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| 2012  Return to driving after severe traumatic brain injury: increased risk of traffic accidents and personal responsibility  Bivona, U.  D'Ippolito, M.  Giustini, M.  Vignally, P.  Longo, E.  Taggi, F.  Formisano, RJ Head Trauma Rehabil, 27 (3), 210-5 | 60 TCC | OBJECTIVE: To determine the frequency of road traffic accidents among individuals who start or resume driving after severe traumatic brain injury (TBI) and to investigate their responsibility for these accidents. DESIGN: Observational/retrospective study. PARTICIPANTS: Sixty adults with severe TBI and their caregivers. MEASURES: Return to Driving Questionnaire and Glasgow Outcome Scale. RESULTS: Thirty of the 60 participants started to drive or resumed driving after TBI. Nineteen (63%) of them were involved in traffic accidents, with personal responsibility in 26 of 36 after return to driving. Participants caused a significantly higher number of accidents after TBI than before. CONCLUSIONS: The ability to drive is frequently compromised after severe TBI. Specific rehabilitation of this complex activity should be a main goal of social reintegration programs in this population. |
| 2012  Access and participation in the community: a prospective qualitative study of driving post-stroke.  White JH, Disabil Rehabil. 2012;34(10):831-8. Epub 2011 Oct 29. | 22 AVC | Loss of role as a driver significantly affects community participation; therefore, we aimed to explore the impact of driving issues post-stroke in community-dwelling stroke survivors. A longitudinal qualitative study of community-dwelling stroke survivors, using semi-structured interviews. Results: Twenty-two participants took part in 84 interviews over a 1-year period post-stroke. The majority of participants was independent and experienced few major depressive symptoms. ages ranged from 50 to 92 years. Emergent key themes included impact on quality of life, personal impacts, change to role performance and knowledge. Participants received inconsistent advice regarding return to driving. Confidence and availability determined public transport use. Conclusions: Driving advice should be standard practice prior to discharge. Allied health professionals can play an essential role in interventions addressing community participation, driver re-training and alternative transport use. Therapists have an important role in assisting stroke survivors to work through feelings of loss and in providing education concerning new skills to support this life transition. |
| 2012  Retrospective cohort study of accident outcomes for individuals who have successfully undergone driver assessment following stroke.  Pearce AM, Smead JM, Cameron ID.Aust Occup Ther J. 2012 Feb;59(1):56-62. | AVC | Pas plus d'accidents chez les patients post-AVC que la population générale |
| 2012  Driving simulation for evaluation and rehabilitation of driving after stroke.  Akinwuntan,J Stroke Cerebrovasc Dis. 2012 Aug;21(6):478-86. | AVC | Driving is an important activity of daily living. Loss of driving privileges can lead to depression, decreased access to medical care, and increased healthcare costs. The ability to drive is often affected after stroke. In approximately 30% of stroke survivors, it is clear from the onset that driving will no longer be possible. Approximately 33% of survivors will be able to return to driving with little or no retraining, and 35% will require driving-related rehabilitation before they can resume safe driving again. The ability to drive is not routinely evaluated after stroke, and there is no established rehabilitation program for poststroke driving. When driving evaluation does occur, it is not always clear which tests are the most salient for accurately assessing poststroke driving ability. Investigators have examined the efficacy of various methodologies to predict driving performance after stroke and have found mixed results, with each method having unique weaknesses, including poor predictive ability, poor face validity, poor sensitivity or specificity, and limited reliability. Here we review common models of driving to gain insight into why single-construct visual or cognitive off-road measures are inadequate for evaluating driving, a complex and dynamic activity that involves timely interaction of multiple motor, visual, cognitive, and perceptual skills. We also examine the potential for driving simulators to overcome the problems currently faced in the evaluation and rehabilitation of driving after stroke. Finally, we offer suggestions for the future direction of simulator-based poststroke driving evaluation and training. |
| 2011  Driving and driving cessation after traumatic brain injury: processes and key times of need.  Liddle J, Fleming J, McKenna K, Turpin M, Whitelaw P, Allen S.Disability and rehabil, 2011, 33(25-26): 2574-2586. | TCC | A descriptive phenomenological approach was used to explore the experience with the aim of improving services for people with TBI. Semi-structured interviews about driving and driving cessation were conducted with 15 people with TBI, 10 FMs and 10 HPs who had experience in driving and driving cessation issues. RESULTS: The findings reveal experiences of the process of driving and driving cessation contextualised within experiences of the accident and treatment process. Participants identified key times of need in relation to driving: being told about driving restrictions, understanding driving restrictions, the 'on hold' period, and returning to driving. CONCLUSIONS: The processes surrounding driving and driving cessation after TBI are complex. Informational, support and practical needs differ at the different times. There are key times where people may need further support to improve rehabilitation outcomes. Rehabilitation approaches may particularly need to provide clear, consistent information about driving restrictions, and the process required for returning to driving. While recovery time appears necessary for allowing a safe return to driving, active support for continued involvement in the community using alternative transport may reduce the frustration and disengagement experienced by people in the 'on hold' period. The findings reveal experiences of the process of driving and driving cessation contextualised within experiences of the accident and treatment process. Participants identified key times of need in relation to driving: being told about driving restrictions, understanding driving restrictions, the 'on hold' period, and returning to driving. |
| 2010  Return to driving within 5 years of moderate-severe traumatic brain injury  Novack , Labbe, et al.Brain Injury 24 (3): 464-471 | TCC | To examine return to driving and variables associated with that activity in a longitudinal database. RESEARCH DESIGN: Retrospective analysis of a large, national database. METHODS AND PROCEDURES: The sample was comprised of people with predominantly moderate-severe traumatic brain injury (TBI) enrolled in the TBI Model System national database at 16 centres and followed at 1 (n = 5942), 2 (n = 4628) and 5 (n = 2324) years after injury. MAIN OUTCOMES AND RESULTS: Respondents were classified as driving or not driving at each follow-up interval. Five years after injury, half the sample had returned to driving. Those with less severe injuries were quicker to return to driving, but, by 5 years, severity was not a factor. Those who were driving expressed a higher life satisfaction. Functional status at rehabilitation discharge, age at injury, race, pre-injury residence, pre-injury employment status and education level were associated with the odds of a person driving. CONCLUSIONS: Half of those with a moderate-severe TBI return to driving within 5 years and most of those within 1 year of injury. Driving is associated with increased life satisfaction. There are multiple factors that contribute to return to driving that do not relate to actual driving ability. |
| 2010  Role of premorbid factors in predicting safe return to driving after severe TBI (sondage aux OT au Canada)  Petzold ATop Stroke Rehabil. 2010 Sep-Oct;17(5):371-9. | OT | BACKGROUND AND PURPOSE: Driving is a key factor in maintaining autonomy and participation in life. Occupational therapists (OTs) are expected to assess individuals who want to resume driving post stroke and to provide retraining where appropriate. Research from the 1980s and 1990s indicated that patients were, for the most part, not being assessed and retrained. However, little is known about current practice management. Thus, this study examined clinicians' management of driving-related issues when treating clients with stroke. METHODS: We performed a Canadawide telephone survey of 480 OTs providing stroke rehabilitation in both inpatient rehabilitation and community-based settings. Clinicians reported on problems they noted and assessments and interventions they would provide for a "typical patient" described in a vignette that matched their work setting. RESULTS: 20% and 34% of clinicians responding to the inpatient rehabilitation and community-based vignettes, respectively, identified return to driving as a problem. Clinician and work environment variables significantly associated (P < .01) with identifying driving as a potential problem included being male, involvement in university teaching, research conducted in setting, and hosting student placements. The use of driving-specific assessments was under 12%. Less than 6% of clinicians offered driving retraining, and their desired use of retraining was low. CONCLUSION: Few clinicians identified driving as a problem post stoke, raising concern that patients attempt to drive on their own or never resume driving because of a lack of attention to driving during their rehabilitation. Poststroke driver assessment and retraining is a critical component of poststroke community reintegration that requires greater awareness by clinicians. |
| 2008  Factors influencing driving 10 years after brain injury.  Lundqvist, Brain Inj. 2008 Apr;22(4):295-304. | AVC | Concentration and vision problems influenced post-stroke patient’s driving ability. Patients had more car accidents reported to an insurance company during the observation period than control subjects. Present driving was retrospectively significantly related to neuropsychological test results but not to on-road test outcome 10 years before |
| 2008  Driving behaviour after brain injury: a follow-up of accident rate and driving patterns 6-9 years post-injury.  Schanke, A. K.J Rehabil Med. 2008 Oct;40(9):733-6. | AVC et TCC | A follow-up of accident rate and driving patterns of patients 6-9 years after brain injury. DESIGN: Postal questionnaire sent to patients with brain injury who were assessed consecutively in the period 1997-2000 and who were re-issued. SUBJECTS: A total of 93 persons, 69 men and 24 women, mean age 57 years, average 9 years post-injury, 65 persons with brain injury after cerebrovascular accidents and 28 with traumatic brain injury. RESULTS: The cerebrovascular accident group had reduced their driving significantly post-injury and had also changed their driving patterns. No significant changes were found in distance driven and driving patterns for the group with traumatic brain injury. Compared with normative data, reported accidents post-injury in the cerebrovascular accident group showed no increased accident rate, while the accident rate in the traumatic brain injury-group was more than 2 times higher. CONCLUSION: Patients with traumatic brain injury represent a risk group for accidents post-injury, while those with brain injury after cerebrovascular accidents do not. Possible causes for this difference are discussed. |
| 2005  Driving with cognitive deficits: neurorehabilitation and legal measures are needed for driving again after severe traumatic brain injury.  Leon-Carrion. Brain Inj. 2005 Mar;19(3):213-9. |  | (1) Patients showing physical functionality above 80% returned to driving, regardless of their cognitive and/or emotional deficits, and against doctor recommendations. (2) Severe TBI survivors that have not been certified as fit to drive are at increased risk for driving incidents other than collisions and traffic accidents. This is illustrated by significant incidents involving some of the subjects in our study that were due to disorientation, confusion and confrontations with people or situations. (3) We found that neurorehabilitation is worthwhile; after integral and multidisciplinary neurorehabilitation more than 70% of survivors of severe TBI can return to driving with regular safety. (4) We also suggest that laws be introduced to keep not-clinically-apt patients from driving. The results suggest that individuals with TBI, who successfully complete a driving evaluation program, are able to reintegrate into the driving community with minimal difficulty. |
| 2002  Driving behaviors following brain injury: self-report and motor vehicle records.  Schultheis, M. T.J Head Trauma Rehabil. 2002 Feb;17(1):38-47. | AVC | OBJECTIVE: Little is known about the extent to which stroke survivors return to driving and the advice and/or evaluations they receive about driving. This study sought to estimate the prevalence of driving after stroke and to determine whether stroke survivors receive advice and evaluation about driving. DESIGN: A convenience sample of stroke survivors was surveyed regarding driving status following stroke, driving exposure, advice received about driving, and evaluation of driving performance. PARTICIPANTS: Two hundred ninety stroke survivors who were between 3 months to 6 years poststroke. RESULTS: Thirty percent of stroke survivors who drove before the stroke resumed driving after the stroke. Stroke survivors are often poorly informed by health care professionals about driving, with 48% reporting that they did not receive advice about driving and 87% reporting that they did not receive any type of driving evaluation. Almost one third of poststroke drivers had high exposure, driving 6 to 7 days per week and/or 100 to 200 miles per week. CONCLUSIONS: These findings suggest that many stroke survivors are making decisions about their driving capabilities without professional advice and/or evaluation. The results also suggest that rehabilitation professionals need to devote more attention and resources to driving issues when working with stroke survivors and their families. |
| 1997  Driving after stroke: driving exposure, advice, and evaluations.  Fisk | AVC | Thirty percent of stroke survivors who drove before the stroke resumed driving after the stroke.. Stroke survivors are often poorly informed by health care professionals about driving, |
| 1998  Driving following traumatic brain injury: prevalence, exposure, advice and evaluations.  Fisk | TCC | A total of 60% of the survey participants reported that they were currently active drivers. Over half (63%) had not been professionally evaluated for driving competency. Survivors of traumatic brain injury often have long-term sensory, cognitive and motor deficits that may impair vehicle operation. However, relatively little is known about the driving status and driving characteristics of brain injury survivors. To better understand driving following traumatic brain injury, a survey of driving status, driving exposure, advice received about driving and evaluations of driving competency was administered to a convenience sample of traumatic brain injury survivors (n = 83). The majority of survey participants had experienced either moderate or severe traumatic brain injuries based on the Glasgow Coma Scale. A total of 60% of the survey participants reported that they were currently active drivers. Most individuals (> 60%) who had returned to driving reported driving every day and more than 50 miles per week. Traumatic brain injury survivors frequently received advice about driving from family members, physicians or non-physician health care professionals, but over half (63%) had not been professionally evaluated for driving competency. The presence of high driving exposure, coupled with a lack of widespread driving fitness testing, suggests that some traumatic brain injury survivors have characteristics that may evaluate their risk for vehicle crashes. However, subsequent prospective studies that directly assess driver safety will be needed to confirm this possibility. |