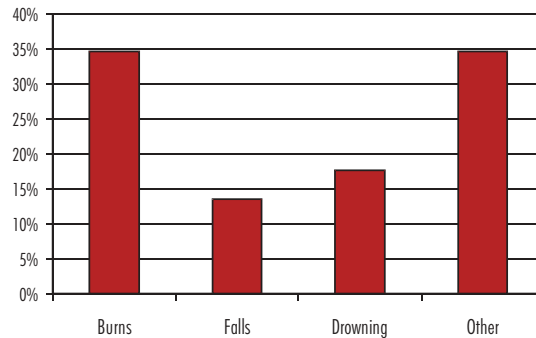


CHAPTER 7. BURNS, FALLS AND DROWNING, AND OTHER UNINTENTIONAL INJURY DEATHS

Compiled by Brett Bowman

The percentage of deaths due to burns, falls, drowning and a group of other unintentional injuries (excluding transport deaths) for 2001 is shown in Figure 24.

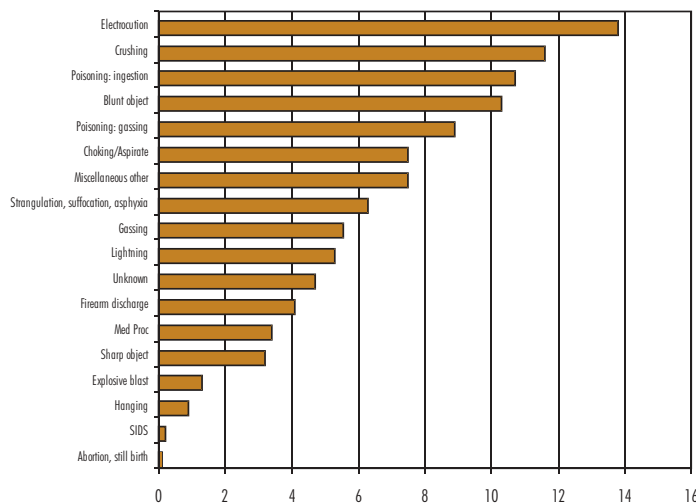
Figure 24. Burns, falls, drowning and other unintentional injury deaths, 2001 (N = 2485).



7.1 EXTERNAL CAUSES OF OTHER UNINTENTIONAL INJURY DEATHS

For the 852 deaths due to unintentional injuries other than burns, falls and drowning (Figure 25), the highest percentages were due to electrocution and crushing. The 'miscellaneous' external causes included lightning, mining and attacks by wild animals.

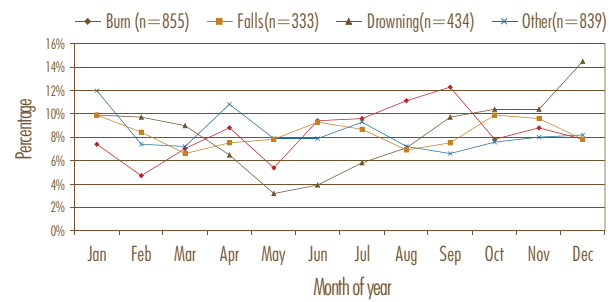
Figure 25. External causes of other unintentional injury deaths, 2001 (N = 852).



7.2 BURNS, FALLS, DROWNING, AND OTHER UNINTENTIONAL INJURY DEATHS: SEASONAL TRENDS

Death from burns and drowning showed marked seasonal fluctuations for 2001 (Figure 26). The percentage of burn deaths was lower at the beginning of the year and higher in the winter months, (May to September 2001), probably due to indoor fires and unsafe heating practices in informal houses. The percentage of drowning deaths decreased during the winter months, showing a steady increase in the summer months and peaking in December. The percentage of deaths due to falls peaked in October.

Figure 26. Burns, falls, drowning and other unintentional injury deaths by month of death, 2001 (N = 2461).



7.3 BURNS, FALLS, DROWNING, AND OTHER UNINTENTIONAL INJURY DEATHS BY SEX

There were 2.5 other unintentional injury deaths among males for every female death (Table XI). Burn deaths accounted for a higher percentage of other unintentional injury death (48.6%) among females than males (29%). Deaths from falls and drowning accounted for a higher percentage of other unintentional injury deaths among females.

Table XI. Burns, falls, drowning, and other unintentional injury deaths by sex, 2001 (N = 2411).

	Male	Female	M: F ratio
Burns	510 (29.0)	341 (48.6)	1.5 : 1
Falls	248 (14.1)	84 (12.7)	3 : 1
Drowning	345 (19.6)	89 (12.7)	3.9 : 1
Other	655 (37.3)	188 (26.8)	3.5 : 1
TOTAL	1758 (100)	702 (100)	2.5 : 1

7.4 BURNS, FALLS, DROWNING AND OTHER UNINTENTIONAL INJURY DEATHS BY POPULATION GROUP

The distribution of burns, falls, drowning and other unintentional injury deaths by population group is shown in Table XII (see section 1.6 - Terminology). Deaths from burns accounted for the highest percentage of other unintentional injury deaths among Africans (39.6%) and Coloureds (36.8%). Death by drowning accounted for a higher percentage of Asian deaths (31.6%) than other population group groups. More than a quarter of unintentional injury deaths other than by traffic injuries among Whites were due to falls.

Table XII. Burns, falls, drowning and other unintentional injury deaths by population group, 2001 (N = 2456)

7.5 BURNS, FALLS,

	Male	Female	M: F ratio
Burns	510 (29.0)	341 (48.6)	1.5 : 1
Falls	248 (14.1)	84 (12.7)	3 : 1
Drowning	345 (19.6)	89 (12.7)	3.9 : 1
Other	655 (37.3)	188 (26.8)	3.5 : 1
TOTAL	1758 (100)	702 (100)	2.5 : 1

DROWNING AND OTHER UNINTENTIONAL INJURY DEATHS BY AGE

Drowning accounted for the highest percentage of deaths in the 1-9-year age groups, while burns represented the greatest caseloads among the 20-59-year age groups. Deaths from falls were more prominent in the 55 years and older age group, and falls were the major cause of unintentional injury death in those 60 years and older. Figures 27a to 27d show the number of deaths per age group due to burns, falls, drowning and other unintentional injury deaths.

Figure 27a. Burns by age, 2001.

Figure 27b. Falls by age, 2001.

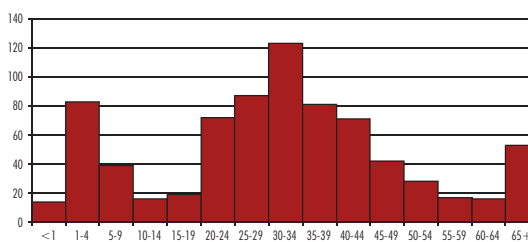


Figure 27c. Drowning by age, 2001.

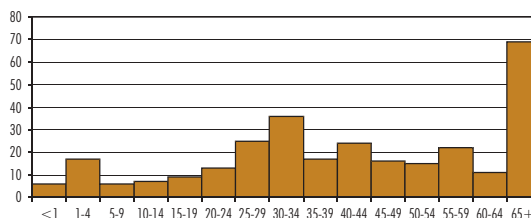
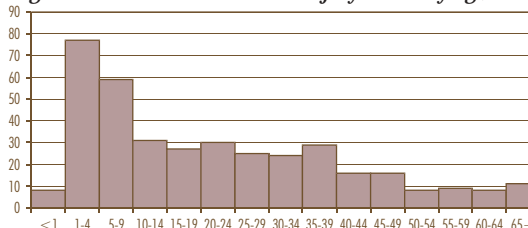
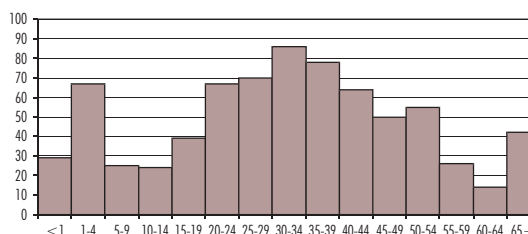


Figure 27d. Other unintentional injury deaths by age



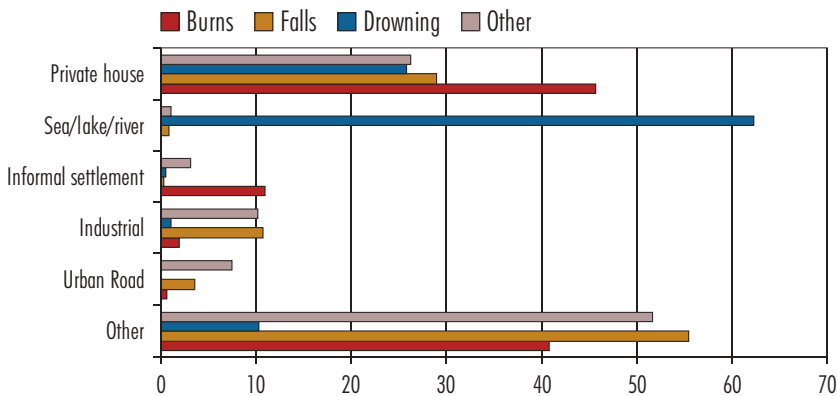
2001 7.6 BURNS, FALLS,



DROWNING AND OTHER UNINTENTIONAL INJURY DEATHS BY SCENE OF INJURY

Most burn deaths occurred in private homes, informal settlements and residential institutions, while deaths due to falls mostly occurred in private homes and industrial areas. Drowning occurred most commonly in the sea, lakes and rivers, although a large number also occurred in and around private homes (e.g. in swimming pools). Figure 28 shows the scene of injury for unintentional injury deaths other than those caused by traffic injuries.

Figure 28. Burns, falls, drowning and other unintentional injury deaths by top five leading scenes of injury, 2001 (N = 2485).



7.7 BURNS, FALLS AND DROWNING BY DAY AND TIME OF DEATH

DAY OF DEATH

The day of death for burns, falls, drowning and other unintentional injuries is shown in Figure 29. Burn deaths were equally spread across weekdays, and peaked on Sundays. Over a third of burn deaths occurred on weekends. Deaths from falls were slightly higher on Mondays and Sundays, although there was not much variation for different days of the week. Drowning occurred more frequently on Sundays than any other day, and 37% of drowning occurred over the weekend.

Figure 29. Burns, falls, drowning and other unintentional injury deaths by day of death, 2001 (N = 1833).

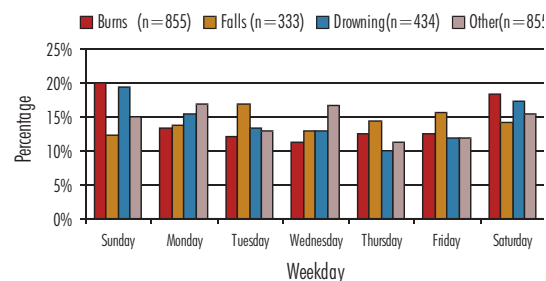
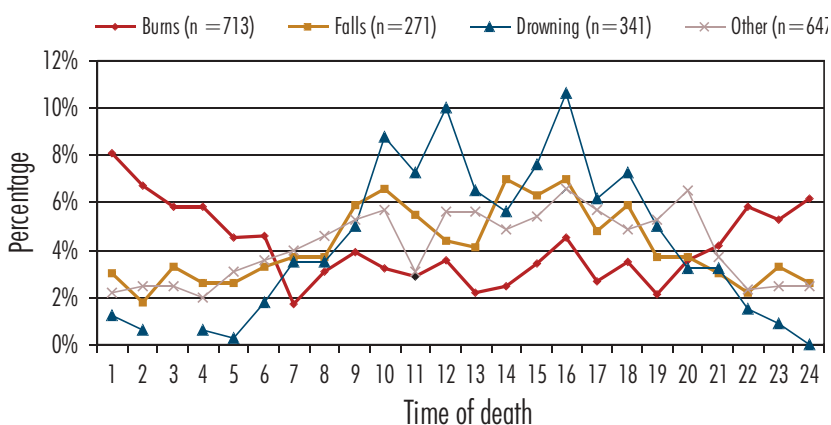


Figure 30. Burns, falls, drowning and other unintentional injury deaths by hour of death, 2001 (N = 1833).

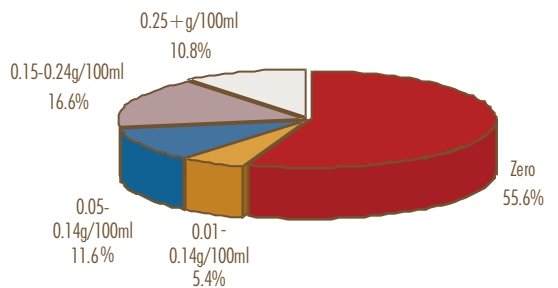


Most fatal burns occurred during the night when people were asleep, whereas falls and drowning were concentrated in the middle of the day (Figure 30).

7.8 BURNS, FALLS, DROWNING AND OTHER UNINTENTIONAL INJURY DEATHS BY BLOOD ALCOHOL CONCENTRATION

BACs was obtained for 595 (23.9%) of the 2485 burn, fall and drowning cases and the other group of unintentional injury deaths. Figure 31 shows that 44.4% of these unintentional injury deaths were alcohol-related, with 87.9% of alcohol-positive cases at or above 0.05 g/100 ml.

Figure 31. Burns, falls, drowning and other unintentional injury deaths by blood alcohol concentration, 2001 (N = 595).



Burn deaths had the highest percentage of positive BACs (65.3%), and over two-thirds (64.7%) had BACs of 0.05 g/100 ml or greater (Table XIII). Just under one-third (32.1%) of fall victims and 40.7% of drowning deaths had positive BACs.

Table XIII. Burns, falls, drowning and other unintentional deaths by blood alcohol concentration, 2001 (N = 595)

	Zero	0.01-0.04	0.05-0.14	0.15-0.24	0.25>	TOTAL	Mean positive BAC (+Std.dev)
Burns	58 (34.7)	1 (3.1)	24 (14.4)	55 (32.9)	29 (17.4)	167	0.13 (0.05)
Falls	53 (67.9)	4 (5.1)	7 (9.0)	6 (7.7)	8 (5.1)	78	0.05 (0.06)
Drowning	64 (59.3)	6 (5.6)	12 (11.1)	19 (17.6)	7 (6.5)	108	0.06 (0.05)
Other	156 (64.5)	21 (8.7)	26 (10.7)	19 (7.9)	20 (8.3)	242	0.05 (0.07)
All unintentional deaths	331 (56.6)	32 (5.4)	69 (11.6)	99 (16.6)	64 (10.8)	595	0.07 (0.05)

7.9 BURNS, FALLS, DROWNING AND OTHER UNINTENTIONAL INJURY DEATHS: IMPLICATIONS FOR PREVENTION

In this section we outline a selection of prevention implications that may be deduced from the NIMSS data on deaths due to burns, falls, drowning and the other unintentional injuries.

BURNS

Burns accounted for the majority of unintentional injury deaths among victims aged 20-44 years. These deaths commonly occurred in private homes, residential institutions and informal settlements. The latter could be as a result of candles, fire lanterns, or other relatively more unsafe heating or light sources being used at night, since burn deaths were common between 10h00 and 06h00 in the morning. Education programmes should be arranged to make people more alert about fire safety, and especially people living in informal housing should be encouraged to have more than one exit point to their homes. This would especially assist children younger than 10 years who often fall victim to burns. Engineering contributions could also improve the safety of the heat and lighting sources currently used in low-income settings. A large percentage of burn victims were alcohol positive, which could explain the cluster of victims aged 20-44 years.

FALLS

Deaths due to falls commonly occurred among people aged 65 years and older or over. These occurred throughout the week, most often at the times 10:00, 14:00 and 16:00. Deaths from falls were common in private homes and industrial areas. Occupational health and safety regulations should be enforced to reduce or prevent the occurrence of these events. The level of intoxication also plays a role in deaths due to falls, since the victim's blood alcohol level was positive in 32.1% of cases.

DROWNING

Drowning deaths most commonly occurred among children aged 1 to 9 years. Drowning often occurred in the sea and around private homes. Drowning prevention interventions currently include education programmes directed at parents and children about the dangers of swimming alone or in waters with strong currents. In addition, community and school-based programmes could be arranged to encourage children to take swimming lessons. Pools at private homes should be fenced in to prevent access to children, which would reduce the number of infants and young children drowning.

OTHER UNINTENTIONAL INJURY DEATHS

Deaths due to unintentional injuries other than burns, falls or drowning most commonly occurred in and around private homes and in industrial areas. These deaths were prevalent among those aged 20 to 44 and 1 to 4 year olds. Some of these deaths were the result of paraffin ingestion, the explosion of paraffin stoves and iron tablet overdoses. The promotion of child resistant closures for paraffin and pharmaceuticals will play an important role in reducing the number of deaths as a result of paraffin ingestion. Pre-packed paraffin will also reduce contamination of paraffin and burn deaths that result from the explosion of paraffin stoves. Other unintentional injury deaths were prevalent among economically active age groups and included deaths from occupational injuries. Occupational health and safety regulations should be met to reduce the number of deaths occurring as a result of occupational injuries.