

JOINT STRATEGIC NEEDS ASSESSMENT

CHILDREN AND YOUNG PEOPLE

CHAPTER: Unintentional Childhood Injuries

Why is this important?

Injuries are a leading cause of hospitalisation and represent a major cause of premature mortality for children and young people, with accidental injury being one of the biggest killers of children in the UK, second only to cancer.

There are clear inequalities in those affected by unintended childhood injuries with children from the poorest families being 13 times more likely to die in accidents and three times more likely to be admitted to hospital with accidental injuries (Child Accident Prevention Trust, 2015). There is also evidence of the ease and low-cost with which information and education programmes to prevent accidental injury in children can be successful (Royal Society for the Prevention of Accidents, 2012).

For the purposes of this JSNA tool, children and young people are considered as all those under the age of 18, though some indicators relating to childhood injuries report data in different age categories.

There is not a central definition or indicator for unintentional childhood injuries with data reported in various forms. The broadest information available on a national, regional and local level comes from the Children and Young People's Health Benchmarking Tool, which is part of the Public Health Outcomes Framework (PHOF) and national Injury Profiles produced by the former South West Public Health Observatory (now part of Public Health England). These contain a number of indicators relating to childhood injury including intentional and unintentional injuries. Local data on child injuries resulting in a visit to an Accident and Emergency (A&E) Department or a hospital admission is available from the Secondary User Service (SUS) dataset but this only includes injuries that are severe enough to require treatment in a hospital setting. Minor injuries that are self-treated or are dealt with in a walk-in centre or other out of hospital setting will not be included in the SUS dataset. Data around child injuries presenting at an A&E Department is also collected by the Trauma and Injury Intelligence Group (TIIG) based at the Centre for Public Health and Liverpool John Moores University. This information is not collated on a national scale but is available at a detailed level for Manchester and allows further analysis of the causes, type, severity and location of injuries including which groups are considered most at risk.

The Manchester Picture

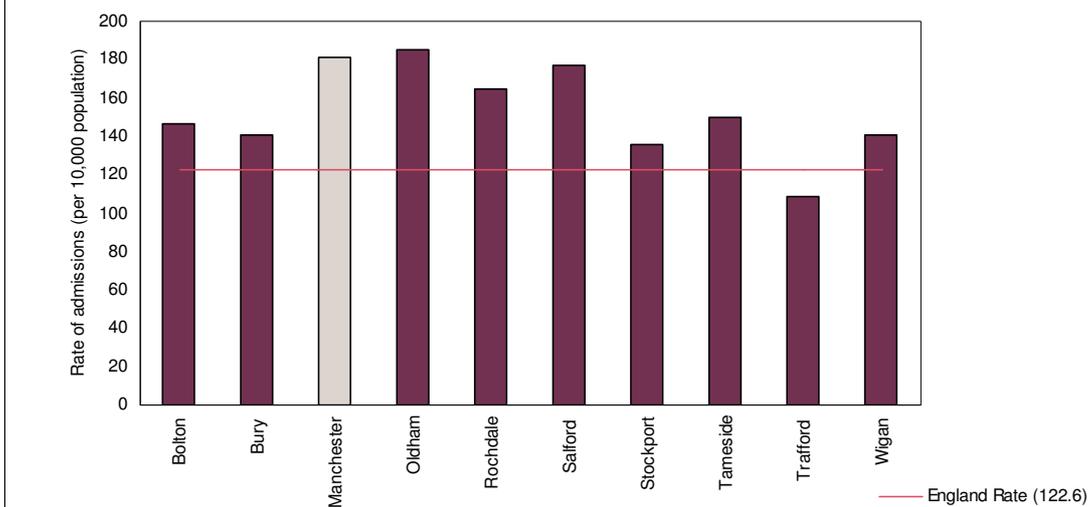
Unintentional childhood injuries are a concern nationally due to their adverse impact on morbidity and mortality among children and young people. Children and young people in Manchester experience a much higher rate of hospital admissions due to unintentional injury than the national and regional averages, as seen below, which puts them at higher risk and demonstrates a clear health inequality between Manchester and the rest of the country.

Numbers and rates of under 18 hospital admissions due to injury 2011/12			
	England	North West	Manchester
Number of hospital admissions (<18)	138,937	22,636	1,960
Rate per 10,000 population	122.6	150.6	181.2

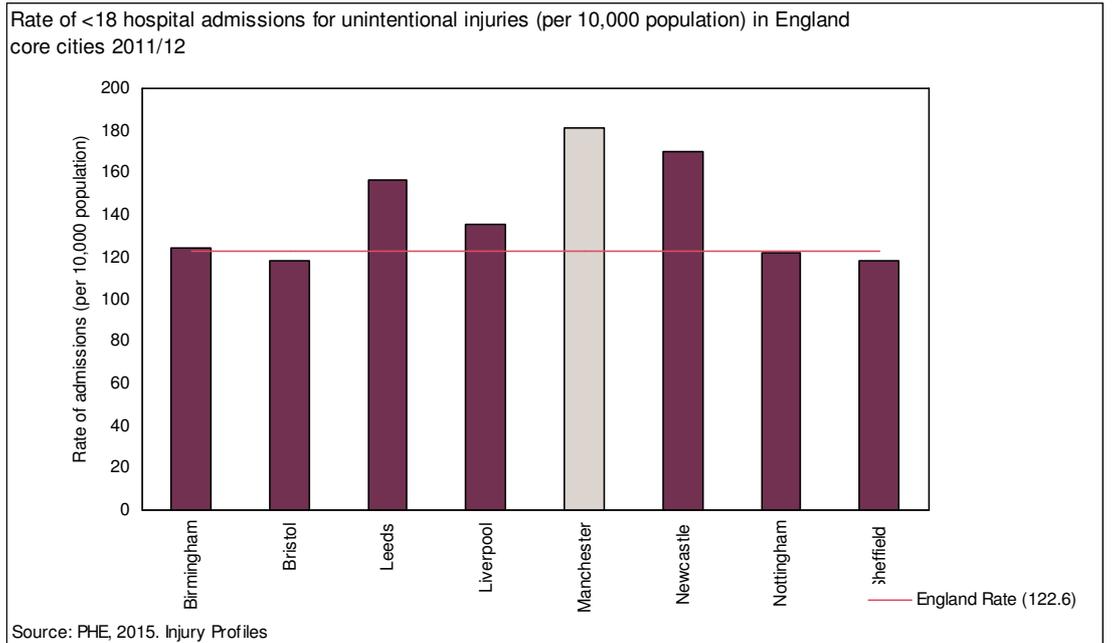
Source: PHE, 2015. Injury Profiles.

When comparing Manchester to other areas in England, there continue to be inequalities as the rate of hospital admissions in under-18s for unintentional injuries remains higher than most comparable areas. This is the case across neighbouring Greater Manchester Local Authorities, which all have a relatively high rate compared to the national average, and statistical neighbours such as the English Core Cities.

Rate of <18 hospital admissions for unintentional injuries (per 10,000 population) in Greater Manchester Local Authorities 2011/12



Source: PHE, 2015. Injury Profiles



This data from other areas in England clearly shows the increased risk of unintentional injury to under-18s in Manchester and the health inequalities that Manchester experiences.

Further Analysis of Manchester Data

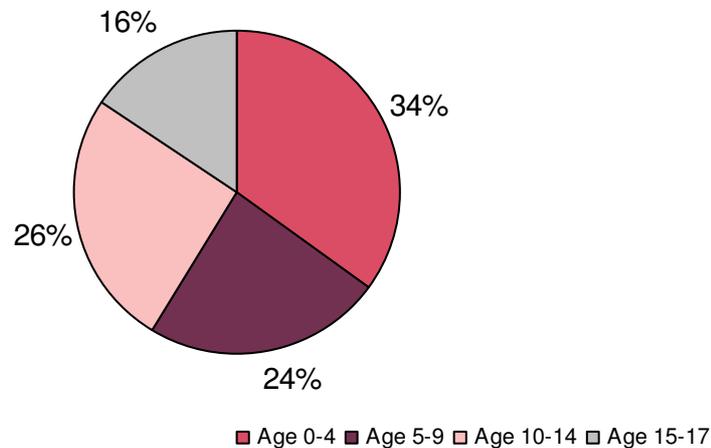
The TIIG data is not collated nationally, hence it has not been used in the regional and national comparisons, however this provides much more up to date and detailed data for Manchester and has therefore been used for further analysis.

NOTE – The data in this section should not be compared to the injury profile data in the previous section as it has been collated separately using different parameters.

This data is based on hospital attendance at A&E departments. It shows that in 2014 there were 10,772 attendances at A&E departments for unintentional injuries among Manchester residents aged under-18.

The age profile of unintentional childhood injuries in 2014 shows the highest rate of injuries among the 0-4 and 10-14 age groups at 99.8 and 104.4 per 1,000 population respectively indicating these age groups are at increased risk.

Proportion of Unintentional Childhood Injuries in Manchester (2014) by Age Group



Source: TIIG Database, 2015

Numbers and rates of under 18 accidental injuries in Manchester 2014 by Age

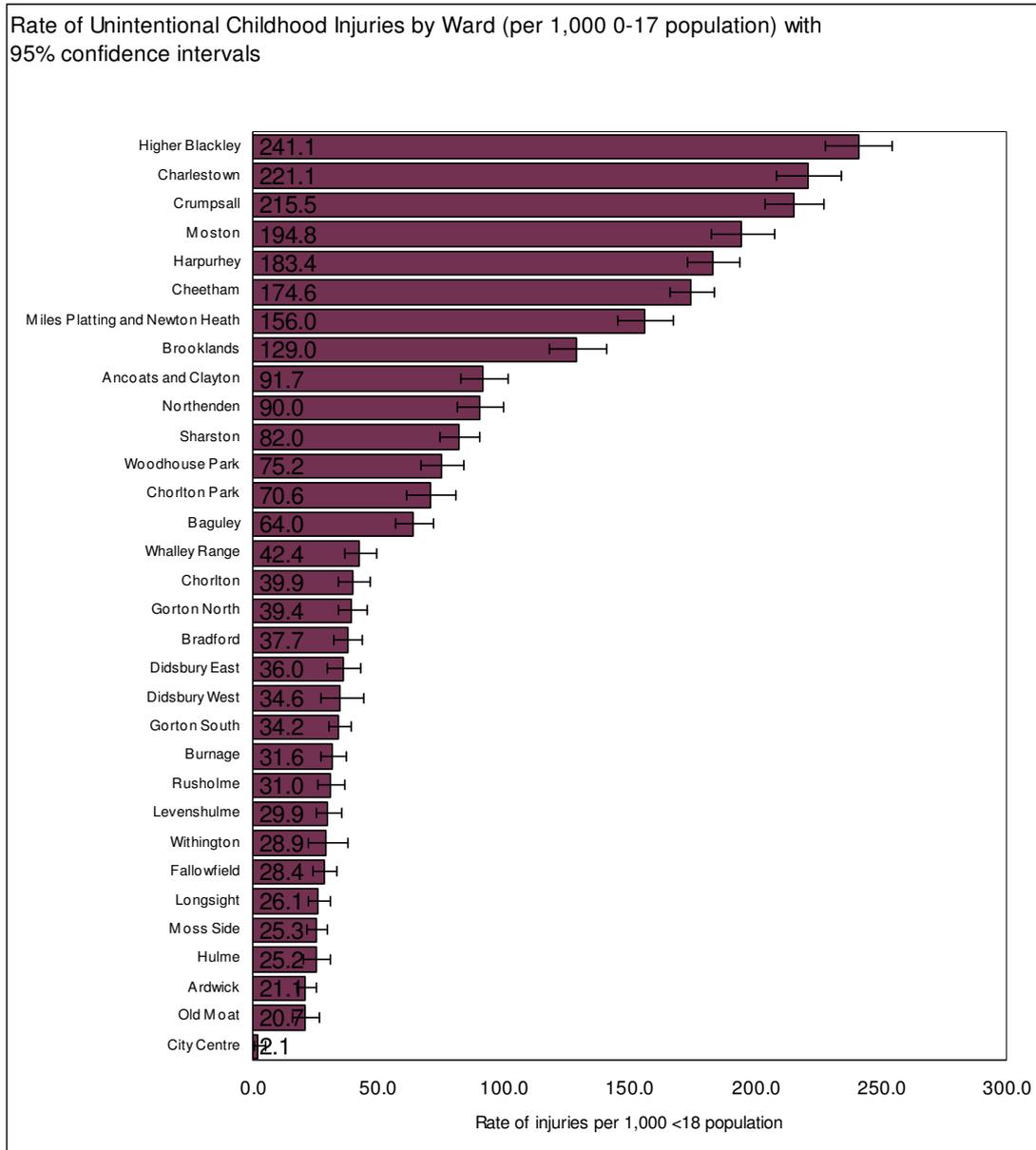
	0-4	5-9	10-14	15-17	Total
Number of accidental injuries (<18)	3,776	2,543	2,776	1,677	10,772
Rate per 1,000 population (in that age group)	99.8	79.8	104.4	49.9	82.9

Source: TIIG Database, 2015

Looking at unintentional childhood injuries by ward of residence shows differences and inequalities across Manchester with some wards experiencing much higher rates than others; the highest being Higher Blackley with 241.1 per 1,000 under-18s (almost 1 in 4 affected) and the lowest being the City Centre with 2.1 per 1,000 under-18s (just over 1 in 500 affected). As these are rates, they already account for the fact that some areas may have a smaller or larger population of under-18s. Some of those with a lower rate, such as City Centre ward, have small numbers of injuries and also small numbers of under-18s which increases the risk that these figures are affected by year-on-year variations and chance.

Including the 95% confidence intervals (CI) for the injury attendance rates for each ward shows how precise these rates are. As these CI are relatively narrow, this indicates a good level of precision. If the 95% CI overlap, this indicates that there is not a statistically significant difference in the injury attendance rates between different wards and that variations may have occurred due to chance. The chart

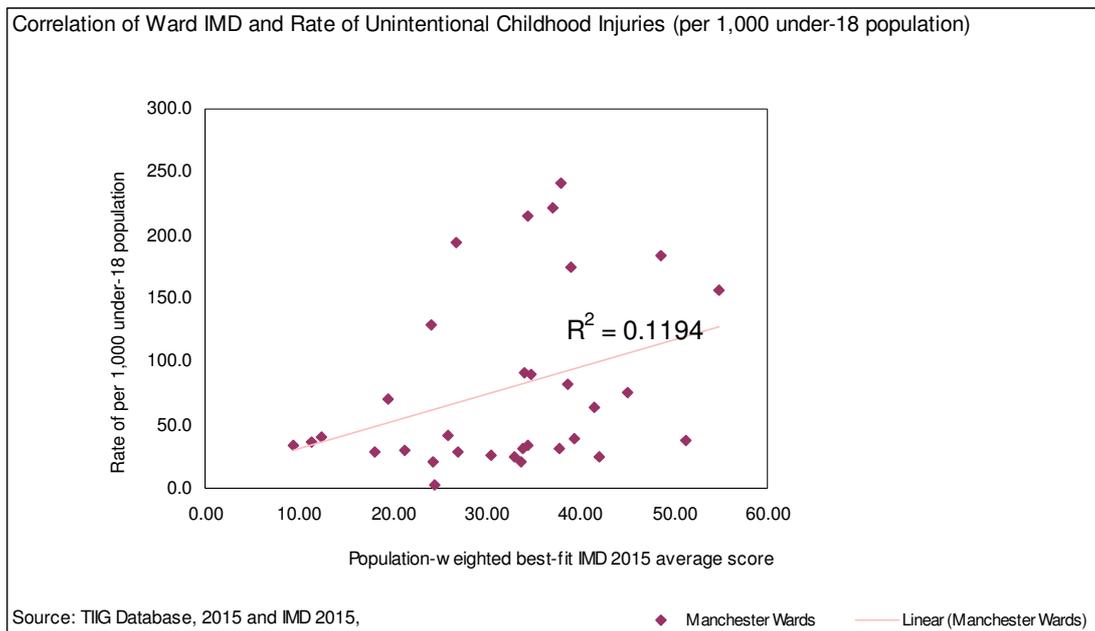
below indicates that the 95% CI for many wards do overlap meaning there is not a significant difference in the rate of hospital attendance for childhood injury. This is more the case where the injury attendance rate between wards is similar (eg. Gorton North, Bradford, Didsbury East). Significant differences are seen between areas where the difference in the rate is greater (eg. Higher Blackley, Harpurhey, Northenden, Levenshulme). There may be other explanations for these variations in attendance rates such as the physical proximity of certain wards to hospitals with an A&E Department (e.g. Higher Blackley and North Manchester General Hospital).



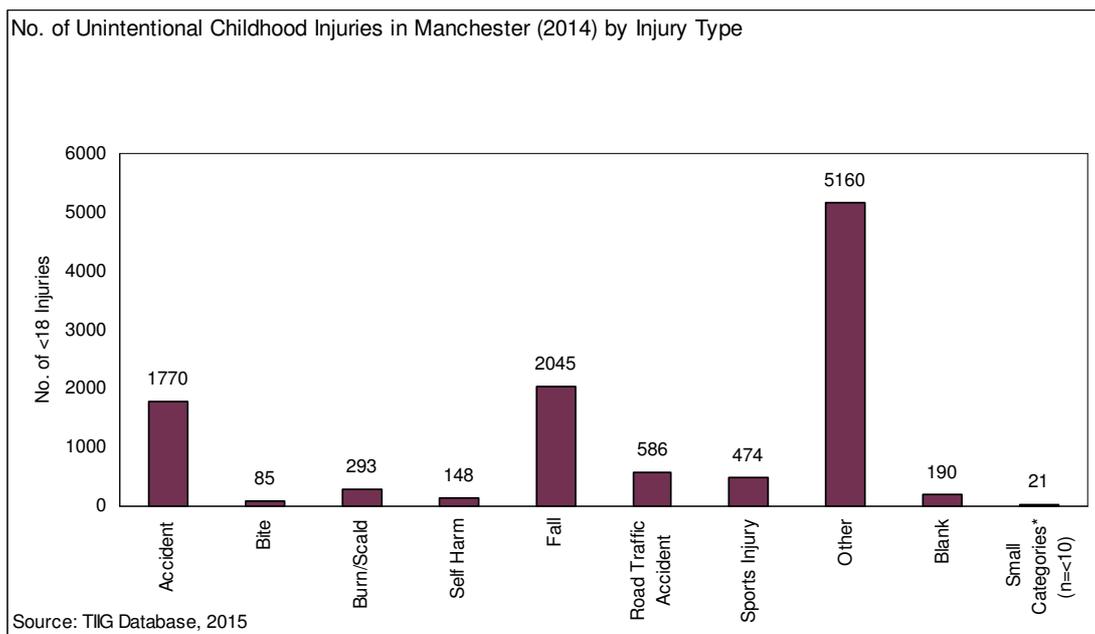
Source: TIIG Database, 2015

The distribution of injuries by ward also shows a relationship with deprivation with a weak positive correlation between average ward multiple deprivation and the rate of unintentional childhood injuries. This means that, overall, the more deprived an area

is, the higher the rate of unintentional childhood injuries which is further evidence of health inequalities in Manchester, however this is a relatively weak association.

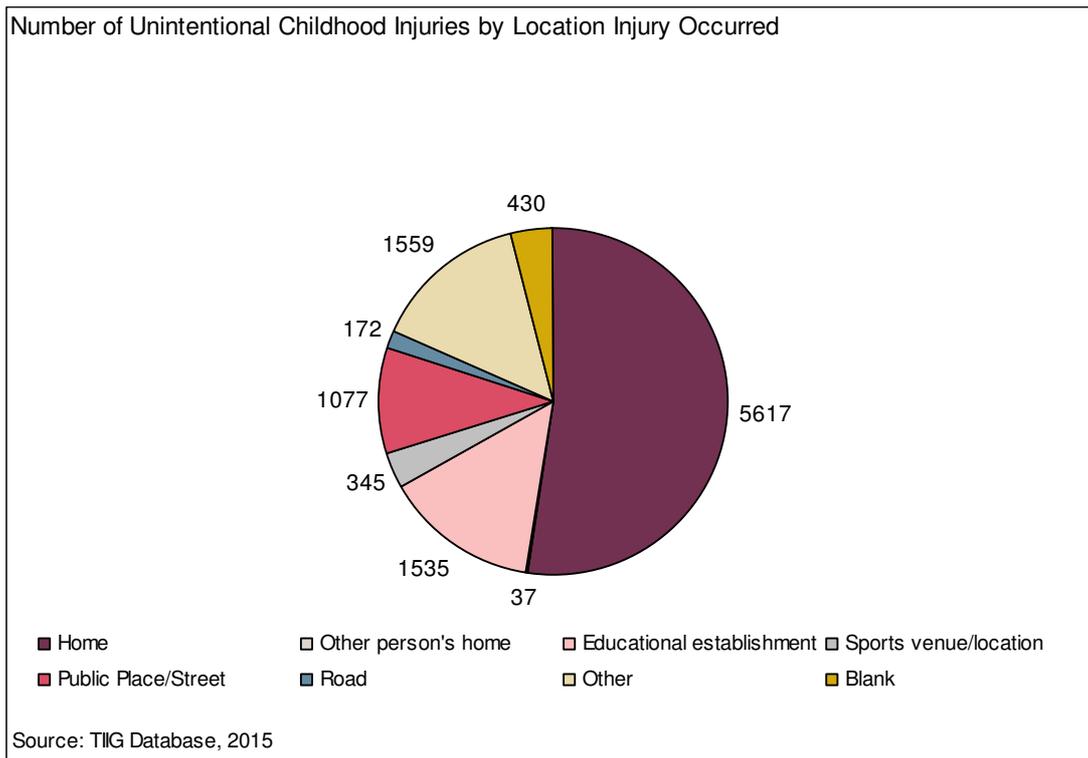


Injury type is also recorded in the TIIG data with the main reported causes being 'Accidents' (1,770) and 'Falls' (2,045). This is of limited use as the category 'Accidents' could encompass a wide range of different injuries and 48% of cases are categorised as 'Other' which gives no further information on the injury type and could also account for a wide range of injuries.



**Small Categories comprises ENT, head injury, limb injury, medical injury, overdose/ poisoning, parent/relative caused, psychiatric, safeguarding, unintentional stabbing, stings*

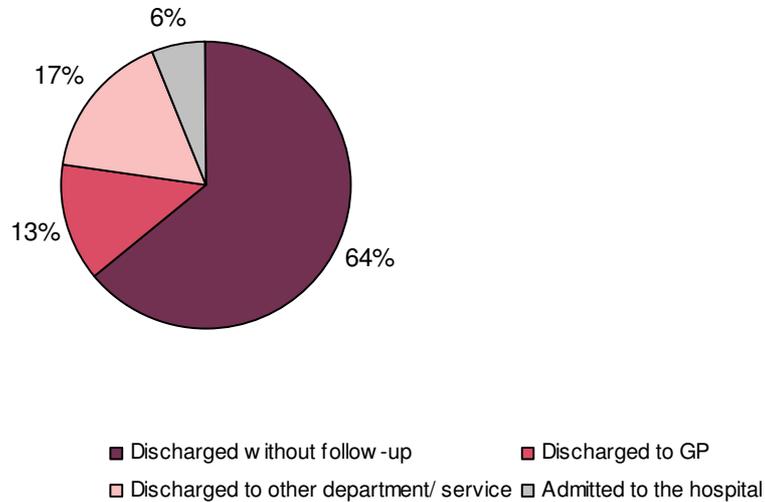
Information on the location at which the injury occurred highlights that 52% (5,617) of injuries occurred in the home in 2014 which indicates that interventions concerning the home should be a key focus. Other key locations where accidents occur are 'Educational Establishments' (1,535 / 14.2%) and in 'Public Places / Street' (1,077 / 10.0%). Considering the main types of injury; 'Accidents' and 'Falls', both of these show a similar breakdown in terms of location with the majority (56% and 54% respectively) occurring in the home.



The method of arrival at hospital following injury varies with the main methods being ambulance, private transport, public transport, on foot or by taxi; however a large number of records either show 'other' or are blank for this category therefore it is of limited use. The method of arrival is often linked to severity of the injury with more of those arriving by ambulance being admitted to hospital compared to the number admitted who either arrived by private transport or on foot.

The discharge method from A&E gives an indication of the severity of the injury with those being admitted to the hospital or referred to another department or health service indicating a more serious injury than those discharged without follow-up.

Proportion of Unintentional Childhood Injuries in Manchester (2014) by Discharge Method



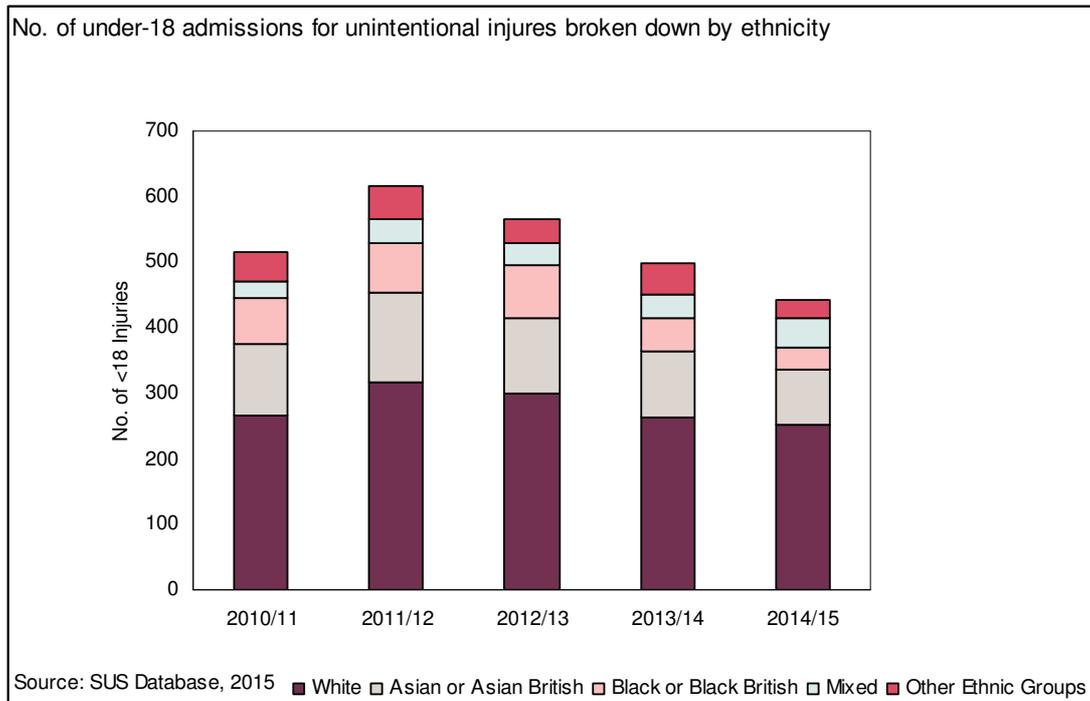
Source: TIIG Database, 2015

The majority of under-18 injuries attending A&E in Manchester in 2014 were discharged without follow-up (6,880 / 64.0%). The remaining cases were either referred to another hospital department including fractures clinics, other healthcare providers or outpatient clinics (1,811 / 16.8%), referred to their GP for follow up (1,425 / 13.2%) or admitted to the hospital (656 / 6.1%).

Those admitted to the hospital indicate they had more severe injuries; however this was a minority of cases. Among the 656 cases admitted, there was a larger proportion aged 0-4 (56% compared to 35% among all discharge methods) indicating that a higher proportion of injuries that occur in this age group are severe compared to other ages. Also, an even greater majority of those injuries admitted occurred in the home (68% compared to 52% among all discharge methods). This presents further evidence of the need for intervention in early years (0-4) and in the home setting.

For trend data, the SUS database can be used to give information on admissions for unintentional injuries over the last 5 years. However, as the analysis above shows, admissions for unintentional injuries only represents a small proportion (<10%) of those attending A&E. Unlike the TIIG database, this data also includes information on ethnicity of patients, which can be examined and compared to representation of different groups in the overall population.

The chart below indicates that the rate of admissions in under-18s for unintentional injuries in Manchester has been declining between 2011 and 2015 from 615 cases to 443 cases (-28%). This also demonstrates the proportion of all unintentional childhood injury admissions by different ethnic groups showing decreases in admissions among particular ethnic groups including those who consider themselves black or black British (-39%) and Asian or Asian British (-55%).



These year-on-year variations in admissions are based on low absolute figures and are therefore subject to chance, however the changing proportions of different ethnic groups affected, compared to the overall make-up of the population indicates that, while ethnic inequalities in those affected by unintentional childhood injuries still exist across Manchester in 2014/15, they have decreased compared to 2011/12.

Proportion of Manchester Population by Ethnic Group and Childhood Injury Admissions					
	Asian or Asian British	Black or Black British	Mixed	Other Ethnic Groups	White
Representation in Overall Population	17.7%	8.6%	4.6%	3.1%	66.6%
Representation in admissions 2011/12	22.3%	12.4%	6%	8%	51.4%
Representation in admissions 2014/15	18.7%	7.7%	10.2%	6.5%	56.9%

Source: SUS Database, 2015

What would we like to achieve?

National Institute for Health and Care Excellence (NICE) Guidance around unintentional childhood injuries (PH29) sets out key recommendations in five main areas; workforce training and capacity building; injury surveillance; home safety; outdoor play and leisure; and road safety. They have also outlined some key general recommendations relating to reducing unintentional childhood injuries:

- Incorporating unintentional childhood injury prevention into local plans and strategies for children and young people's health and wellbeing
- Coordinating unintentional childhood injury prevention activities
- Identifying and responding to attendance at emergency departments and minor injury units

There is an emphasis throughout the NICE guidance on partnership working, particularly referring to the role of Local Authority children's services, local safeguarding children boards, highway authorities (in relation to road safety), environmental health & trading standards departments, hospital emergency departments and health visitors.

There are also a range of other local partners in Manchester who could be engaged in terms of those services who come into contact with families affected by unintentional childhood injuries, particularly those with a presence in the home. These include the Greater Manchester Fire and Rescue service, Manchester Children's Centres, registered housing providers and home improvement agencies (Manchester Care and Repair).

What do we need to do to achieve this?

- Review and benchmark the level of investment in accident prevention programmes
- Continue working to develop wider network of agencies and departments involved in unintentional childhood injury prevention (engaging with local partners)
- Given the evidence in the data, the 0-4 and 10-14 age groups continue to be at highest risk of unintentional injury and the home has been identified as the highest risk setting for unintentional childhood injuries. Prioritise working with these age groups and in the home (in the form of physical risk assessments and educational interventions). There is also evidence of geographical areas across Manchester which may be at higher risk (wards) and therefore may

benefit from a more targeted approach to childhood accident prevention.

What are we currently doing?

In order to tackle the burden of unintentional injuries in under-18s in Manchester, the Manchester Public Health Team commissions a Child Accident Prevention service which is run as an educational initiative with the current provider being Central Manchester Foundation Trust. This service involves close working between the provider (CMFT) and the education service (including a number of schools) in Manchester but also encompasses a wider range of partners including the Greater Manchester Fire and Rescue Service and the NHS Choose Well campaign.

Early Learning for Safety (ELFS)

Developed locally in 2002, ELFS targets 3 to 5 year old children. It recognises and responds to the fact that the majority of unintentional injuries in this age group occur in the home. A three pronged approach aims to raise awareness in Early Year's Education Providers, Parents/Carers and Children (3 to 5 year olds) of the most prevalent cause of unintentional injuries in this age group. It focuses on the five injury types (falls, choking, poisoning, burns and scalds) that Public Health England (PHE) identified as the leading, preventable causes of death and serious long-term harm in under-fives (PHE, 2014). Analysis of national data suggests that these are the five injury types that should be prioritised.

In addition to raising awareness ELFS aims to inform adults of the most likely causes of each of these injury types, advising how to minimise the occurrence and severity of injury through simple engineering measures and behavioural changes. Early Year's Education Providers are provided with locally developed interactive resources (Elfie Bear rhymes, games etc) to use with the children. Children's Centres and Primary Schools can opt for Hospital Health Educators to visit their School/Centre to deliver workshops for parents/carers (home safety, injury prevention and first aid) and/or groups of children (home safety and injury prevention).

To assist and encourage Children's Centres and Primary Schools to work with children and parents/carers on unintentional injuries throughout the year ELFS produces a termly newsletter and activity sheet (parent/carer). The information within these is informed by current national (Child Accident Prevention Trust) and local (Royal Manchester Children's Hospital) injury types/causes/issues. These are emailed to every Children's Centre and Primary School within the City of Manchester and uploaded to the ELFS web pages.

www.cmft.nhs.uk/education-and-training/health-education-interventions/elfs

Injury Minimization Programme for Schools (I.M.P.S.)

I.M.P.S. is a national project that has been operational in Manchester since 2000. It

targets children in their final year at primary school at an age (10-11 years old) when they are at, or approaching a greater risk of serious unintentional injuries. This is as a result of young people gaining greater independence from their families, undertaking activities with friends and starting to make decisions for themselves. I.M.P.S. aims to address this increased risk by focusing on areas where unintentional injuries are high (on the road, during sport and leisure, etc) and the most common causes (falls, road traffic collisions etc).

Schools can access a wide range of lessons and activities via the national I.M.P.S. website (www.impsweb.co.uk). These are complemented and brought to life by a planned morning visit to a local hospital's Emergency Department (Central Manchester University Hospitals NHS Foundation Trust, University Hospital South Manchester or North Manchester General Hospital). The children are taught by Hospital Health Educators about hazards and risks they face, practical safety behaviour and appropriate responses to emergencies, including first aid.

As with ELFS, Manchester I.M.P.S. produces a termly newsletter and activity sheet (children). The information within these is informed by current national (Child Accident Prevention Trust) and local (Royal Manchester Children's Hospital) injury types/causes/issues. These are emailed to every Primary School within the City of Manchester and uploaded to the I.M.P.S. web pages.

www.cmft.nhs.uk/education-and-training/health-education-interventions/imps

The service also aims to tackle health inequalities by ensuring that the service is accessible and acceptable to all service users and by reducing the health burden of unintentional child injury, which is much higher in Manchester than the national and regional averages, the direct health inequalities will also be reduced.

Community and Stakeholder Views

The service (ELFS & I.M.P.S.) actively encourages it's users to comment on their satisfaction of the service and the content, delivery and benefits (current and/or future) of hospital visits or workshops. ELFS is evaluated by School/Centre staff and by every Parent/Carer that attend a workshop through the completion and return of an evaluation following their workshops(s)). I.M.P.S. is evaluated by every class teacher through the completion and return of evaluation at the end of their hospital visit. I.M.P.S. children can leave comments and or feedback following their hospital visit, or at any time in the future e.g. if they ever have to use I.M.P.S. knowledge or skills. A standard class evaluation has been devised for the 15/16 academic year which teachers complete with pupils. It asks:

...Where you satisfied with your I.M.P.S visit?

...What was the most important thing that you learned at I.M.P.S.?

...What did you enjoy the most?
...Was there anything that you didn't like?

Where possible and/if appropriate the service acts upon any feedback given. Service user satisfaction and comments are generally very positive about the content and delivery of teaching sessions within both projects.

Service user satisfaction and comments are reported on in termly performance monitoring to the Manchester Public Health team and included in project termly newsletters.

All participating pupils are encouraged to complete an online quiz before and after their hospital visit (www.impsquiz.co.uk). Data is then analysed to assess whether or not participation has changed knowledge (individual/class/school) of safety and first aid.

References and Links

Child Accident Prevention Trust (CAPT)

Leading UK charity working to reduce the number of children and young people killed, disabled or seriously injured in accidents - <http://www.capt.org.uk/>

Manchester Child Accident Prevention Service (CMFT)

Early Years Foundation Stage (ELFS) - <http://www.cmft.nhs.uk/education-and-training/health-education-interventions/elfs>

Injury Minimisation Programme for Schools (IMPS) -

<http://www.cmft.nhs.uk/education-and-training/health-education-interventions/imps>

NICE Guidance on Unintentional Child Injuries (PH29)

<https://www.nice.org.uk/guidance/ph29>

PHE Injury Profiles

<http://www.apho.org.uk/addons/115501/atlas.html>

PHE (2014) "Reducing unintentional injuries in and around the home among children under 5 years" *Public Health England*

<https://www.gov.uk/government/publications/reducing-unintentional-injuries-among-children-and-young-people>

Public Health Outcomes Framework (further information on data)

<http://www.makingthelink.net/childhood-injury-agenda/public-health-outcomes-framework> <http://fingertips.phe.org.uk/profile/cyphof/data#page/0>

RoSPA (2012) The Big Book of Accident Prevention. *The Royal Society for the Prevention of Accidents*

<http://www.rospa.com/rospaweb/docs/advice-services/public-health/big-book.pdf>

Trauma and Injury Intelligence Group (TIIG)

<http://www.cph.org.uk/tiig/>

Other JSNA Topics that this links to

Wider Determinants of Health: Deprivation

Mental Health & Emotional Health & Wellbeing: Self-harm and suicide

Safeguarding: Child Protection, Neglect, Emergency Admissions to Hospital, Death in Childhood

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