Provisional monthly topic of interest: Hospital admissions due to bites, strikes and stings from dogs, other mammals, non-venomous arthropods and other animals

NHS Choices' states that:

"Dog bites are most common in young children, particularly boys aged 5 to 9. It is estimated that around half of all children will be bitten by a dog at some point during their life, usually by either a family dog or a dog that belongs to a friend or neighbour. Bites from stray dogs are rarer as they tend to be wary of humans and usually keep their distance. However, it is difficult to estimate exactly how common animal bites are in England, as many people do not seek medical treatment or advice for minor bites. Dog bites are the most common form of bites and reports of serious dog attacks resulting in fatalities, usually involving young children, receive a lot of media coverage. However, such cases are very rare in England: in 2010, there were two deaths as a result of dog bites.

In adults, most animal bites are to hands, arms, legs or feet. Due to their size, most attacks on children are to their face and usually involve their lips, nose or cheek. There is a risk of infection following a dog bite and medical attention is recommended for all but minor dog bites. For most bites, treatment can be received via a GP, walk-in centre or a local minor injuries unit. However, if the bite wound is more severe or involves bones, joints or tendons then treatment at A&E may be required." This topic of interest is an analysis of inpatient admissions (most of which followed an attendance at A&E) and will therefore represent the most severe injuries.

Other mammals' bites or strikes, which can only be identified collectively in HES can include farm animals, horses, foxes and cats (most of which are strays).

"Arthropods are a diverse family of organisms with a hard exoskeleton and include insects, spiders, centipedes, lice and crabs. In the UK, non-venomous arthropods that bite or sting include midges, mosquitoes, fleas, bedbugs, spiders, mites, ticks and ants. Most non-venomous arthropod bites and stings only cause itching and swelling that usually clears up within several hours. Blisters may require bandaging and infections can usually be treated by antibiotics. An allergic response to a bite or sting however may require further treatment at an allergy clinic."

Key facts for admissions due due to bites, strikes and stings from dogs, other mammals, non-venomous arthropods and other animals

Provisional data for the period May 2011 to April 2012 shows:

- Bites, strikes and stings accounted for 12,423 finished admission episodes representing very little change on the previous 12 month period when there were 12,436 admissions.
- Being bitten or stuck by a dog accounted for over half (6,447; 52%) of these admissions.
- There was a clear seasonal trend for bites and stings from non-venomous arthropods with highest admissions in summer and lowest admissions in winter. Although less pronounced, admissions for dog bites or strikes were also lowest during winter months.
- Rates of admission for bites or stings from non-venomous arthropods were highest in the 40-44 age group. For other mammals’ rates were highest in the 65-69 age groups. For dog bites and strikes the highest rate was for very young children (5 to 9).
- Rates of admission for dog bites or strikes showed the most regional variation, with the highest rates in the North East, North West and Yorkshire and the Humber regions and lowest in London and the South East Coast. London showed the lowest rate of bites or strikes by other mammals but one of the highest rates for stings or bites by non-venomous arthropods.

Chart 1: Number (and %) of finished admission episodes where the cause of the admission was a bite, strike or sting for the period May 2011 to April 2012.
Chart 2: Number of finished admission episodes for bites, strikes and stings, by month, May 2010 to April 2012

Chart 3: Rate of finished admission episodes (per 100,000 population\(^6\)) for bites, strikes and stings, by age band, May 2011 to April 2012
Further key facts for admissions from dog bites or strikes

Dog bites and strikes accounted for over half of admissions and show the most variation by age and region. Therefore further analysis is included for these admissions.

Provisional data for the period May 2011 to April 2012 shows:

- Dog bites accounted for 6,447 admissions, representing an increase of 5.2% from the 6,127 admissions in the previous 12 month period.
- Further analysis shows that overall slightly more males (52.4%) were admitted for dog bites or strikes than females. Rates of admission were highest for young children, especially those aged 5 to 9. Rates of admission for men were similar between the ages of 15 and 50 before decreasing in older ages whereas for women, admission rates were highest for those in their late forties to early fifties.
- The largest variation in dog bites or strikes between regions was seen in the younger age groups with higher rates of admissions in northern SHAs. For all age groups admissions were lowest in London and the South East Coast regions.
- Plastic surgery was the treatment speciality with the highest rate of admissions for all age groups under 70 and was highest for those aged 0 to 9. The 0 to 9 age group also had the highest admission rate for the Oral or Maxillo facial surgery treatment speciality and this is consistent with sustaining more facial injuries. Admission rates in the Trauma and Orthopaedics treatment speciality were increasingly higher in the older age groups (especially 50 to 69) and this is consistent with sustaining more injuries to the hands and body.
Chart 6: Rate of finished admission episodes (per 100,000 population) for dog bites by Strategic Health Authority of residence, and age band. May 2011 to April 2012.

Chart 7: Rate of finished admission episodes (per 100,000) by treatment specialty for dog bites by age band. May 2011 to April 2012.
Footnotes

1. NHS Choices
   http://www.nhs.uk/conditions/Bites-human-and-animal/Pages/Introduction.aspx
   http://www.nhs.uk/Conditions/Bites-insect/Pages/Introduction.aspx

2. Cause codes
A supplementary code that indicates the nature of any external cause of injury, poisoning or other adverse effects. Only the first external cause code which is coded within the episode is counted in HES.

ICD-10 codes used:

**Dog bites and strikes**
W54 - Bitten or struck by dog

**Other mammal bites and strikes**
W55 - Bitten or struck by other mammals

**Arthropod bites or stings**
W57 - Bitten or stung by non-venomous insect and other non-venomous arthropods

**Other bites and strikes**
W53 - Bitten by rat
W56 - Contact with marine animal
W58 - Bitten or struck by crocodile or alligator
W59 - Bitten or crushed by other reptiles

Please note: figures presented in this report excludes **Contact with venomous animals and plants** (X20-X29):
X20 Contact with venomous snakes and lizards
X21 Contact with venomous spiders
X22 Contact with scorpions
X23 Contact with hornets, wasps and bees
X24 Contact with centipedes and venomous millipedes (tropical)
X25 Contact with other venomous arthropods
X26 Contact with venomous marine animals and plants
X27 Contact with other specified venomous animals
X28 Contact with other specified venomous plants
X29 Contact with unspecified venomous animal or plant

3. Provisional data
The data is provisional and may be incomplete or contain errors for which no adjustments have yet been made. Counts produced from provisional data are likely to be lower than those generated for the same period in the final dataset. This shortfall will be most pronounced in the final month of the latest period, i.e. November from the (month 9) April to November extract. It is also probable that clinical data are not complete, which may in particular affect the last two months of any given period. There may also be errors due to coding inconsistencies that have not yet been investigated and corrected.

4. Finished admission episodes
A finished admission episode (FAE) is the first period of inpatient care under one consultant within one healthcare provider. FAEs are counted against the year in which the admission episode finishes. Admissions do not represent the number of inpatients, as a person may have more than one admission within the year.

5. SHA/PCT of residence
The strategic health authority (SHA) or primary care trust (PCT) containing the patient’s normal home address. This does not necessarily reflect where the patient was treated as they may have travelled to another SHA/PCT for treatment.

6. ONS Population estimates
Population estimates are only currently available for mid-2010 from the Office of National Statistics and are therefore not concurrent with the period presented in this publication. Rate per 100,000 has been calculated using the total population within the same category e.g. all persons aged 0-16 in London SHA.

The estimated resident population of an area includes all people who usually live there, whatever their nationality. People arriving into an area from outside the UK are only included in the population estimates if their total stay in the UK is 12 months or more. Visitors and short term migrants (those who enter the UK for 3 to 12 months for certain purposes) are not included. Similarly, people who leave the UK are only excluded from the population estimates if they remain outside the UK for 12 months or more. This is consistent with the United Nations recommended definition of an international long-term migrant. Members of UK and non-UK armed forces stationed in the UK are included in the population and UK forces stationed outside the UK are excluded. Students are taken to be resident at their term time address. At a subnational level, the population estimates reflect boundaries that were in place on 1 April of 2010.
7. Treatment Specialty
Defines the specialty in which the consultant was working during the period of care.
Treatment specialty codes used:
110 - Trauma and Orthopaedics
214 - Paediatric trauma and Orthopaedics
160 - Plastic surgery
219 - Paediatric plastic surgery
144 - Maxillo facial surgery
217 - Paediatric Maxillo facial surgery
140 - Oral Surgery
For this publication admissions for related categories have been combined e.g. plastic surgery and paediatric plastic surgery have been combined as category 'plastic surgery'.

Source statement
Source: Hospital Episode Statistics (HES), Health and Social Care Information Centre

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