Study Jurisdiction N, Trauma &/or Nontrauma	Outcome Measure and Sample Period	Neurological and/or Functional Change with Rehabilitation
Gupta et al. 2009 India (single centre) 64, Nontrauma	AIS BI 2005-2008	• AIS score showed significant neurological recovery during rehabilitation (p=0.001). • # of patients at AIS A went from 31.3% to 18.8%, AIS B from 20.3% to 7.8% and AIS C/D from 48.4%to 73.4% between admission and discharge. • BI scores showed significant functional recovery (p=0.000).
Moslavac et al. 2008 Croatia (single centre) 154, Trauma	AIS 1991-2001	• 49% were AIS A at admission -of these, 93% remained an A at discharge, 5% to C and 1% to D. • 8% were AIS B at admission -of these, 38%remained B at discharge, while 31% of these improved to a C, 23% to a D and 8% to E. • 21% were AIS C at admission – of these, 3% deteriorated to A, 9% remained C, 67% improved to D and 21% to E. • 12% were AIS D at admission – of these, 26% remained D and 74% improved to E. • 8% were AIS E at admission – all of these remained E.
DeVivo 2007 United States multi-centre N=24,333 Trauma	AIS FIM 1973-2006	• For 2002-2006, among injuries that were initially neurologically complete, 15.1% became incomplete by discharge. Among ASIA B injuries, 45.2% improved at least one grade, whereas 54.3% of ASIA C injuries improved to at least ASIA D injuries. This suggests some gains in the likelihood of neurologic improvement over the past 30 years. • Mean gain in FIM motor score decreased by 3.38 points during the past 20 years (p<0.01) although FIM efficiency increased (p<0.01) (discrepancy due to reduced LOS). • FIM motor scores at admission & discharge decreased significantly during the past 20 years (p<0.0001).
Müslümanoğlu et al. 1997 Turkey $N_{Initial}$=52 N_{Final}=10	AIS FIM	1. Neurological assessments (Motor scores and light touch scores) showed increases from admission to discharge for those with incomplete injuries (p<0.001) but not complete injuries. 2. FIM showed increases from admission to discharge for those with incomplete injuries (p<0.05) and those with complete paraplegia (p<0.05) but not complete tetraplegia. • FIM scores (p<0.05), but not motor scores or light touch scores showed significant increases from discharge to 1 year post-discharge in a subsample of 10 with paraplegia.
Chan & Chan 2005 China (single centre) 33, Trauma	FIM 2002	• All groups showed ↑ in FIM motor scores from admission to discharge but these were only significant for tetraplegia AIS D. • All patient groups (i.e., levels and severity of injury) had similar FIM motor scores at discharge as noted by American Consortium for Spinal Cord Medicine (1999).

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Pollard & Apple 2003 USA (single centre) 95, Trauma	AIS	• Most gains in motor and sensory scores were found in first year. An average of 35 motor points (18% during acute care, 53% during rehabilitation, 8% during the remainder of the year) and 46 sensory points (46% during acute care, 46% during rehabilitation, 8% during the remainder of the year) were recovered. • People with Brown Sequard and Central Cord injuries had more improvement in motor scores but not sensory scores than those with anterior cord (p=0.019).
Pagliacci et al. 2003 Italy (multi-centre) 684, Trauma	AIS 1997-1999	• ↑ was associated with AIS B and C, shorter LOS, earlier admission and no complications (especially pressure sores).
Tooth et al. 2003 Australia (single centre) 167, Trauma	FIM 1993-1998	• ↑ from 68.7 (admission) to 102.2 (discharge) due almost entirely to gains in motor FIM scores. • Total FIM scores were lowest for those with complete tetraplegia and highest for those with incomplete paraplegia. Those with complete tetraplegia had the least change in FIM scores.
Catz et al. 2002 Israel (single centre) 250, Trauma	Frankel 1962-1992	• ↑ in 27% of those admitted at A, B or C to D or E. None initially admitted as A were able to achieve D or E. 43% of those initially C ↑ to D and 11% to E. 47% of those initially D ↑ to E.
Celani et al. 2001 Italy (multi-centre) 859, Trauma & Nontrauma	Frankel 1989-1994	• ↑ of at least 1 grade was seen in ~1/3 of those with traumatic SCI. Initial B and C had greatest probability of ↑. 76% of those initially at C and 67% of those initially at B ↑. With non-traumatic SCI, 64% of those initially at C and 44% of those initially at B ↑.
Sumida et al. 2001 Japan (multi-centre) 123, Trauma & Nontrauma	FIM 1994-1997	• Compared earlier versus later admission to rehabilitation and showed ↑ FIM and FIM efficiency for the earlier group • Greater proportion of persons ↑ by at least 1 AIS grade with earlier admission. • Increasingly greater likelihood of ↑ by 1 AIS grade for initial AIS of B, C or D than A.
Marino et al. 1999 USA (multi centre) 3585, Trauma	AIS 1988-1997	• Increasingly greater likelihood of ↑ to D for initial AIS of C>>B>>A.
Müslüman-oğlu et al. 1997 Turkey (single centre) 52, Trauma & Nontrauma	AIS FIM1992-1995	• ↑ in ASIA motor scores and light touch scores for those with incomplete injuries but not complete injuries. • FIM showed ↑ f for those with incomplete injuries and those with complete paraplegia but not complete tetraplegia.

Study Jurisdiction N, Trauma &/or Nontrauma	Outcome Measure and Sample Period	Neurological and/or Functional Change with Rehabilitation
DeVivo et al. 1991 USA (multi-centre) 13,763, Trauma	AIS FIM1973-1990	• Proportion showing ↑ were 10.3% (A), 45.2% (B), 55.9% (C), 7.3% (D) versus no change 89% (A), 50.3% (B), 41.5% (C), 90.5% (D) versus declined 4.5% (B), 2.6% (C), 2.0% (D) • From 1973-1990 the proportion of incomplete patients increased from 40% to 55.2%. • Average FIM gain was 37 (incomplete paraplegia, 36 (complete paraplegia), 34 (incomplete tetraplegia and 15 (complete tetraplegia).
Yarkony et al. 1987 USA (single centre) 711, Trauma	MBI 1973-1980	• ↑ in total scores & self-care and mobility subscores. • greater ↑ for incomplete versus complete and for those with paraplegia versus tetraplegia.
Burke et al. 1985 Australia (single centre) 262, Trauma	Frankel	• 31% of people improved, 66% remained unchanged, and 3% deteriorated. 23% initially complete became incomplete and 40% of those initially incomplete improved.