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accidents don't have to happen

Public Health England

Delivering Accident Prevention at local level in the new public health system

Part 2: Accident prevention in practice

Case Study Non collision injuries in Bristol

Safety issue

Raise awareness

Education

Preventative measures

Partnership working

Reduced Risk of Injury

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Part 2
RS3

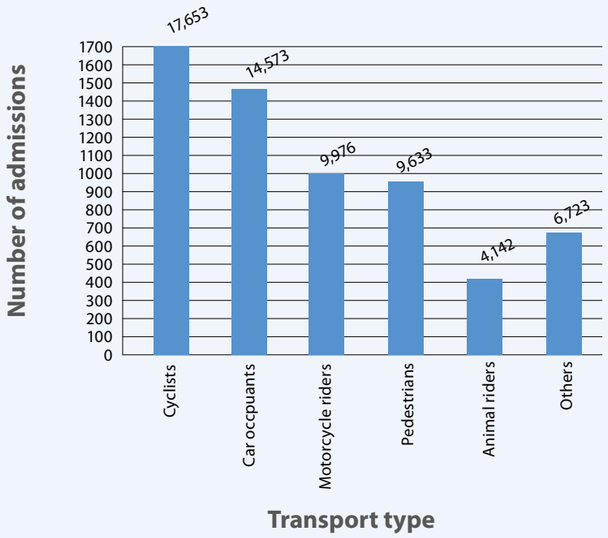
Accident prevention in practice

CASE STUDY: Non collision injuries in Bristol

This case study shows how focussing on performance against the public health outcome indicators has led NHS Bristol into new areas of research and intervention, and developed the contribution injury prevention can make in supporting and strengthening other public health agendas.

In most localities, analysis of the injuries contributing to public health outcomes indicators for childhood injury will raise the question: "What causes non-collision cycling injuries?" (NCIs). According to Hospital Episode Statistics [1] (HES), NCIs accounted for 12,301 admissions [2] to hospital during 2011/12. This represents 19.6% of all travel and transport related admissions, and 69.6% of all injury related admissions of cyclists. It is estimated that only 4% are reported to police and recorded in STATS19 [3], diminishing the value of this data set as a guide to causes and circumstances.

Numbers of injuries requiring admission of travellers by mode in England in 2011-12



The health, economic and social benefits of cycling are significant, and the public health profession is strongly advocating a move to more active and less carbon intensive forms of travel. The prevalence of NCIs may be adding to the (exaggerated) public perception of cycling as being hazardous. 70% of NCIs cause no injury requiring medical attention, but we speculate that for some new cyclists, experience of even a non-injurious NCI may discourage them from continuing to cycle. By addressing the root causes, we can make cycling easier and more enjoyable, and at the same time less hazardous.

NHS Bristol identified the need to reduce the risk of NCIs in 2009, but only one UK study shed any light on the issue [4] and none had specifically researched the causes and circumstances of NCIs.

In partnership with Bristol Cycling City, NHS Bristol designed a web-survey form [5] and circulated the URL across the UK. More than 1,000 cyclists recorded the details of their non-collision incidents, giving a good sample for analysis. But the method created biases in the response and the results are most applicable to working age cyclists. The causes of NCIs will differ between adult commuter cyclists and children aged under 18. Further research is required. Some likely candidate risk factors are already suspected, but without soundly based investigation, we are powerless to intervene effectively.

Analysis showed that 26% of all reported incidents happened as a result of slipping on ice. This is a remarkable result, given that fewer people cycle during inclement weather, and supports a hypothesis that the hazard of cycling on ice is underestimated.
The next highest cause of incidents was slipping on wet roads (8%). The pre-survey favourites of potholes and mechanical failures accounted for 3% and 2.5% respectively. [6]

The clarity of the conclusions from the survey led NHS Bristol to commission the Think TwICE campaign from local cycling charity Lifecycle. [7] This sought to encourage employers to help cyclists plan ahead and get information about bus routes, car-share opportunities or their employer's perspective on working from home, aiming to reduce the pressure to cycle in frozen conditions because there are no other options. In Bristol, emergency admissions (all ages) due to NCIs were slightly (but not significantly) lower in 2010/11 than 2009/10, but relatively mild weather will have played a bigger part than any other single factor.

As discussion with road safety and cycle advocates continued, thinking about the role of non-collision incidents in the wider policy framework has evolved. Further evidence from studies in mainland Europe complemented NHS Bristol's findings about ice but has given greater emphasis to kerbs, poor road surfaces and rail/tram lines. [8] Our findings are feeding into evolving plans for cycle networks around Bristol's harbourside, where kerb design, cycle path surfaces and rail/tram lines have been brought into sharpened focus as a result. We expect the result to be even better cycle infrastructure, easier cycling and fewer injuries.

References

1. http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=211
2. Note: Admissions figures include only patients formally admitted to a hospital bed, and exclude those treated in emergency departments whose attendance did not result in admission.
3. STATS19 is the police database that reported a total of 3,085 cyclists killed and seriously injured in the UK during 2011/12. Estimate of between 3-4% arises from European Transport Safety Council (2007) Social and Economic consequences of road traffic injury in Europe. And see also reference 8.
4. Walker and Jones, (2005) The Oxford & Cambridge Cycling Survey - A large-scale study of bicycle users in two major UK cycling cities. Cambridgeshire County Council
5. http://www.betterbybike.info/non-collision-incidents
6. http://www.tinyurl.co\avonsafecycling
7. http://www.lifecycleuk.org.uk/ice
8. Benington, R (2012) How can we get (and keep) Britain cycling? NHS Bristol, http://www.tinyurl.co\avonsafecycling

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