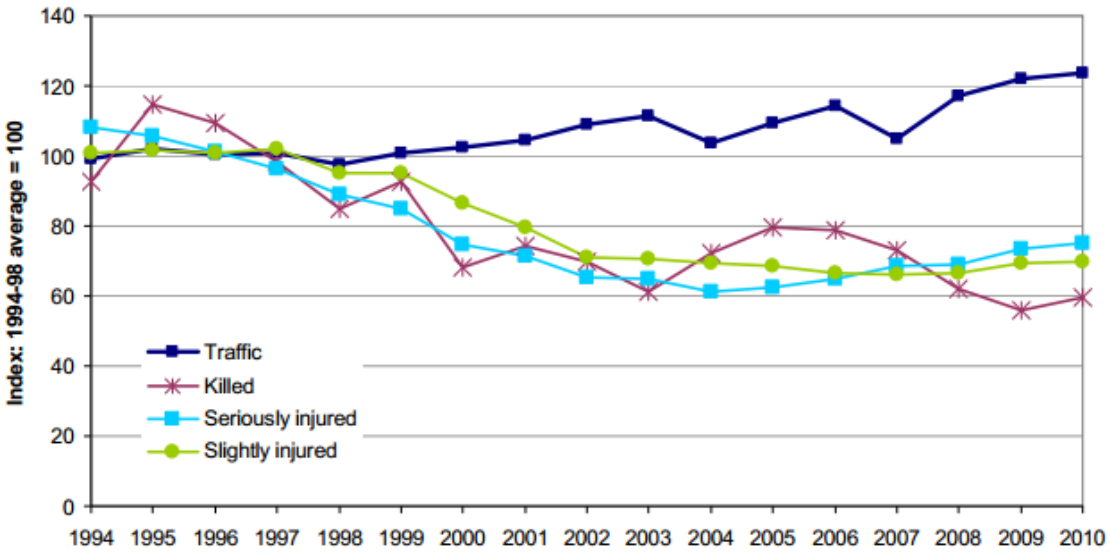
Cycle Safety - PACTS policy briefing

Levels of cycling have been following a general growing trend in recent years. This is to be encouraged, as pedal cycles take less space on the roads, produce virtually zero emissions and do not pose significant risk to other road users. Cyclists benefit as well as society, with the associated health benefits of being physically active.

Background

The following graph illustrates that while levels of cycle traffic have mostly increased over the past 16 years, casualty levels have fluctuated.

Pedal cycle traffic and reported casualties by severity: GB 1994 - 2010[1]



- **Cycling levels in 2010 were 15% greater than 2000**, and 17% greater than in 1994. In a measure of vehicle kilometres, cycling made up 0.9% of road traffic (which consists of all motor vehicles including motorcycles, and pedal cycles) in 2000, and 1.0% in 2010.
- **In 2010 cyclist deaths rose from 104 to 111**. **The number of serious injuries continued to rise for the third year**, from 2428 in 2007 to 2660 in 2010.
- In 2011, for which data is only available for the first three quarters, **the steady rise in cyclist casualties continued**. Comparing the year Oct 2010 – Sept 2011 to Oct 2009 – Sept 2010, the number of cyclists killed and seriously injured rose by 8%.
- A measure of cyclist casualties per 100,000 population in England showed that the **cyclist casualty rate for the 10% most deprived areas is greater than for the 10% least deprived areas**.[2] Additionally, these least deprived areas make up the greatest proportion of pedal cycle trips.

[1] General overview and trends in reported casualties, *Road Casualties in Great Britain: 2010 Annual Report*, Department for Transport (DfT).
[2] Road casualties and deprivation, *Road Casualties in Great Britain: 2007 Annual Report*, DfT. Page 57.
All statistics on Page 1 are from DfT data series *Reported Road Casualties in Great Britain.*

How to improve cycle safety

Shared responsibility

In the safe systems approach to road safety the aim is to design a road system where inevitable human errors of judgement do not result in death or serious injury. Responsibility for keeping users safe even when they make mistakes is shared amongst the designers, builders and providers of the system. Therefore, roads and vehicles should be designed to pose as low a risk as reasonably practicable on cyclists.

Design

A literature review[3] commissioned by the Department for Transport and written by TRL found that the greatest benefits of all interventions to increase cycle safety come from reducing motor vehicle speeds. Such an intervention has wider benefits for other road users as well as greatly reducing risk imposed on cyclists. Lower speeds are particularly beneficial at junctions where most cycle injuries in multi-vehicle collisions take place. Therefore 20mph zones in urban areas and design features to slow vehicles such as raised side road entry treatments are desirable. However, careful consideration should be given to traffic calming measures which may increase risk to cyclists, such as road narrowing.

As reducing motor speeds is the intervention which is most beneficial to cycle safety, the government should complete a national digital database of speed limits, with the view of advancing towards the universal fitment of ISA. Intelligent Speed Adaptation (ISA) is a driver assistance system aimed at increasing compliance with speed limits.

Kerbed, segregated cycle lanes are not wide-spread in the UK, and the TRL literature review found no evidence in Europe regarding the safety performance of kerbed cycle lanes. Other design features not widely used in the UK include cycle lane markings continued across junctions, cycle pre-signals and Trixi mirrors (mounted at traffic lights, giving drivers of heavy vehicles a view of any cyclists to their left), which are now being trialled in London. Further trials and evidence gathering for these features should be carried out in this country.

Although evidence showing the effectiveness of cycle lanes is limited in the UK, it has been found that many people find cycling a bad experience using existing roads, are put off cycling by having to negotiate difficult road junctions, and have a desire for more cycle lanes.[4] Therefore more should be done to ensure cycle infrastructure is well-planned, well-maintained, consistent, and legible to all road users. Building a better, safer environment for cycling provides a double win: with a safer infrastructure it is hoped that casualty rates will reduce; and also a visibly safer infrastructure may encourage a greater number of people to cycle, assisting achievement of 'safety in numbers'.

As well as improving the design of the road environment, vehicles can be made safer for cyclists. The pedal cycles themselves should be kept in good condition, with brakes, tyres, gears, pedals and handlebars in working order. With regard to other road users, goods vehicles can be fitted with side under-run protection, to avoid cyclists falling under the wheels. They should also be fitted with blind spot mirrors. Car bonnets can be made more forgiving for cyclists in the event of a collision, and in-vehicle technologies can detect cyclists and alert drivers to their presence on the road. In vehicle design issues the UK government should be engaging with Europe, and encouraging Euro NCAP to include cyclist protection in their tests for 'pedestrian protection'.

[3] http://assets.dft.gov.uk/publications/infrastructure-and-cyclist-safety/infrastructure-and-cyclist-safety.pdf
[4] http://radar.brookes.ac.uk/radar/items/17bb3ed2-1209-b3e9-5357-614f329af72e/1/Understanding_Walking_&_Cycling_Report_WEB.pdf

Attitudes

The concept of a shared responsibility may not yet be fully present in road user attitudes. Qualitative research carried out on behalf of the Department for Transport found that the most important barriers to road cycling are related to other road users: the behaviour of other road users; and the volume and speed of traffic[5]. In reaction to these barriers cyclists respond with any of the following four basic approaches:

Complete **avoidance** of traffic
Keeping out of the way and **guarded**
Being **assertive** and staying in control of the situation
Being **opportunistic** and making the most of the bike.

Interactions between road users can go wrong due to acts of aggression, failures of attitude, failures of competence/understanding, and failures of expectation.

These attitudes can be tackled through marketing, education, enforcement and infrastructure design. Training for cyclists should be widely available to encourage and enable more people to cycle safely. Cyclists should be encouraged to make themselves seen and safe, for example by wearing reflective clothing. More work could be done on ensuring that drivers, especially HGV drivers, are aware of the risks in interactions between cyclists and motorised vehicles. The Freight Operator Recognition Scheme (FORS), a membership scheme that aims to improve freight delivery in London, should be rolled out across the country.

A policy focus such as the one given to motorcycle safety over recent years would be welcome. PACTS suggests holding a cycle summit where experts could meet and discuss issues with the government, much like the Motorcycle Advisory Group. A campaign should be launched modelled on the 'Named Rider' motorcycle safety campaign, which helped drivers think about the rider rather than just seeing the motorcycle. The campaign not only increased awareness of the vulnerability of the motorcycle rider[6], but also gave an alternative to the shock tactic sometimes favoured by safety campaigns, which may have an undesired effect of discouraging riding.

Summary

Cycling has health, environmental and societal benefits, and therefore should be promoted. While halting the rise in cyclist casualties needs to be a priority, safety campaigns which may discourage cycling would be detrimental to transport safety (through the 'safety in numbers' trend) as well as other sectors. Moves to reduce cycling risks should be based on evidence and evaluation. This applies particularly to infrastructure improvements which need to be well-planned and designed.

It is possible to boost cycling levels while reducing cyclist casualties, as other European countries have demonstrated.[7] This should be the UK's goal.

For any further information please contact PACTS on 020 7222 7732 or naomi.baster@pacts.org.uk.

[5] http://assets.dft.gov.uk/publications/safety-cycling-and-sharing-the-road-qualitative-research-with-cyclists-and-other-road-users/rswp17.pdf
[6] http://assets.dft.gov.uk/publications/think-research/motorcycles-report.pdf
[7] http://www.etsc.eu/documents/Yearbook_2005.pdf