The Memory & Attention Center

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Neuropsychological Evaluation

Re: **Daniel Kensmith Xample** Eval. Date: 06-21-2021
Date of Birth: 12-21-1948 Age: 72 yrs & 6 mos Sex: Male
Referred by: Dr. Mathew Pulicken

Referral Data and Problem Statement:

Mr. Daniel Kensmith is a 72-year-old white, married, retired male who was referred for a neuropsychological evaluation related to on-going memory problems that started two years ago. His wife, Mrs. Patricia Kensmith, accompanied him to this appointment. They both reported that Mr. Kensmith had difficulty with short-term memory with repeating himself and periods of confusion. He also has word retrieval problems, and he feels that his concentration is weak, and his mind sometimes goes blank. Within the last two months there has been a significant decrease in his skills. Mrs. Kensmith expressed frustration with the onset of her husband's decline and with his difficulties with his speech. He has significant trouble with answering questions. When he would answer, he would mix up words and the answer would not be what the question was asking. Mrs. Kensmith was adamant that it was because of his metformin, vitamin B levels, or his sleep apnea. There has been confusion with his driving. For example, he becomes confused with which roads to take, but instead of getting lost he takes a longer way. He is followed by his neurologist, Dr. Mathew Pulicken, due to these changes. Mr. Kensmith reported that the results from his MRI two months ago were normal.

Medically he has a history of type 2 diabetes, sleep apnea, benign prostatic hyperplasia, hyperlipidemia, vasodepressor syncope, and varicose veins. Daily medications include daily use of metformin 500 mg, atorvastatin 10 mg, tamsulosin 0.4 mg, vitamin D3, Vitamin B12, and Vitamin B6. He was prescribed donepezil 5 mg in February. Shortly after his first dose Mrs. Kensmith reported him becoming disoriented, and difficulty with eyesight that lasted for three hours. He did not seek medical treatment and his symptoms resolved. He denied any prior treatment by a psychiatrist or psychotherapist. He has not been in any substance abuse treatment. There is no history of head trauma or psychological trauma.

Mr. Kensmith is the middle child of eleven siblings, and he grew up in New Bedford. Eight of the siblings are still alive, with three of his sisters being deceased. One died from cancer at forty-four, one from a fall two years ago, and one from lung cancer at sixty-two. His father died when he was forty-seven from heart disease, and his mother died at eighty-eight from dementia. He and Mrs. Kensmith have been married for forty-five years. Together they have one adopted daughter and three grandchildren who live in Maine, and who they are close with. After high school he earned his bachelor's degree in elementary education at Bridgewater State University. He also received two master's degrees in special needs, and guidance counseling, and his CAGS certificate. He taught at Bridgewater State University for twenty years. In 2003 they moved to the Cape, and he became the Director of special needs and was an administrator for the Dennis-Yarmouth schools for eight years before retiring.

He is independent in all of his self-care (dressing, bathing, feeding, toileting, ambulating) and he is independent in his instrumental functioning (managing his finances, shopping, meal preparation, driving and medication management). He has been on the board for Dream Day Camp since 2008. He enjoys traveling, gardening, golf, and carpentry. He and Mrs. Kensmith are members of the Newcomers Club and they meet every month. At 6'2 and 185 lbs., he eats a pescatarian diet and drinks one cup of coffee daily. He has lost thirty pounds since last year with no explanation. He gets approximately four hours of sleep with trouble falling back asleep. Mrs. Kensmith is his health care proxy and power of attorney if warranted.

Tests & Procedures Used:

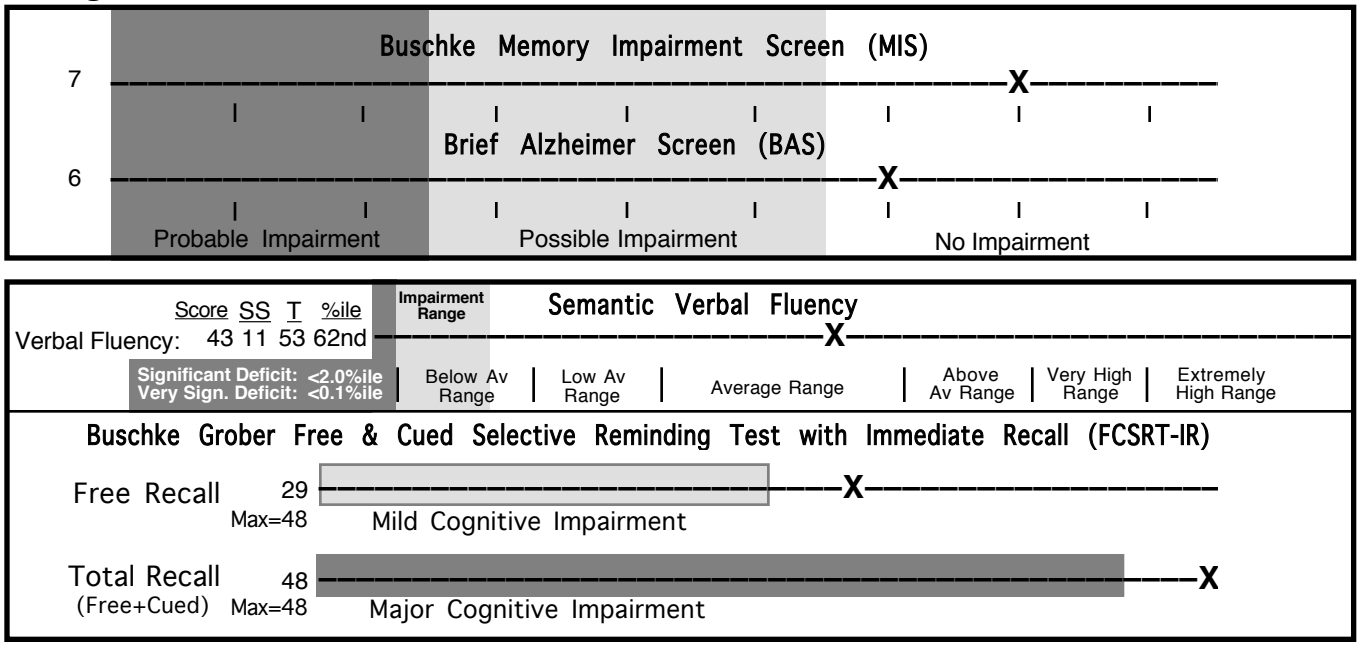
American National Adult Reading Test (AMNART); Basic Level of Assistance Needed (BLOAN) with Katz ADL criteria; Beck Anxiety Scale (BAI); Belle Browne Pain Scale; Brief Alzheimer Screen (BAS); CERAD modified Boston Naming Test; CERAD Word-List Memory (WLM); Clinical Dementia Rating (CDR) Scale; Clock Drawing; DSM5 Cross-Cutting Symptom Measure (CCSM); Elder Abuse Suspicion Index (EASI); Enhanced Cued Recall (ECR); Free & Cued Selective Reminding Test with Immed. Recall (FCSRT-IR); Generalized Anxiety Disorder Scale (GAD-7); Geriatric Depression Scale (GDS); Memory Impairment Screen (MIS); Metaphors, Reasoning & Long-term Recall; Mini-Mental State Examination (MMSE) with Crum norms; Patient Health Questionnaire (PHQ-9); PHQ Panic Syndrome Scale; PRIME MD-PHQ2; Rey Dot Counting Test (DCT); Rey Fifteen-Item Test (FIT); Semantic Verbal Fluency with race-controlled MOANS norms; Seven Item Instrumental ADL Test; and Word Fluency for 3 semantic categories.

Observations & Mental Status:

Mr. Kensmith is an average weight 72-year-old man with short white hair and glasses for reading. He presented with a well-balanced and stable gait. His fine-motor functioning was adequate for written and copying tasks and no tremor was noted. His speech was of normal tone, pace, and volume. He wore bilateral hearing aids, and he maintained consistent eye contact. Estimated premorbid intellectual functioning based on his ability to read aloud isolated words on the AMNART instrument fell in the Average range. This seems low in comparison to his educational achievement and employment levels. He was unable to read aloud words like "subtle, simile, sieve, algae, etc."

Mrs. Kensmith answered most of the questions during the interview, and Mr. Kensmith tried answering them to the best of his ability. During the interview Mr. Kensmith demonstrated noticeable difficulty with word retrieval. During the evaluation had confusion with questions and directions. He seemed to have problems with comprehension, and he made word-substitutions as he mixed up his sentences. Even so, throughout the evaluation he was pleasant, friendly, and he had appropriate affect. Overall, he was cooperative and attentive, and there was no indication of distractibility. Performance validity with the Rey 15-Item Test and Rey Dot Counting (DCT) indicated no evidence of suboptimal effort. The results that follow are presumed valid.

Neurocognitive Test Results:

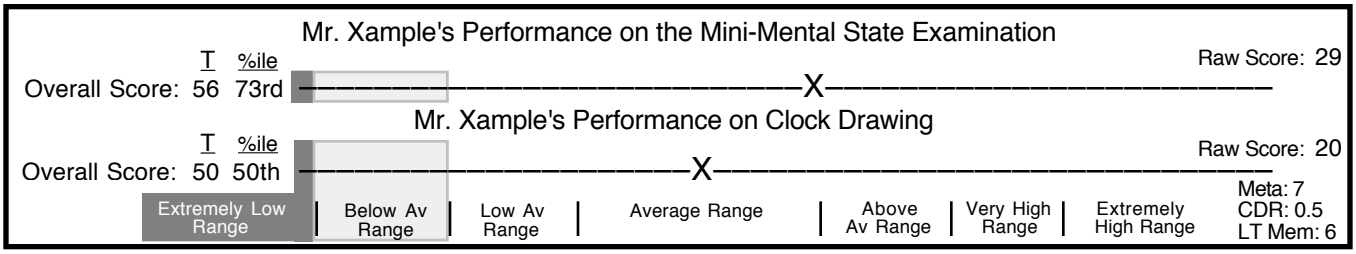


The Memory Impairment Screen was given to assess immediate recall for four visually presented words. His score was above the cut-off point indicating a probable Major Neurocognitive Disorder (NCD); however, there is still an 18% likelihood of a Major NCD, but the MIS is very brief measure. The Brief Alzheimer Screen (BAS) was done as a measure of verbal fluency, orientation, mental control and recall for verbally presented words. His results fell in the normal range. Based on the most discriminating BAS test items, Mendiondo et al. found this score to be 87% accurate; i.e., there is just a 13% chance of having a major NCD. BAS results were similar to MIS findings as they also fell in the normal range.

The Buschke and Grober Free & Cued Selective Reminding Testing with Immediate Recall (FCSRT-IR) was administered to evaluate for major neurocognitive disorder like Alzheimer's disease or vascular dementia. It is also useful in determining mild NCD, a precursor stage before dementia, which is often referred to as Mild Cognitive Impairment or MCI. Mr. Kensmith's Total Recall score was well above the cutoff indicative of dementia (see the dark bar in the chart above). A score in this range is nearly 100% accurate in ruling out a major neurocognitive disorder such as Alzheimer's dementia according to Grober et al. (1987). These results were fairly consistent with the MIS, BAS and MMSE (see next page).

DCT procedure after Lezak (1983) Neuropsy Assess with norms from Boone et al. (2002) Arch Clin Neuropsy, 17.
MIS procedure from Screening for dementia with the memory impairment screen (MIS) by Buschke et al. (1999), Neurology, 15; 52(2): 231-238.
BAS scoring based on Mendiondo et al. (2003), regression equation analysis of CERAD findings in J of Alz Dis, 5; 391-398.
Verbal Fluency norms based on the Mayo's Older Adult Normative Studies (MOANS).
FCSRT-IR procedure after Grober E et al. (1988), Neurology, 38:900-903–with materials provided by Dr. Grober
Grober E, Buschke H (1987). Genuine memory def in dementia. Dev Neuropsy-chol;3:13-16.

Neurocognitive Results, continued:



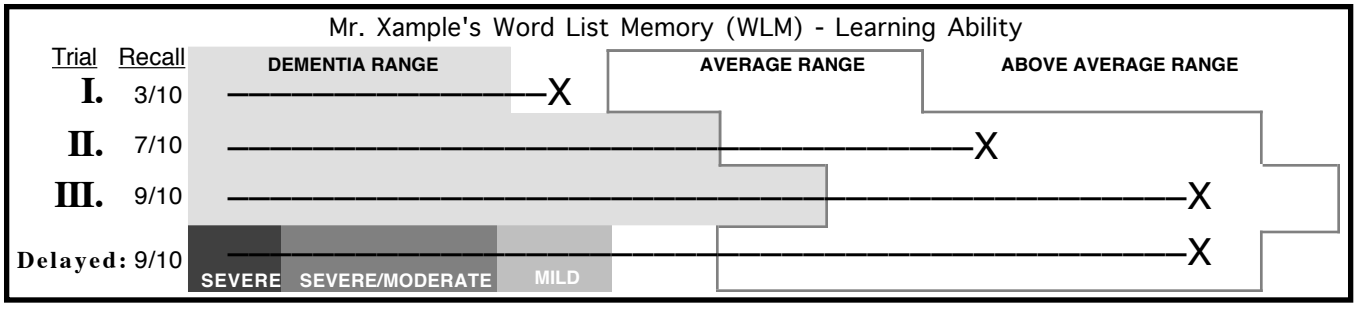
The MMSE was administered to assess general cognitive function. MMSE results fell within the average range (25th to 73rd percentile) as compared to people of the same age and educational background. A deficit was evident in reading. Expressive writing and visuo-construction skill on a copy task were intact.

Clock Drawing was administered; his results indicated average functioning suggesting good visual reasoning on this task. Poor capacity to interpret difficult proverbs was evident as only one out of the three proverbs tested was accurately solved. Ability to interpret simple proverbs was good for the two given. Simple abstraction tasks (solving word problems and determining similarities) indicated fair reasoning capacity. Recall for remote events (from the last 30 years) was good.

The Clinical Dementia Rating (CDR) scale was administered and indicated a daily functioning level within the range typically associated with expectations for mild cognitive difficulty. Mr. Kensmith demonstrated benign forgetfulness; and moderately impaired judgment and problem solving but typically intact social judgment.

Memory Testing:

Mr. Kensmith was asked to learn 10 words over three trials on the CERAD Word-List Memory (WLM). He was then asked to remember them after a delay. Three words were recalled on the first trial, seven words on the second, and nine words on the third and last trial.

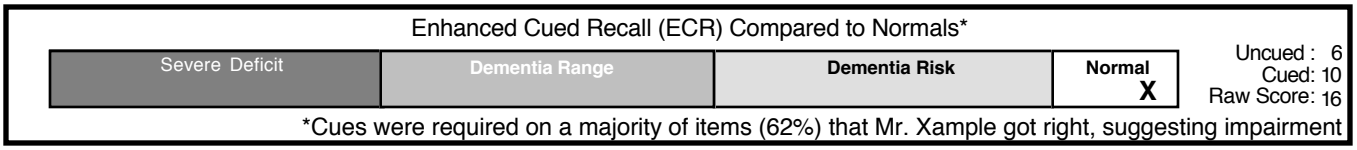


The WLM delayed recall test is the most sensitive test in the CERAD battery for dementia. Following a brief delay nine words were retained yielding a savings score of 100% from the third, or most recent, trial. Mr. Kensmith's WLM Delayed Recall was within the average range. This score determines normal individuals vs. patients with neurocognitive disorders with very high accuracy.

MMSE procedure after Folstein et al., 'Mini-Mental State': A prac method for grading the cog state of pts for the clin (1975), J of Psych Res, 12, 189-198. %iles based on 70 to 74 year olds in Crum et al., Population-based norms for the MMSE by age and educ level (1993). JAMA, 269, 2386-2391.
Clock Drawing Task-modified from Mendez M et al. (1992). Devel of scoring criteria for the Clock Drawing Task in AD. JAGS;40:1095-1099. Comp population aged from 51-84, with mean educ of 12 yrs.
WLM test from the CERAD neuropsych. battery. Norms after Welsh, K.A. et al, Detection and staging of dem in Alz's Dis. (1992). Arch of Neur, 49, 448-452. Mean age: 71, SD: 6 years.

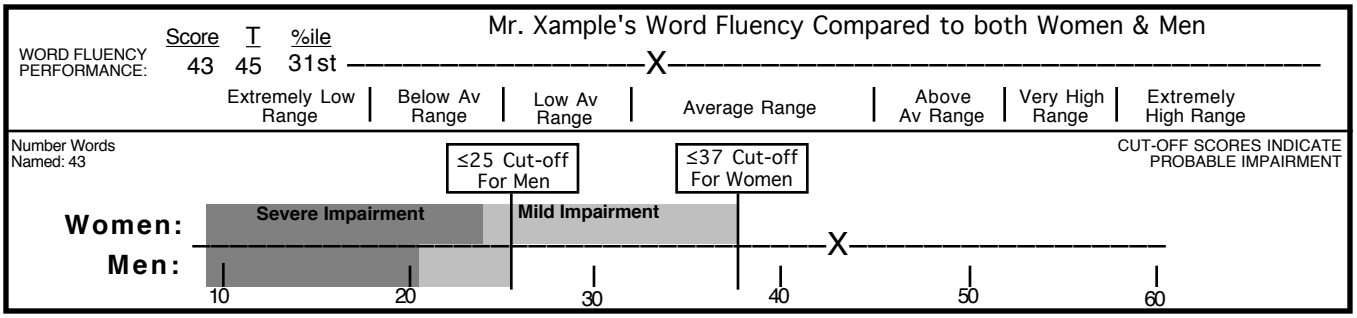
Memory Testing, continued:

Enhanced Cued Recall testing (ECR) was performed as a memory test for new learning of the names of 16 pictured objects, in free recall (uncued) and aided recall (cued) conditions. Mr. Kensmith freely recalled six test items. Cues were provided for the ten items he missed, and this helped his recall 100% of the time. His overall score fell within average expectations; this score correctly classifies normal performance about 90% of the time.

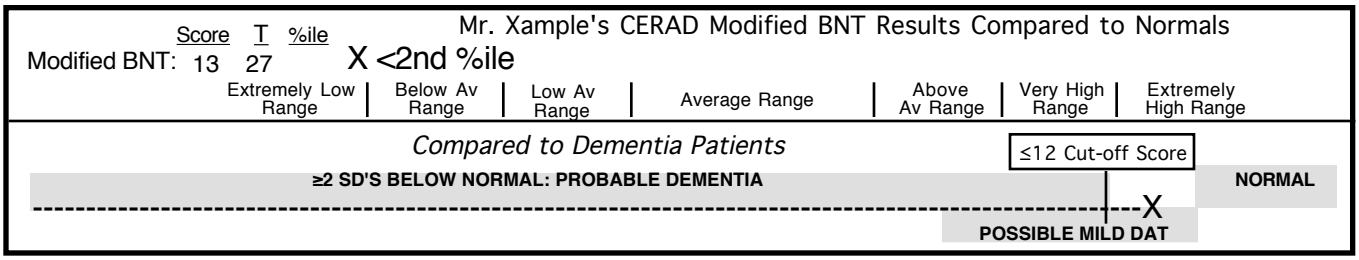


Language Measures:

Mr. Kensmith named as many animals, fruits and vegetables as possible within one minute per category on the Word Fluency measure. Word retrieval problems are frequently seen in dementia and other neurological conditions. A score this high indicates that Mr. Kensmith is very likely (92.5%) to be of normal cognitive ability.



The modified Boston Naming Test (BNT) was given as a measure of confrontation naming with Mr. Kensmith His capacity to name common objects on the BNT was low, but acceptable; scores this high are obtained only about 8% of the time by people with dementia.



Mr. Kensmith did well on Delayed Word List Memory, confrontation naming, and Word Fluency testing. These results would tend to rule out a dementing condition. His average cued recall also argues against dementia; however, he needed cues on most (62%) items to score this well. Learning was seen on just one of the three FCSRT-IR practice trials while better learning occurred over all three learning trials of the WLM.

Enhanced Cued Memory test method and norms by Solomon, P.R. et al., Arch. of Neur., 55, 349-355.
WF norms and proc. after Monsch, A.U. et al, Comp. of verbal fluency tasks in the detection of dem. of the Alz Type (1992). Arch. of Neur., 49, 1254.
Modified BNT procedure from the CERAD neuropsy. battery. Norms after Welsh K.A. et. al, Det and staging of dem in AD (1992). Arch. of Neur., 49, 448-452.
Mean age: 71, SD: 6 years.
Clock Drawing Task-modified from Mendez M et al. (1992). Devel of scoring criteria for the Clock Drawing Task in AD. JAGS;40:1095-1099. Comp population aged from 51-84, with mean educ of 12 yrs.
WLM test from the CERAD neuropsych. battery. Norms after Welsh, K.A. et al, Detection and staging of dem in Alz's Dis. (1992). Arch of Neur, 49, 448-452.
Mean age: 71, SD: 6 years.

Emotional Functioning, Pain & Activities of Daily Living:

Beck Depression Inventory–Not Administered

	S	T	%ile	Compared to Mental Health Outpatients	
Beck Depression Inventory-II					Significantly MORE Depressed Than Patients in MH Treatment
Geriatric Depression Scale*	3	44	27th	Extremely Low Range | Below Av Range | Low Av Range | Average Range | Above Av Range | Very High Range | Extremely High Range	Depressed Range; Max: 30
Beck Anxiety Inventory	0			Compared to Anxiety Patients in Treatment: Low | Moderate | High | Very High | Severe ->	Clinically Anxious; No Symptoms Reported; Max: 63

Twelve domains of psychiatric functioning were assessed with the DSM-5 Cross-Cutting Symptom Measure (CCSM). Problem areas involved three domains; i.e, mild mania, mild psychosis and moderate memory problems. Ten domains including; depression, anger, anxiety, somatic, self-harm, sleep, repetitive thinking/behaviors, dissociation, personality function and substance use showed no problems. The PHQ-9 indicated minimal depression based on indicators over the past two weeks. Results were consistent with the CCSM depression subtests.

Further evaluation with the GDS (see chart above) found results consistent with the PHQ-9.* His GDS results were below expectations for a person of his age as fewer depression indicators than normal were endorsed. Being generally satisfied with his life, being hopeful about the future, usually being in good spirits, feeling happy most of the time, believing it is wonderful to be alive and enjoyment in getting up each morning suggested a good deal of optimistic thinking on the GDS. Some insight was apparent as he reported trouble concentrating. Results on all depression measures were the same, suggesting findings are reliable. No past Major Depressive Episodes were reported within the past two years.

Testing with the GAD-7 found minimal signs of generalized anxiety. No symptoms reaching criteria for Generalized Anxiety Disorder were reported. CCSM findings supported this as there was little to no anxiety apparent. The Beck Anxiety Inventory was given to assess anxiety-related problems. Mr. Kensmith noted far fewer symptoms of anxiety on the BAI than typical for his sex and age. Nil insight, or denial, of even minor symptoms of anxiety is suggested. BAI results were below the level typical for patients receiving treatment for anxiety. In sum, no significant anxiety was apparent on the CCSM and GAD-7; which was consistent with the low level of anxiety seen on the BAI. Given lack of significant feelings of nervousness or uncontrollable worry, criteria for Generalized Anxiety Disorder (GAD) were not met. The PHQ Panic Syndrome Scale indicated no panic-like symptoms. Noticeable pain was described. Neurophysiological symptoms were not reported.

Activities of Daily Living (ADLs) data were reported by, wife. Mr. Kensmith functions independently in seven of seven basic ADL areas assessed with the BLOAN; i.e., he needs little or no assistance with bathing, dressing, toileting, transferring, continence, eating and ambulating safely. Mr. Kensmith appears fully independent for his basic activities of daily living (ADLs). The 7-item Instrumental Activities of Daily Living (IADL) Test indicated Mr. Kensmith is independent for finances, housekeeping, laundry, meal preparation, shopping, telephone use and transportation.

*GDS norms after Yesavage et al. (1983). Devel. and validation of a geriatric depr. scrning scale: A prelim. report. J. of Psych. Res., 17, 1, 37-49.

Diagnostic Impressions:
G31.84 Mild Vascular Neurocognitive Disorder
F98.5 Adult-Onset Fluency Disorder (Broca's Dysphasia)

Summary:

Mr. Daniel Kensmith is a 72-year-old white, married, retired male who was referred for a neuropsychological evaluation related to on-going cognitive problems that started two years ago. Upon assessment, Mr. Richards obtained scores on the cognitive tests that largely fell in the normal range. His FCSRT-IR total recall results were well above the cutoff indicative of dementia, and his free recall was above the cutoff for a mild cognitive impairment. His MMSE score fell within the average range. His WLM results fell within the below average range. His verbal fluency measure and his ECR score were within normal expectations. His BNT results were in the mild range suggesting some difficulty with word finding, but these results were above the cutoff for dementia. In short, there was no test evidence of a Major Neurocognitive Disorder.

Several different measures of mental health symptoms suggested the absence of symptoms of anxiety and depression. His GDS results were below expectations for a person of his age as fewer depression indicators than normal were reported. The GAD-7 indicated minimal signs of general anxiety. Overall, his distress did not fall within the criteria for a Depressive Disorder, or of a Generalized Anxiety Disorder. These data indicated that there was not a mental health disorder that was causing his problems with cognitive functioning. He may be engaging in some degree of denial as a means of coping with his diminishing abilities.

While the test data did not suggest problems with memory functioning, observations coupled with the report of his wife, both strongly suggested a new-onset focal disorder (expressive dysphasia marked by garbled speech) in his ability to articulate coherent sentences. As such he would appear have an expressive aphasia consistent with Broca's disorder. He was able to comprehend the directions and conversation, showing no evidence of receptive (Werniki's) aphasia. He was also able to repeat information spoken aloud to him, which rules out a Conduction Aphasia. As to etiology, while Mr. Kensmith recalled his MRI was normal there are other issues suggestive of vascular disease like vasodepressor sycope, faricose veins, hyperlipidemia and especially diabetes type 2. There is evidence of effect in other parts of the brain given emerging signs of confusion (while driving), mild dysnomia or word-finding problems and growing short-term memory difficulty (repeating himself) all of which appear progressive. Primary Progressive Aphasia is possible, but appears unlikely given his rather insidious and slow symptom evolution. Repeat evalauation can better assess etiology with retesting in a year from now.

Treatment Planning Recommendations:

- Information about these recommendations and more is available at our website: AgeSure.com.
- Preventive strategies should focus on vascular disease with a focus on maintaining low blood pressure (his varicose veins suggest there could be a physiological mechanism causing local hypertension in the lower legs) and keeping cholesterol levels in check. Most important would be close monitoring to control diabetes, which is a major risk factor for both vascular and Alzheimer's disease related neurocognitive disorder.
- Part of a preventive protocol should be sustained aerobic exercise elevating heart rate (stationary bike, brisk walking, water aerobics, etc.) for at least 150 minutes a week (20–60 minutes daily, five or more days/week).
- Consider a Mediterranean (or Paleo) diet with plenty of poly-unsaturated fats (like olive oil), fruits, bright colorful vegetables, legumes, whole grains and lean proteins as a preventive strategy for dementia.
- The above strategies can reduce dementia risk from both Alzheimer's disease as well as vascular causes.*
- OTC melatonin and night-time milk (a cup contains 100 mg of tryptohpan, which stimulates the pineal gland to make melatonin) helps sleep, if no help consider low dose trazodone, but use care as it can cause orthostatic hypotension, increasing fall risk. Good sleeping patterns/habits with adequate nightly sleep may significantly reduce dementia risk.
- Mr. Kensmith's good social interaction skills, independence, and friendly nature should be encouraged via social activities, supervised projects and trips, etc. Structured socialization would help stimulate and maintain his positive motivation, which will decrease confusion and memory problems.*
- Repeat neurocognitive assessment in about a year, or sooner if mental state changes or exacerbated/additional symptoms occur, is advised.*

*Consistent with the Amer. Acad. of Neurology MCI Guidelines, pub. in Neurology, 2018

Recommendations, continued:

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Billed under Dr. Eggleston for DOS–>06/21/21:
• 1 UNIT OF 96138 for 1st half-hour to prepare protocols (e.g., enter pt ID data), set up file, HCP supervision, test prep. & setup. Also,
Billed under Dr. Eggleston on DOS–>06/21/21:
• 9 UNITs OF 96139 for 3:00 hrs of technician time to procedure explanation, test administration, admin. questionnaires, record observations plus 80 min. of data encoding and scoring.
Place of Service: 11–> Lewis Bay Assts, 119 Cedar St, Hyannis, MA 02601Billed under Dr. Eggleston for DOS->06/21/21 for 60 min. of pre-testing activity:
• 1 UNIT OF 96132 for 1st hour (60 min.) of neuropsych. services primarily before the test session to clarify problem statement, check for prior testing, review med. records, plan the assessment, select tests & procedures, set up chart in advance of the appointment, start history writeup. And, finally,
• 2 UNITs OF 96133 for 2:00 hrs (max. billable is 2 units) spent post-testing on 06/21/21 integrating findings, interpreting, clinical decision making (diagnosing), report writing, making rec's/treatment planning, writing letters, advising on referral options, peer consultation/supervision.
Current medications (#130) were reviewed and documented in the patient report. Pain screening (#131) was negative, no follow-up plan was required. Depression screening tools (#134) included the; Patient Health Questionnaire (PHQ-9), PRIME MD-PHQ2, PRIME MD-PHQ2 and DSM5 Cross-Cutting Symptom Measure (CCSM).Depression screening was negative, so no follow-up plan was needed. Elder abuse screening (#181) was negative, so no follow-up was necessary.