

## Generalist's Resource to Integrate Driving (GRID)

**Introduction:** The **Generalist's Resource to Integrate Driving (GRID)** is a resource for general practice occupational therapy practitioner to integrate driving into their practice. The *GRID* is a tool designed to provide specific guidelines for generalists to evaluate, create and implement intervention plans to develop or restore the client's valued IADL of driving and community mobility.

**Rationale:** In order to facilitate social participation, community mobility is key! Since driving is the most common type of community mobility in the United States, it is critical to address this IADL directly and consistently. As with any client factor, the generalist occupational therapist may need to refer to a specialist for additional guidance or direct intervention. This document assists the generalist with the screening process, scores and considerations when referring to an occupational therapist who has expertise (a specialist) in driving rehabilitation (OT-DRS).

**Aim of the GRID:** This guide uses a wide range of scores for the "yellow" or referral category. This ensures a client has the optimal opportunity to be evaluated by the expert OT-DRS using evidence from more specialized assessments as well as their expert experience. The OT-DRS can then offer the best clinical decision with less risk of over or under restriction of driving. The *GRID* is **designed for generalists to determine the need for further evaluation and/or implementation, not for the generalist to make a licensing decision.**

**Components of the GRID:** This guide is based on the framework of the OT-DRIVE model<sup>1</sup> and the occupational therapist user should have a sufficient understanding of the rationale of this model before using the **GRID**.

- The first column lists *client factors* which include the major factors to consider when screening or assessing for driver fitness. These are not all of the possible client factors, but specific ones that are most relevant (e.g., seizures, crashes) and/or most commonly related to driver fitness (e.g., visual skills, cognitive) and most likely to be available to a generalist occupational therapist.
- The contextual factors for most of the client factors offers relevant and specific information that must be considered for each client factor when determining the level of risk for driving.
- Finally, the last three columns indicate the "scores" for determining whether to refer to the OT-DRS for evaluation for driving or provide intervention. Some boxes do not have a color or score, because there are no specific screening tools to gain a score OR it is a factor that the occupational therapist needs to use their own clinical judgement to determine. While there is a list of multiple assessment tools, not all need to be completed, however, it is important to address all of the seven major (bolded) client factors.

### DIRECTIONS

1. Complete appropriate screening tools and assessments.
2. Screening assessment outcomes should be used to combination with any other clinical evidence the therapist has gathered, especially occupation-based assessment to gain a holistic view and understanding of the client's risk.
3. Use the chart to categorize the performance of each client factor (e.g. strength, acuity, Trails Making Tests) into the red, green or yellow category.

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<sup>1</sup> Schold Davis, E. & Dickerson, A.E. (July 24, 2017). OT-DRIVE: Integrating the IADL of driving and community mobility into routine practice. *OT Practice*, 22, 8-14.

- Carefully read and consider the *contextual section* and *use clinical judgment* to incorporate knowledge of the client’s performance from observed ADLs and IADLs.
4. Finally, consider the overall presentation of the client.
- Clients who score only in the green category indicate low driving risk. This information should be shared with the referring physician and team and the client offered education.
  - Clients with mixed performance (e.g., some green, yellow, and/or red) may indicate some risk and should be referred to an OT-DRS.
  - Clients who score predominately in the red category indicate severe driving risk and are recommended for driving retirement and/or intervention for community mobility. Also consider the client’s potential for driving. If there is potential in the future (i.e., a move to “yellow”), the client should be informed, and an intervention plan developed.
  - If the client has aphasia, call or refer to the OT-DRS, as most screening tools are based on intact language skills.
  - For clients who are scheduled for discharge, but still have potential for improvement, refer the client to the OT-DRS with the communication that they will be appropriate for an evaluation at a future date.

**Decision Basis of the Cut Off Scores:** The screening scores used for differentiating green, yellow and red are based on the three pillars of evidence-based medicine: 1) research evidence for each screening tool listed (references available), 2) expertise of occupational therapists with significant driving rehabilitation experience, and 3) the clear understanding that driving is a highly valued activity of clients and there is different degrees of risk in diverse contexts.

**Background:** Appropriate range of scores, or “cut off” scores, for individual screening and assessment tools are typically derived from empirical research on the assessment tool over multiple studies. The strongest evidence is provided when the assessment tool has been used with **diverse** sample populations and the analysis includes sensitivity and specificity offering a full range of cut off scores with their rate of true positives and true negatives. In other words, acceptable score ranges can be adjusted to determine those with a potential problem (wider range) or only those individuals with a very severe problem (narrow range).

In addition, many research studies that develop cut off scores are based on a particular population (e.g., dementia) and therefore, may not be valid for other populations (e.g., stroke, traumatic brain injury). Thus, when using a specific range of scores (cut points), understanding the population upon which the evidence is based is critical when applied to another diagnosis.

Finally, cut off scores are typically based on the concept that a particular score indicates whether the individual is “likely” to pass or fail a driving outcome. The score ranges used in the GRID are designed to indicate that the individual “likely” needs further or specialized evaluation, not for making a licensing decision. However, for those individuals with client factors that are clearly in the **red**, best practice is to provide occupational therapy interventions to meet the client’s community mobility needs by means other than driving to ensure continued social participation. Per the OT-DRIVE model, these clients do not need a referral to a driving specialist unless other factors come into play (e.g. client or family specifically request the full comprehensive driving evaluation, required by licensing authorities). However, it is important to also consider *potential to drive*. While the client may be red today, do they have the potential to improve and be yellow in the future? In this case, the generalist should educate the client and/or family about referral to an OT-DRS in the future.

*Development: Dickerson, A.E., Cassidy, T., and Touchinsky, S. (2020).*

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Client Factors	Contextual Factors	GREEN	YELLOW: Refer	RED
<b>Medical</b>				
Seizures	Most states have strict criteria for seizures.	<input type="checkbox"/> Controlled	<input type="checkbox"/> Other medical concerns	<input type="checkbox"/> Uncontrolled or recent.
Diabetes Control	Some states have criteria.	Decision to refer based on outcomes from screening on physical, vision, sensation and cognition		<input type="checkbox"/> Uncontrolled &/or poor insight or compliance
Neurological Status	Consider whether condition is progressive, nonprogressive, stable, remediable.			
<b>Falls</b>	Flag: Multiple falls.			
<b>Crashes</b>	Flag: At-fault crash; multiple minor crashes.			
<b>Insight</b>	Recognition of deficits and how they affect their driving risk.		If refer to DRS, share information about level of insight.	
<b>Physical Skills</b>				
Strength ROM	Impaired physical capabilities alone should not prevent anyone from being referred. Individuals who have difficulty understanding the instructions for completing these physical screens should be evaluated primarily on cognition for driving risk.	<input type="checkbox"/> Within functional limits	<input type="checkbox"/> Impairment that may impact driving.	<input type="checkbox"/> Unable to follow directions
Sensation		<input type="checkbox"/> No problems	<input type="checkbox"/> Impaired sensation either foot	
Rapid Pace Walk		<input type="checkbox"/> 5.0 - 7.9 seconds	<input type="checkbox"/> 8 or more seconds	
Brake Reaction		<input type="checkbox"/> 0.35 - 0.65 seconds	<input type="checkbox"/> 0.66 - 1.0 seconds	
<b>Visual Skills</b>		State Vision Requirements dictate RED		
Distance Acuity	Acuity is a criterion for driving at all state licensing agencies, but the measure varies between states. If outside of state legal limits, send to a vision specialist for evaluation.	<input type="checkbox"/> 20/10 to 20/40 acuity.	<input type="checkbox"/> 20/50 to 20/70	<input type="checkbox"/> Vision clearly impacting any ADL/IADL safety issues
Visual fields	Some states have visual field criteria, if outside legal limits, send for a vision specialist evaluation <b>before</b> a driving evaluation.	<input type="checkbox"/> Full visual fields	<input type="checkbox"/> Questionable visual fields.	<input type="checkbox"/> Obvious neglect or field cut
<b>Cognitive / Perceptual Skills</b>				
AMPS	Occupational performance measure, weigh motor and process scores based on diagnosis. Must be certified rater.	<input type="checkbox"/> Motor 2.0 - 4.0 Process 1.3 - 4.0	Motor -2.0 to 1.9 and Process 1.0 and up <b>OR</b> Motor 2.0+ and Process is 0.9 - 1.2	<input type="checkbox"/> Process 0.8 or below
Trail Making A	Always do the Trails A example first. Time includes cueing for mistakes.	<input type="checkbox"/> 0-39 seconds without errors.	<input type="checkbox"/> Completed and taking over 40 seconds with or with mistakes.	<input type="checkbox"/> Unable to complete
Trail Making B	Trails A and Trails B example should be completed. Time includes cueing for mistakes. Stop after 5 minutes.	<input type="checkbox"/> 0-90 seconds (with or without corrections)	<input type="checkbox"/> Between 1.5 - 3.5 min (with or without corrections)	<input type="checkbox"/> Any time over 3.5 minutes with/out corrections; or cannot complete
Clock drawing	This clock drawing should follow the directions and scoring from the CADrES from <i>AGS Clinician's Guide</i> (Version 3 or 4).	<input type="checkbox"/> 0-1 errors	<input type="checkbox"/> 2-5 errors	<input type="checkbox"/> Obvious distortion with missing elements
BCAT*	Brief Cognitive Assessment; Total = 50; should be certified.	<input type="checkbox"/> At least 44 out of 50	<input type="checkbox"/> Between 25 to 43	<input type="checkbox"/> Score of 0 to 24
MOCA	Full MOCA; Total = 30 points; should be certified.	<input type="checkbox"/> At least a score of 27	<input type="checkbox"/> Between 16 - 26 pts.	<input type="checkbox"/> Score of 0 to 15 pts.
Snellgrove Maze	This screening tool was designed for dementia; thus, scoring may not be valid for individuals with other types of conditions.	<input type="checkbox"/> 0 to 60 seconds & 0 errors	<input type="checkbox"/> 0 - 60 seconds with 1-2 errors; 61-90 seconds with 0-2 errors.	<input type="checkbox"/> More than 90 seconds, or multiple errors; Cannot do.

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