# Functional Applications of the OT-DRIVE Model with Potential Young Driver Needs & Pediatric Therapists

By Missy Bell, OTR/L, DRS, LDI

OT-DRIVE by Elin Schold Davis and Anne Dickerson is "a *model for general practice occupational therapy practitioners, with a framework for risk identification, treatment planning, and referral"* (Davis & Dickerson, 2017). It was created to assist OT generalists be more confident about making appropriate recommendations about driving and community mobility while staying in lane of practice. Despite referencing this model in correlation with research pertaining to "older driver" needs, the developers agree that principles of OT-DRIVE can also be expanded to "youth driving". In fact, the "*algorithm pathway"* created by the developers for necessary referral to a driving rehabilitation specialist (DRS) can be used with any population at risk (Dickerson, 2012).

The OT Practice article "*OT-DRIVE: Integrating the IADL of Driving and Community Mobility Into Routine Practice*" (2017), mentions barriers such as therapist "*confidence* and *competence"* being reasons OT's may not approach the topic (Dickerson, Schold Davis, & Chew, 2011). Fortunately, the model reminds us that as Occupational Therapists, we are "experts in activity analysis" (Davis & Dickerson, 2017). It suggests, that with a little more education, OT's could apply what is already known to help plan for future driving or community mobility needs and refer to a DRS/CDRS when appropriate (Davis & Dickerson, 2017).

Take the following list of pediatric therapy tasks and imagine how they could apply to "pre-driving" because they all do: *managing a puzzle or stringing beads, getting in/out of a chair or on/off of a toilet, riding a wheeled toy, bouncing/tossing and catching a ball, navigating an obstacle course, following multi-step directions, or implementing stress reduction or social thinking techniques*. There are multiple ways pediatric therapy pertains to later occupations of driving and community mobility as well as general safety, independence, work/life skills and total well-being.

The OT-DRIVE model says client factors and IADL's can assist in the driving and community mobility assessment process (Davis & Dickerson, 2017). Pediatric OT's can use familiar tools from their own practice setting to begin conversations about driving fitness and potential risk assumptions before appropriate referral to the OT/DRS. No special assessments are required for an OT "generalist" to begin this important pre-driving conversation or to help with skill building activities well in advance of driving age.

Thoughtful pre-driving readiness skill-building and "discharge" planning with certain kids could be just as important as the pediatric OT evaluation and treatment process. The plan could potentially enhance foundations in safety, independence and mobility. It also helps remind a family that more OT needs may be evident in transitions to adulthood.

The OT-DRIVE model encourages OT's to work "at the top of their license" (Davis & Dickerson, 2017). In other words, even though as a pediatric OT you may not have any training with driving rehabilitation, it is important that you do help client family's see the connection between a child's performance deficits and future driving potential or risks. There are several concerns being identified with young driver needs that various field practitioners are working hard to solve. Let's look at three perceived problems that pediatric OTs can assist with.

## Referrals & Planning

One problem is that kids seem to get "lost in the system" or somehow or "age out" of OT services prior to driving age. Perhaps, the family wants to "take a break" after years of therapies. Maybe they get "discharged" from therapy after meeting some goals related to the needs of that age/stage. Sudden halts in therapy may also occur due to a financial reason or some sort of pivotal change. Transitions, in fact, are where I think most issues occur.

Regardless of the reason, many pediatric OT providers miss the opportunity to at least mention to a parent the need to address driving readiness down the road. They could take it a step further by documenting in the discharge summary the need for clinical assessment prior to driving age or planning annual check-up visits and following up with the parent down the road to discuss pre-driving planning if possible.

If even just for a simple screening, referral to an OT Driving Rehabilitation Specialist is incredibly necessary for any kid and family with relevant history and risk factors before getting the student behind the wheel. The OT/DRS has the necessary training, experience, liability tools/equipment, and support structures in place to address the safe driving evaluation and training needs of the young potential driver.

## Driver Training Safety

Finding appropriate service providers who can and do work with certain young drivers can be quite challenging. This fact can result in regular driver education instructors serving "rehabilitation" and "special education" needs. This is reason enough to expand pediatric skills to become an OT/DRS. As an OT/DRS you can provide guidance to parents and instructors in how to approach driving lessons (if that seems like an appropriate route to go after testing).

Parents are either unaware of the additional dangers of driving with certain limitations or factors, are not sure how to best address them, or do not know who to ask for appropriate assistance. Regardless of the reason, it is dangerous that they may be doing parent-led student driver training with students assumed "more at risk" without any idea of how to approach it safely.

## Time-Frames

It is reasonable and understandable to think that waiting to drive is a good idea for some students but it is important to address several "readiness skills" at this time. Much of driving risk is cognitive and visual-based. Both can be addressed in other ways such as "boot camp" activities (Radloff, Kaminski, & Dickerson, 2013) or "passenger-level training" (Monahan, 2009). For motor skills development, community mobility independence, and general health & fitness, the student could practice safe mobility skills and using public transportation. Community-based

therapy sessions or "functional field-trips" can be an excellent way for a pediatric OT to assess and address these types of occupational performance needs.

It can a long time for many kids to drive well. Learning to drive for other students takes 2-3x longer than average teens and is not always possible (Monahan, 2009). Several kids who do not drive safely on busier and faster roads and unfamiliar settings will pass a road-test for licensure (a fact that is quite scary). The standard road-test is simply not enough to appropriately assess safe driving potential and assumed risk in some kids. With an OT/DRS involved, a safer driving plan can be discussed with necessary restrictions. Often, many more lessons may be needed for students after licensure to be a safe and functional driver in certain conditions/settings. Follow-ups will be important to make sure safe driving skills have not regressed for any reason.

## Putting the D.R.I.V.E. into Action with Youth Needs

"**D is for Develop**" is the first step in model and pertains to the evaluation process. Collaboration between OT generalists in various pediatric practice settings and the OT/DRS can be quite beneficial for client service accessibility. It not only helps save money for some clinical testing and treatment at times, but it also helps solve the problem with pediatric service gaps, and encourages appropriate scope of practice (Dickerson, Stressel, Justice, & Luther-Krug, 2012).

As creative, and problem-solving OT's it is also important to develop more accessible screening tools related to youth driving risks to enhance necessary referrals to driving rehab specialists. There are some nice free screening tools available online for older drivers but not many for younger ones (that are easily accessible to anyone outside of the specialty field of driver rehab.)

For this reason, I have created some helpful screening tools which can be used by a collaborating pediatric OT, parent, or driving school. Safety measures are added so that impressions are not generated without appropriate assistance. All of the tools have an optional OT/DRS scoring and interpretations form and/or reference the OT-DRIVE model. I utilize the model in this way because it can help steer conversations about driving risk using common language and simple pictures which almost anyone can understand. It also indicates how Occupational Profile and Intervention can influence risk (Appendix: Figure 1). At the same time, using the infographic imagery can help generate awareness about how, with *normal aging*, comes *increased risk* in older adulthood. This could potentially stimulate conversation about other necessary referrals.

"**R is for Readiness**" is the next step. It might be evident very early on that a child has an impairment indicative of a "non-driver" or higher risk distinction based on a medical diagnosis or contributing factors. A pediatric OT can easily be educated in how to search both state Department of Public Safety restrictions and medical board guidelines related to driving limitations. This could help facilitate in a treatment plan or discharge planning process the recommendation of referral to an OT/DRS prior to driving age.

The OT can also help inform a parent early-on about the need to address furthering a child's independence in community mobility access via the school OT and PT or other Orientation & Mobility specialist. This may assist the family with development of a school IEP plan

incorporating mobility needs. It could also help private school kids, get some important assistance from their public-school district if the child qualifies.

"**I is for Intervention**". This OT-DRIVE model helps the OT assess if a student-risk is assumed "green", "yellow", or "red". Driving *intervention* is OT/DRS scope of practice but the generalist can assist by working on general fitness-to-drive skills and IADLs. This is especially important during transitions from early to late adolescents and in school settings. Advocate for services, document the need for transition planning, and educate schools about the need for OT's to discuss safe driving and community mobility needs for students "at risk" (Podvey & Meyers, 2018).

One additional part of "intervention" relevant to discuss with pediatric OT practitioners is medication. Many parents have a goal of pediatric OT improving self-regulation and attention without medication. Some even avoid particular testing done for fear of "labels" and "drugs". There are a few things to bring up about driving and medication. A student may have a prescribed medication that is discovered to be an added safe driving concern or benefit.

For example, stimulant medicine has been shown to significantly reduce crash risk in kids with ADHD according to Behind the Wheel with ADHD. The same prescription drugs commonly prescribed to children with attentional needs and dual diagnoses are associated with other driving risks (such as *lethargy, insomnia, lack of appetite, weakness, blurred vision, nervousness, fuzzy-thinking, slowed reflexes, anxiety, and agitation*) from www.roadwiserx.com.

Many young potential drivers with attention, anxiety, and sensory challenges battle with finding the right stimulation "cocktail" or most effective self-regulation plan. Perhaps, crunching on some sour, spicy candy and using a standard gear shifter or some caffeine & music prior to a morning commute to school is better than a controlled substance for a child. All factors must be considered such as client-family's beliefs and values and select intervention side effects.

Medication or supplement trials can take many weeks. Waiting until driving age to figure it out could delay and impair the process of learning to drive. The pediatric OT can recommend a family speak to the prescribing doctor in order to bring up these concerns ahead of driving time. At least a conversation is being had with a doctor about driving (who might otherwise fail to mention it during an annual visit or check-up). Doctors often avoid conversations about driving and let OT/DRS's make that decision after providing a prescription to Eval & Treat. They use OT/DRS findings to support medical clearance to drive, cessation, or driving with restrictions.

"**V is for Verification**". The importance of driving and community mobility for building "social capital" (Monahan, 2012) and general health/well-being can be discussed prior to referral to an OT/DRS. A generalist can find out a family's and student's feeling about driving beforehand or at least start the conversation. What are the general goals, values, beliefs and potential expectations of the family and student?

Perhaps, the student has some difficulties that are assumed to be influenced by an element of nature/nurture or "the *apple does not fall far from the tree*". Maybe the student does not want to drive and is anxious about driving for some legitimate reason. Is a parent hoping the child will

learn to drive for particular reasons and potentially clouded in judgement about safety? These are important client factors to consider and verify before providing service. One ethical reasoning skill important to develop is balancing the needs and desires with not only a teenager, but also the caregiver/s seeking our help. In pediatrics, both are clients.

Sometimes family education is one of the more complex responsibilities of the OT/DRS therapist, and we certainly face "disagreement" at times by clients, family members, and other providers. This is not a time to waiver in feelings of confidence of competence. Use the OT-DRIVE model to support your decision about potential risk as a future driver based on your OT clinical reasoning and general knowledge. Then refer to an OT/DRS or CDRS for a comprehensive driving evaluation. They will make the final professional judgement.

The OT/DRS will have more confidence about how to approach ethics and liability factors related to students at risk for driving. But these are important responsibilities to consider by anyone involved in driving decisions. I highly recommend any pediatric OT practitioners wanting to assist in the driving conversation, to collaborate with a DRS colleague and seek additional education. OT/DRS's do the same. It's just a part of best practice for any OT.

"**E is for Evaluation**" is the final step in the OT-DRIVE process. Sometimes there are clear indicators that driving is either not realistic or rather risky at the present time but a client and family need to see the results and better understand why. Even OT/DRS's can use the OT-DRIVE framework to help create "data-driven" decisions. A child can seem to have many strengths but some inconsistencies in performance at times. This says (at a very gut level), this kid, given certain factors, could be a real danger to himself or others. One might ask a simple question: *for what average teenager is that not also true*?

## Final Thoughts & Comments

As OT's involved in the complex "*to-drive or not-to-drive*" conversation, we cannot ignore the risks with any person, regardless of age, disability factors, and goals/values. We, also, cannot ignore what taking away driving could do for someone who wants to drive and can prove oneself as no additional "red light" risk than any young, novice driver. We must ask ourselves what can we do in the way of planning and education that will limit potential accidents with those "caution signal" kids we see, who likely will be driving no matter what. And what can we do as a profession to help address this national safety concern? Let's help save lives where we can.

I hope that you have learned more about the OT-DRIVE model of practice and how it can be applied to pediatric general practice as well as with other young driver concerns. I will be speaking more about this topic in AOTA specialty interest group talks so stay tuned.

For more information or comments contact Missy Bell via Safe Driving & Rehabilitation, LLC at www.safedrivingrehab.com.

**Appendix** Figure 1: Infographic from the OT-DRIVE Model (Davis & Dickerson, 2017)

## References


Davis, E. S., & Dickerson, A. (2017). OT-DRIVE: Integrating the IADL of driving and community mobility into routine practice. OT Practice, 22(13), 8–14.

Dickerson, A.E. (2012). Appendix A: Driving as a Valued Occupation. In Maguire & Schold Davis (Eds.) Driving and Community Mobility: Occupational Therapy Strategies Across the Lifespan. Bethesda, MD: AOTA Publishing (pp.417-422).

Dickerson, A.E. & Niewoehner, P. (2012). Chapter 6: Analyzing the Complex IADLs of Driving and Community Mobility? In Maguire & Schold Davis (Eds.) Driving and Community Mobility: Occupational Therapy Strategies Across the Lifespan. Bethesda, MD: AOTA Publishing (pp.115-135).

Dickerson, A. E., Schold Davis, E., & Chew, F. (2011, June). *Driving as an instrumental activity of daily living in the medical setting: A model for intervention and referral*. Presentation at the Transportation Research Board: Emerging Issues in Safe and Sustainable Mobility for Older People, Washington, DC.

Dickerson, A.E., Stressel, D., Justice, M., & Luther-Krug, M. (2012). Chapter 12: Behind the Wheel: Driver Rehabilitation Intervention. In Maguire & Schold Davis (Eds.) Driving and Community Mobility: Occupational Therapy Strategies Across the Lifespan. Bethesda, MD: AOTA Publishing

Dickerson, A. E., Reistetter, T., Schold Davis, E., & Monahan, M. (2011). Evaluating driving as a valued instrumental activity of daily living. *American Journal of Occupational Therapy, 65*, 64–75. http://dx.doi.org/10.5014/ajot.2011.09052

Hunt, L.A., & Slater, D. (2012). Chapter 5: Occupational Therapy's Ethical Obligation to Address Driving and Community Mobility. In Maguire & Schold Davis (Eds.) Driving and Community Mobility: Occupational Therapy Strategies Across the Lifespan. Bethesda, MD: AOTA Publishing, (pp. 101-113).

Monahan, M. (2012). Chapter 13: Assessing, Treating, and Preparing Youth with Special Needs for Driving and Community Mobility. In Maguire & Schold Davis (Eds.) Driving and Community Mobility: Occupational Therapy Strategies Across the Lifespan. Bethesda, MD: AOTA Publishing, (pp. 383-410).

Orentlicher, M. L., Case, D., Podvey, M. C., Myers, C. T., Rudd, L. Q., & Schoonover, J. (2017). Frequently Asked Questions (FAQ): What is Occupational Therapy's Role in Transition Services and Planning? Bethesda, MD: American Occupational Therapy Association, Inc. Retrieved at https://www.aota.org/~/media/Corporate/Files/Secure/ Practice/Children/FAQ-What-is-OTs-Role-in-Transition-Services-andPlanning-20170530.pdf

Podvey, M.C., Myers, C. (2018). Frequently Asked Questions (FAQ): What is Occupational Therapy's Role in Transition Services and Planning? Bethesda, MD: American Occupational Therapy Association, Inc. Retrieved at https://www.aota.org/~/media/Corporate/Files/AboutOT/Professionals/WhatIsOT/CY/Fact-Sheets/Transitions.pdf

Radloff, J.C., Kaminski, K., & Dickerson, A. (2013). Driving and Community Mobility Skills Bootcamp: Skill-Building Activities for Individuals with High-Functioning Autism Spectrum Disorder. OT Practice, 22 (13), 8-14.


## Helpful Starter Resources

AOTA CE on CD™: Creating Successful Transitions to Community Mobility Independence for Adolescents: Addressing the Needs of Students With Cognitive, Social, and Behavioral Limitations (2009). Presented by M. Monahan & K. Patten.

AOTA CE on CD™: Driving Assessment and Training Techniques: Addressing the Needs of Students With Cognitive and Social Limitation Behind the Wheel (2009). Presented by M. Monahan.

AMS Building Blocks Course 1: Course 1 "Occupational Therapy for Driving and Community Mobility" (Revised 2019). Adaptive Mobility Services. Presented by Susie Touchinsky.

Driving & Community Mobility: Occupational Therapy Strategies Across the Lifespan. A Self-Paced Clinical Course by AOTA.(2012). Edited by M. McGuire & E. Schold Davis.

Liability Considerations & Risk Management Strategies for Driving Rehab. Adaptive Mobility Services. Presented by S. Pierce.

Professional Driving Instructor and Rehabilitation Specialist Training Webinar. Behind the Wheel with ADHD (2017). Presented by G. Sweeney & A. Shannahan.

Safe Driving & Rehabilitation, LLC Resources & Projects Pages www.safedrivingrehab.com

The Association for Driver Rehabilitation Specialists www.aded.net