

CHRONIC HEAD INJURY MEASURE OF PERFORMANCE

VERSION 8.0

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BRAINTRUST
PERFORMANCE SERVICES, LLC

A NOTE FROM DR. MATTHEW DODSON, OTR/L, FOUNDER OF BRAINTRUST PERFORMANCE
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Hello, and thank you for reviewing the administration manual for the Chronic Head Injury Measure of Performance (CHIMP), a semi-structured interview tool. I hope you will find the CHIMP to be a valuable resource in your daily practice, and I welcome any feedback you may have as you utilize it.

As a health care provider who has treated hundreds of clients with cognitive and emotional regulation deficits as a result of mild head injury, I have noticed several trends: 1) in today's medical model of care, there is poor appreciation of the impact that relatively mild cognitive and emotional regulation deficits can have on a person (particularly the kind that are not detected by standardized testing), and 2) there are extremely limited resources available to the clinician who wishes to effectively evaluate and treat a client with a mild head injury.

Over the last five years, I have developed the CHIMP to both increase the medical establishment's appreciation of the effects of mild head injury as well as to provide a resource for clinicians such as myself who work with this dynamic and challenging population. The approximately 55 questions in the CHIMP-Civilian and CHIMP-Military are spread across 12 different performance and participation categories which are commonly affected by mild head injury. You will grow accustomed to hearing comments such as, "You have really covered everything I'm having trouble with" or "How did you know that I was having difficulty with x?" when you use it to guide an interview with a client. To date, dozens of clinicians have been trained on and have utilized the CHIMP in the United States and Canada, and their feedback has been incorporated in this, the 8th revision of the tool.

Braintrust Performance Services, LLC, is a company with three missions:

- 1) To increase awareness of the effects of mild head injury across the spectrum of medical professions, health insurance companies, and the general public.
- 2) To provide clinical instruction and solutions to healthcare providers and healthcare systems about how to address the effects mild head injuries have on their clients.
- 3) To provide concierge evaluation and therapy services for cognitive and emotional deficits from head injury to high-level clients who are motivated to get "back to the way I used to be."

In keeping with these three goals, I have designed the CHIMP-Civilian and CHIMP-Military to be free of charge and accessible in the public domain. The cognitive, emotional, and financial costs of mild head injury are significant—the cost of this tool to you, the health care provider those clients are relying on, should not be.

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Appendix C: Epworth Sleepiness Scale (ESS)

Appendix D: Headache Disability Index (HDI)

Appendix E: COVD-QOL



INTRODUCTION

The Chronic Head Injury Measure of Performance (CHIMP) is a semi-structured interview tool intended to assist the therapy professional in identifying the totality of functional performance deficits commonly seen in individuals with chronic mild head injury. The CHIMP has alternate forms which have been designed to meet the measurement needs of two specific populations: the CHIMP-Civilian (CHIMP-C) is utilized with civilians with mild head injury from a variety of etiologies, and the CHIMP-Military (CHIMP-M) is utilized with service members with mild head injury who have had exposure to combat or other crises in the line of duty and have not yet transitioned to civilian life.

WHY IS THE CHIMP DIFFERENT?

The CHIMP differs from traditional measures of functioning after head injury in several ways:

- 1) It assesses the nuanced performance and participation deficits commonly seen in clients with specifically *mild* head injury. Many tools address moderate or severe head injury, but these tools traditionally do not capture the unique aspects of *mild* head injury.
- 2) It is intended to be administered in the sub-acute/chronic stages of injury (> 2 months post-injury), rather than earlier in the recovery process. This timing is critical because a mild head injury is a lived experience, which means that the deficits caused by mild head injury may only become obvious when an individual has returned to daily life.
- 3) It is a tool that can be used to guide an interview with a client with a mild head injury, or as a pre/post treatment measure to evaluate the effectiveness of the treatment intervention.

DEFINING MILD HEAD INJURY

Braintrust Performance Services utilizes the term “mild head injury” as a descriptor for a wide variety of diagnoses, injuries, and illnesses which can introduce chronic cognitive and emotional dysfunction into a client’s life. While the majority of current media attention and research on mild head injury is focused on mild *traumatic* brain injury (mTBI), or concussion, it is important to recognize that there are other injuries, illnesses, and medical treatments that can affect a client’s cognitive and emotional capacities. In addition to the vast majority of traumatic brain injuries being classified as mild, a large percentage of strokes are also considered mild in nature. Similarly, conditions such as “pump head” (a condition that affects clients who spend periods of time on heart/lung bypass machines during surgeries), “chemo brain” (the cognitive decline sometimes seen in chemotherapy patients), encephalitis, and demyelinating disorders such as multiple sclerosis can have chronic effects on higher level brain function. Additionally, some psychological diagnoses (e.g., depression, anxiety, post traumatic stress disorder, schizophrenia,



Asperger’s Syndrome) can also lead to chronic brain dysfunction that is more commonly associated with a frontal lobe injury, rather than a traditional mental health presentation. In short, the CHIMP-C and the CHIMP-M incorporate an approach that is considered functionally *inclusive* rather than diagnostically *exclusive*.

OVERVIEW OF THE CHIMP

Clinical practice has demonstrated that because of the lack of assessment tools able to identify deficits from mild head injury, often the best source of reliable information on how the injury has affected the client is the client him or herself. However, the difficulty with this approach is that most clinicians are not familiar with exactly how a mild head injury expresses itself in daily life, and therefore do not know what questions to ask to identify problem areas. The CHIMP is a semi-structured interview that identifies traditional functional deficits resulting from mild head injury. There is an optional measurement scale built in, should the clinician desire to capture changes in what the client perceives are his or her most significant deficits pre- and post-intervention.

The CHIMP is composed of approximately 55 questions that address 12 different performance categories which are known to be affected by mild head injury. These 12 performance categories are listed in Table 1 below.

PERFORMANCE CATEGORIES IN THE CHIMP	
Interpersonal Interactions	Cooking Safety/Performance
Meeting Job Demands	Driving Safety/Performance
Thinking Skills	Environmental Tolerance
Decision Making & Financial Management	Relationship Performance
General Occupational Engagement	Emotional Regulation
Engaging in Recreation/Entertainment	Client-Generated Responses

Table 1: The 12 Performance Categories in the CHIMP

Each of these 12 performance categories is investigated by 3 to 5 questions in the course of the administration of the CHIMP. The questions addressing each of these performance categories are in turn structured to elicit information at three different levels of performance: task, activity, and occupational role inquiries. A description of these three different levels of questions, and an explanation of why each level is necessary follows.

TASK LEVEL QUESTIONS

Description: An individual set of requirements for which competent performance must be demonstrated in order to accomplish more complex activities.



Rationale for inclusion in the CHIMP: If a client is unable to complete such critical tasks as “setting up your daily schedule” or “reading and retaining information related to daily work tasks,” the activity that is dependent on competent completion of those tasks—such as, “fulfilling your job’s cognitive demands”—may not be possible. Identification of task-level breakdowns allows for a targeted intervention addressing those component skills.

Examples in the CHIMP: “Concentrating for as long as you need to on something”; “making choices about small, relatively unimportant issues”; “effectively utilizing maps or GPS units when you drive.”

ACTIVITY LEVEL QUESTIONS

Description: A complex performance pattern made up of many tasks that must be accomplished in order to produce a desired functional outcome; competent performance of activities is an integral part of the successful engagement in an occupational role.

Rationale for inclusion in the CHIMP: Although a client may be able to complete all the tasks that make up an activity independent of one another, the ability to bundle all of those tasks together to execute that larger activity may be affected. For example, a client may be able to perform the tasks of “following a daily schedule” and “supporting and communicating with friends,” but completing those and other tasks at the same time to accomplish the activity of “engaging in recreational activities with others” may be problematic. In other words, many tasks make up an activity.

Examples in the CHIMP: “Tolerating busy restaurant or shopping environments”; “watching movies”; “following through or completing tasks or projects you start”.

OCCUPATIONAL ROLE LEVEL QUESTIONS

Description: A set of behaviors and capacities that enables an individual to integrate complex performance patterns in a goal-directed fashion. This integration of tasks and activities allows a person to accomplish larger roles which society expects of an individual.

Rationale for inclusion in the CHIMP: Occupational roles require successful combinations of a variety of activities (which in turn require competent task performance). Occupational roles are especially sensitive to breakdowns at the task and activity level, because so many activities have to effectively function together. Occupational roles commonly affected by mild head injury include those of worker, spouse, parent, and community member. In other words, many activities make up an occupational role.

Examples in the CHIMP: “Interacting with other people”; “performing your job”; “taking care of your children.”

ADMINISTRATION OF THE CHIMP

The clinician should orient the client to the overall intent of the session (determining how his or her injury or illness has affected daily life). The CHIMP should be given in a quiet space with minimal environmental distraction; efforts should also be made to make the client comfortable, since some clients may be sensitive to the questions covered in the later stages of the CHIMP. The clinician should ask the questions as guided by the CHIMP, and then fill out the CHIMP-C or CHIMP-M form with the client's responses. The CHIMP will take somewhere between 45 minutes to 75 minutes to complete, depending on how complex the client's presentation is.

SLEEP, HEADACHE, AND VISION QUESTIONS

Any interview or evaluation of an individual with a mild head injury should start by giving the client an opportunity to describe any difficulties he or she is currently experiencing with three of the most common physiological concerns associated with mild head injury: poor sleep, headaches, and vision impairments. Because any or all of these three factors can have a significant impact on component performance and engagement in tasks, activities, or occupational roles, it is imperative to complete a thorough investigation of these concerns. If it appears that any or all of these areas are problematic, the clinician is encouraged to complete independent questionnaires/investigations of these issues in addition to the CHIMP to establish the need for a referral to an appropriate medical specialist. In keeping with the public-domain philosophy of the CHIMP, the following gold standard resources have been identified to assist with determining whether a referral is appropriate.

Sleep Issues

Tool suggested: *Epworth Sleepiness Scale* (Appendix C)

Available at: <http://epworthsleepinessscale.com/>

Original literature source: Johns, M. (1991). A new method for measuring daytime sleepiness: The Epworth Sleepiness Scale. *Sleep*, 14(6): 540-545.

Consider referral if: "10-20% of the population will have scores over 10" (Johns, 2012).

Headache Issues

Tool suggested: Henry Ford Hospital Headache Disability Inventory (Appendix D)

Available at: <http://www.lilystcm.info/pdf/Head-ASHP.pdf>

Original literature source: Jacobson, G., Ramadan, N., Sandeep, A., and Newman, C. (1994). The Henry Ford Hospital Disability Inventory (HDI). *Neurology*, 44: 837-842.



Consider referral if: Functional or Emotional subscale averages are above 1.5 (clinical interpretation by BPS, LLC).

Vision Issues

Tool suggested: College of Optometrists in Vision Quality of Life Outcomes assessment (COVD-QOL) (Appendix E)

Available at: Harris, P., and Gormley, L. (2007). Changes in scores on the COVD Quality of Life Assessment before and after vision therapy: A multi-office study. *Journal of Behavioral Optometry*, 18, 43-47.

Original literature source: Mozlin, R. (1995). Quality-of-Life Outcomes Assessment. *Journal of Optometric Vision Development*, 26: 194-199.

Consider referral if: The total score is greater than 20 (Maples, 2000).

QUESTION SETS AND QUESTIONS

After inquiring if the client has any headache, sleep, or vision concerns and duly investigating those concerns, the clinician should ask the client the 15 question sets. Each question set begins with a global question: “Do you have any difficulty with x?” (phrasing for each question set has been provided on the response form to assist with communicating the intent of that question set with the client). If the client indicates that he or she does not have difficulty with the global question, that question set can be skipped and the clinician can move on to the next question set. If a client indicates yes to a global question, the “Y” should be circled, and each question in that set should then be asked. Space is provided for the clinician to record the client’s explanation of what his or her concerns are with each question. Some questions are allotted more space than others, as experience has shown that certain questions elicit more insight from clients than others. Figure 1 illustrates a sample question set filled out by a clinician during an interview.

Triage?	Question ("Do you have any difficulty with...")	YES	NO	
	"DO YOU HAVE ANY DIFFICULTY WITH SETTING UP/FOLLOWING A SCHEDULING OR BUDGETING YOUR MONEY? Y N" If yes...			
*	...setting up (not following) your daily schedule	X		<i>just can't get everything organized and end up getting nothing done</i>
	...following a schedule (once it has been established)		X	
	...following a budget/managing your money (any impulse buying?)		X	
	...paying bills on time	X		<i>forget ALL the time; used to take care of this for family, now spouse does it</i>

Figure 1: Sample Question Set as filled out by a clinician during an interview

Client-Generated Responses

In order to assure client-centered treatment planning it is imperative to ask the client if there is anything that was not covered in the questions that he or she feels is a concern. For this purpose, three blank question spaces are provided at the end of the question sets. Asking the client, “Are there any other concerns you have related to your daily function that we didn’t cover?” gives him or her the opportunity



to contribute personal concerns. For instance, specific concerns with neuromuscular dysfunction or handling criticism constructively are not included in the questions, but these may be points of significant concern to the client; the “client-generated responses” section provides the opportunity to investigate these other concerns. Figure 2 illustrates a sample client-generated response section as filled out by a clinician during an interview.

Triage?	Question ("Do you have any difficulty with...")	YES	NO
	Client-Generated Responses		
*	<i>Difficulty managing care for ill mother</i>	X	<i>mother with Alzheimer's currently lives with them; SIGNIFICANT stressor on top of caring for three children</i>
*	<i>Can no longer taste/smell</i>	X	<i>since accident can't taste/smell well; used to love to cook; kids now complain food she cooks tastes different</i>

Figure 2: Sample client-generated responses section as filled out by a clinician during an interview

Triage Process

It is likely that the client will emphasize difficulty with or spend more time discussing certain questions rather than others. There is a space on the left-hand column of the answer sheet titled “Triage?”; when one of the questions seems to be more problematic or meaningful to the client, it may be helpful to place a tic mark beside the question in this column to keep track of it. This allows the clinician to more easily identify the top concerns of the client, which are then compiled in the “Question Triage Worksheet” table in the back of the assessment. Upon completion of the interview portion of the CHIMP, it is customary to end up with 5-10 questions which have been “triaged” (or emphasized) by the client; these questions are then transferred and recorded by hand in the “Questions to be Triaged” table by the clinician.

Figure 3 illustrates a sample Question Triage Worksheet as completed by a clinician after all the questions sets have been asked and 10 questions have been triaged.

Question Triage Worksheet				
Triage Ranking (Assigned in Reverse Order by Client)	Question To be Triageed	Importance	Performance	Satisfaction
	<i>Fulfilling my job's cognitive demands, including leadership responsibilities</i>			
	<i>Remembering to do things in the future (appointments, errands)</i>			
	<i>Making choices about small, relatively unimportant issues (agenda for weekend)</i>			
	<i>Setting up my daily schedule</i>			
	<i>Reading and retaining information related to daily work tasks (e-mails)</i>			
	<i>Having enough energy for my day's activities</i>			
	<i>Communicating with my significant other</i>			
	<i>Supporting my children</i>			
	<i>Caring for my mother with Alzheimer's</i>			
	<i>Inability to smell/taste what I'm cooking</i>			
		Sum of Question Ratings		
		Number of Questions Rated		
		Average of I, P, and S Ratings (Sum/Total)		

Figure 3: Sample Question Triage Worksheet, as completed by clinician

Reverse Ordering

Once the questions that have been triaged are entered on the “Questions to be Triageed” table by the clinician, the table is then provided to the client and he or she is then asked to “reverse order” the questions in order of importance. The reverse ordering process is a technique that encourages the client to evaluate the list of triaged questions and identify, by working backwards, which questions the client is most interested in working on in therapy. In other words, if 10 questions have been triaged, the client is asked to first identify which of them is least important and label it with the number “10,” then find the next least important and label it with the number “9,” and so on, until left with the #1 concern he or she would like to address. Clinical experience has shown that addressing this process by stating:

“These are all issues that seem to be especially important to you, but now we’re going to figure out which of them is most important. I’d like you to start by indicating which of these is least important, and we’ll put the number 10 (or 7 or 5) by it, then find which is the next least important, and put a number 9 (or 6 or 4) by it.”

Figure 4 illustrates the first half of the reverse ordering process being completed by the client after his or her triaged questions have been identified by the clinician.

Question Triage Worksheet				
Triage Ranking (Assigned in Reverse Order by Client)	Question To be Triageed	Importance	Performance	Satisfaction
	<i>Fulfilling my job's cognitive demands, including leadership responsibilities</i>			
	<i>Remembering to do things in the future (appointments, errands)</i>			
9	<i>Making choices about small, relatively unimportant issues (agenda for weekend)</i>			
	<i>Setting up my daily schedule</i>			
8	<i>Reading and retaining information related to daily work tasks (e-mails)</i>			
	<i>Having enough energy for my day's activities</i>			
	<i>Communicating with my significant other</i>			
	<i>Supporting my children</i>			
	<i>Caring for my mother with Alzheimer's</i>			
10	<i>Inability to smell/taste what I'm cooking</i>			
		Sum of Question Ratings		
		Number of Questions Rated		
		Average of I, P, and S Ratings (Sum/Total)		

Figure 4: The first three reverse order rankings by the client, starting with #10, then #9, etc. (numbers in blue).

If the reverse ordering process proves to be too conceptually difficult to complete, the client can complete a traditional ranking procedure, starting with indicating the most important concern with the number “1.” If at all possible, however, it is recommended that the reverse ordering technique be utilized. This method of reverse ranking requires the client to thoroughly evaluate each question in relation to its importance to the other questions, and the resulting triaged list will give the clinician a thoroughly vetted client-centered list of concerns to address in rehabilitation.

Once the triage process is completed, the clinician and the client should have a concrete, prioritized list of concerns that can be utilized to construct a treatment plan. Figure 5 illustrates the completed reverse ordering process on a client’s Question Triage Worksheet.

Question Triage Worksheet				
Triage Ranking (Assigned in Reverse Order by Client)	Question To be Triageed	Importance	Performance	Satisfaction
4	<i>Fulfilling my job's cognitive demands, including leadership responsibilities</i>			
5	<i>Remembering to do things in the future (appointments, errands)</i>			
9	<i>Making choices about small, relatively unimportant issues (agenda for weekend)</i>			
6	<i>Setting up my daily schedule</i>			
8	<i>Reading and retaining information related to daily work tasks (e-mails)</i>			
7	<i>Having enough energy for my day's activities</i>			
1	<i>Communicating with my significant other</i>			
2	<i>Supporting my children</i>			
3	<i>Caring for my mother with Alzheimer's</i>			
10	<i>Inability to smell/taste what I'm cooking</i>			
		Sum of Question Ratings		
		Number of Questions Rated		
		Average of I, P, and S Ratings (Sum/Total)		

Figure 5: A client's completed Question Triage Worksheet after the reverse prioritization process.

UTILIZING THE CHIMP AS AN OUTCOME MEASURE

DEVELOPMENT OF THE CHIMP AS AN OUTCOME MEASURE

As this semi-structured clinical interview evolved from interactions with clients, the need to not only effectively identify common performance deficits but also to measure change over time in those deficits became apparent. To accomplish this, the questions and structure of the interview, Question Triage Worksheet, and reverse ordering technique were dovetailed with a 10-point interval rating scale focusing on three areas of the clients' own perceptions of: 1) how important a question is to him or her, 2) how well the client feels he or she performs that question, and 3) how satisfied he or she is with that performance. The rating scale of Importance/Performance/Satisfaction categories utilizes the same scoring rubric as the Canadian Occupational Performance Measure, one of the most widely recognized tools from the last 20 years for identifying and establishing client-centered goals (Law et al., 1990).

ADMINISTERING THE CHIMP AS AN OUTCOME MEASURE

The Importance, Performance, and Satisfaction rating guide, with its 1-10 scale printed on it, is provided to the client to guide their answer choices. (Figure 6 illustrates the Importance/Performance/Satisfaction guide). The clinician, who keeps the completed Question Triage Worksheet, asks the client the importance of each question to him or her, his or her impressions of how well they perform that question,

and how satisfied they are with that performance. The numeric ratings given by the client for each question are then recorded by the clinician on the Question Triage worksheet in the appropriate spaces. It has been found that phrasing each question in the manner “What’s the importance of...to you?”, “How well do you feel you perform...”?, and “How satisfied are you with your current performance?” will engender the most accurate responses on the part of the client.

IMPORTANCE									
1	2	3	4	5	6	7	8	9	10
Not Important at All					Extremely Important				
PERFORMANCE									
1	2	3	4	5	6	7	8	9	10
Extremely Poor/Cannot Do					Do Extremely Well				
SATISFACTION									
1	2	3	4	5	6	7	8	9	10
Not Satisfied at All					Extremely Satisfied				

Figure 6: The Importance/Performance/Satisfaction guide, given to clients after completion of reverse ordering process of the Question Triage Worksheet

At the bottom of the Questions to be Triage table is a space to record the averages for Importance, Performance, and Satisfaction rating of all triaged questions. These averages can be attained through simple mathematics (total sum of scores divided by total number of scores), and the resulting data can be used to track overall progress of the client in their recovery. ***As with the Canadian Occupational Performance Measure, a change score of 2 points is considered to be a clinically significant change.*** Figure 7 illustrates a completed Question Triage Worksheet with Importance, Satisfaction, and Performance scores *pre-treatment*. Figure 8 illustrates a completed Question Triage Worksheet *post-treatment*, indicating the effect of the clinician’s intervention.

Question Triage Worksheet					
Triage Ranking (Assigned in Reverse Order by Client)	Question To be Triageed	Importance	Performance	Satisfaction	
4	<i>Fulfilling my job's cognitive demands, including leadership responsibilities</i>	8	5	3	
5	<i>Remembering to do things in the future (appointments, errands)</i>	10	2	2	
9	<i>Making choices about small, relatively unimportant issues (agenda for weekend)</i>	5	5	5	
6	<i>Setting up my daily schedule</i>	9	3	3	
8	<i>Reading and retaining information related to daily work tasks (e-mails)</i>	8	5	5	
7	<i>Having enough energy for my day's activities</i>	8	3	2	
1	<i>Communicating with my significant other</i>	10	4	2	
2	<i>Supporting my children</i>	10	3	1	
3	<i>Caring for my mother with Alzheimer's</i>	10	3	2	
10	<i>Inability to smell/taste what I'm cooking</i>	5	1	5	
		Sum of Question Ratings	83	34	30
		Number of Questions Rated	10	10	10
		Average of I, P, and S Ratings (Sum/Total)	8.3	3.4	3

Figure 7: Completed Question Triage Worksheet with I/P/S scores pre-treatment, establishing baseline levels of Importance, Performance, and Satisfaction of the triaged questions.

Question Triage Worksheet					
Triage Ranking (Assigned in Reverse Order by Client)	Question To be Triageed	Importance	Performance	Satisfaction	
4	<i>Fulfilling my job's cognitive demands, including leadership responsibilities</i>	8	8	7	
5	<i>Remembering to do things in the future (appointments, errands)</i>	10	8	8	
9	<i>Making choices about small, relatively unimportant issues (agenda for weekend)</i>	5	7	10	
6	<i>Setting up my daily schedule</i>	9	9	9	
8	<i>Reading and retaining information related to daily work tasks (e-mails)</i>	8	8	8	
7	<i>Having enough energy for my day's activities</i>	8	7	5	
1	<i>Communicating with my significant other</i>	10	8	9	
2	<i>Supporting my children</i>	10	7	7	
3	<i>Caring for my mother with Alzheimer's</i>	10	6	8	
10	<i>Inability to smell/taste what I'm cooking</i>	5	1	10	
		Sum of Question Ratings	83	69	81
		Number of Questions Rated	10	10	10
		Average of I, P, and S Ratings (Sum/Total)	8.3	6.9	8.1

Figure 8: Completed Question Triage Worksheet with I/P/S scores post-treatment, showing significant improvements in the client's performance and satisfaction with their performance in the triaged areas of concern.

INTERPRETATION

The CHIMP is intended to inform the clinician of the client's impression of his or her own strengths and weaknesses, rather than to place him or her into an overall performance category. The information gained can then be utilized to structure a truly client-centered treatment plan, emphasizing the areas the client wishes to and limiting the amount of (potentially ineffective) time spent addressing non-client centered goals. Currently no normative data is available for either version of the CHIMP.

Clinical experience has shown the CHIMP to have high face validity with this population, and its high content validity has been supported by professionals familiar with this population who have administered the tool. The scoring rubric of the Importance/Performance/Satisfaction interval scales has been shown to be extremely robust when utilized by the Canadian Occupational Performance Measure, and appears to maintain many of these clinical strengths through its use in the CHIMP. However, to date there is no data collected establishing these or other validity/reliability data.

CONCLUSION

The CHIMP-C and the CHIMP-M represent an effort to efficiently identify the most common deficits associated with chronic mild head injury, and its structure guides an initial interview with a client with a mild head injury. Although to date there is no reliability or validity data that has been collected for it, the CHIMP has been shown to be a useful outcome measure clinically. Braintrust Performance Services, LLC, offers the Chronic Head Injury Measure of Performance as a tool to the clinician to assist this underserved population.

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Chronic Head Injury Measure of Performance - Civilian (version 8.0)



Name:

Date:

Time:

"DO YOU HAVE ANY PROBLEMS WITH YOUR SLEEP? Y N" If yes, describe...

*if indicated, administer the Epworth Sleepiness Scale (ESS)

"DO YOU HAVE ANY PROBLEMS WITH HEADACHES? Y N" If yes, describe...

*If indicated, administer the Henry Ford Hospital Headache Disability Inventory (HDI)

"DO YOU HAVE ANY PROBLEMS WITH YOUR VISION? Y N" If yes, describe...

*If necessary, administer the College of Optometrists in Vision Development Quality of Life (COVD-QOL)

Triage?	Question ("Do you have any difficulty with...")	YES	NO
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"DO YOU HAVE ANY DIFFICULTY INTERACTING WITH OTHER PEOPLE? Y N" If yes...

...interacting appropriately with workplace superiors			
...interacting appropriately with workplace peers			
...interacting appropriately with workplace subordinates			
...interacting appropriately with strangers			

"DO YOU HAVE ANY DIFFICULTY PERFORMING YOUR JOB? Y N" If yes...

...fulfilling your job's physical demands			
...fulfilling your job's cognitive demands, including leadership responsibilities			

"DO YOU HAVE ANY DIFFICULTY WITH YOUR THINKING SKILLS? Y N" If yes...

...being able to organize information			
...doing more than one thing at a time (multitasking)			
...concentrating as long you need to on something			
...resisting environmental distractions (noises or movements)			
...resisting internal distractions (thoughts/feelings/ideas)			
...following through or completing tasks or projects you start			
...remembering to do things in the future (appointments, errands)			
...remembering to get everything you need on your grocery list			
...remembering to take everything you need when you leave the house			
...having good time management skills (being on time, not losing track of time)			

"DO YOU HAVE ANY DIFFICULTY MAKING DECISIONS? Y N" If yes...

...effectively prioritizing tasks			
...making choices about large, important issues (large purchases, life decisions)			
...making choices about small, relatively unimportant issues (agenda, food menus)			

"DO YOU HAVE ANY DIFFICULTY WITH SETTING UP/FOLLOWING A SCHEDULING OR BUDGETING YOUR MONEY? Y N" If yes...

...setting up (not following) your daily schedule			
...following a schedule (once it has been established)			
...following a budget/managing your money (any impulse buying?)			
...paying bills on time			

Triage?	Question ("Do you have any difficulty with...")	YES	NO
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"DO YOU HAVE ANY DIFFICULTY WITH READING/RETAINING INFORMATION? Y N" If yes...

...reading and retaining information in books or novels			
...reading and retaining information related to daily work tasks (e-mails/manuals)			
...reading and retaining information for education/professional advancement			
...reading and retaining information from a computer screen (versus in print)			

"THESE ARE QUESTIONS ABOUT A VARIETY OF DIFFERENT THINGS YOU MAY FIND IMPORTANT..."

Do you have enough energy for your day's activities?			
Do you have difficulty following instructions when you take medication?			
Can you effectively care for your pet (feeding, walking, grooming)?			
Are you meeting your spiritual/religious needs?			
Are your sexual intimacy needs being met (both interest and performance)?			
Are you able to enjoy things you used to enjoy?			

"IS THERE ANY DIFFERENCE IN YOUR RECREATIONAL ACTIVITIES? Y N" if yes...

...engaging in recreational activities <i>by yourself</i> (games, hunting, reading, art, etc.)			
...engaging in recreational activities <i>with others</i> (including your family and friends)			

"DO YOU HAVE ANY DIFFICULTY WATCHING TV/MOVIES? Y N" If yes...

...watching sports			
...watching TV sitcoms or shows			
...watching movies			

"DO YOU HAVE ANY DIFFICULTY WITH COOKING? Y N" If yes...

...cooking in a safe manner (burning food, leaving the stove on)			
...producing a good outcome when cooking			

"DO YOU HAVE ANY DIFFICULTY WITH DRIVING? Y N" If yes...

...driving safely/receiving traffic tickets			
...managing roadrage or anxiety while driving			
...remembering how to get places you've driven to before <i>without</i> using a GPS			
...effectively utilizing maps or GPS units when you drive			

Triage?	Question ("Do you have any difficulty with...")	YES	NO
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"DO YOU HAVE ANY DIFFICULTY BEING IN BUSY OR CROWDED SETTINGS? Y N" If yes...

	...successfully tolerating restaurant or shopping environments		
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"DO YOU COMMUNICATE AS EFFECTIVELY NOW WITH YOUR LOVED ONES OR FRIENDS? Y N" If yes...

	...supporting and communicating with your significant other		
	...supporting and communicating with your friends		

"DO YOU HAVE ANY DIFFICULTY TAKING CARE OF YOUR CHILDREN NOW? Y N" If yes...

	...supporting and communicating with your children		
	...being safe in your childcare responsibilities		
	...being effective at disciplining your children		
	...being effective at advocating for your children (in school, community issues)		

"DO YOU EXPERIENCE EMOTIONS DIFFERENTLY NOW, ESPECIALLY FRUSTRATION? Y N" If yes...

	...how you respond to sad or depressing situations		
	...how you respond to situations that make you feel anxious		
	...how you respond to irritating or frustrating situations		

Client-Generated Responses

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Question Triage Worksheet

Triage Ranking (Assigned in Reverse Order by Client)	Question To be Triageed	Importance	Performance	Satisfaction
Sum of Question Ratings .				
Number of Questions Rated .				
Average of I, P, and S Ratings (Sum/Total)				

IMPORTANCE

1 2 3 4 5 6 7 8 9 10

Not Important at All

Extremely Important

PERFORMANCE

1 2 3 4 5 6 7 8 9 10

Extremely Poor/Cannot Do

Do Extremely Well

SATISFACTION

1 2 3 4 5 6 7 8 9 10

Not Satisfied at All

Extremely Satisfied

Chronic Head Injury Measure of Performance - Military (version 8.0)



Name:

Date:

Time:

"DO YOU HAVE ANY PROBLEMS WITH YOUR SLEEP? Y N" If yes, describe...

*if indicated, administer the Epworth Sleepiness Scale (ESS)

"DO YOU HAVE ANY PROBLEMS WITH HEADACHES? Y N" If yes, describe...

*If indicated, administer the Henry Ford Hospital Headache Disability Inventory (HDI)

"DO YOU HAVE ANY PROBLEMS WITH YOUR VISION? Y N" If yes, describe...

*If necessary, administer the College of Optometrists in Vision Development Quality of Life (COVD-QOL)

Triage?	Question ("Do you have any difficulty with...")	YES	NO
---------	---	-----	----

"DO YOU HAVE ANY DIFFICULTY INTERACTING WITH OTHER PEOPLE? Y N" If yes...

...interacting appropriately with military superiors			
...interacting appropriately with military peers			
...interacting appropriately with military subordinates			
...interacting appropriately with strangers/civilians			

"DO YOU HAVE ANY DIFFICULTY PERFORMING YOUR JOB? Y N" If yes...

...fulfilling the physical demands of your MOS			
...fulfilling the leadership responsibilities of your MOS			
...fulfilling the cognitive demands of your MOS			

"DO YOU HAVE ANY DIFFICULTY WITH YOUR THINKING SKILLS? Y N" If yes...

...being able to organize information			
...doing more than one thing at a time (multitasking)			
...concentrating as long you need to on something			
...resisting environmental distractions (noises or movements)			
...resisting internal distractions (thoughts/feelings/ideas)			
...following through or completing tasks or projects you start			
...remembering to do things in the future (appointments, errands)			
...remembering to get everything you need on your grocery list			
...remembering to take everything you need when you leave the house			
...having good time management skills (being on time, not losing track of time)			

"DO YOU HAVE ANY DIFFICULTY MAKING DECISIONS? Y N" If yes...

...effectively prioritizing tasks			
...making choices about large, important issues (large purchases, life decisions)			
...making choices about small, relatively unimportant issues (agenda, food menus)			

"DO YOU HAVE ANY DIFFICULTY WITH SETTING UP/FOLLOWING A SCHEDULING OR BUDGETING YOUR MONEY? Y N" If yes...

...setting up (not following) your daily schedule			
...following a schedule (once it has been established)			
...following a budget/managing your money (any impulse buying?)			
...paying bills on time			

Triage?	Question ("Do you have any difficulty with...")	YES	NO
---------	---	-----	----

"DO YOU HAVE ANY DIFFICULTY WITH READING/RETAINING INFORMATION? Y N" If yes...

...reading and retaining information in books or novels			
...reading and retaining information related to daily work tasks (e-mails/manuals)			
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Can you effectively care for your pet (feeding, walking, grooming)?			
Are you meeting your spiritual/religious needs?			
Are your sexual intimacy needs being met (both interest and performance)?			
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...engaging in recreational activities <i>by yourself</i> (games, hunting, reading, art, etc.)			
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"DO YOU HAVE ANY DIFFICULTY WITH COOKING? Y N" If yes...

...cooking in a safe manner (burning food, leaving the stove on)			
...producing a good outcome when cooking			

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...driving safely/receiving traffic tickets			
...managing roadrage or anxiety while driving			
...remembering how to get places you've driven to before <i>without</i> using a GPS			
...effectively utilizing maps or GPS units when you drive			

Triage?	Question ("Do you have any difficulty with...")	YES	NO
---------	---	-----	----

"DO YOU HAVE ANY DIFFICULTY BEING IN BUSY OR CROWDED SETTINGS? Y N" If yes...

<input type="checkbox"/>	...successfully tolerating restaurant environments	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...successfully tolerating busy shopping environments	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...successfully tolerating concert or sporting event environments	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...successfully tolerating movie theater environments	<input type="checkbox"/>	<input type="checkbox"/>	

"DO YOU COMMUNICATE AS EFFECTIVELY NOW WITH YOUR LOVED ONES OR FRIENDS? Y N" If yes...

<input type="checkbox"/>	...supporting and communicating with your significant other	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...supporting and communicating with your friends	<input type="checkbox"/>	<input type="checkbox"/>	

"DO YOU HAVE ANY DIFFICULTY TAKING CARE OF YOUR CHILDREN NOW? Y N" If yes...

<input type="checkbox"/>	...supporting and communicating with your children	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...being safe in your childcare responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...being effective at disciplining your children	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...being effective at advocating for your children (in school, community issues)	<input type="checkbox"/>	<input type="checkbox"/>	

"DO YOU EXPERIENCE EMOTIONS DIFFERENTLY NOW, ESPECIALLY FRUSTRATION? Y N" If yes...

<input type="checkbox"/>	...how you respond to sad or depressing situations	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...how you respond to situations that make you feel anxious	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	...how you respond to irritating or frustrating situations	<input type="checkbox"/>	<input type="checkbox"/>	

Client-Generated Responses

<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
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<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
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<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
--------------------------	--	--------------------------	--------------------------	--

IMPORTANCE

1 2 3 4 5 6 7 8 9 10

Not Important at All

Extremely Important

PERFORMANCE

1 2 3 4 5 6 7 8 9 10

Extremely Poor/Cannot Do

Do Extremely Well

SATISFACTION

1 2 3 4 5 6 7 8 9 10

Not Satisfied at All

Extremely Satisfied

APPENDIX C: EPWORTH SLEEPINESS SCALE

Name: _____ Today's Date: _____

Your age (yrs): _____ Your sex (Male = M, Female = F): _____

How likely are you to doze off or fall asleep in the following situations, in contrast to just feeling tired?

This refers to your usual way of life in recent times.

Even if you haven't done some of these things recently, try to work out how they would have affected you.

Use the following scale to choose the **most appropriate number** for each situation:

0 = would **never** doze

1 = **slight chance** of dozing

2 = **moderate chance** of dozing

3 = **high chance** of dozing

It is important that you answer each question as best you can.

Situation	Chance of Dozing (0-3)
Sitting and reading	
Watching TV	
Sitting, inactive in a public place (e.g., a theatre or a meeting)	
As a passenger in a car for an hour without a break	
Lying down to rest in the afternoon when circumstances permit	
Sitting and talking to someone	
Sitting quietly after a lunch without alcohol	
In a car, while stopped for a few minutes in the traffic	

Adapted from <http://epworthsleepinessscale.com/>. The ESS was first published in 1991 (Murray, W. J. A new method for measuring daytime sleepiness: the Epworth Sleepiness Scale. *Sleep*, 1991; 14 (6): 540-545.). The questionnaire was subsequently modified slightly in 1997 to include the above content.

APPENDIX D: HEADACHE DISABILITY INDEX

Name: _____ **Date:** _____ **Age:** _____ **Scores Total** _____; E _____; F _____
(100) (52) (48)

Instructions: Please *circle* the correct response:

1. I have headache: (1) 1 per month (2) more but less than 4 per month (3) more than one per week
2. My headache is: (1) mild (2) moderate (3) severe

Instructions: *Please read carefully.* The purpose of the scale is to identify difficulties that you may be experiencing because of your headache. Please check off Yes, Sometimes, or No to each item. Answer each question as it pertains to your headache only.

	DIFFICULTIES	YES	SOMETIMES	NO
E1	Because of my headaches I feel handicapped	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F2	Because of my headaches I feel restricted in performing my routine daily activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E3	No one understands the effect my headaches have on my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F4	I restrict my recreational activities (e.g., sports, hobbies) because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E5	My headaches make me angry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E6	Sometimes I feel that I am going to lose control because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F7	Because of my headaches, I am less likely to socialize	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E8	My spouse (significant other), or family and friends have no idea what I am going through because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E9	My headaches are so bad that I feel I am going to go insane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E10	My outlook on the world is affected by my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E11	I am afraid to go outside when I feel that a headache is starting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E12	I feel desperate because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F13	I am concerned that I am paying penalties at work or at home because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E14	My headaches place stress on my relationship with family or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F15	I avoid being around people when I have a headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F16	I believe my headaches are making it difficult for me to achieve my goals in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F17	I am unable to think clearly because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F18	I get tense (e.g., muscle tension) because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F19	I do not enjoy social gatherings because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E20	I feel irritable because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F21	I avoid traveling because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E22	My headaches make me feel confused	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E23	My headaches make me feel frustrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F24	I find it difficult to read because of my headaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F25	I find it difficult to focus my attention away from my headaches and on other things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Jacobson, G.P., Ramadan, N.M., et al. The Henry Ford Hospital headache disability inventory (HDI). Neurology 1994; 44:837-842.

SCORING METHOD FOR HENRY FORD HOSPITAL

HEADACHE DISABILITY INVENTORY

E = Emotionally based questions (#'s 1, 3, 5, 6, 8, 9, 10, 11, 12, 14, 20, 22, 23)

F = Functionally based questions (#'s 2, 4, 7, 13, 15, 16, 17, 18, 19, 21, 24, 25)

Score Values

Yes = 4 points

Sometimes = 2 points

No = 0 points

FINAL SCORES

Emotional = total sum of columns for the “E” questions above / Pt’s total (13x4 = 42) or,
Patient’s Score (E questions) / Pt total score

Functional = total sum of columns for the “F” questions above / Pt’s total (12x4 = 48) or,
Patient’s Score (F questions) / Pt total score

And/or . . .

Total composite score = total sum of columns for the “F” questions above / total possible (12x4 = 48) or, **Patient’s Score (E + F questions) / 100**

APPENDIX E: MODIFIED SAMPLE COVD – QOL FORM

Date:		0	1	2	3	4
		Never	Seldom	Occasionally	Frequently	Always
1	I have blurred vision when looking at near objects					
2	I have double vision (seeing two objects rather than one)					
3	I have headaches with near work.					
4	Words run together when I read					
5	My eyes burn, itch, and water					
6	I fall asleep when I read					
7	I see worse at the end of the day					
8	I skip or repeat lines when reading					
9	I feel dizzy or sick to my stomach with near work					
10	I tilt my head or cover an eye when reading					
11	I have difficulty copying from the chalkboard					
12	I avoid reading and near work					
13	I leave out small words when reading					
14	I write uphill or downhill (my handwriting tends to slant up or down)					
15	Columns of numbers appear misaligned					
16	I don't understand what I read					
17	I am poor in sports					
18	I hold my reading very close					
19	I have trouble keeping attention on reading					
20	I have difficulty completing assignments on time					
21	I often say, "I can't" before trying					
22	I avoid sports and games					
23	I have poor hand/eye coordination					
24	I do not judge distance accurately					
25	I am clumsy					
26	I do not use my time well					
27	I do not do well figuring out change (money)					
28	I lose papers and belongings					
29	I have trouble with car/motion sickness					
30	I am forgetful with a poor memory					

Adapted from: Harris, P., and Gormley, L. (2007). Changes in scores on the COVD Quality of Life Assessment before and after vision therapy: A multi-office study. *Journal of Behavioral Optometry*, 18, 43-47.