

Author Year Country Research Design Score Total Sample Size	Methods	Outcome
<p>Worobey et al. 2012 USA Cohort N=726</p>	<p>Population: Mean age: 42.9 yr; Gender: males=576, females=150; Level of injury: paraplegia=353, tetraplegia=373; Mean time since injury: 12.5 yr. Intervention: Two groups of participants completed surveys at different time points (2004-2006 and 2006-2001). Outcome Measures: Demographic data; wheelchair characteristics and occupational status; Type of wheelchair repair and/or breakdown in past 6 mo and; Consequences of breakdown including 1) no consequence, 2) been stranded, 3) been injured, 4) missed work or school, 5) missed a medical appointment.</p>	<ol style="list-style-type: none"> 1. Compared to the historical group (2004-2006), the current group (2006-2011) showed a significant increase in the number of repairs (7.8%) and adverse consequences (23.5%) ($p < 0.001$ for both). 2. Compared to manual wheelchair users, power wheelchair users experienced consequences, being stranded, and missing a medical appointment ($p < 0.001$ for all). 3. 64.6% of reported consequences were with power wheelchairs. 4. For wheelchairs with seat functions (tilt, recline, elevating seat/leg rests) there was not a significant number of repairs reported ($p = 0.156$). 5. For wheelchairs with seat functions reported more and higher number of adverse consequences ($p = 0.011$ and 0.008 respectively) including greater number of reports of being stranded ($p = 0.46$), of being injured ($p = 0.004$) and missing medical appointments ($p = 0.024$). 6. No significant differences in number of repairs or adverse consequences based on age, years since injury, gender, occupational status or level of education.
<p>Nelson et al. 2010 USA Cohort N=659</p>	<p>Population: Mean age: 55 yr; Gender: males=632, females=27; Level of Injury: cervical=277, thoracic=337, lumbar=45; Severity of Injury: complete=283, incomplete=376; Mean time since injury: 21 yr. Intervention: Questionnaire Outcome Measure: Number of falls and fall related injuries, Comparisons between baseline characteristics and no fall, fall, and injurious fall groups, Comparison of above fall categories with all variables to determine predictors.</p>	<ol style="list-style-type: none"> 1. Average of w/c use per day = 10.9 ± 4.3 hr 2. 31% of the 659 participants reported 553 fall events; 14% of these sustained an injury; 1 reported death related to fall. 3. Of the 204 participants who reported a fall, 109 (53%) reported more than 1 fall (range 2-53). 4. Of the 208 reported injuries, 179 (85%) were minor, 29 (14%) were serious 5. Predictors of wheelchair related falls included: increased pain in previous 2 mo ($p < 0.001$); positive for alcohol abuse ($p = 0.01$); high FIM score for motor function ($p < 0.001$);

		<p>history of fall in past year ($p < 0.001$); fewer years with SCI ($p = 0.007$); a shorter length of w/c ($p = 0.005$).</p> <p>6. Predictors of falls with injuries were; increased pain in previous 2 mo ($p < 0.001$); high FIM score for motor function ($p = 0.1$); history of fall in previous year ($p < 0.001$) and lack of accessibility of home entrance ($p = 0.01$).</p>
<p>McClure 2009 USA Case Series N=2213</p>	<p>Population: Mean age: 42.4 yr; Gender: males=1758 , females=455; Level of injury: tetraplegia=1121, paraplegia=1061, Mean time since injury: 12.2 yr.</p> <p>Intervention: As part of a larger database data collection survey about assistive technology, the questions specific to wheelchair breakdown and adverse events for people with SCI who use a wheelchair for more than 40 hr/wk were analyzed.</p> <p>Outcome Measures: Frequency of a repair occurrence in the past 6 mo, Frequency of breakdown in the past 6 mo, Consequences of breakdown – participants could choose all that applied: 1) No consequences, 2) Being stranded, 3) Being injured, 4) Missed work or school, 5) Missed a medical appointment.</p>	<p>1. 971 (44.8%) participants reported at least 1 wheelchair repair within a 6 mo period.</p> <p>2. Out of 2101 participants that had remembered the number of repairs, 427 (20.3%) had 1 repair, 348 (16.6%) had 2-3 repairs, and 130 (6.2%) completed ≥ 4 repairs.</p> <p>3. Participants that reported ≥ 1 repair ($n = 192$, 19.7%) reported 262 adverse events; stranded ($n = 140$), being injured ($n = 42$), missing work/school ($n = 33$), or missing a medical appointment ($n = 47$).</p> <p>4. 8.7% of 2213 participants reported ≥ 1 adverse event.</p> <p>5. Participants with power wheelchairs had significantly more repairs than participants with manual wheelchairs (power=1.39 ± 3.675, manual=0.81 ± 1.820, $p < 0.001$).</p> <p>6. Participants with power wheelchairs reported significantly more adverse events compared to participants with manual wheelchairs (106/192, $p < 0.001$) and also experienced more adverse consequences ($p < 0.001$).</p> <p>7. There were no significant differences in reported repairs between participants with power wheelchairs with seat functions compared to participants without seat functions (seat=1.32 ± 2.234, no seat=1.20 ± 1.668, $p = 0.488$); the occurrence of adverse consequences was not associated with power seat functions ($p = 0.208$).</p>