DIFFERENTIATING PATTERNS OF HEALTH SERVICE USE FOLLOWING SEVERE TRAUMATIC BRAIN INJURY: AN IDIOGRAPHIC ANALYSIS

Method Detailed sub-acute HSU data for 316 cases of adult severe TBI (GCS 3-8) was extracted from the injury compensation database of the Transport Accident Commission in Victoria, Australia. Data comprised of monthly observation counts of HSU over the 60-month period post injury. A semi-parametric group-based trajectory analytical technique for longitudinal data was used to identify distinct clusters of participant trajectories.

Results Four patterns of HSU trajectory were identified. Group 1 (27% of participants) displayed a rapid decrease in HSU in the first 12 months post injury which stabilised to an average of 1–2 services per month thereafter. Group 2 (24%) had a sharp peak in HSU post-injury (25–36 services per month) and a gradual decline over time. Group 3 (32%) displayed a peak in the first months post injury (16–25 services per month), and then a very slow decline. Group 4 (17%) displayed a steady rise from 16 to 36 services per month, and then a gradual decrease in the final 2 years.

Significance Idiographic analysis of subacute HSU using trajectory modelling allows differentiation of distinct patterns of HSU following severe TBI. Such analysis may aid health system resource planning and management.