

Distribution and type of inpatient allied health services for people following land transport crashes across Queensland – where are the gaps?

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CREATE CHANGE

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Background

This proof-of-concept project utilises state-wide inpatient hospital administrative data to 1) describe the distribution and use of core allied health services, such as physiotherapy, speech pathology, occupational therapy (OT) and social work, by patients following land transport crashes (LTCs), and 2) identify service gaps for injured patients.

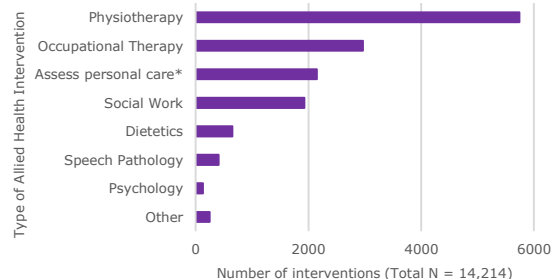
Method

- Sourced from Queensland Hospital Admitted Patient Data Collection:** All episodes of in-patient care with an injury principal diagnosis (ICD-10-AM code S00 – T98) for patients admitted to a Queensland public or private hospital between 01/01/2016 and 31/12/2016.
- LTC definition:** ICD-10-AM External Cause V00 - V98.
- Encounter definition:** Episodes relating to the same hospital encounter were combined, and allied health services counted over the whole hospital encounter.
- Analysis:** Descriptive analysis was undertaken to quantify 1) type of inpatient allied health services received, 2) the hospital location and 3) demographic/injury factors of patients receiving these services.

Results

- 14,702 hospital encounters following a LTC in 2016.
- 8,721 (59.3%) encounters had interventions coded
 - 6,381 (73.2%) of these 8,721 encounters had **allied health (AH) interventions coded**. Total number of AH interventions in this group = 14,214.
- Average of 2.2 AH interventions per encounter (Range = 1 to 21)
- Most common AH intervention = Physiotherapy (Figure 1)

Figure 1



*Assessment of personal care and other activities of daily/independent living. This category is coded separately from the Generalised allied health interventions.

- Table 1 summarises the demographic, injury and admission characteristics of patients who received an AH intervention compared to those who didn't.
- Overall, the majority of patients were discharged back to their usual residence at the end of the hospital encounter, however for those who received AH intervention, 22% of patients resided outside the HHS of the treating facility.

Conclusion

Given many patients reside outside the hospital area, the results of this study will form the basis for developing innovative methods to address mal-distribution of services for those injured in RTCs, which has implications for NDIS and NIIS-Q.

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TABLE 1	Yes AH (N = 6381)	No AH (N = 2340)
Age, Mean(SD)	41.3 (SD=20.8)	29.8 (SD=18.8)
Female, N (%)	1 987 (31%)	608 (26%)
ARIA of usual residence, N (%)		
Major City	3 488 (55%)	1 105 (47%)
Inner Regional	1 477 (23%)	593 (25%)
Outer Regional	1 037 (16%)	471 (20%)
Remote/Very Remote	231 (4%)	126 (5%)
Type of Land Transport Crash (Top 3), N (%)		
Motorcyclist	1 844 (29%)	683 (29%)
Car Occupant	1 747 (27%)	325 (14%)
Pedal Cyclist	1 043 (16%)	717 (31%)
Principal Nature of injury (Top 3), N (%)		
Fracture	3 609 (57%)	1 252 (54%)
Internal organ injury	1 025 (16%)	93 (4%)
Open wound	368 (6%)	578 (25%)
Principal Body location of injury (Top 3), N (%)		
Lower extremity (incl hip)	1 960 (31%)	378 (16%)
Upper extremity	1 189 (19%)	1 328 (57%)
Traumatic brain injury	844 (13%)	364 (16%)
Encounter LOS, Median (IQR)	3 days (1–7 days)	1 day (1–2 days)
Funding source (Top 3), N (%)		
Health Service Budget	3 209 (50%)	1 441 (62%)
Motor Vehicle Third Party	1 430 (22%)	230 (10%)
Private Health Insurance	1 028 (16%)	445 (19%)
HHS of Treating facility (Top 10), N (%)		
METRO SOUTH	1 283 (20%)	326 (14%)
METRO NORTH	1 198 (19%)	305 (13%)
GOLD COAST	758 (12%)	269 (11%)
SUNSHINE COAST	668 (10%)	197 (8%)
CAIRNS AND HINTERLAND	363 (6%)	209 (9%)
MACKAY	363 (6%)	146 (6%)
TOWNSVILLE	341 (5%)	92 (4%)
DARLING DOWNS	336 (5%)	193 (8%)
WIDE BAY	296 (5%)	119 (5%)
CENTRAL QUEENSLAND	285 (4%)	149 (6%)
Resided outside HHS of treating facility, N (%)	1,416 (22%)	450 (19%)
Discharged to usual residence	5 920 (93%)	2 260 (97%)
Died in hospital	68 (1%)	28 (1%)