

# Roads, Casualties and Public Health: The Open Sewers of the 21<sup>st</sup> Century

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Short version of talk first given as the PACTS' 21<sup>st</sup> Westminster Lecture and ETSC's 12<sup>th</sup> European Transport Safety Lecture, One Birdcage Walk, London, 23<sup>rd</sup> November 2010. An illustrated transcription of that longer lecture is available here: [http://sasi.group.shef.ac.uk/publications/reports/Pacts\\_2011.pdf](http://sasi.group.shef.ac.uk/publications/reports/Pacts_2011.pdf)

# My argument

Every century comes with a major public health warning about the harm that we inflict on ourselves. In Britain in the nineteenth century it was the diseases we spread by tolerating open sewers. In the twentieth century it was tobacco that we slowly learnt to love then fear. In the twenty-first century it is the way we tolerate how cars are allowed to travel on our roads



Plan von Manchester und seinen Vorstädten

# Manchester 178 years ago



1. die Börse.
2. die alte Kirche.
3. das Arbeitshaus.
4. der Armenthubhof  
Zwischen beiden der Liverpooler & Londoner E.B. Hof.
5. St. Michael's Kirche.
6. Scotland Bridge über d. Irk.  
Die Straße von 2 nach 5 heißt Long Millgate.
7. Ducie Bridge über d. Irk.
8. Little Ireland.

## Little Ireland From:

“The Condition of the Working Class of England”, Friedrich Engels, 1845

who went on to observe....

Marx and Engels Collected Works: Volume 04, 1844-45  
<http://www.marxists.org/archive/marx/works/cw/volume04/index.htm>

1 Engl. Meilen.  
62 1/2 = 1: der Äquators

Das commercielle Viertel ist zur Unterscheidung von der linken zur rechten Hand abwärts schief.

Map of Manchester

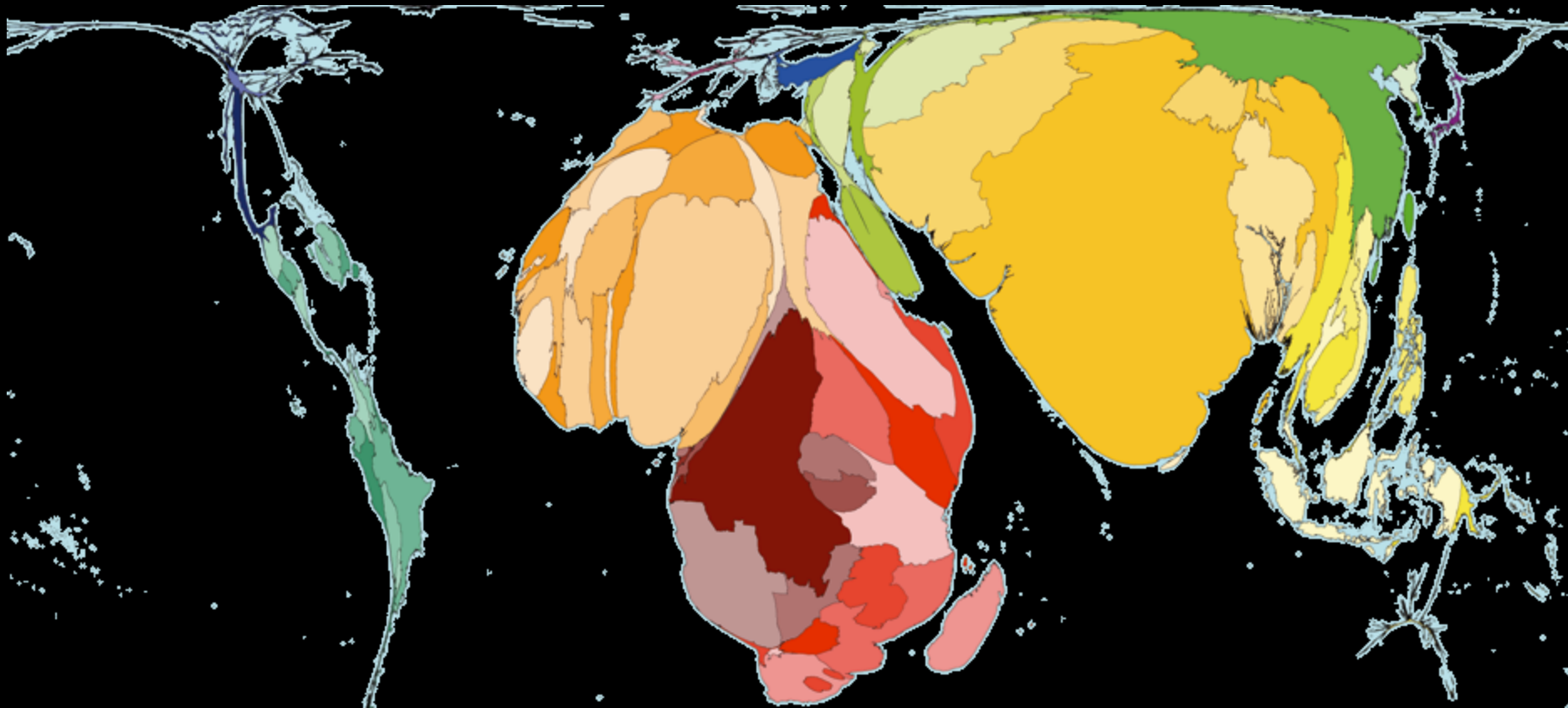
“Map of Manchester”

Northern Conference on 20mph speed limits, Warrington, May 17th

## A German Tourist in 1842, writes...

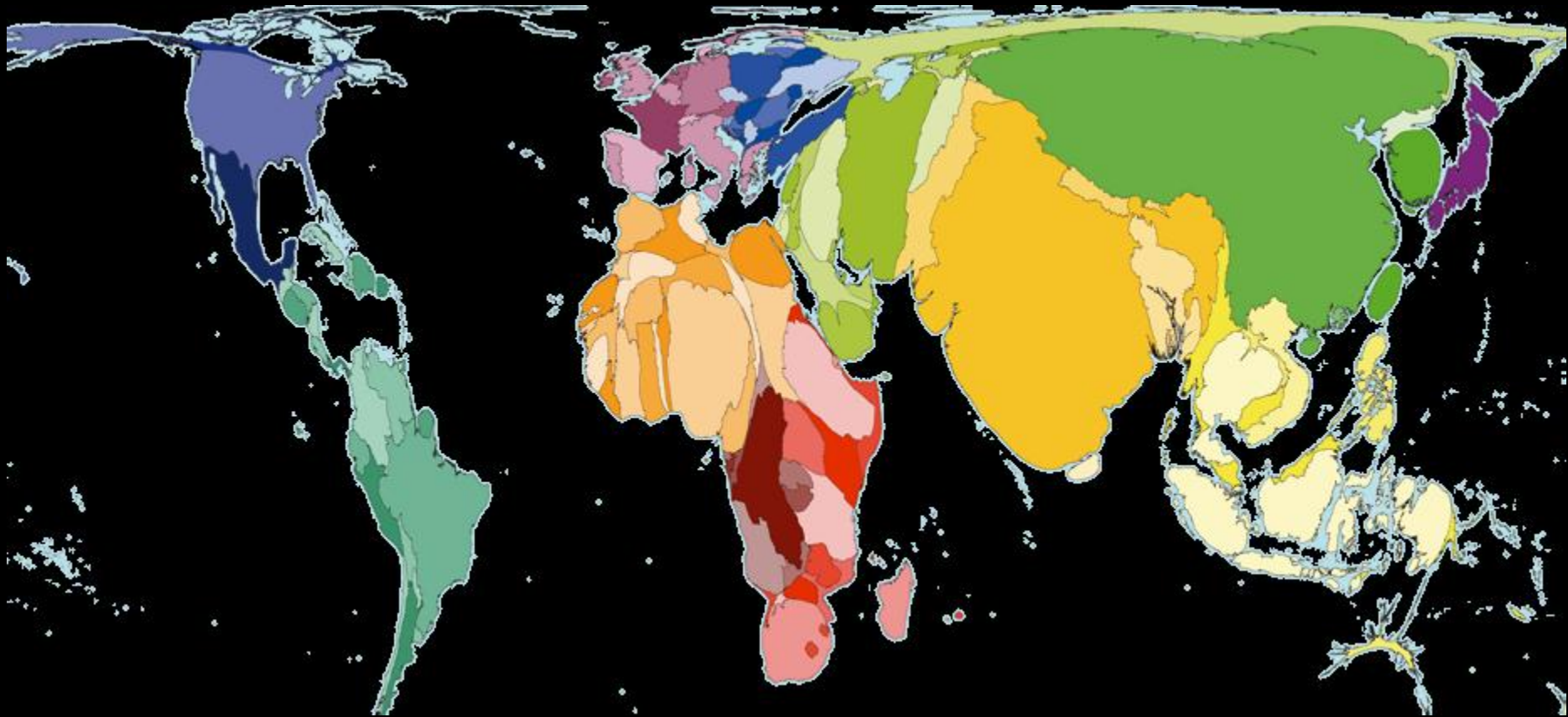
“As I passed through the dwellings of the mill-hands in Irish Town, Ancoats, and Little Ireland ... found a whole street following the course of a ditch, because in this way deeper cellars could be secured without the cost of digging, cellars not for storing wares or rubbish, but for dwellings for human beings. *Not one house of this street escaped the cholera.*”

# People dying with diarrhoea (now)



1,871,441 people ,all ages each year  
but reducing worldwide, in contrast to . . .5

# People dying on the roads now



1,195,339 people a year

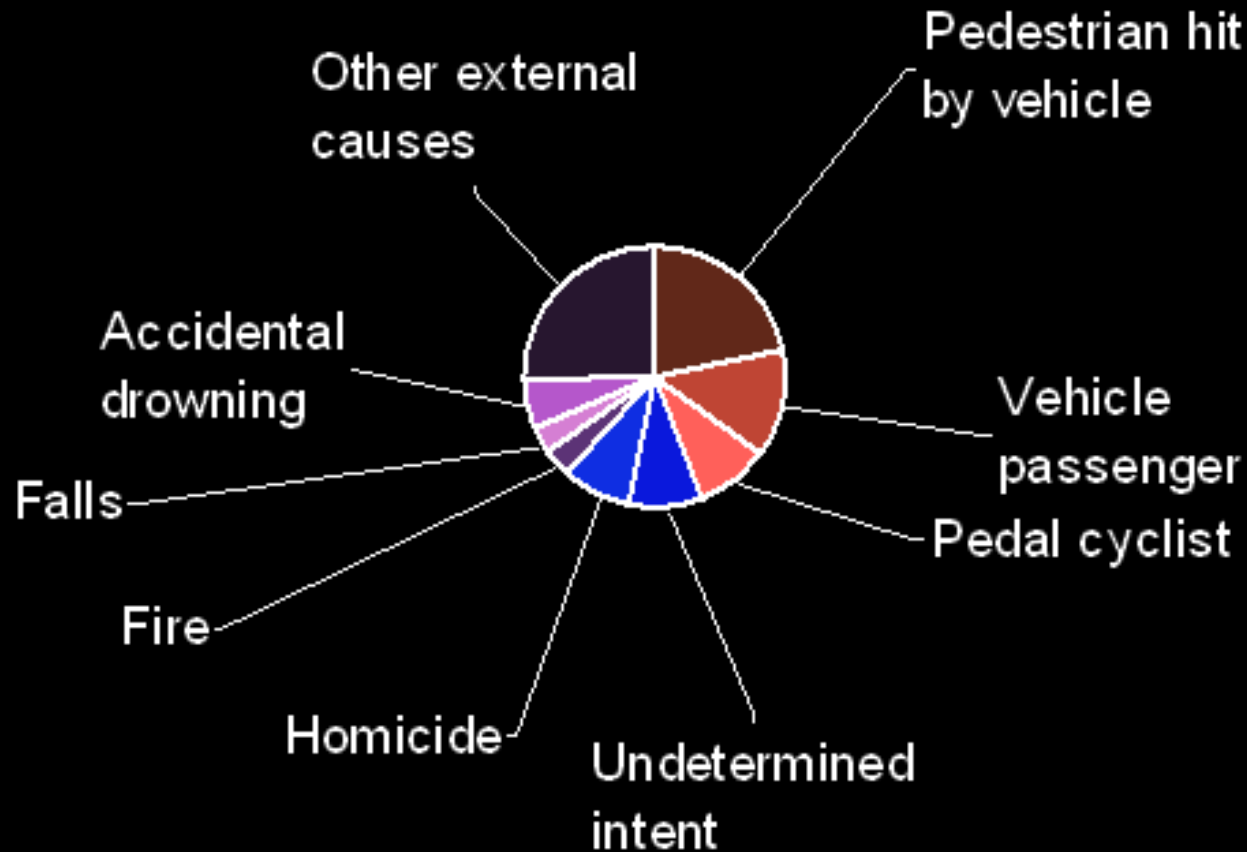
If we turn to the last 12 months in the UK we  
find a new crisis

“In June 2010 the Department for Communities and  
Local Government published what is likely to  
become one of the most infamous documents of the  
economic depression/recession. It was titled: 'Local  
government contribution to efficiencies in 2010/11’”

(Dorling and Thomas, forthcoming, “Bankrupt Britain” Atlas, Bristol :Policy Press – the source for all  
of the charts which now follow – based in turn on mortality data for 2006-2007 by cause )

**Roads trap affluent children in their homes and are  
the main site of killing of poorer children. What is  
key is how large this contribution to death has  
become:**

# 2006–07 external causes of death of 5 to 10 year olds, Britain:

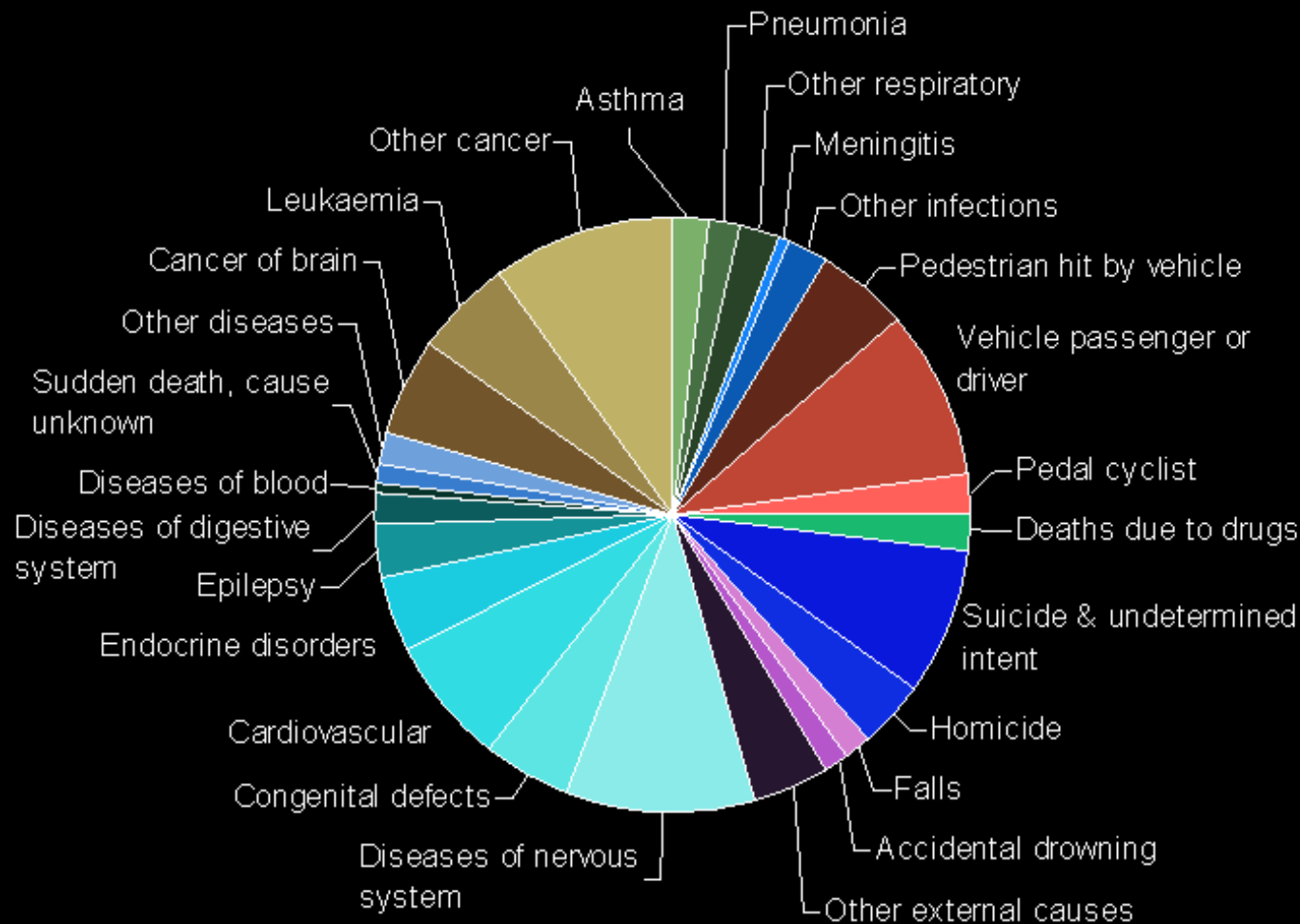




## We reveal our ignorance in our priorities

“...the cuts this document specified will result in more people, and especially young children, being killed. That is because road safety funding is to be cut by £37 million: 'Road safety funding - £37.797m. £20.592m is proposed to be removed from road safety revenue grant (paid out via area based grant) in the last four months of 2010/11 and £17.205m road safety capital grant originally due to be paid in May. This represents a reduction of 27 per cent in the revenue grant and all of the capital grant.’” (Dorling and Thomas, forthcoming, 2011)

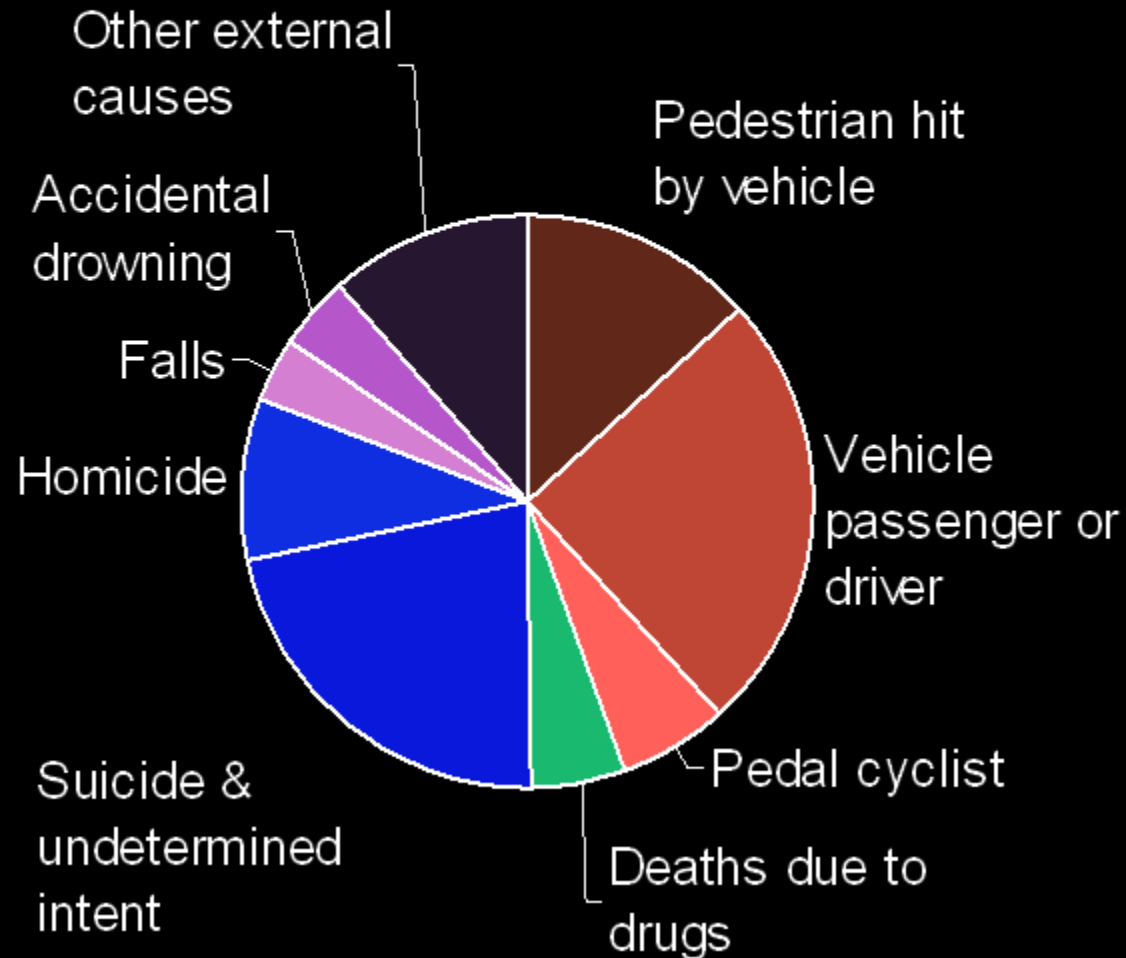
# 2006–07 all causes of death of 11 to 16 year olds, Britain



## We need to know what to **fear** most

We are now so protective of very young children – those aged 5 to 9 – that more die due to disease today than as pedestrians. However, dying as a pedestrian has been the greatest threat to children aged 5 to 9 in Britain for most of the last two decades. Still, by age 10, car drivers are the greatest danger to children. This is still found today when all risk categories are compared.

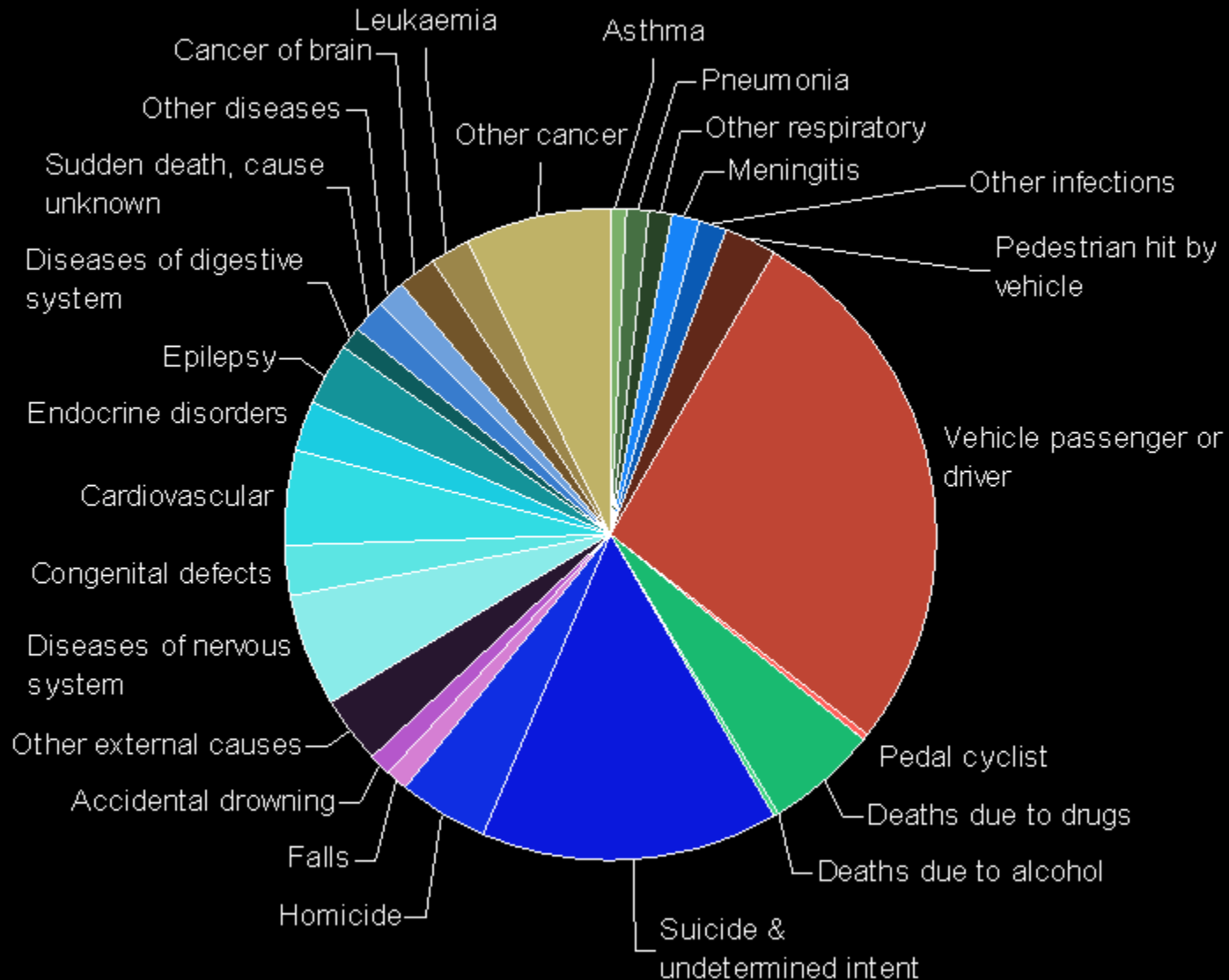
# 2006–07 external causes of death of 11 to 16 year olds, Britain



The threat reduces our **freedom** to move as children, we become more socially isolated

By the onset of adulthood the car and a small number of cases of suicide together account for half of all deaths at these young ages: nine deaths a week of 17, 18 and 19 year olds from these causes alone, almost all due to cars and their drivers. The numbers of deaths per week from such causes continues to rise throughout young adults' twenties, only falling relative to other risks when these young adults reach their late thirties

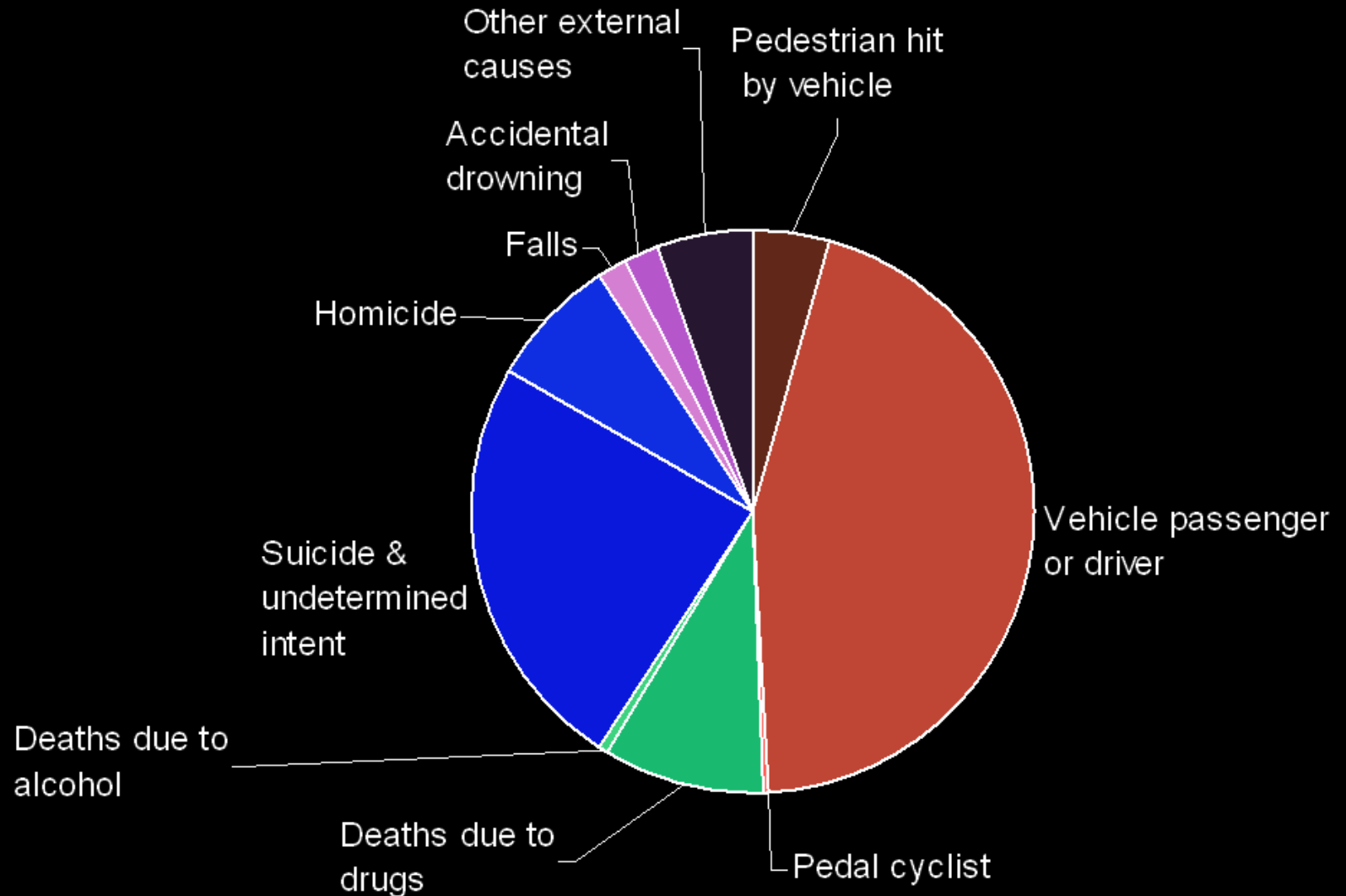
# 2006–07 all causes of death of 17 to 19 year olds, Britain



## The threat is **not diminishing**

Around 30,000 people of all ages are killed or seriously injured on roads in Britain every year. In 2008 some 27,855 thousand cars were registered to be driven on the country's roads. That rose slightly to 27,868 during 2009 (partly with government encouragement for new car buying with a 'scrapage scheme'). Very young adults now cycle less.

# 2006–07 external causes of death of 17 to 19 year olds, Britain



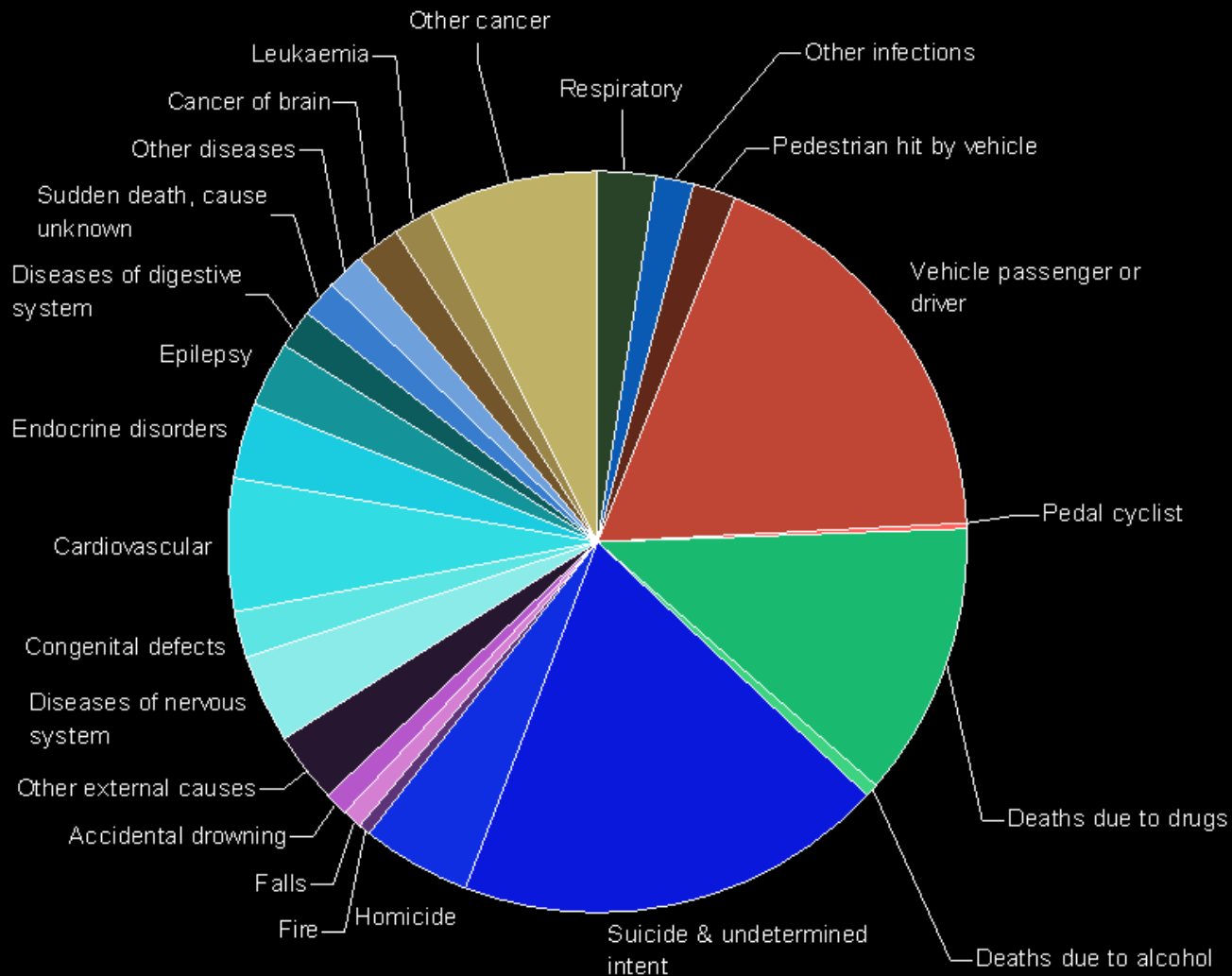


# Public health measures have begun to be introduced **very slowly**:

“We want to encourage highway authorities to introduce, over time, 20 mph zones or limits into streets which are primarily residential in nature and into town or city streets where pedestrian and cyclist movements are high, such as around schools, shops, markets, playgrounds and other areas, ...

We want to draw attention to the initial evidence from the trial of wide area signed-only 20mph limits in Portsmouth, and want to make clear that 20 mph limits over a number of roads may be appropriate elsewhere.” (DfT circular December 2009)

# 2006–07 all causes of death of 20 to 24 year olds, Britain



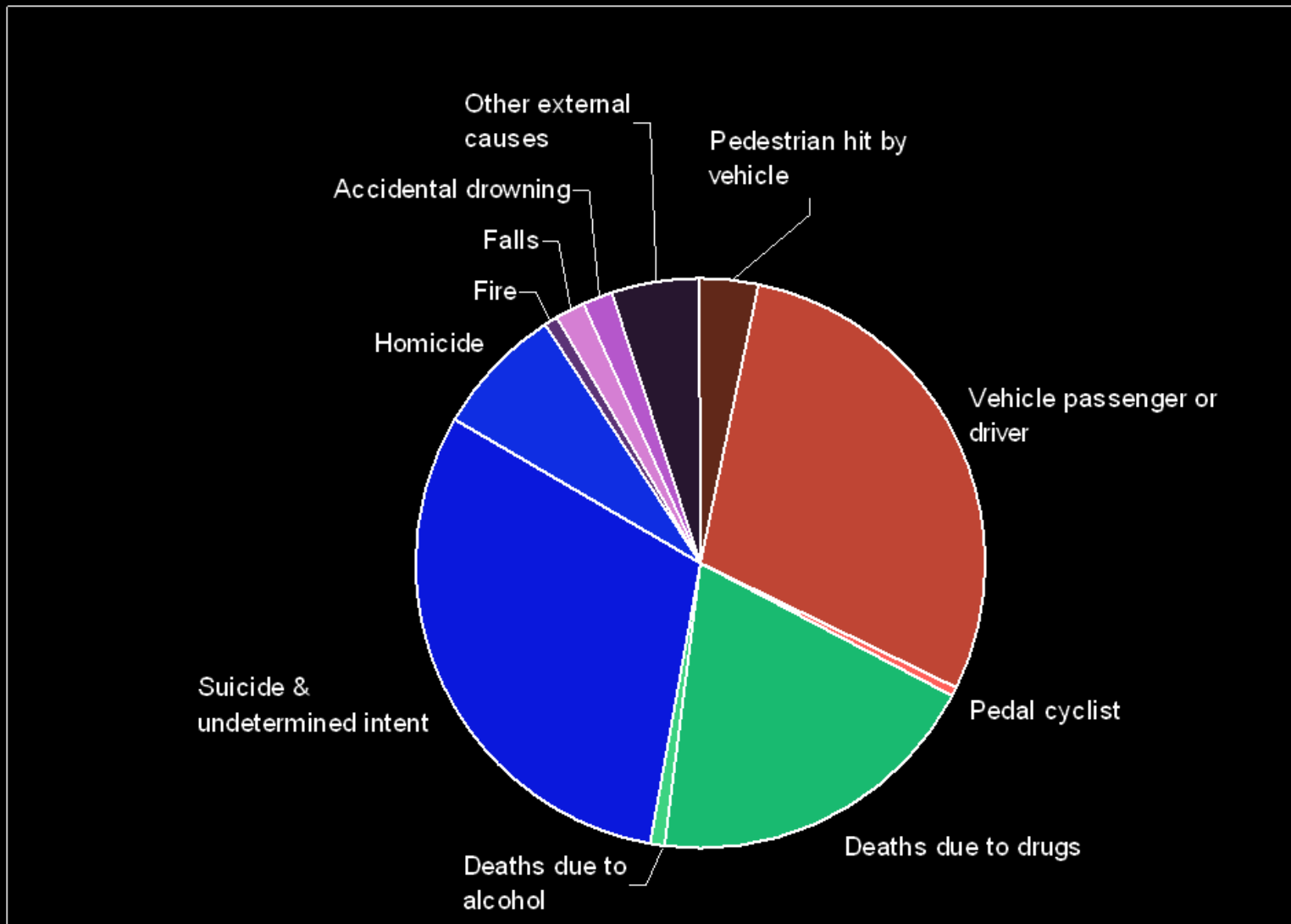
# Despite now having the medical evidence

“The introduction of 20 mph zones was associated with a **41.9%** (95% confidence interval 36.0% to 47.8%) reduction in road casualties, after adjustment for underlying time trends. The percentage reduction was greatest in younger children and greater for the category of killed or seriously injured casualties than for minor injuries. There was no evidence of casualty migration to areas adjacent to 20 mph zones, where casualties also fell slightly by an average of 8.0%”

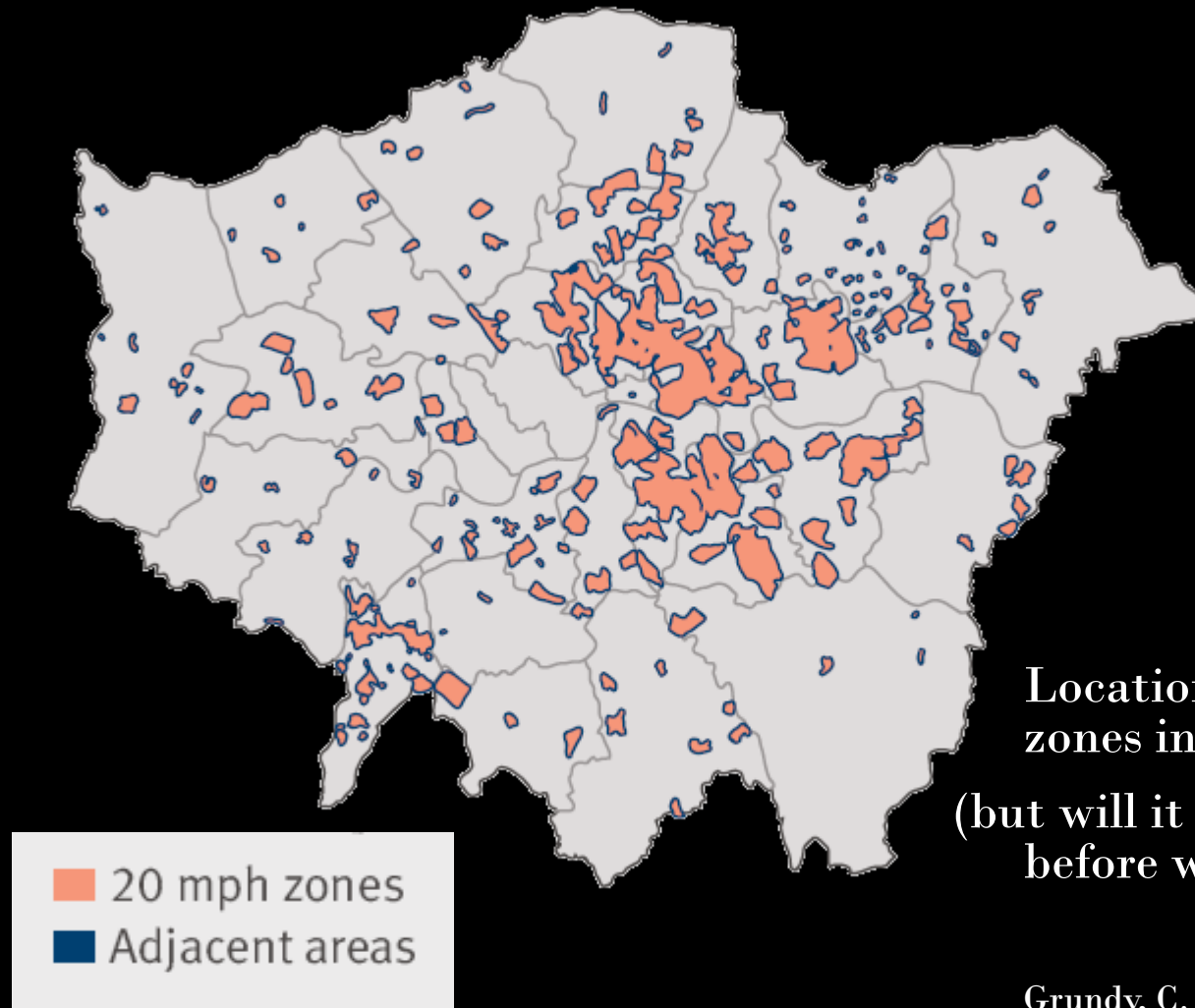
Grundy, C. et al. 2009, Effect of 20 mph traffic speed zones on road injuries in London, 1986-2006: controlled interrupted time series analysis, *BMJ*, 2009;339:b4469

doi:10.1136/bmj.b4469

# 2006–07 external causes of death of 20 to 24 year olds, Britain



We are  
starting to  
learn, just as  
we did in 1848  
with the first  
Public Health  
Act



Location of 20 mph speed  
zones in London (1991-2007),  
(but will it take 100 years again  
before we see the full effect?)

Grundy, C. et al. 2009, Effect of 20 mph  
traffic speed zones on road injuries in  
London, 1986-2006: controlled interrupted  
time series analysis, *BMJ*, 2009;339:b4469

[doi:10.1136/bmj.b4469](https://doi.org/10.1136/bmj.b4469)

# “Road danger, middle aged men and affluence the biggest causes”

## **PRESS RELEASE ROAD DANGER, MIDDLE AGED MEN AND AFFLUENCE - BIGGEST CAUSES OF DEATH AND INJURY ON BRITAIN’S ROADS**

- 16 September 2010

Young people called on to protest at next week’s World Safety Conference.

- The World Safety Conference (<http://www.safety2010.org.uk/>) which opens
- in London next week is set to point the finger of blame for road traffic
- crashes on the victims of those crashes, rather than tackling the root cause,
- which is dangerous road traffic, says Dr Ian Roberts, Trustee of Road Peace
- (the UK national charity for the victims of road traffic crashes) and professor
- of public health at the London School of Hygiene and Tropical Medicine.



This press release can be downloaded from our website:

[http://www.roadpeace.org/resources/PR\\_20100815\\_Road\\_danger\\_middle\\_aged\\_men\\_and\\_affluence.pdf](http://www.roadpeace.org/resources/PR_20100815_Road_danger_middle_aged_men_and_affluence.pdf)

## We will remember the dates in the future:

- When we re-ordered the priority of vehicles so that blame is presumed on the larger and cars stop when children stand by the road (as in Switzerland)
- When we pedestrianised\* city centres as a matter of course and required reasons for 30mph and above wherever people walk and cycle
- When road safety became a DoH, not DfT issue

\* "pedestrianised is not a word in the US dictionary

Or in Powerpoint in English English!

Northern Conference on 20mph  
speed limits, Warrington, May 17th

# Local authority funding by intervention type — **what we may cut**

	Thameside	Total (National)
<b>Play schemes including traffic calming in vicinity and safer access</b>	£280,000	£2,030,000
<b>Pedestrian/cyclist facilities</b>		£1,327,000
<b>Engineering and traffic calming</b>	£100,000	£5,347,000
<b>Education, publicity and training</b>	£91,000	£1,510,500
<b>Home Zones</b>	£200,000	£431,000
<b>Watchman/VMS speed enforcement</b>	£90,000	£341,200
<b>Diversions activities (clubs)</b>	£30,000	£119,000
<b>Car-seat schemes</b>		£85,000
<b>Research</b>		£21,800
<b>Total Budget</b>	<b>£791,000</b>	<b>£11,200,500</b>

Christie, N. et al, “Road Safety  
 Web Publication No. 19  
 Road Traffic Injury Risk in  
 Disadvantaged Communities:  
 Evaluation of the Neighbourhood  
 Road Safety Initiative (DfT, 2010)  
 Table A1.1 from appendix I  
 My added words in **yellow**,  
**Thameside just shown as example**



Just as it took us to the 1950s to begin to get sewage off our beaches.... So:

“While most children are injured on the residential roads, these make up about 80% of the road length in the NRSI areas. When this is accounted for, the risk to the children is highest on the main roads. It is especially high per head of population of young people aged 16–24 years. The implication of this is that **as much attention should be paid to pedestrian safety for people of all ages on main roads as on the residential network** “ (Christie, et al. 2010)

# We will look back and wonder what we were thinking

Accidents involving cars are responsible for more deaths among children and young adults in Britain than can be attributed to any other causes. Just as open sewers were once seen as convenient and cheap, if a little loathsome, and tobacco was once widely tolerated, at some point in the future the antisocial and only very personal and short-term benefits of personal residential car transport will be more widely recognised. Cars provide instant gratification. A car standing on the drive outside of 'your' house is widely seen as a sign of success. But what is one person immediate convenience is a town's congestion and a country's major killer. ...Even before considering **fumes, oil** and car **debt**.

# Traffic at 30 mph is too fast for children's visual abilities, scientists reveal

- A study by researchers at Royal Holloway, University of London reveals that primary school children cannot accurately judge the speed of vehicles travelling faster than 20 mph.



- » Billington, J., Wilkie, M., Field, D. T., Wang, J.P. (2010) Neural processing of imminent collision in humans
- » Proceedings of the Royal Society B, Biological Sciences, published online 27 October 2010, doi: 10.1098/rspb.2010.1895
- » Wang, J. (2010) Traffic at 30 mph is too fast for children's visual abilities, scientists reveal, University Press Release
- » <http://www.rhul.ac.uk/aboutus/newsandevents/news/newsarticles/speedchildren.aspx>

# We become attuned to stupidity

If you had suggested in 1810, at the very start of the industrial revolution, that in a centuries time the open sewers would have been covered over, fresh water would be piped to houses, Individual latrines built for every property; they would have thought you mad.

If you had suggested too strongly in 1910, just before the First World War made cigarette smoking the national pass-time, that in a century most adults would no longer smoke and it might even be illegal to smoke in any public building; they might have certified you.



We evolved to fear heights. Enough died from falling. We have not evolved to fear speed – please treat a road like a cliff.

(slide courtesy of Ian Cameron, NSW)

**For more see:**

J.S.Dean (1947) *Murder Most Foul... A Study of the Road Deaths Problem*, London: Georg Allen & Unwin Ltd. Reprint 2007 by RoadPeace.

# Conclusion

If you suggest in 2010 that within a century we will no longer live in towns and villages choked by cars, paving over gardens, even if all cars are electrically powered by batteries recharged from wind-farms; they might accuse you of taking a flight of fantasy.

However, what remains the same over time is our intolerance of suffering, of ourselves and those around us. Slowly, one by one, the causes of the greatest damage to health are progressively removed. This lecture brought together maps, statistics and arguments to suggest that we should now view our road transport system in this way – as the greatest current avoidable toll on public health