

Impact of snow and ice in East Sussex, December 2009 and January 2010

1. Introduction

Data on A&E attendances and hospital admissions can help assess the impact of the snow and ice in East Sussex during the 2009/10 winter on East Sussex resident's health and well-being. Data for the two months December 2009 and January 2010 will be used and compared with the same period in previous years. This paper provides information on attendances at A&E and hospital admissions, for falls and then road traffic accidents.

2. Attendances at A&E

Data issues

It is worth noting that Crowborough, Lewes and Uckfield have Minor Injury Units and that a number of injuries caused by the snow and ice may have been treated in these settings – it is currently not possible to accurately capture these so they are not included in this report.

Attendances at A&E for dislocation/fracture/joint injury/amputation where the incident location is a public place could be used as a proxy for falls on pavements as a result of the impact of the ice and snow. Injuries to East Sussex residents can be identified but it does not mean that the injury occurred in East Sussex. Where data is presented for East Sussex residents it will include attendances at any A&E department – so will include attendances at Brighton for example and potentially attendances at any A&E department in the

country. Separate analysis will look at attendances at East Sussex Hospitals NHS Trust only, regardless of whether the patient was an East Sussex resident or not.

A&E attendance data is not as established a dataset as hospital admissions and therefore there is much more variation in the quality of the coding between hospitals and over time. The quality of the coding is improving which may show an increase in numbers when looking at specific reasons for attendances at A&E.

Table 1 – percentage of A&E attendances with valid incident location code and valid diagnosis code (for attendances from East Sussex residents)

Dec-Jan 07/08	Dec-Jan 08/09	Dec-Jan 09/10
93%	93%	97%

Attendances at A&E due to road traffic accidents (RTAs) can also be identified and analysis of these is also presented in this report.

Criteria used to extract A&E attendance data:

Month of attendance = December or January

A&E attendance category = 1 (first A&E attendance in a particular episode)

A&E diagnosis = 05 (dislocation/fracture/joint injury/amputation)

A&E incident location = 60 (public place)

Valid East Sussex postcode (patient's resident postcode) or Provider = RXC (East Sussex Hospitals Trust)

For RTAs: A&E patient group = 10 (reason for A&E episode - road traffic accident)

There is an increase in the number of A&E attendances in Dec-Jan 09/10 compared to the previous 2 years. Over the three-year period attendances have increased year on year with a 24% increase in attendances across the county in 08/09 from 07/08, and a 58% increase in 09/10 from 08/09. There is variation within the county, with, for example, Lewes district showing an increase in numbers of 132% in 09/10 from the year before and Rother showing an increase of 29%, see table 2.

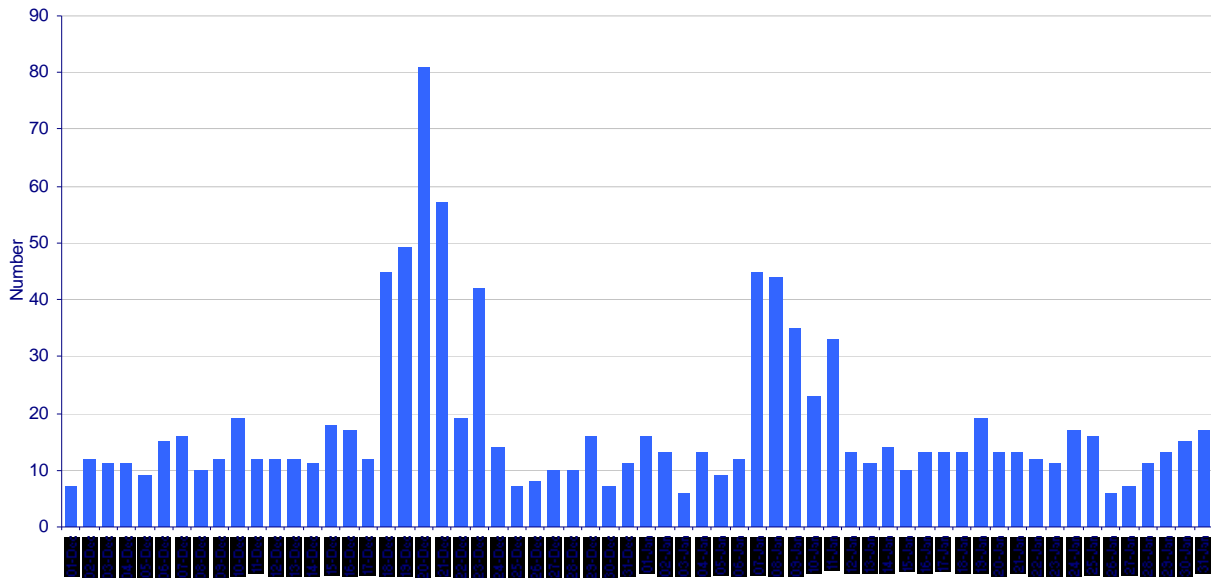
Table 2 – number of A&E attendances during December or January for dislocation/fracture/joint injury/amputation that occurred in a public place by East Sussex local authority residence and year

District/borough residence of patient	Dec-Jan 07/08	Dec-Jan 08/09	Dec-Jan 09/10	% increase from 08/09 to 09/10
Eastbourne	131	154	263	71%
Hastings	132	175	254	45%
Lewes	72	59	137	132%
Rother	121	139	180	29%
Wealden	101	166	264	59%
<i>East Sussex</i>	<i>557</i>	<i>693</i>	<i>1098</i>	<i>58%</i>

Looking at the number of attendances by day for Dec-Jan 09/10 shows two peaks, the period 18/12/09-23/12/09 and 07/01/10-11/01/10 (Figure 1).

Figure 1

Number of A&E attendances for dislocation/fracture/joint injury/amputation that occurred in a public place by day, December 09-January 10, East Sussex residents



These two peak-periods account for 473 attendances, 43% of the attendances across the two months for East Sussex residents.

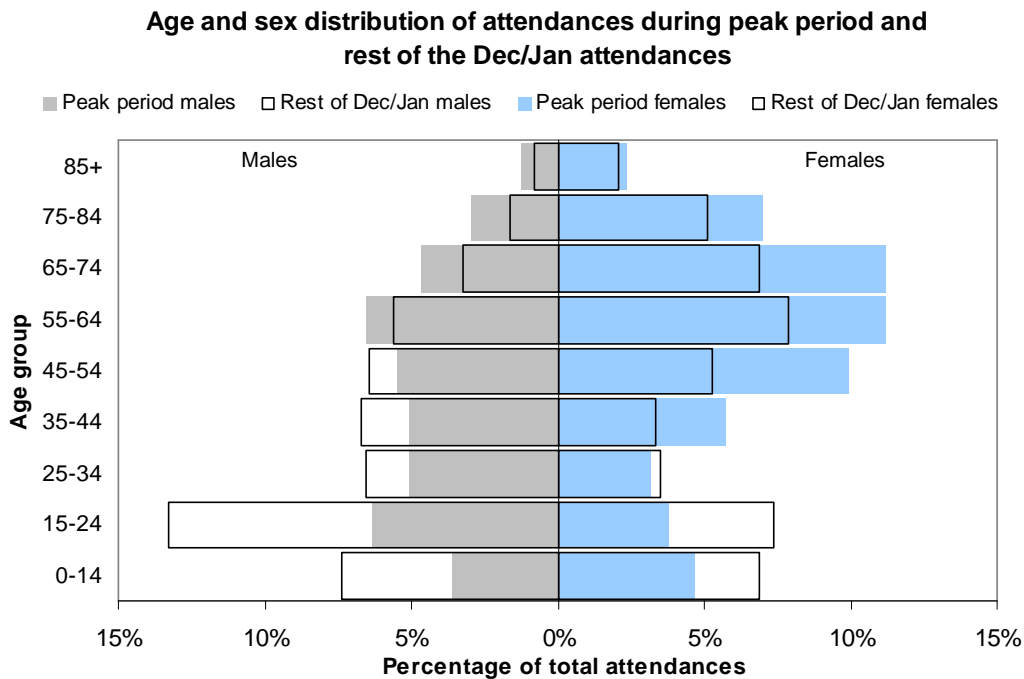
The age and sex breakdown of the 473 attendances during the peak periods is shown in table 3.

Table 3 – age and sex breakdown of attendances during the peak periods

Age group	Males	Females	Total
0-14	17	22	39
15-24	30	18	48
25-34	24	15	39
35-44	24	27	51
45-54	26	47	73
55-64	31	53	84
65-74	22	53	75
75-84	14	33	47
85+	6	11	17
<i>Total</i>	<i>194</i>	<i>279</i>	<i>473</i>

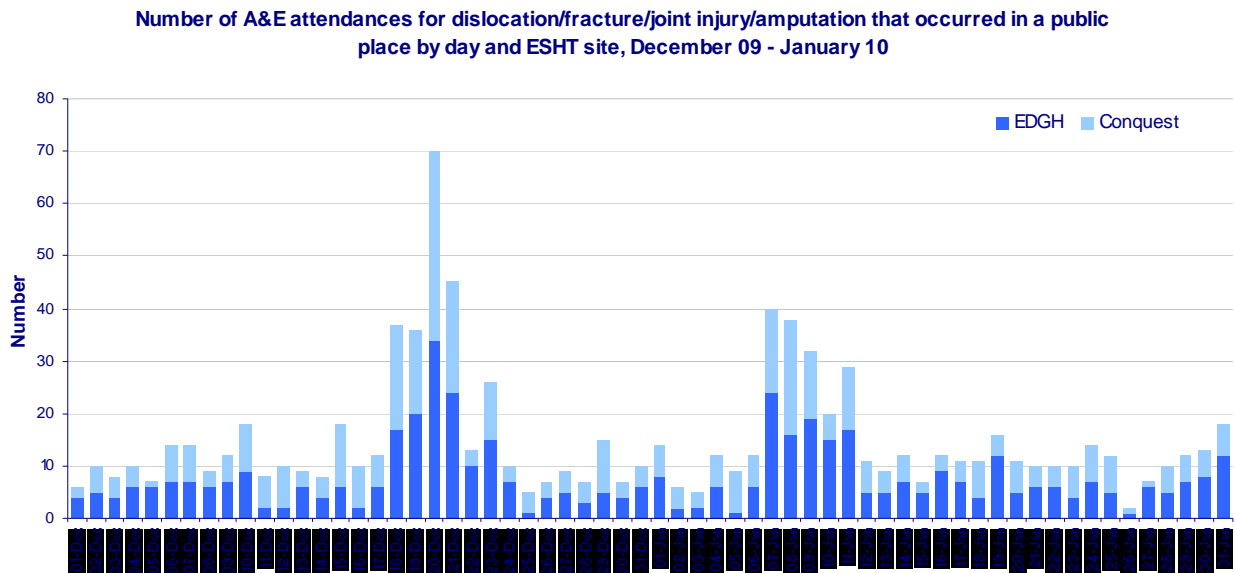
The age and sex distribution for attendances during the two peak periods and the rest of Dec/Jan for East Sussex residents is compared in figure 2. During the peak periods (18th- 23rd Dec and 7th- 11th Jan) the main difference in the pattern of attendances is the proportionally higher attendance of older females. The figure shows that older females made up a larger percentage of total attendances whereas young males aged 15-24 made up a smaller percentage of total attendances during the peak periods. The change in the distribution of attendances during the peak periods reflected a rise in the attendance rate of older females, resulting in under 25s making up a smaller percentage of the total attendances.

Figure 2



Attendances at East Sussex Hospitals Trust A&E departments during December 2009 or January 2010 are shown in Figure 3.

Figure 3



Sunday 20th December had the highest numbers at both sites with 34 at Eastbourne and 36 at The Conquest.

Looking at the A&E attendances at ward level needs to be done with caution due to the small numbers involved and the ward population size. For these reasons, the top 20 wards with the highest A&E attendance rate per 1,000 population has been presented for dislocation/fracture/joint injury/amputations that occurred in a public place during December 09 or January 10 (Table 4). The number of attendances and the rate for the previous year is also shown. It is important to note that due to the small numbers involved, the rate can be sensitive to a small change in numbers.

Table 4 – top 20 East Sussex wards with highest A&E attendance rate per 1,000 population for dislocation/fracture/joint injury/amputations that occurred in a public place

Ward	Local Authority	Dec 08-Jan 09		Dec 09-Jan 10	
		Number of attendances	Rate per 1,000 pop	Number of attendances	Rate per 1,000 pop
Polegate South	Wealden	<5	1.3	11	4.6
Tressell	Hastings	5	1.0	22	4.4
Gensing	Hastings	11	1.8	27	4.1
Silverhill	Hastings	7	1.6	18	3.9
Conquest	Hastings	9	1.7	18	3.7
Old Town	Eastbourne	18	1.7	38	3.6
Hailsham East	Wealden	8	2.8	10	3.5
Ninfield & Hooe with Wartling	Wealden	<5	1.2	8	3.4
Langney	Eastbourne	14	1.3	36	3.4
Ewhurst & Sedlescombe	Rother	5	2.1	8	3.3
Alfriston	Wealden	<5	1.2	8	3.1
Ashdown	Hastings	17	3.1	16	3.0
Central St Leonards	Hastings	13	2.1	20	3.0
East Dean	Wealden	<5	0.4	7	3.0
Ratton	Eastbourne	19	2.0	27	2.9
Castle	Hastings	20	3.0	20	2.9
Brede Valley	Rother	10	2.1	14	2.9
Baird	Hastings	5	1.0	13	2.8
Hollington	Hastings	12	1.8	16	2.7
Sidley	Rother	9	1.7	14	2.6
<i>Total across East Sussex</i>		693	1.3	1098	2.1

The Payment by Results tariff (PbR) for East Sussex resident attendances at A&E during December or January for dislocation/fracture/joint injury/amputation that occurred in a public place ranged from £56-£102 per attendance in 2008/09 with a total cost of £68,600. In 2009/10 the cost per attendance ranged from

£61.58-£129.45 per attendance with a total cost of £122,600 (2009/10 costs are PbR tariffs with market forces factor built in).

Market Forces Factor (MFF)

Used within payment by results (PbR) to compensate organisations for variation in unavoidable costs incurred when providing PbR activity e.g. staff, buildings, land. See link for further details:

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_095351.pdf

3. Admissions at hospital due to falls on ice or snow

It is possible to identify admissions to hospital as a result of a fall on ice or snow using a secondary diagnosis code of 'fall on same level involving ice and snow' (ICD 10 W00). Admissions for East Sussex residents could be to a hospital anywhere in the country.

Criteria used to extract hospital admissions data:

Month of admission = January or December

Episode number = 01 (used to count admissions)

Secondary diagnosis = W00 (fall on same level involving ice and snow) in any of the first 6 secondary diagnosis positions

Valid East Sussex postcode (patient's resident postcode) or Provider = RXC (East Sussex Hospitals Trust)

During December 09 and January 10 there were 198 admissions due to a fall on snow for East Sussex residents (see Table 5 for breakdown by district/borough). The number of admissions to hospital due to snow and ice for East Sussex residents in the previous year is 23 admissions over the two month period December 08 and January 09. It is not possible to breakdown these

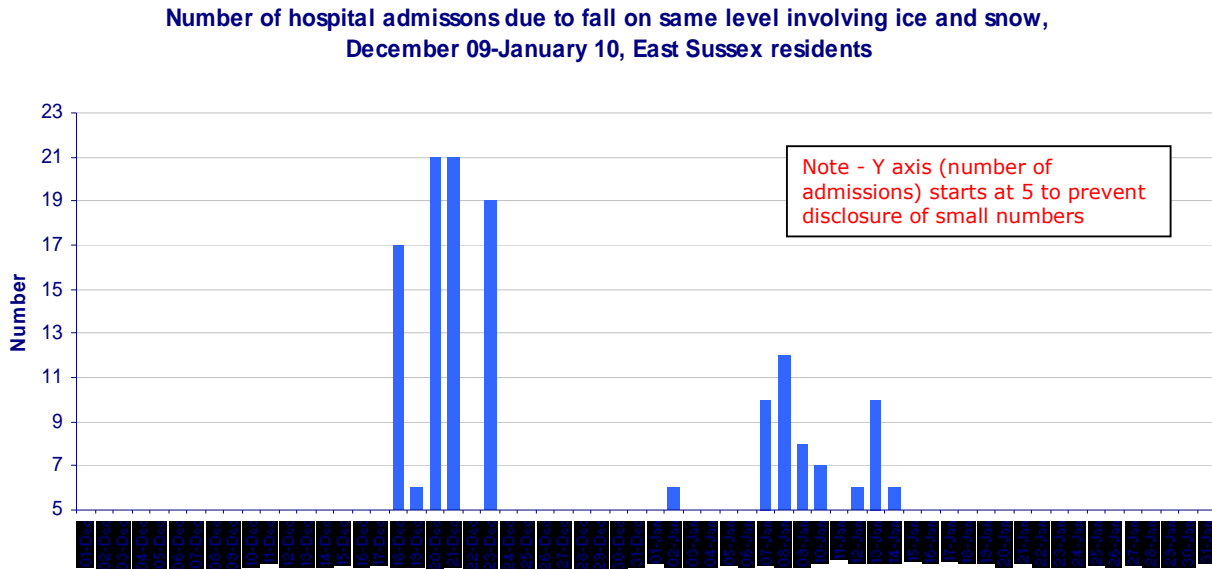
admissions to a district/borough level due to the disclosure of small numbers.

Table 5 – admissions to hospital during December 09 and January 10 due to a fall on same level involving ice and snow, East Sussex residents

District/borough residence of patient	Number of admissions
Eastbourne	25
Hastings	39
Lewes	30
Rother	52
Wealden	52
<i>East Sussex</i>	<i>198</i>

Figure 4 shows the number of admissions by day for December 09 and January 10 – note that the Y axis (number of admissions) starts at 5 to prevent disclosure of small numbers. The admissions data shows the same peak in December as A&E data highlighted, with a slightly longer period in January. It is important to remember that admissions could be anywhere in the country – they do not necessarily relate to snow/ice falls locally.

Figure 4



Just under half of admissions were due to falls on ice and snow that occurred in the street/highway (Table 6).

Table 6- place of occurrence of fall that resulted in hospital admission, Dec 09-Jan 10

Place of occurrence	Number
street / highway	93
unspecified place	67
home	22
other specified place	10
trade / service area	<5
school, other institution and public administrative areas	<5
sports / athletics area	<5
farm	<5
<i>Total</i>	<i>198</i>

Over half of admissions (55%) were for females. Persons aged 65 years or over accounted for 48% of admissions with those aged 65-74 years accounting for around a quarter (24%).

Table 7 – age and sex breakdown for admissions due to fall on ice and snow December 09 and January 10, East Sussex residents

Age group	Males	Females	Total
0-14		7	7
15-24		12	12
25-34		6	6
35-44	6	7	13
45-54	8	21	29
55-64	17	19	36
65-74	19	29	48
75-84	14	15	29
85+	8	10	18
<i>Total</i>	<i>89</i>	<i>109</i>	<i>198</i>

During December 09 and January 10 there were 135 admissions at East Sussex Hospitals Trust due to falls on same level involving snow and ice. There were 78 admissions at The Conquest and 57 at Eastbourne DGH.

The cost of admissions to hospital due to falls on the same level involving ice and snow, for East Sussex residents during December 09 and January 10 ranged from £506.19 to £10,376.12 per admission with a total cost of £548,000.

4. Attendances at A&E - road traffic accidents (RTAs)

Attendances at A&E due to RTAs can be identified, although there is no way to determine whether the snow and ice would have been a factor. Note that information is not available on where the accident

occurred; data is presented based on the patient's postcode of residence.

There is slight reduction in the number of East Sussex residents attending an A&E department due to a road traffic accident in December/January 09/10 compared to the previous year (Table 8). This could be explained by less vehicles being on the road due to the snow and ice. The data does not show a peak in attendances around the snow/ice periods. During the peak periods (from fractures data: 18th-23rd Dec and 7th-11th Jan) in December-January 09/10 there were 71 A&E attendances due to RTAs, compared to 81 for the same period in the previous year.

Table 8 – number of A&E attendances during December or January for road traffic accidents by East Sussex local authority residence and year

District/borough residence of patient	Dec-Jan 08/09	Dec-Jan 09/10
Eastbourne	86	88
Hastings	108	113
Lewes	56	53
Rother	65	58
Wealden	141	104
<i>East Sussex</i>	<i>456</i>	<i>416</i>