HSC Public Health Agency

# Unintentional injuries in Northern Ireland:

## Mortality and Hospital Admissions, 2015-2024

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## Executive Summary

The Northern Ireland (NI) Home Accident Prevention (HAP) Strategy 2015-2025 aimed to reduce injuries and deaths from accidents in the home, particularly among young children, older people and those experiencing disadvantage. This analysis examines trends in mortality and hospital admissions associated with unintentional injuries (UI) during 2015-2024. It identifies the main causes of serious injury and the population groups most affected. The available data do not reliably identify where injuries occurred. The findings therefore describe the wider burden of UI rather than injuries specifically occurring in the home. As a result, the findings cannot be used to measure the impact of the HAP Strategy but can inform future prevention priorities.

Key findings:

- Unintentional injury deaths increased between 2015 and 2024. Registered deaths increased from 538 to 867, while the mortality rate increased by 55%, from 29 to 45 per 100,000 population ($p_{trend} < 0.05$). UI mortality rates were consistently higher among males and increased with age, with the highest rates among older age groups, particularly those aged 85 and over.
- Hospital admissions decreased over the same period. Admissions fell from 14,934 in 2015 to 9,627 in 2024, while the admission rate decreased by 38%, from 805 to 499 per 100,000 population ($p_{trend} = 0.001$).
- Falls were the leading cause of UI deaths and hospital admissions. Falls accounted for 46% of registered UI deaths and 56% of UI admissions during 2015-2024. Among people aged 75 years and older, falls accounted for 85% of UI admissions.
- Accidental poisoning was the second leading cause of UI deaths. It accounted for 26% of registered UI deaths, of which 83% were drug-related and 15% alcohol-related. Accidental poisoning mortality increased over the study period, particularly affecting working-age adults. Changes in the classification of deaths should be considered when interpreting this trend.
- UI rates differed by socioeconomic deprivation. During 2015-2024, the pooled annual UI mortality rate was 72% higher and the hospital admission rate 33% higher in the most deprived areas than in the least deprived areas. The largest relative difference in mortality was for accidental poisoning, with rates approximately six times higher in the most deprived areas (21 versus 4 per 100,000). Differences also varied by age and sex, particularly among working-age adults and males.

## 1. Introduction

The Northern Ireland (NI) Home Accident Prevention (HAP) Strategy 2015-2024 established a population-wide framework to reduce injuries and deaths from accidents in the home, with priority given to children younger than 5 years, people aged 65 years and older, and those experiencing social, economic, or health disadvantage. Its objectives included increasing public awareness, promoting safer home environments, strengthening training, and improving the evidence base for prevention [1]. The end of the strategy period provides an opportunity to reassess these priorities against the burden of injury recorded during 2015-24.

Home accidents form part of the wider burden of unintentional injury (UI). Falls, poisoning, burns, suffocation, and drowning – mechanisms central to home accident prevention – also occur in other settings. Population-level mortality and hospital admission data can therefore identify relevant causes of injury and population groups at greatest risk, but cannot quantify the burden attributable specifically to the home without information on the location in which the injury occurred. This distinction is important when interpreting the findings and their implications for future prevention priorities.

## 2. Data sources and methods

UI was defined as injury arising from events in which harm was not deliberately inflicted, including falls, accidental poisoning, exposure to mechanical forces, transport accidents, drowning and other threats to breathing, fire and smoke exposure, burns and scalds, and other accidental exposures. UI deaths and hospital admissions were identified using International Classification of Diseases, 10th Revision (ICD-10) codes V01-V99, W00-W99, X00-X59, and Y85-Y86. Injury-related hospital admissions were identified using ICD-10 codes S00-T73, T75 and T78. External causes of injury were identified using ICD-10 codes V01-V99 and W01-X59. Binary indicator variables were created to flag admissions with at least one relevant code.

Mortality and hospital admission data were examined over 2015-24. Mortality data were provided by the Northern Ireland Statistics and Research Agency (NISRA), which compiles mortality statistics from death registration records held by the General Register Office Northern Ireland (GRONI). Deaths were classified according to the underlying cause of death. Year refers to the calendar year in which the death was registered rather than the year in which it occurred. Registration can be delayed when a death requires investigation by the Coroners Service, which is particularly relevant to accidental poisoning deaths. Following a review of suicides registered during 2015-19, some deaths previously classified as suicide or events of undetermined intent were reclassified as accidental poisoning; this should be considered when interpreting temporal patterns in accidental poisoning mortality [2]. Following NISRA's review of suicide statistics, some deaths previously classified as being of undetermined intent were reclassified as accidental. This should be considered when interpreting temporal changes in accidental poisoning mortality.

Hospital admission data were obtained from the Hospital Activity Information Branch of the Department of Health. Data were sourced from hospital administrative systems, including the Patient Administration System and, following its implementation, the Encompass electronic patient record system. Encompass was introduced in the South Eastern HSC Trust in November 2023, Belfast HSC Trust in June 2024, Northern HSC Trusts in November 2024, and Southern and Western HSC Trusts in May 2025. Data derived from Encompass are classified as Official Statistics in Development and should therefore be interpreted with caution. Its introduction also affected the recording of transfers between hospitals within the same HSC Trust, which had previously been recorded as a discharge followed by a new admission.

Admissions were approximated from discharges and in-hospital deaths, using the discharging episode of each hospital spell. Injuries were included only where a relevant diagnosis code was recorded on that episode. The resulting figures represent admission events rather than

unique patients. Admissions to the Mental Health and Learning Disability Programmes of Care were excluded.

Supplementary episode-based diagnosis data for financial years 2015/16-2024/25 were used to examine the circumstances of specific injury mechanisms. These data were restricted to the Acute Programme of Care and included diagnoses recorded across consultant episodes. As a hospital admission may involve more than one episode, the supplementary findings were analysed separately from the admissions series.

Data were analysed by cause of injury, age, sex, and Northern Ireland Multiple Deprivation Measure 2017 quintile, with Q1 representing the most deprived areas and Q5 the least deprived.

Rates were expressed per 100,000 population using 2024 Mid-Year Population Estimates [3]. Pooled annual rates summarised the study period using the total number of events and the corresponding population denominators across 2015-2024. Absolute rate differences were calculated by subtracting the rate in the reference group from the rate in the comparison group and were expressed per 100,000 population. Relative differences were calculated by dividing the absolute difference by the reference group rate and multiplying by 100. For deprivation comparisons, Q5 was used as the reference group. Rate ratios were calculated by dividing the comparison group rate by the reference group rate. Percentage changes over time were calculated relative to the rate in the first year.

Temporal trends were assessed across the ten annual rates using two-sided Mann-Kendall tests, with correction for ties and a continuity-corrected normal approximation. Sen's slope, calculated as the median of all pairwise annual changes in rate, was used to estimate the magnitude and direction of change. P-values for trend ($p_{trend}$) assess evidence of a monotonic change across the full series of annual rates and do not represent tests of the difference between the first and last years. Statistical significance was defined as $p_{trend} < 0.05$. Analyses assumed independence of annual observations and were not adjusted for multiple comparisons or serial correlation. Trend analyses were exploratory and should not be interpreted as evidence of causality or of the effect of specific policies or interventions.

The findings describe unintentional injuries across all settings and cannot be restricted to injuries occurring in the home. Location-of-injury information was not available in the hospital admissions data. For mortality data, the completeness of location-of-injury recording declined over the study period, and NISRA ceased reporting deaths occurring at home as a separate category from 2020 onwards. Consequently, the proportion of unintentional injury deaths or hospital admissions attributable specifically to injuries occurring in the home could not be determined.

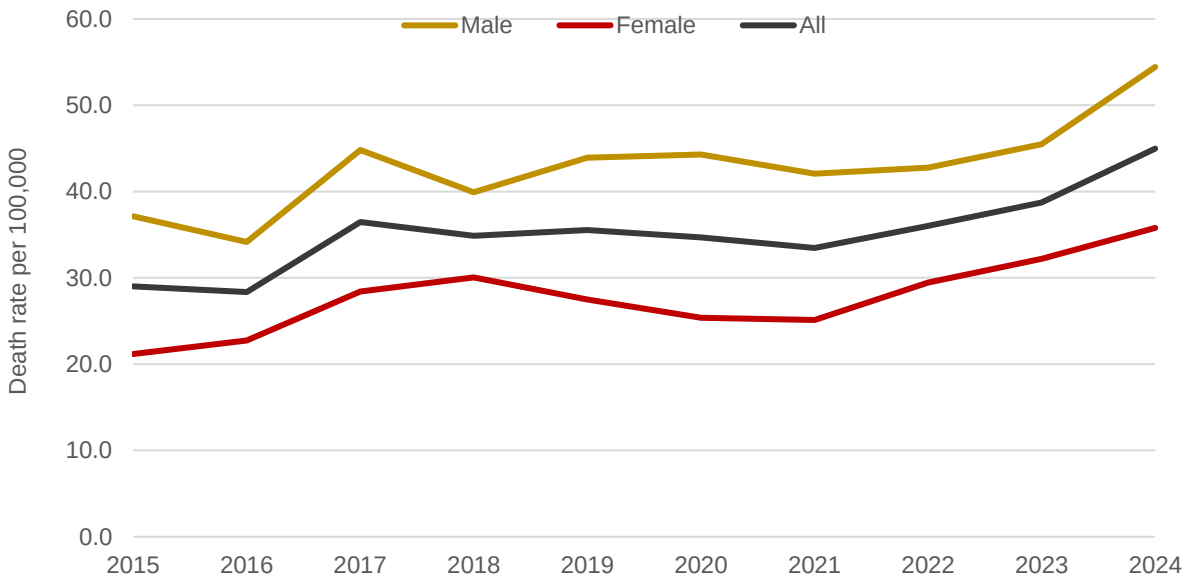
## 3. What the evidence shows

### 3.1. The burden of UI deaths

#### *3.1.1 Overall UI mortality, by sex and age*

There were 6,679 deaths registered as due to UI during 2015-2024. The annual number increased from 538 in 2015 to 867 in 2024, an increase of 329 (61%), while the mortality rate increased from 29 to 45 per 100,000 population (55%; $p_{trend} < 0.05$). Males accounted for 4,001

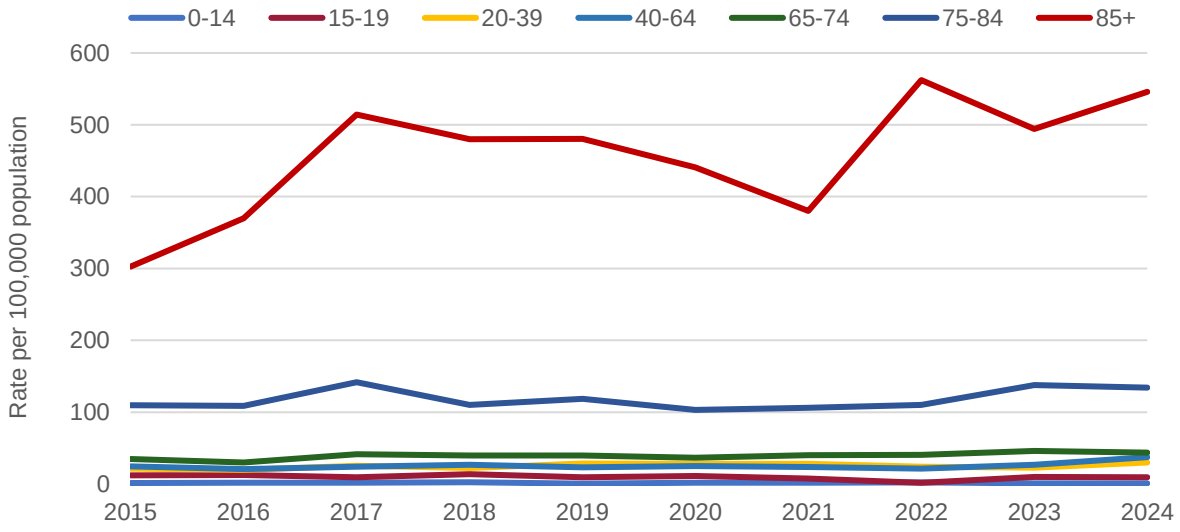
deaths (60%) and females for 2,678 (40%). Mortality rates increased over the study period in both sexes ($p_{trend}$ < 0.05 for both) and were consistently higher among males than females (Figure 1).




**Source:** NISRA/GRO data

**Figure 1.** Unintentional injury mortality rate per 100,000 population, Northern Ireland, 2015-2024. Deaths are classified by year of registration rather than year of occurrence.

UI mortality increased with age and was highest among older people. People aged 65 years and older accounted for 56% of all UI deaths. Between 2015 and 2024, mortality rates increased from 35 to 44 per 100,000 among people aged 65-74 years (25.0%; $p_{trend}$ = 0.02), from 110 to 134 per 100,000 among those aged 75-84 years (22.4%; $p_{trend}$ = 0.47), and from 303 to 546 per 100,000 among those aged 85 years and older (80%; $p_{trend}$ = 0.07). In the oldest age group (people aged 85 and over), rates declined between 2017 and 2021 before increasing sharply from 2022. The lower rates observed in 2020 and 2021 coincided with the COVID-19 pandemic, although the available data cannot establish whether the pandemic contributed to this pattern (Figure 2).



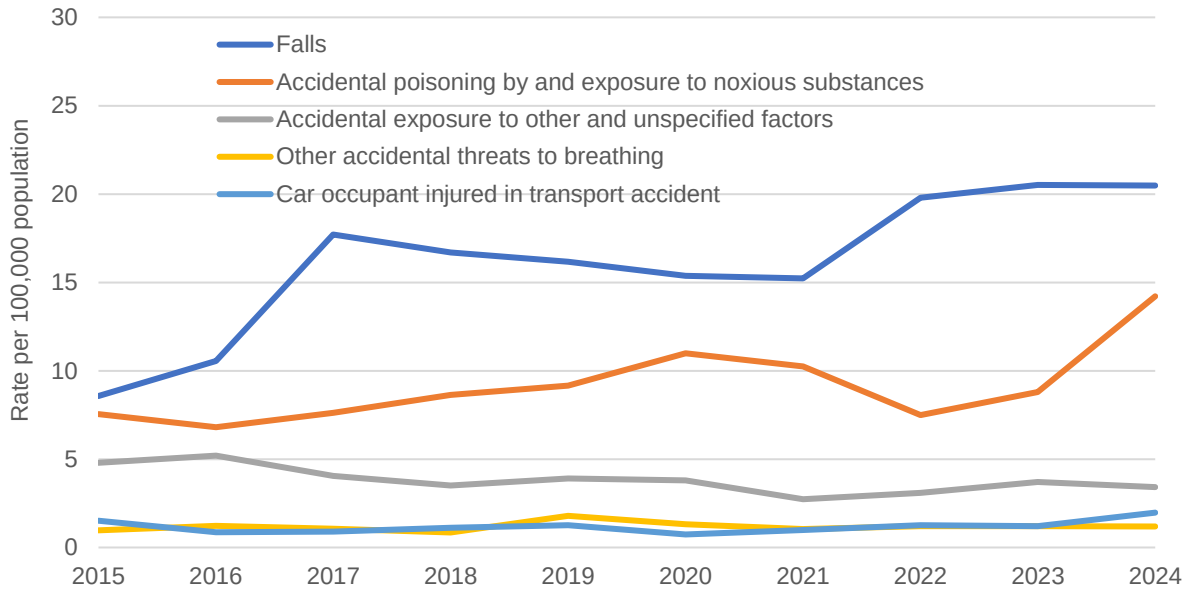

**Source:** NISRA/GRO data

**Figure 2.** Unintentional injury mortality rate per 100,000 population by age, Northern Ireland, 2015-2024.

Deaths among children were uncommon. During 2015-2024, 24 UI deaths occurred among children younger than 5 years, including eight among infants and 16 among children aged 1-4 years. Among children aged 0-14 years, 56 deaths occurred overall. Mortality rates for this age group decreased from 1.4 per 100,000 in 2015 to 0.84 per 100,000 in 2024 (40%; $p_{trend}$ = 0.8) (Figure 2).

*3.1.2 Leading causes of UI deaths*

Falls and accidental poisoning were the leading causes of UI mortality. During 2015-2024, falls accounted for 3,059 deaths (46% of all UI deaths), accidental poisoning by and exposure to noxious substances for 1,737 (26%), and other or unspecified accidental exposures for 722 (11%). Falls and accidental poisoning together accounted for 72% of all UI deaths. Information on the circumstances of fatal falls was limited, with approximately 97% classified as unspecified falls (Figure 3).



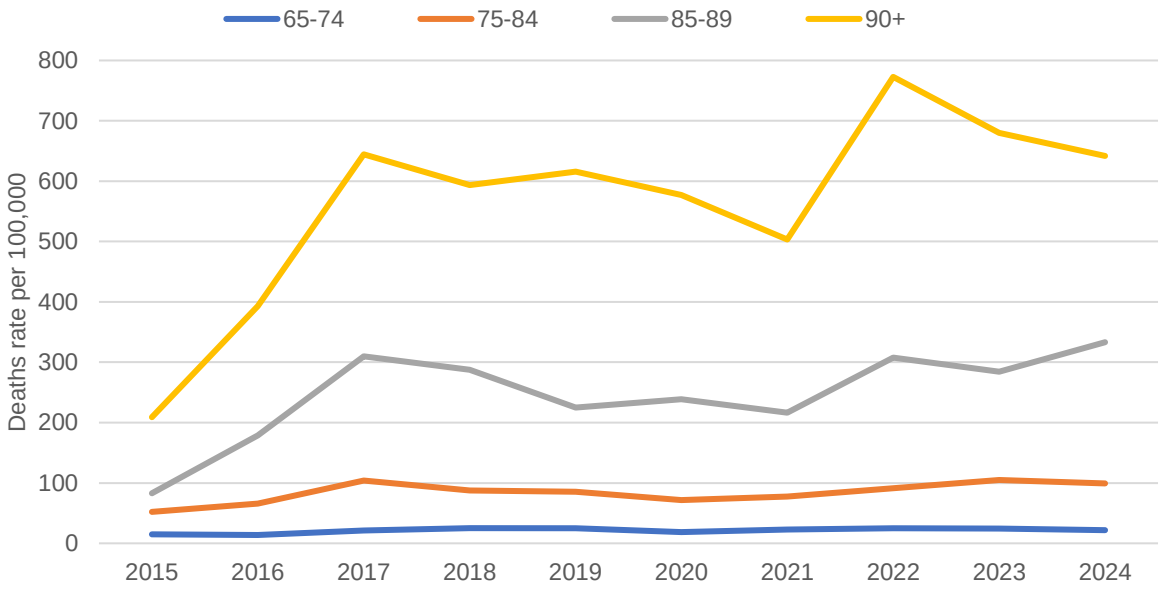

**Source:** NISRA/GRO data

**Figure 3.** Unintentional injury mortality rate per 100,000 population by cause of death, Northern Ireland, 2015-2024.

Accidental poisoning deaths increased from 140 in 2015 to 274 in 2024 (96%), with the mortality rate increasing from 8 to 14 per 100,000 (89%; $p_{trend}$ = 0.04) (Figure 3). Accidental poisoning accounted for 74% of UI deaths among people aged 20-39 years and 45% among those aged 40-64 years; together, these two age groups accounted for 91% of all accidental poisoning deaths

Drug disorders and poisonings accounted for 83% of accidental poisoning deaths, and alcohol-specific disorders and poisonings for 15%. Between 2023 and 2024, deaths due to drug disorders and poisonings increased from 148 to 211 (43%), while deaths attributed to alcohol-specific disorders and poisonings increased from 18 to 60 (233%). Together, these increases accounted for the entire net increase in accidental poisoning deaths between 2023 and 2024.

By contrast, the mortality rate from accidental exposure to other and unspecified factors (i.e. the exact circumstances of the accident are unclear or conditions caused by unknown or unclassified environmental hazards) decreased from approximately 4.8 to 3.4 per 100,000 between 2015 and 2024 (29% decrease; $p_{trend}$ = 0.02). Among children younger than 5 years, other accidental threats to breathing accounted for 11 of the 24 UI deaths (46%).



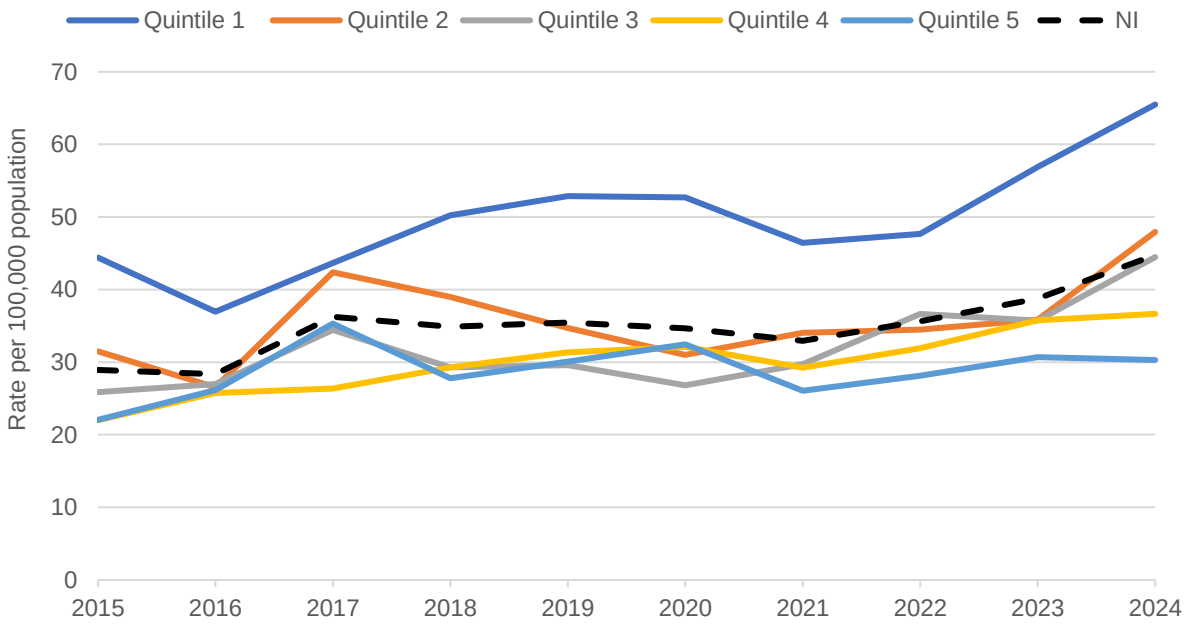

**Source:** NISRA/GRO data

**Figure 4.** Falls mortality rate per 100,000 population by age group, Northern Ireland, 2015-2024.

3.1.3 Socioeconomic inequalities in UI mortality

UI mortality rates were higher in the most deprived areas than in the least deprived areas during 2015-2024. The pooled annual mortality rate was 50 per 100,000 population in the most deprived quintile (Q1), compared with 29 per 100,000 population in the least deprived quintile (Q5), with the rate in Q1 being 72% higher. Between 2015 and 2024, mortality rates increased in both quintiles, from 44 to 66 per 100,000 in Q1 and from 22 to 30 per 100,000 in Q5. The absolute difference between Q1 and Q5 increased from 22 to 35 per 100,000. There was evidence of an increasing monotonic trend in Q1 ($p_{trend}$ = 0.02), but not in Q5 ($p_{trend}$ = 0.28). The increase in the difference between quintiles was not separately tested for statistical significance (Figure 5).

The magnitude of the difference between Q1 and Q5 varied by age and sex. Among adults aged 20-39 years, the pooled annual mortality rate was 49 per 100,000 in Q1 compared with 9 per 100,000 in Q5, with the rate in Q1 being 5.2 times that in Q5. Among those aged 40-64 years, the corresponding rates were 49 per 100,000 and 12 per 100,000, an approximately 4-fold difference. Differences were also greater among males than females. Male mortality rates were 65 per 100,000 in Q1 compared with 32 in Q5, a 2.1-fold difference, while female rates were 35 and 26 per 100,000, respectively, a 1.3-fold difference.




**Source:** NISRA/GRO data

**Figure 5.** Unintentional injury mortality rate per 100,000 population by deprivation quantile and year, Northern Ireland, 2015-2024. Deprivation Quintile assigned based on Super Output Area (SOA) and 2017 NIMDM. Q1 represents the most deprived areas and Q5 the least deprived areas. In the absence of official estimates at the required level, rates have been calculated from small area population estimates provided by Information & Analysis Directorate which are not official estimates.

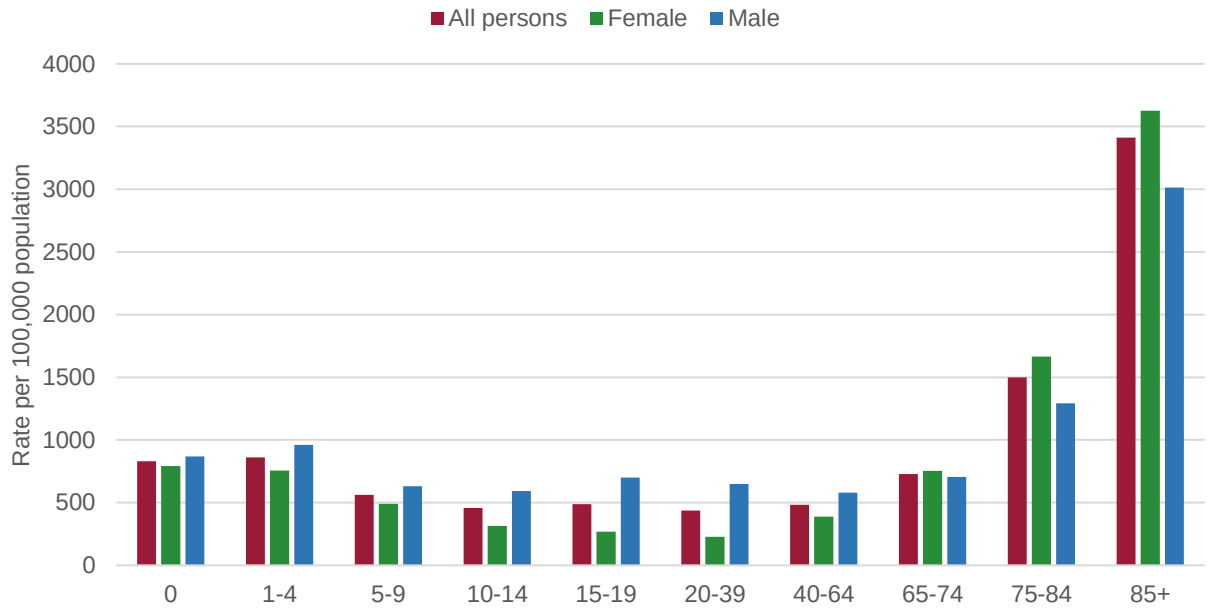
Differences by deprivation also varied according to injury cause. The pooled annual mortality rate for accidental poisoning was 21 per 100,000 in Q1 compared with 4 per 100,000 in Q5, with the rate in Q1 being 6.1 times that in Q5. In comparison, falls mortality rates were similar between the two quintiles (18 per 100,000 in both Q1 and Q5).

## 3.2. The burden of UI admissions

### *3.2.1 Overall UI admissions, by sex and age*

During 2015-2024, there were 120,897 hospital admissions associated with unintentional injury (UI) in Northern Ireland (NI). Annual admissions decreased from 14,934 in 2015 to 9,627 in 2024, a reduction of 36%. The corresponding admission rate decreased from 805 to 499 per 100,000 population (38%; $p_{trend}$ = 0.001).

Males accounted for 66,733 admissions (55%) and females for 54,163 (45%), with one admission not classified by sex. The pooled annual admission rate was higher among males than females (716 versus 563 per 100,000 population).




**Source:** Hospital Inpatient System, Hospital Activity Information Branch, Information & Analysis Directorate, Dept. of Health, NI.

**Figure 6.** Unintentional Injury admissions rate per 100,000 by age group and sex, Northern Ireland, 2015-2024. Specified injury codes S00-T73, T75, T78 with V01-X59 in any diagnostic position. Admissions are approximated using deaths and discharges. Admissions represent admission events rather than unique individuals.

UI admission rates varied by age, with the highest pooled annual rates among people aged 85 years and older (3,412 per 100,000), followed by those aged 75-84 years (1,498 per 100,000). Rates decreased across all age groups between 2015 and 2024 (Figure 6). The largest relative reduction was among people aged 85 years and older, from 5,239 to 2,408 per 100,000 (54%; $p_{trend} < 0.001$).

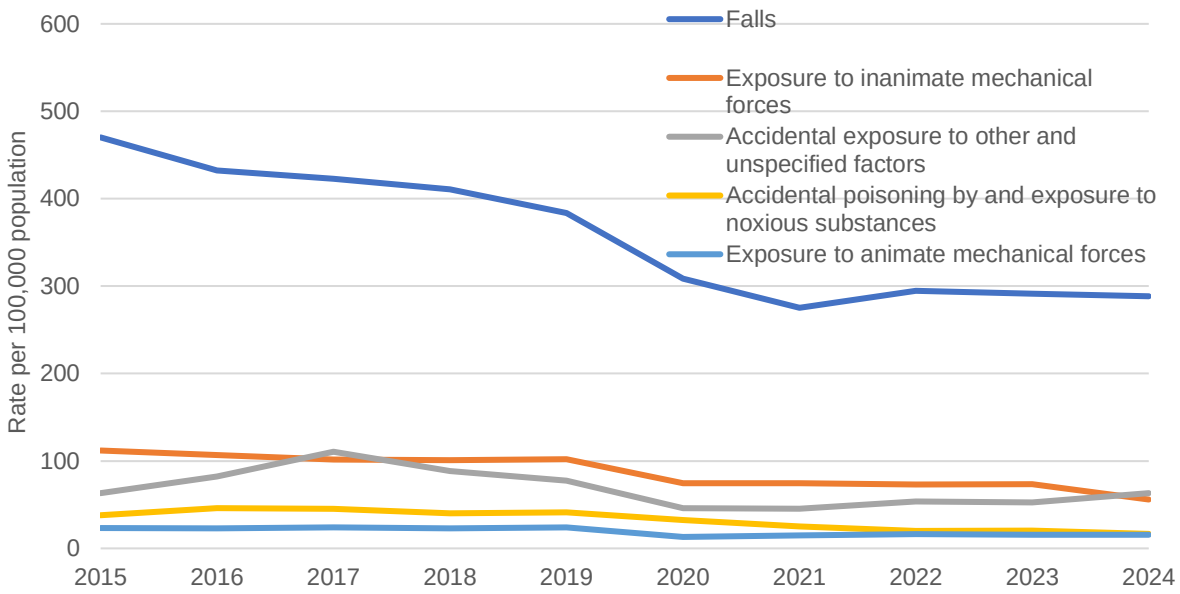
UI admission rates also decreased among children. Among those aged 1-4 years, rates decreased from 1,004 to 576 per 100,000 (43%; $p_{trend} < 0.001$), compared with reductions from 716 to 399 per 100,000 among those aged 5-9 years (44%; $p_{trend} < 0.001$) and from 605 to 340 per 100,000 among those aged 10-14 years (44%; $p_{trend} < 0.001$).

### *3.2.2 Leading causes of UI admissions*

Falls were the most frequently recorded cause of UI admissions, accounting for 67,634 admissions (56%) during 2015-2024. This was followed by exposure to inanimate mechanical forces (16,547; 14%), accidental exposure to other and unspecified factors (12,913; 11%) and accidental poisoning by and exposure to noxious substances (6,140; 5%) (Figure 7).

The annual admission rate for falls decreased from 470 per 100,000 in 2015 to 288 in 2024 (39%; $p_{trend} < 0.001$). Falls accounted for an increasing proportion of UI admissions with age, representing 72% of admissions among people aged 65-74 years, 82% among those aged 75-84 years and 89% among those aged 85 years and older (Figure 8).

Admission rates also decreased for exposure to inanimate mechanical forces, from 112 to 56 per 100,000 (50%; $p_{trend} = 0.001$), and accidental poisoning, from 38 to 17 per 100,000 (56%; $p_{trend} = 0.004$).



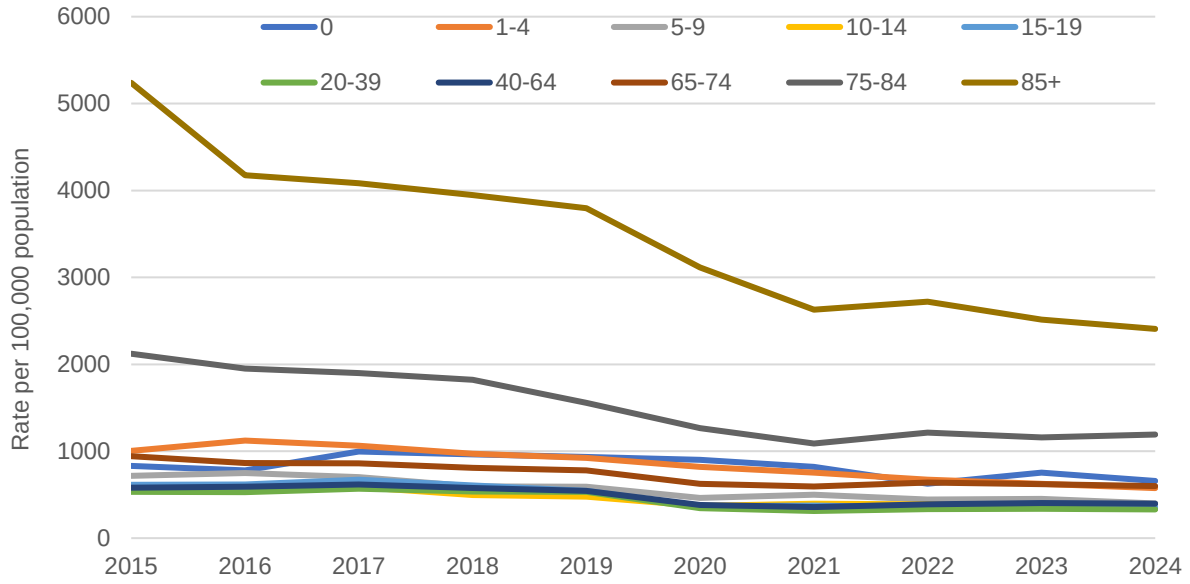

**Source:** Hospital Inpatient System, Hospital Activity Information Branch, Information & Analysis Directorate, Dept. of Health, NI.

**Figure 7.** Unintentional injury hospital admissions by injury cause, Northern Ireland, 2015-2024. Admissions represent admission events rather than unique individuals.

Falls were also the most frequently recorded cause of UI admissions among infants aged under one year and children aged 1-4 years, accounting for 50% and 45% of admissions, respectively. Accidental exposure to other and unspecified factors was the second most frequently recorded cause among infants aged under one year, while exposure to inanimate mechanical forces ranked second among children aged 1-4 years. The latter category includes injuries involving sharp objects, crushing or entrapment, and contact with falling objects.

Supplementary analysis of episode-based activity for 2015/16-2024/25 [4] provided further detail on the recorded circumstances of falls. Of fall diagnoses, 57% were classified as unspecified falls, 11% as falls on the same level from slipping, tripping or stumbling, 8% as falls on or from stairs and steps, 7% as other falls on the same level, and 3% as falls involving a bed.

Among falls for which a specific mechanism was recorded, the most frequently recorded category varied by age. Falls involving playground equipment were the most frequently recorded specified category among children aged 0-9 years. Falls on the same level due to collision with, or pushing by, another person, were the most frequently recorded category among those aged 10-19 and 20-29 years. Falls on or from stairs and steps were most frequently recorded among adults aged 30-59 years, while falls on the same level from slipping, tripping or stumbling were most frequently recorded among those aged 60 years and older. These supplementary findings describe episode-level diagnoses rather than admission events and are therefore not directly comparable with the main hospital admissions time-series.




**Source:** Hospital Inpatient System, Hospital Activity Information Branch, Information & Analysis Directorate, Dept. of Health, NI.

**Figure 8.** Unintentional injury hospital admission rates per 100,000 population by age. Northern Ireland, 2015-2024.

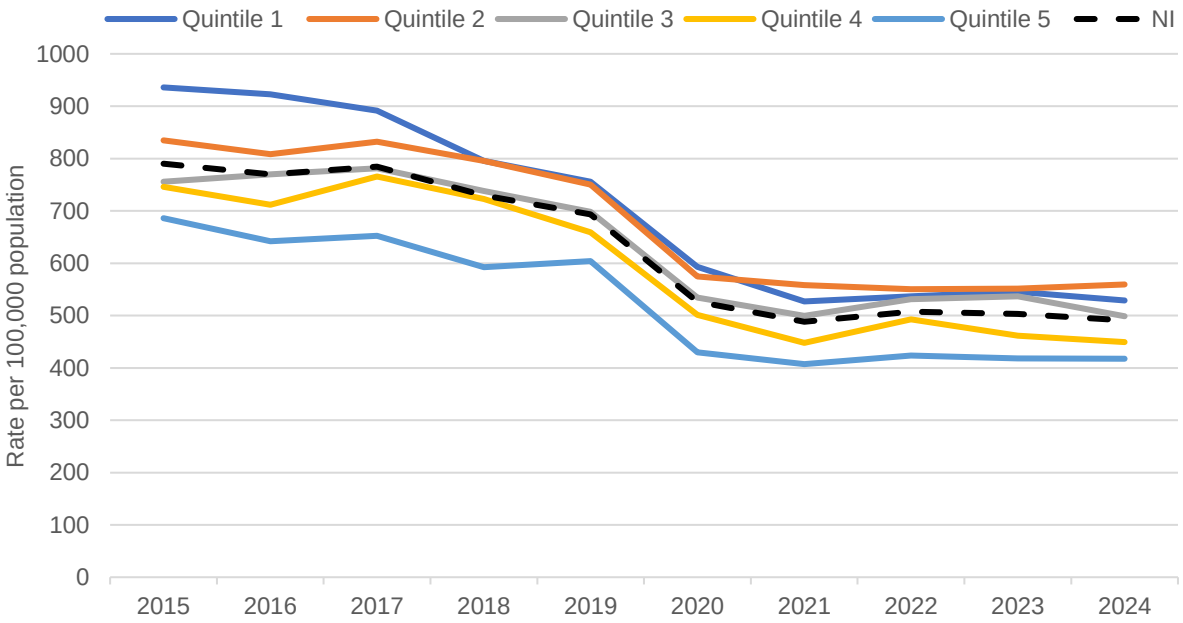
*3.2.3 Socioeconomic inequalities in UI admissions*

UI admission rates differed by area-level deprivation during 2015-2024. The pooled annual admission rate was 702 per 100,000 population in the most deprived quintile (Q1), compared with 526 in the least deprived quintile (Q5), an absolute difference of 176 per 100,000 and a relative difference of 33%.

The difference between Q1 and Q5 was greater among males than females. Among males, pooled annual admission rates were 832 per 100,000 in Q1 and 541 in Q5, with the rate in Q1 being 54% higher. The corresponding rates among females were 578 and 511 per 100,000, a relative difference of 13%.

Admission rates decreased across all deprivation quintiles between 2015 and 2024 ($p_{trend}$ < 0.01 for each quintile) (Figure 9). In Q1, the rate decreased from 936 to 529 per 100,000 (44%; $p_{trend}$ = 0.001), compared with a decrease from 686 to 418 per 100,000 in Q5 (39%; $p_{trend}$ = 0.002). The absolute difference between Q1 and Q5 decreased from 250 to 111 per 100,000, while the relative difference decreased from 36% to 27%, narrowing the gap between the most and least deprived areas. Rates in Q1 remained higher than those in Q5 in each year of the study period.

The magnitude of the deprivation-related difference varied by age. Among adults aged 20-39 years, the pooled annual admission rate was 525 per 100,000 in Q1 compared with 289 in Q5, with the rate in Q1 being 81% higher. Among adults aged 40-64 years, the corresponding rates were 609 and 352 per 100,000, a relative difference of 73%. Among children aged 0-4 years, rates were 950 in Q1 and 688 per 100,000 in Q5, a relative difference of 38%. The direction of the difference was reversed among adults aged 85 years and older, for whom the pooled annual admission rate was 3,089 per 100,000 in Q1 compared with 3,427 in Q5, with the rate in Q1 (most deprived quantile) being 10% lower.




**Source:** Hospital Inpatient System, Hospital Activity Information Branch, Information & Analysis Directorate, Dept. of Health, NI.

**Figure 9.** Unintentional injury hospital admission rates per 100,000 population by area deprivation quintile, Northern Ireland, 2015-2024. Specified injury codes S00-T73, T75, T78 with V01-X59 in any diagnostic position. Admissions are approximated using deaths and discharges. Deprivation Quintile assigned based on Super Output Area (SOA) and 2017 NIMDM. Q1 represents the most deprived areas and Q5 the least deprived areas. In the absence of official estimates at the required level, rates have been calculated from small area population estimates provided by Information & Analysis Directorate which are not official estimates.

Deprivation-related differences also varied by injury cause. For accidental poisoning, the pooled annual admission rate was 53 per 100,000 in Q1 compared with 18 in Q5, with the rate in Q1 approximately 2.9 times that in Q5. Rates for exposure to inanimate mechanical forces were 98 and 58 per 100,000, respectively, with the rate in Q1 being 68% higher. For falls, the corresponding rates were 389 and 315 per 100,000, an absolute difference of 74 per 100,000 and a relative difference of 24%.

Overall, UI admission rates decreased across all deprivation quintiles between 2015 and 2024. Rates were higher in Q1 than Q5 at both endpoints, although the absolute and relative differences were smaller in 2024 than in 2015. The magnitude and direction of differences varied by sex, age and injury cause.

## 4. Conclusions

Unintentional injury deaths increased in Northern Ireland between 2015 and 2024, while hospital admissions decreased. Falls were the leading cause of deaths and hospital admissions, particularly among older people. Accidental poisoning was the second leading cause of deaths and mainly affected working-age adults. UI mortality and hospital admission rates were generally higher in the most deprived areas, with differences varying by age, sex and cause of injury. These findings support continued attention to falls prevention, accidental poisoning and inequalities in injury outcomes. The available data do not reliably identify where

injuries occurred. Consequently, the findings cannot determine the burden of injuries specifically occurring in the home or assess the impact of the HAP Strategy. Improved recording of injury location would strengthen the evidence available to inform future home accident prevention priorities.

## References


1. Department of Health, Social Services and Public Safety. *Home Accident Prevention Strategy 2015-2025.* 2015. Available at: Home Accident Prevention Strategy 2015 - 2025 (accessed 11/10/2026)
2. Northern Ireland Statistics and Research Agency. *Review of Suicide Statistics in Northern Ireland. 2022*. Available at: https://www.nisra.gov.uk/publications/review-suicide-statistics-northern-ireland (Accessed 20/09/2026)
3. Northern Ireland Statistics and Research Agency. *2024 Mid-Year Population Estimates for Northern Ireland and Estimates of the Population Aged 85 and Over for Northern Ireland, 2024 (and 2001 to 2023 revised).* Available at: https://www.nisra.gov.uk/publications/2024-mid-year-population-estimates-northern-ireland-and-estimates-population-aged-85 (Accessed 27/01/2026).
4. Department of Health. Episode Based Activity, 2015-16 to 2024/25. Available at Acute episode based activity previous publications | Department of Health (Accessed 05/06/2026).