Supplementary 1: Data cleaning procedures

We removed duplicate death records, before unique person identifiers were screened and excluded for errors in the administrative data (e.g., if hospital presentations occurred following death). Individuals with incongruent age, sex, and other key identifiers across subsequent records were also omitted from the dataset. Persons aged over 105 were also excluded from analysis, due to the small number of individuals coded as older than 105 years of age. Contiguous episodes across APDC, EDDC and CODURF datasets were concatenated to one episode, when time between sequential separations was less than one hour.

Hospital-treated ISH incidents were identified by codes congruent with International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) – used to classify diseases, injuries, and related health problems. Otherwise, ISH events were identified by fielding keywords within documentation, in line with protocol in the LifeSpan trial series and the methods employed by the NSW Health Mental Health department.

Deaths by ISH were identified by screening primary and contributing cause of death codes for ICD-10 codes (Supplementary 2). Deaths in hospital were defined when the final separation in hospital records was death (n = 199, 0.7%). Death dates were only available in the format of month and year, thus, the maximum date in each month was extracted to create a dummy ‘approximate death date’ when the death did not occur in hospital.

HCs prior to index were identified when the maximum date of hospital separation in contiguous episodes was at least 1 hour prior to index. CMHCs prior to index were identified when the maximum activity date was less than the index date. Persons with a CMHC after the approximated death date were omitted when reporting proportions of persons with CMHCs.

The study involved the compilation of a single wide dataset, to describe characteristics of the index event and the most recent HC/CMHC, as well as a frequency count of all episodes within the retrospective period. Demographic characteristics were derived from inputs at index. Characteristics of retrospective APDC, EDDC and MH-AMB records were retrieved from the final contiguous episode of care.