	2	100%	10%
Less than monthly to 1 per month	1	50%	5%
More than 1 per month to weekly	0	0%	0%
More than 1 per week up to daily	1	50%	5%
2+ time per day (at least 5 days/week)	0	0%	0%

## VERBALLY AGGRESSIVE TOWARDS OTHERS

**Exhibit 64: Comparison of the Verbally Aggressive Towards Others to the Binary ULTC 100.2 Behavior Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No history and no concern about this behavior	44	25%
Has history, no concern about reoccurrence	12	42%
Has history, case manager has concerns about re-occurrence	3	67%
Currently requires intervention and/or displays symptoms	25	80%
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 65: Summary Percent Agreement Between LOC Screen Behavior Cutoff Scores for Verbally Aggressive Towards Others**

Scenario	%
% Agreement with ULTC 100.2 using cutoff of Has history, no symptoms or intervention in past year, case manager has concerns about re-occurrence or currently requires intervention	73.80%
% Agreement with ULTC 100.2 using cutoff of currently requires intervention	73%

# BEHAVIORS

**Exhibit 66: Distribution for Intervention Types for Verbally Aggressive Towards Others**

Intervention	Frequency	% for Intervention	% for Behavior
<b>Cueing</b>	20	100%	71%
Less than monthly to 1 per month	4	20%	16%
More than 1 per month to weekly	4	20%	16%
More than 1 per week up to daily	6	30%	24%
2+ time per day (at least 5 days/week)	6	30%	24%
<b>Physical Prompts</b>	2	100%	43%
Less than monthly to 1 per month	0	0%	0%
More than 1 per month to weekly	0	0%	0%
More than 1 per week up to daily	2	100%	8%
2+ time per day (at least 5 days/week)	0	0%	0%
<b>Planned intervention</b>	12	100%	52%
Less than monthly to 1 per month	0	0%	0%
More than 1 per month to weekly	2	17%	8%
More than 1 per week up to daily	4	33%	16%
2+ time per day (at least 5 days/week)	6	50%	24%
<b>Other</b>	4	100%	10%
Less than monthly to 1 per month	0	0%	0%
More than 1 per month to weekly	1	25%	4%
More than 1 per week up to daily	3	75%	12%
2+ time per day (at least 5 days/week)	0	0%	0%

## PROPERTY DESTRUCTION

**Exhibit 67: Comparison of the Property Destruction Scores to the Binary ULTC 100.2 Behavior Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No history and no concern about this behavior	62	31%
Has history, no concern about reoccurrence	7	71%
Has history, case manager has concerns about re-occurrence	3	100%
Currently requires intervention and/or displays symptoms	12	92%
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 68: Summary Percent Agreement Between LOC Screen Behavior Cutoff Scores for Property Destruction**

Scenario	%
% Agreement with ULTC 100.2 using cutoff of has history, no symptoms or intervention in past year, case manager has concerns about re-occurrence or currently requires intervention	70.20%
% Agreement with ULTC 100.2 using cutoff of currently requires intervention	67%

# BEHAVIORS

**Exhibit 69: Distribution for Intervention Types for Property Destruction**

Intervention	Frequency	% for Intervention	% for Behavior
<b>Cueing</b>	9	100%	71%
Less than monthly to 1 per month	3	33%	25%
More than 1 per month to weekly	2	22%	17%
More than 1 per week up to daily	2	22%	17%
2+ time per day (at least 5 days/week)	2	22%	17%
<b>Physical Prompts</b>	3	100%	43%
Less than monthly to 1 per month	0	0%	0%
More than 1 per month to weekly	1	33%	8%
More than 1 per week up to daily	2	67%	17%
2+ time per day (at least 5 days/week)	0	0%	0%
<b>Planned intervention</b>	7	100%	52%
Less than monthly to 1 per month	1	14%	8%
More than 1 per month to weekly	1	14%	8%
More than 1 per week up to daily	3	43%	25%
2+ time per day (at least 5 days/week)	2	29%	17%
<b>Other</b>	2	100%	10%
Less than monthly to 1 per month	1	50%	5%
More than 1 per month to weekly	0	0%	0%
More than 1 per week up to daily	1	50%	5%
2+ time per day (at least 5 days/week)	0	0%	0%

## HIGHEST SCORE ACROSS BEHAVIOR ITEMS

**Exhibit 70** compares an item that takes the highest score for each participant on all the behavior items with the ULTC 100.2 threshold (2 or greater) for behavior. It was expected that no one who scored in one of the first two categories (No history and no concern about behavior or Has history, no concern about reoccurrence) would have exceeded the ULTC 100.2 threshold. However, one person with no history of any of the behavior problems (4%) and 13 people with a history, but no concern about the reoccurrence of any of the behaviors (31%), received a score on the ULTC 100.2 that was high enough to allow them to meet LOC solely based on this item.

Conversely, 18% of those who currently were requiring an intervention for one or more of these behaviors (7 individuals) did not exceed the ULTC 100.2 threshold. This may be due to the case manager perceiving the amount and type of intervention needed was not substantial enough exceed the ULTC 100.2 criterion.

# BEHAVIORS

**Exhibit 70: Comparison of the Highest Score Across all Behavior Items to the Binary ULTC 100.2 Behavior Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No history and no concern about this behavior	26	4%
Has history, no concern about reoccurrence	13	31%
Has history, case manager has concerns about reoccurrence	7	29%
Currently requires intervention and/or displays symptoms	38	82%
Total	84	
Total as % of all assessments	100%	

**Exhibit 71** presents the level of agreement between two different binary versions of the new behavior item shown in **Exhibit 70** with the binary version of the ULTC 100.2 behavior threshold (score of 2 or higher). The first new binary variable counts “has history, case manager has concerns about reoccurrence” and “currently requires intervention and/or displays symptoms” while the second version of the binary variable only considers “currently requires intervention and/or displays symptoms” as exceeding the threshold. The ULTC behavior item was a closer match when using a threshold that only included the “currently requires intervention and/or displays symptoms” category (83%) than when also including the “has history, case manager has concerns about reoccurrence” category (79.8%).

**Exhibit 71: Level of Agreement among Binary Summary ULTC 100.2 and Highest Score for New Assessment Measures for Behaviors**

Scenario	Usual
% Agreement with ULTC 100.2 using cutoff of Has history, no symptoms or intervention in past year, case manager has concerns about re-occurrence or currently requires intervention	79.8%
% Agreement with ULTC 100.2 using cutoff of currently requires intervention	83%
% who score as currently having behavior issue who do not exceed ULTC 100.2 behavior threshold	13%
% who exceed ULTC 100.2 behavior threshold who do not score as having a current behavior	27%
% who score as currently have or at-risk of having behavior issue who do not exceed ULTC 100.2 behavior threshold	18%
% who exceed ULTC 100.2 behavior threshold who do not score as having or being at-risk of having a current behavior	18%

27% of the people who exceed the ULTC 100.2 threshold were not scored as having any active behavior issues and an additional 18% of the people exceeding the ULTC 100.2 threshold were not even scored as being at risk of a behavior issue.

Conversely, 13% of participants who had an active behavior issue did not exceed the ULTC 100.2 behavior threshold and another 5% who were at risk of a behavior issue reoccurring did not exceed the ULTC 100.2 threshold.



# BEHAVIORS

## OCCURRENCE/REOCCURRENCE OF BEHAVIOR

The pilot also asked, “How likely is it that disruptive or dangerous behaviors would occur and/or escalate if services were withdrawn?” to act as another check to minimize the risk of removing essential services. **Exhibit 72** shows that a substantial number of people rated as being not at risk for the reoccurrence of a behavior exceeded the ULTC 100.2 threshold.

**Exhibit 72: Comparison of the Occurrence/Reoccurrence of Behavior Item to the Binary ULTC 100.2 Supervision/Behavior Threshold**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Behavior would almost certainly reoccur	21	71%
Very Likely	12	83%
Likely	9	44%
Unlikely	13	23%
Highly Unlikely	13	15%
Not Sure	6	33%
Not currently receiving services	10	20%

**Exhibit 73** shows how the criteria case managers used to determine how to code this item. This item was based mostly on the report of a proxy (67%, 56 individuals) or the participant (60%, 50 individuals). Case managers only reported using observation as the basis of this determination one-fifth of the time.

**Exhibit 73: Methods Used by Case managers to Code Whether Behavior Would Reoccur if Services were Withdrawn**

Scenario	Frequency	Percent
Observation	17	20%
Self-report	50	60%
Proxy	56	67%
% using just 1	50	60%
% using 2 approaches	29	35%
% using all 3	5	6%

# MEMORY AND COGNITION

## Memory and Cognition

The following tables summarize the 84 responses for the memory and cognition items that were obtained during the pilot. The following items were used for this comparison:

- **ULTC 100.2 Item:** The age appropriate ability to acquire and use information, reason, problem solve, complete tasks or communicate needs in order to care for oneself safely.
  - **Scoring Response 2:** The client requires consistent and ongoing reminding and assistance with planning or requires regular assistance with adjusting to both new and familiar routines, including regular monitoring and/or supervision, or is unable to make safe decisions, or cannot make his/her basic needs known.

The new assessment items begin with an item to determine if there are potential difficulties with memory and cognition (see **Exhibit 74**):

- **Difficulty with Memory & Cognition-** Does the participant have any difficulty with memory (e.g., retain relevant functional information), attention (e.g., ability to stay focused on task), problem solving, planning, organizing or judgment?

**Exhibit 74: Summary of the Frequency and Percent of Responses for Difficulty with Memory and Cognition Item**

Response Options	Frequency	%
Yes	72	86%
No	9	11%
Unknown	3	4%

For the purposes of pilot data collection, the follow-up items were asked of all individuals, regardless of the response to this item. The follow-up items include:

- **Memory-** Ability to retain relevant functional information, both short and long term (See **Exhibits 75-76**)
- **Attention-** Level of Impairment: Ability to stay focused on a task (See **Exhibits 77-78**)
- **Problem Solving -** Ability to discover, analyze, and address an issue with the objective of overcoming obstacles and finding a solution that best resolves the issue (See **Exhibits 79-80**)
- **Planning -** Ability to think about and arrange the activities required to achieve a desired goal (See **Exhibits 81-82**)

# MEMORY AND COGNITION

- **Judgment** - Ability to predict and anticipate outcomes based on information provided (See Exhibits 83-84)
- **Ability to make appropriate decisions**- Ability to make appropriate decisions regarding daily tasks, such as picking out an outfit, deciding when and what to eat, or selecting what to do throughout the day (See Exhibits 85-86)

## MEMORY

**Exhibit 75: Comparison of the Memory Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	11	82%
Age appropriate difficulty/dependence	2	100%
Mildly impaired: demonstrates some difficulty	29	45%
Moderately impaired: demonstrates marked difficulty	14	79%
Severely impaired: demonstrates extreme difficulty	13	100%
Impairment present, unable to determine degree of impairment	5	80%
Unable to answer	0	
Not applicable	10	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 76: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Memory Item**

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	64%
% Agreement with ULTC 100.2 using cutoff = severe	68%

# MEMORY AND COGNITION

## ATTENTION

**Exhibit 77: Comparison of the Attention Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	16	44%
Age appropriate difficulty/dependence	2	100%
Mildly impaired: demonstrates some difficulty	23	61%
Moderately impaired: demonstrates marked difficulty	18	89%
Severely impaired: demonstrates extreme difficulty	13	92%
Impairment present, unable to determine degree of impairment	2	50%
Unable to answer	0	
Not applicable	10	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 78: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Attention Item**

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	68%
% Agreement with ULTC 100.2 using cutoff = severe	61%

## PROBLEM SOLVING

**Exhibit 79: Comparison of the Problem-Solving Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	11	36%
Age appropriate difficulty/dependence	3	100%
Mildly impaired: demonstrates some difficulty	21	52%
Moderately impaired: demonstrates marked difficulty	13	77%
Severely impaired: demonstrates extreme difficulty	23	100%
Impairment present, unable to determine degree of impairment	2	50%
Unable to answer	0	
Not applicable	11	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

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**Exhibit 80: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Problem Solving Item**

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	68%
% Agreement with ULTC 100.2 using cutoff = severe	67%

## PLANNING

**Exhibit 81: Comparison of the Planning Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	12	82%
Age appropriate difficulty/dependence	3	100%
Mildly impaired: demonstrates some difficulty	21	57%
Moderately impaired: demonstrates marked difficulty	16	81%
Severely impaired: demonstrates extreme difficulty	16	100%
Impairment present, unable to determine degree of impairment	5	80%
Unable to answer	1	
Not applicable	10	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 82: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Planning Item**

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	63%
% Agreement with ULTC 100.2 using cutoff = severe	59%

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## JUDGMENT

**Exhibit 83: Comparison of the Judgment Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	11	18%
Age appropriate difficulty/dependence	3	100%
Mildly impaired: demonstrates some difficulty	20	55%
Moderately impaired: demonstrates marked difficulty	14	79%
Severely impaired: demonstrates extreme difficulty	23	100%
Impairment present, unable to determine degree of impairment	3	67%
Unable to answer	0	
Not applicable	1	
<b>Total</b>	<b>75</b>	
<b>Total as % of all assessments</b>	<b>89%</b>	

**Exhibit 84: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Judgment Item**

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	65%
% Agreement with ULTC 100.2 using cutoff = severe	63%

## DECISION MAKING

**Exhibit 85: Comparison of the Decision-Making Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	32	34%
Age appropriate difficulty/dependence	3	100%
Mildly impaired: demonstrates some difficulty	21	71%
Moderately impaired: demonstrates marked difficulty	12	92%
Severely impaired: demonstrates extreme difficulty	13	100%
Impairment present, unable to determine degree of impairment	1	0%
Unable to answer	0	
Not applicable	2	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

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## Exhibit 86: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Decision Making Item

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	63%
% Agreement with ULTC 100.2 using cutoff = severe	52%

### HIGHEST SCORE ACROSS MEMORY & COGNITION ITEMS

**Exhibit 82** compares an item that takes the highest score for each participant on all the cognition items with the ULTC 100.2 threshold (2 or greater) for cognition. It was expected that participants who score as moderately impaired or higher would exceed the ULTC 100.2 threshold.

More than one fourth of the people in the mildly impaired category (6 individuals) were scored as exceeding the ULTC 100.2 threshold. Conversely, more than a fourth who scored as being moderately impaired (5 individuals) and one person who scored as being severely impaired did not exceed this threshold.

## Exhibit 87: Comparison of the Highest Score across the Cognitive Items to the Binary ULTC 100.2 Memory & Cognition Item

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
No impairment	8	0%
Age appropriate difficulty/dependence	not included	
Mildly impaired: demonstrates some difficulty	22	27%
Moderately impaired: demonstrates marked difficulty	19	74%
Severely impaired: demonstrates extreme difficulty	33	97%
Impairment present, unable to determine degree of impairment	not included	
Unable to answer	not included	
Not applicable	2	
Total	84	
Total as % of all assessments	100%	

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**Exhibit 88** presents the level of agreement of this item when collapsed to a binary item with a binary version of the ULTC 100.2 cognition threshold (2 or higher). The ULTC cognition item was a closer match when using a threshold that of moderately impaired (85%) than severely impaired (74%).

## **Exhibit 88: Level of Agreement Among Binary Summary ULTC 100.2 and New Assessment Measure for Highest Score Across the Cognitive Items**

Scenario	%
% Agreement with ULTC 100.2 using cutoff = moderate	85.40%
% Agreement with ULTC 100.2 using cutoff = severe	74.40%
% who score as moderately impaired or higher who do not exceed ULTC 100.2 cognitive Threshold	11.54%
% who exceed ULTC 100.2 cognitive Threshold who do not score as having been moderately impaired or higher	11.54%
% who score as being severely impaired or higher who do not exceed ULTC 100.2 cognitive Threshold	3.03%
% who exceed ULTC 100.2 cognitive Threshold who do not score as being severely impaired or higher	38.46%

## LOCATION WHERE MEMORY & COGNITION IMPAIRMENTS OCCUR

If a participant exhibited impairment (excluding age appropriate difficulty/dependence) in any of the memory and cognition categories, case managers documented all the areas in which this difficulty was present. For example, a participant may not have issues with attention at home but become overwhelmed and be unable to focus his/her attention in the community because of a sensory processing issue.

**Exhibit 89** presents the results of this categorization across each of the memory and cognition categories. Community (60-68%, 50 to 57 individuals) and home (63-67%, 53 to 56 individuals) had the highest prevalence of impairment across the categories, while planning in school had the lowest prevalence (6%, 5 individuals).

## **Exhibit 89: Locations Where Impairment Occurs Across the Memory & Cognition Items**

ADL	Home	Work	School	Community
Memory	65%	8%	11%	67%
Attention	63%	10%	11%	60%
Problem Solving	67%	7%	12%	62%
Planning	63%	8%	6%	67%
Judgment	67%	8%	13%	68%

## ABILITY TO COMMUNICATE WITH FAMILIAR AND UNFAMILIAR INDIVIDUALS

There were two additional new items within the Memory & Cognition area to enhance the understanding of how participants express themselves with individuals they are familiar with, such as a family or regular support, and individuals they are not familiar with (see **Exhibits 90-91**):

- **Expressing Self with Familiar Individuals-** Participant's ability to express ideas or wants with individuals he/she is familiar with.



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- **Expressing Self with Unfamiliar Individuals-** Participant’s ability to express ideas or wants with individuals he/she is not familiar with.

**Exhibits 90 and 91** provide a comparison of these expression items. The number of individuals who were able to express complex messages without difficulty with individuals they were familiar with (36, 42%) was substantially larger than those who were able to express complex messages with individuals they were unfamiliar with (23, 26%).

Based on the language of the ULTC 100.2 scoring response two “Cannot make his/her basic needs known”, it was presumed that all individuals who frequently exhibit difficulty with expressing needs and ideas would exceed the LOC threshold. This was the case for individuals the participant is familiar with, however there were three individuals (17%) who had frequent difficulty expressing needs and ideas with individuals they were unfamiliar with who did not exceed the LOC threshold.

**Exhibit 90: Comparison of the Expressing Self with Familiar Individuals Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Expresses complex messages without difficulty.	36	42%
Age appropriate difficulty/dependence	3	75%
Exhibits some difficulty with expressing needs and ideas (e.g., some words or finishing thoughts).	22	64%
Frequently exhibits difficulty with expressing needs and ideas.	18	100%
Rarely/never expresses self.	3	100%
Unable to assess	1	
Unknown	0	
Not Applicable	1	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

**Exhibit 91: Comparison of the Expressing Self with Unfamiliar Individuals Item Scores to the Binary ULTC 100.2 Memory & Cognition Item**

Response Options	Frequency	% Exceeding ULTC 100.2 Threshold
Expresses complex messages without difficulty.	23	26%
Age appropriate difficulty/dependence	1	100%
Exhibits some difficulty with expressing needs and ideas (e.g., some words or finishing thoughts).	26	65%
Frequently exhibits difficulty with expressing needs and ideas.	18	83%
Rarely/never expresses self.	13	100%
Unable to assess	2	
Unknown	1	
<b>Total</b>	<b>84</b>	
<b>Total as % of all assessments</b>	<b>100%</b>	

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## USE OF OBSERVATION, SELF-REPORT, AND PROXY

**Exhibit 92** shows how the criteria case managers used to determine how to code the Memory and Cognition items. These items were based mostly on the report of a proxy (61-63%, 51-53 individuals) or the participant (46-56%, 39-47 individuals). Case managers only reported using observation more than one third of the time for the item on expressing ideas or needs with individuals the participant is familiar with (37%, 31).

**Exhibit 92: Methods Used by Case Managers to Code Memory & Cognition Items**

ADL	% Using Observation	% Using Self-Report	% Using Proxy
Memory	26%	50%	61%
Attention	32%	51%	61%
Problem Solving	20%	49%	62%
Planning	20%	46%	63%
Judgment	19%	48%	61%
Decision Making	24%	56%	63%
Expressing Self- Familiar With	37%	56%	62%
Expressing Self- Unfamiliar With	40%	56%	62%

# CONCLUSION

## Conclusion

The findings of this report highlight the differences between the ULTC 100.2 and the new assessment items. Although the new items were selected to capture data on similar constructs, changes were necessary to reflect best practices for reliability and validity, including using the FASI items wherever possible. The changes that result from this may impact eligibility.

Many of these differences are caused by the ULTC 100.2 training that instructs case managers to score participants' ability to perform tasks in the absence of any adaptive equipment. This is contrary to the approach taken by other LTSS assessment tools, which generally try to assess the amount of human support needed after accounting for the use of any adaptive equipment.

The findings highlight the fundamental flaws of the ULTC 100.2 and reinforce the need to change this tool. The findings also demonstrate how challenging it will be to replicate the LOC decisions using the ULTC 100.2 because of these flaws. These findings suggest that it will be especially important to pay attention to the following areas in the effort to replicate LOC:

- Mobility, notably the scoring of people who are independent with the use of equipment, such as a walker or cane.
- Eating, notably the scoring of people who only need assistance with cutting and chewing
- Behaviors, given that some people who were scored as exceeding the ULTC 100.2 behavior threshold did not appear to have any active behavior issue on the new items and others that had active issues on the new items were not scored as exceeding the ULTC 100.2 behavior threshold.

While there are substantial differences between the current and new tool, the scores agree in the vast majority of cases. Because Colorado's nursing facility LOC criteria includes multiple pathways for eligibility (i.e., 2 or more ADLs, Supervision, and/or Memory/Cognition), these differences may only have a minimal impact on the ability to replicate LOC while minimizing changes in eligibility. The next phase of the pilot will capture additional information and expand the total sample to over 500 participants. These data will be used to model the impact on eligibility, determine whether these differences in individual items impact eligibility, and determine what can be done to mitigate any impact.