WTSC 2015 Notes & Quotes

Unless otherwise stated, all references to page numbers refer to:

> Transportation Research Board, Special Report 300:
> **Achieving Traffic Safety Goals in the United States, *Lessons from Other Nations***
> (2011)

Other sources quoted:

> ***WHY IS ROAD SAFETY IN THE U.S. NOT ON PAR WITH SWEDEN, THE U.K., AND THE NETHERLANDS? Lessons to be Learned***
> *Juha Luoma, Michael Sivak*
> *The University of Michigan Transportation Research Institute (2013)*
>
> ***Speed cameras for the prevention of road traffic injuries and deaths***
> *Wilson, et al*
> *The Cochrane Library (2010)*
>
> *http://roadsafety.transport.nsw.gov.au/stayingsafe/alcoholdrugs/drinkdriving/rbt/*
>
> ***NTSB,** (2013 May 14)*
>
> ***Effectiveness of Sobriety Checkpoints for Reducing Alcohol-Involved Crashes***
> *Randy W. Elder, et al*
> *Traffic Injury Prevention (2002)*
>
> *http://www.scdb.info/en/statistik/*
>
> ***SEATTLE v. MESIANI***
> *110 Wn.2d 454, 755 P.2d 775, (May 12, 1988)*

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General

The United States is missing significant opportunities to reduce traffic fatalities and injuries. *p211*

From 1995 to 2009, annual traffic fatalities declined 52% in France, 39% in the United Kingdom, 25% in Australia, and 50% in total in 15 high-income countries (excluding the United States) for which long-term fatality and traffic data are available, but only 19% in the United States. *p212*

Two enforcement techniques aimed at driver behavior that have contributed to fatality reductions in the benchmark nations are automated enforcement of speed limits (i.e., detection and identification of speeding vehicles by means of automated cameras and speed-measuring devices installed in the roadway) and frequent roadside sobriety checks to enforce laws against alcohol-impaired driving. The objective of these techniques is general deterrence, that is, to make the risk of detection and punishment high enough to change the driving behavior of the population. Neither technique is in common use today in the United States because of legal restrictions, popular opposition, and cost considerations. Despite these constraints, the United States can learn important lessons from the benchmark nations' enforcement practices. They demonstrate that sustained and intensive enforcement, rationally organized and managed, can alter driver behavior sufficiently to produce worthwhile systemwide safety improvement. *p6, (also 230)*

The deterrent effect is reinforced with social marketing. *p230 (also p6)*

Traffic Deaths			
	1997	2008	% change
France	8400	4300	-49
Germany	8500	4500	-48
UK	3700	2600	-29
Australia	1800	1400	-18
Japan	11300	6000	-46
US	42000	37400	-11

p18

In general, U.S. campaigns do not show awareness of the lessons learned in other countries with extensive experience and evidence of success. *p241*

The countries or U.S. states that make progress will be those with the best overall long-term management of their safety programs. *p214*

The most characteristic features of successful national safety programs are to be found in the management of the programs. *p215*

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General (cont.)

With regard to countermeasures, the striking characteristic of the four countries' programs is the intensity of enforcement. Systematic U.S. data are not available for comparison, but citations for speeding and roadside tests for alcohol impairment may be 3 to 10 times more frequent in some of the benchmark countries than in the United States. *p101*

Publicity campaigns in the four countries appear to be intense, sustained, integrated with the overall traffic safety strategy, and based on a foundation of research, and they are reputed to have reinforced the impact of enforcement and other safety measures. *p101*

In comparison, U.S. safety programs have been faulted for concentrating on vehicle and infrastructure improvements while underemphasizing measures to control unsafe behavior more effectively. In the assessment of one safety researcher (Evans 2004, 389–408), the lag between percentage reductions in fatality rates in the United States and reductions achieved in other countries in recent decades reflects a "dramatic failure of U.S. safety policy" (Evans 2004, 390). Under the failed policy, "U.S. safety priorities have been ordered almost perfectly opposite to where technical knowledge shows benefits are greatest" (Evans 2004, 389). In particular, the author argues, policy has concentrated on regulation of vehicle design and safety features, which are of lesser value, and has neglected countermeasures aimed at altering the driver behavior factors that are the major determinants of risk. *p25*

Getting progress started again in the United States apparently will require more widespread and systematic application of the proven countermeasures and greater coordination of strategy among law enforcement agencies, the court system, and public health programs aimed at alcohol abuse. *p150*

Fatality rate	U.S.	Sweden	U.K.	Netherlands
/ million population	123.8	42.2	43.1	40.1
/ million motor Vehicles	146.5	72.4	76.0	72.9
/ billion km driven	7.1	4.4	4.5	5.1

p6, from:
WHY IS ROAD SAFETY IN THE U.S. NOT ON PAR WITH SWEDEN, THE U.K., AND THE NETHERLANDS? Lessons to be Learned
Juha Luoma, Michael Sivak
The University of Michigan Transportation Research Institute (2013)

The study concluded that there are no consistent safety benefits from improving road infrastructure, as measured by extent, functional class, and lane width. *p56*

The South Australia performance indicators report is noteworthy not only for the high level of enforcement intensity it documents but also as an illustration of the kind of routine performance monitoring that is considered necessary in support of the management of Australian safety programs. *p88*

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France

At least four circumstances seem to have been key to France's recent successful effort to reduce traffic fatalities. First, the program has received sustained high-level political direction. Second, centralization of administration, … .Third, the government's ability to take effective action has been facilitated by strong capabilities for data collection, evaluation, research, and planning. The speed and efficiency of data collection are an example of the advantages of centralization. Finally, public attitudes and public communication probably have been major factors in the outcome of the program. *p83*

France has achieved among the steepest declines in fatality rate in the past decade of the OECD countries for which data are available, reducing fatalities per vehicle kilometer by 6.9% per year in the 1997–2008 period, compared with 2.4% per year in the United States. Total fatalities fell by 49% from 1997 to 2008, including a 21% reduction from 2002 to 2003. *p77*

The number of roundabouts in France increased from 10,000 in 1993 to 30,000 in 2008, and roundabouts continue to be installed at an average rate of 1,000 per year. French evaluations indicate that installing a roundabout at an intersection reduces the rate of injury crashes by at least 50%, and studies in the United States and other countries have reported similar benefits. *p80*

One thousand radar and camera apparatuses were in operation by 2005, 1,850 by 2007, and 2,300 by April 2009. Two thousand additions were planned between 2008 and 2012. *p77*

Australia

The fatality rate per kilometer of travel, more than 50% higher than the U.S. rate in the 1970s, has been lower than the U.S. rate since 2001. Traffic fatalities fell from 1,767 in 1997 to 1,441 in 2008, an 18% decline, while traffic grew by 33% in the period. *p84*

[In Victoria] From 1990 to 1992, a series of laws and regulations strengthened enforcement. Random alcohol testing for drivers was greatly increased (the test rate today is 300 per 1,000 licensed drivers annually). The penalty of immediate license suspension for a second drunk driving offense was established. The use of cameras for speed enforcement was introduced, and drivers were penalized points toward license suspension for speed camera violations. For new drivers, the probationary period for new licenses was increased to 3 years and a blood alcohol limit of zero was set for the first 3 years of a new license. Finally, a permanent program of public education was established to inform the public about safety measures and to build public support for safety. *p86*

[In Victoria] Most of the decline was between 1988 and 1992, the period during which the new safety programs were introduced. The factors considered and the estimated percentage point contributions to the overall 43% reduction in serious casualty crash frequency between 1988 and 1996 … The analysis credited all road safety programs together with a 29% reduction and external factors (changes in alcohol sales and unemployment) with a 19% reduction. *p89*

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UK

Traffic deaths in 2008 were 2,600, a 29% decline from 1997. *p93*

Speed enforcement cameras have been in use since 1992. In 2006, 1.96 million speeding citations were issued, a rate of 58 citations per 1,000 licensed drivers, about the same as the rate of speeding citations in New York State and about one-fourth the rate in France. Nearly 90% of speeding offenses cited are identified by cameras. *p94*

Speed cameras are installed at 5,500 sites. Under a management and funding arrangement introduced in 2000, the cameras were paid for from speeding fine revenue through a fund controlled by the national government and overseen by an independent board. The assent and cooperation of local government authorities were required to install and operate speed cameras. This arrangement funded expansion of the system. *p95*

2005 study evaluated the effect of the U.K. safety camera program in the period 2000–2004. Safety cameras include speed cameras and red light cameras, but 93% of offenses identified by the cameras are for speeding. … The 2005 study estimated that the frequency of serious injuries and deaths was reduced by 42% at the camera sites, over and above the nationwide trend of a 3.5% per year reduction in frequency of deaths and serious injuries. *p96*

According to the safety strategy progress report, an analysis of local spending for specifically safety-motivated improvements in infrastructure concluded that these investments are earning a 300% rate of return. *p97*

The traffic interventions were reinforced by educational activities, publicity, and arrangements for regular consultation with community interest groups and citizens. *p98*

U.K. fatality rate (per vehicle kilometer) has maintained its ranking as among the lowest in the world, and the U.K. rate has continued its decline, falling 28% from 1997 to 2007. *p100*

Sweden

A small country (population of 9 million) with low population density outside the urban centers, Sweden is in some respects more comparable geographically with Canada and Australia than with the large European countries. *p91*

High-frequency alcohol testing is carried out. The rate was 380 tests per 1,000 licensed drivers in 2006, higher than in France. The legal BAC limit is 0.2 grams per liter (0.02%), the lowest in Europe. *p91*

2013 Fatalities / 100 000 population % Change From			
	2012	2000	1990
France	-8.3	-58.0	-70.9
Australia	-9.5	-45.9	-62.1
UK	–8.7 (2011–2012)	-53.5	-70.0
Sweden	-11.5	-55	-66.9
WA			

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Automated Speed Cameras

Other countries that introduced automated speed enforcement had to overcome public opposition on grounds similar to the objections that have been raised in the United States. U.S. safety program managers considering adoption of the methods of these countries can use the international experience to anticipate difficulties and to learn possible ways to address public concerns. *p173*

A 1% increase in speed results approximately in 2% change in injury crash rate, 3% change in severe crash rate, and 4% change in fatal crash rate" and that "an increase in average speed was found to increase the risk of a crash more on minor than on major roads. *p153*

In the United Kingdom, 90% of all speed offenses cited are identified by the camera system. *p155 (also p96)*

in France, a two-thirds reduction in vehicles traveling 10 km/h or more over the limit from 2000 to 2008. *p155*
(10 km/h = 6 m/h)

France's safety statistical agency estimated that three-fourths of the sharp reductions in fatalities and injuries on French roads between 2002 and 2005 resulted from a decline in speeds over the period induced by the speed control program begun in 2002. *p24*

Speeding … is the number one road safety problem in many countries, often contributing to as much as one third of fatal accidents and speed is an aggravating factor in the severity of all accidents. …
Research indicates that co-ordinated actions taken by the responsible authorities can bring about an immediate and durable response to the problem of speeding. Indeed, reducing speeding can reduce rapidly the number of fatalities and injuries and is a guaranteed way to make real progress towards the ambitious road safety targets set by OECD/ECMT countries. …
Speed management … should be a central element of any road safety strategy. *p152*

However, experience (e.g., in France and Australia) has demonstrated that the combination of appropriately determined limits, persistent and well-managed enforcement with adequate resources, and public outreach can effectively control speeds. *p154*

Queensland study estimated that the package had reduced the number of fatal and severe injury crashes in the state by 13% during the initial application period of December 2002 through January 2004. The analysis estimated the individual effects of the components of the intervention package and found that the largest effect was attributable to increased use of speed cameras. The doubling of total hours of speed camera enforcement as part of the intervention package was associated with a 9% decrease in fatal and serious injury crashes. *p90*

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Automated Speed Cameras (cont.)

A final set of recommendations for speed control programs in the United States is presented in the essay from the AAA Foundation cited above. The authors argue that two strategic elements will be necessary in a successful nationwide program to reduce speeding: first, political leadership at the federal, state, and local levels, starting with congressional action, to establish speed control as a high-level safety priority; and second, a staged approach to speed control campaigns that starts with campaigns to eliminate speeding in specific locations and situations where public support already exists and where evidence indicates that speeding is a specially significant risk factor. Such initial efforts will increase public awareness and support for expanding speed control. *p154*

[In France] The national safety statistical agency has estimated that 75% of the total reduction in casualties (fatalities plus injuries) from 2002 through 2005 can be attributed to speed reductions over the period. Annual fatalities declined 31% from 2002 to 2005. *p167*

[In France] The safety statistical agency has estimated that 40% of the reduction of fatalities in 2003 and 75% of the total reduction in casualties from 2002 through 2005 can be attributed to speed reductions over the period. *p83*

Twenty eight studies measured the effect on crashes. All 28 studies found a lower number of crashes in the speed camera areas after implementation of the program. In the vicinity of camera sites, the reductions ranged from 8% to 49% for all crashes, with reductions for most studies in the 14% to 25% range. For injury crashes the decrease ranged between 8% to 50% and for crashes resulting in fatalities or serious injuries the reductions were in the range of 11% to 44%. Effects over wider areas showed reductions for all crashes ranging from 9% to 35%, with most studies reporting reductions in the 11% to 27% range. For crashes resulting in death or serious injury reductions ranged from 17% to 58%, with most studies reporting this result in the 30% to 40% reduction range. The studies of longer duration showed that these positive trends were either maintained or improved with time.
Wilson, et al
Speed cameras for the prevention of road traffic injuries and deaths
The Cochrane Library (2010)

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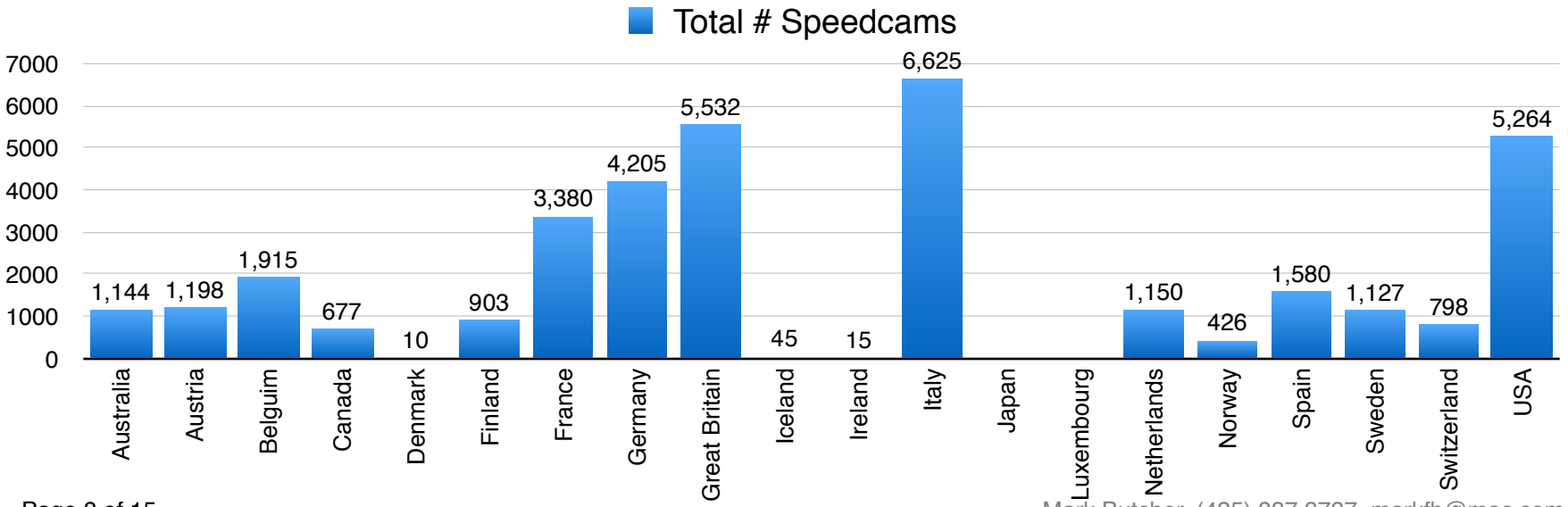
Automated Speed Cameras (cont.)

Wealthy 20 Speedcams

Country	Australia	Austria	Belguim	Canada	Denmark	Finland	France	Germany	Great Britain	Iceland	Ireland	Italy	Japan	Luxembourg	Netherland	Norway	Spain	Sweden	Switzerland	USA
Total # Speedcams	1144	1198	1915	677	10	903	3380	4205	5532	45	15	6625			1150	426	1580	1127	798	5264
Speedcams/1000 km²	0.1	14.3	58.8	0.1	0.2	2.7	6.2	11.8	22.7	0.4	0.2	22			27.7	1.3	3.1	2.5	19.3	0.5
Speedcams/1m inhabita	56.1	145.7	183.3	20.2	1.8	172	55.7	51	91.5	145.3	3.5	112.9			70.4	92	36.6	124.6	107.6	17.2

Source:
http://www.scdb.info/en/statistik/

Average speedcams/1m inhabitants for the 'Wealthy 17' =	86
Population of WA =	7m
86 * 7 (average Speedcams * population of WA) =	602



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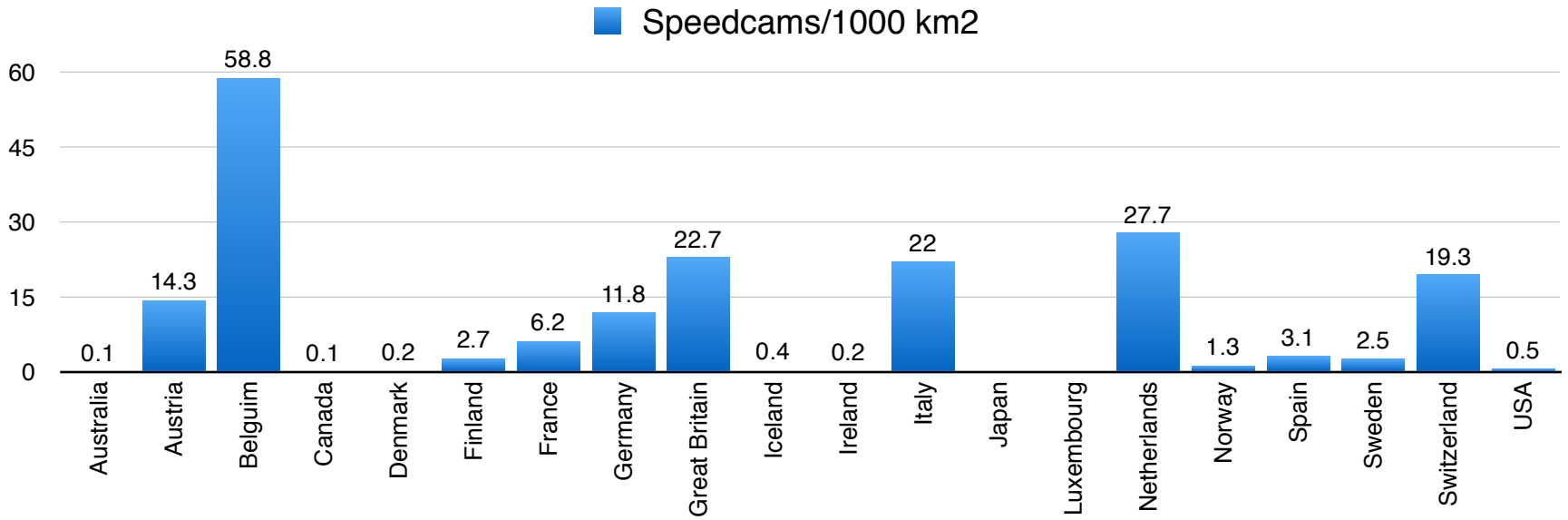
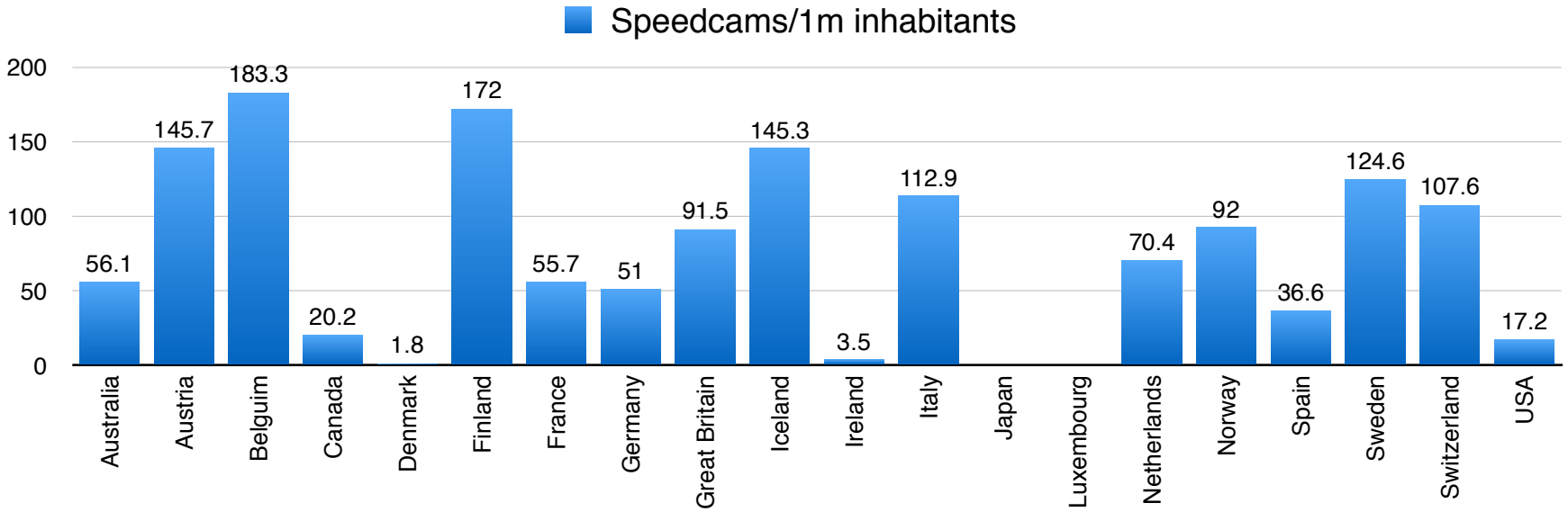
Automated Speed Cameras (cont.)





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Sobriety Checkpoints

Furthermore, it has been found in the Netherlands that each doubling of the number of random breath tests since 1986 was associated with a 25% decrease in drink-driving offenses. Between 1985 and 2005, the proportion of drink-driving offenders decreased by two thirds. In Sweden, the proportion of injury crashes involving drunk drivers was reduced from 14% to 9% after the introduction of random breath testing in the 1970s. *p15*

WHY IS ROAD SAFETY IN THE U.S. NOT ON PAR WITH SWEDEN, THE U.K., AND THE NETHERLANDS? Lessons to be Learned

Juha Luoma, Michael Sivak

The University of Michigan Transportation Research Institute (2013)

In Australia, the fraction of all fatally injured drivers and motorcycle riders with BAC exceeding the 0.05% (0.5 g/L) legal limit fell from 44% in 1981 to 30 in 1992, but then fluctuated between 26 and 30% through 1998. The fraction of all fatalities that were alcohol-related fell from 43% in 1988 to 35% in 1992, then fluctuated between 35 and 38% from 1992 to 2001. *p140*

In countries that have introduced sustained, high-frequency programs of random sobriety testing, including Australia, Finland, and France, reductions of 13 to 36% in the frequency of alcohol-involved fatal injury crashes have been achieved. *p151 (also p232)*

As an illustrative comparison, the state of Pennsylvania reports that in 2008, at all sobriety checkpoints and roving patrols targeting impaired driving conducted by state and local police, there were 227,000 “motorist contacts” (i.e., drivers stopped and observed by police), a rate of 26 motorists contacted per 1,000 licensed drivers. Most motorists contacted would not have been administered alcohol tests. The French rate of 222 drivers per 1,000 subjected to preventive alcohol tests (i.e., tests not subsequent to a crash or citation) is 10 times the Pennsylvania rate of motorist contacts. *p82*

The interventions used in the benchmark countries that are believed to have the greatest effectiveness are high-frequency roadside alcohol testing, low BAC limits, intensive follow-up on offenders through the judicial system, and the coupling of social marketing techniques with enforcement. *p142*

There is evidence to indicate that lowering the legal BAC limit to 0.5 g/L (0.05%), combined with more intensive enforcement, would reduce U.S. fatalities further. Evaluations of the effects of reducing the limit from 0.8 g/L (0.08%) to 0.5 g/L (0.05%) in the Netherlands, Austria, France, and Australia found that the change reduced alcohol-impaired driving and crashes and that at least part of the effect was independent of any concomitant changes in enforcement.
p233

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Sobriety Checkpoints (cont.)

	# Contacted Drivers/1000 Licensed Divers	page #
South Australia state, Australia	632	*p88*
Sweden	380	*p91*
Victoria state, Australia	300	*p86*
France	222	*p83*

5.5m licensed drivers in WA
200 annual sobriety checkpoint contacts / 1000 licensed drivers = 1.1m drivers / year = 3000 drivers / day (for SBT: 1.1m / 62% = 1.8m / year, or 4860 / day)

The BAC limit is 0.8 g/L (0.08%) in the United States and 0.5 g/L (0.05%) or lower in Australia, Canada, Japan, and nearly every country in Europe except the United Kingdom and Ireland. The rate of roadside alcohol testing is 1 test per 3.6 registered drivers per year in France and 1 test per 2.6 drivers in Sweden. In the Australian state of South Australia, the rate is 1 test per 1.6 registered drivers per year, and other Australian states maintain similar rates. Most European countries and Australia conduct random roadside alcohol checks. *p231*

[In France, both RBT & subsequent to crash or violation] The alcohol test rate was 279 tests per thousand drivers in 2007. *p81*

[Victoria, Australia] From 1990 to 1992, a series of laws and regulations strengthened enforcement. Random alcohol testing for drivers was greatly increased (the test rate today is 300 per 1,000 licensed drivers annually). The penalty of immediate license suspension for a second drunk driving offense was established. *p86*

[NSW, Australia] Random breath testing started in 1982. Since then, fatal crashes involving alcohol have dropped from about 40 per cent of all fatalities to the 2012 level of 15 per cent. Police conduct about 5 million breath tests each year in NSW. Every police car is a mobile RBT.
http://roadsafety.transport.nsw.gov.au/stayingsafe/alcoholdrugs/drinkdriving/rbt/

Fatal crashes decreased 18% in Queensland and 8% in New South Wales after those Australian states lowered their per se BAC limits from 0.08 to 0.05.
***NTSB,** 2013 May 14*

Three very specific reasons support the NTSB's decision to recommend lowering the per se BAC limit: (1) alcohol impairs critical driving tasks; (2) crash risk is consistently and significantly elevated by the time an individual reaches 0.05; and (3) lowering the BAC limit has been shown to reduce crashes, injuries, and deaths.
***NTSB**, 2013 May 14*

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Sobriety Checkpoints (cont.)

Procedures for conducting sobriety checkpoints vary in different countries. At random breath testing (RBT) checkpoints, which are used in Australia and several European countries, all drivers stopped are given breath tests for blood alcohol lev- els. Issues regarding the violation of constitutional protections against unreasonable search and seizure prevent the use of RBT checkpoints in the United States (NHTSA, 1990), where selective breath testing (SBT) checkpoints are used. At SBT check- points, police must have reason to suspect the driver has been drinking before they can demand that a driver take a breath test. *p266*

Effectiveness of Sobriety Checkpoints for Reducing Alcohol-Involved Crashes

Randy W. Elder, et al

Traffic Injury Prevention (2002)

Some drinking drivers believe that, even if they are stopped at an SBT checkpoint, they can avoid detection. There appears to be some basis for this belief, as a recent study found that 62% of drivers leaving a U.S. checkpoint with blood alcohol concentrations (BACs) above 0.08 g/dL passed through undetected (Wells et al., 1997). Given this problem, RBT checkpoints might be expected to be more effective than SBT checkpoints at increasing the perceived risks of drinking and driving, and thus be more effective deterrents. *p267*

Effectiveness of Sobriety Checkpoints for Reducing Alcohol-Involved Crashes

Randy W. Elder, et al

Traffic Injury Prevention (2002)

These results provide strong evidence that both RBT and SBT sobriety checkpoints are effective in reducing alcohol-related crashes and associated fatal and nonfatal injuries. The greater sensitivity of RBT checkpoints in detecting drinking drivers might lead one to expect a stronger deterrent effect leading to improved effectiveness in reducing alcohol-related crashes relative to SBT checkpoints. The results of this review did not provide evidence of such differential effective- ness. None of the studies reviewed directly compared RBT and SBT checkpoints, however, so these results should be interpreted cautiously. *p270*

Effectiveness of Sobriety Checkpoints for Reducing Alcohol-Involved Crashes

Randy W. Elder, et al

Traffic Injury Prevention (2002)

Some authors have suggested that there may be thresholds for enforcement and publicity below which sobriety checkpoints are relatively ineffective at deterring drinking and driving. This review cannot adequately address this hypothesis because the included studies primarily evaluated checkpoint programs that were well funded and implemented on a large scale. Smaller-scale programs appear to be underrepresented due to two factors. First, the commitment of resources to the evaluation and subsequent publication of results may be more likely for larger programs than smaller ones. Second, studies of smaller-scale programs had a greater tendency to be excluded from our review due to quality limitations. *p272*

Effectiveness of Sobriety Checkpoints for Reducing Alcohol-Involved Crashes

Randy W. Elder, et al

Traffic Injury Prevention (2002)

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Seattle v. Mesiani

110 Wn.2d 454, May 12 1988

NATURE OF ACTION: Persons charged with criminal violations after being stopped at sobriety checkpoints challenged the validity of such checkpoints. In a separate action, persons stopped at the checkpoints sought to have the checkpoint activity stopped. *p1*

[WA] Const. art. 1, 7 provides: "No person shall be disturbed in his private affairs, or his home invaded, without authority of law." *p2*

Because sobriety checkpoints involve seizures, they are valid only if there is "authority of law." Article 1, section 7 "unlike any provision in the federal constitution, explicitly protects the privacy rights of Washington citizens, and these privacy rights include the freedom from warrantless searches absent special circumstances." This court recognizes only narrow exceptions to the warrant requirement. Warrantless searches incident to arrests have been allowed, for instance, to prevent destruction of evidence or danger to officers. The burden is on the City to show that the stop falls within an exception to the warrant requirement. It has failed to do so. *p3*

Seattle's sobriety checkpoint program unconstitutionally gave police officers unbridled discretion to conduct intrusive searches. *p4*

Other jurisdictions have applied, with differing results, the 3-prong balancing test of BROWN v. TEXAS (1979) to determine whether sobriety checkpoints violate the Fourth Amendment. "Consideration of the constitutionality of . . . seizures involves a weighing of the gravity of the public concerns served by the seizure, the degree to which the seizure advances the public interest, and the severity of the interference with individual liberty." *p5*

CONCURRING OPINION:While I agree with the holding of the majority that the sobriety checkpoint program of the City of Seattle did not meet constitutional muster, I do so with reluctance since I believe a sobriety checkpoint program, properly authorized by statute or ordinance, could be designed which would violate neither Const. art. 1, 7, nor the Fourth Amendment. *p5*

The BROWN Court, while willing to recognize some legitimate interests of society to seize an individual, would not allow arbitrary invasions at the unfettered discretion of officers in the field. The Court did, however, lay the groundwork in support of a properly regulated and authorized sobriety checkpoint. "[T]he seizure must be carried out pursuant to a plan embodying explicit, neutral limitations on the conduct of individual officers." *p6*

In determining whether a checkpoint program satisfied the balancing test between state interest and individual privacy, I would consider the following factors: (1) The amount of discretion permitted individual officers at the checkpoint; (2) the checkpoint location; (3) the sufficiency of an advance notice to approaching drivers; (4) the safety of the checkpoint; (5) the notice to the public at large; (6) the amount of time drivers are detained; (7) the thoroughness of the program's guidelines; and (8) the vehicle selection process. *p8*

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Management and Planning

The countries or U.S. states that make progress will be those with the best overall long-term management of their safety programs. *p214*

The most characteristic features of successful national safety programs are to be found in the management of the programs. *p215*

The following are essential elements of the management model:

- A systems perspective that integrates engineering design, traffic control, regulatory enforcement, and public health methods to identify and reduce risks. This approach requires collaboration across government agencies and levels of government
- A plan that specifies goals and milestones, methods, schedule, and resource requirements. A jurisdiction's traffic safety plan constitutes a commitment for which legislatures may hold executive agencies accountable, and the public may hold accountable the government agencies responsible for delivery. The plan provides for long-term continuity in funding and in strategies. The most credible plans quantitatively specify the expected impact of individual planned countermeasure initiatives in order to demonstrate that aggregate casualty reduction goals are consistent with the means proposed.
- Regular monitoring to identify problems and measure progress toward goals and ongoing evaluation to determine effectiveness of the actions taken.

In the United States, management practices in traffic safety programs typically are lacking in essential elements of this ideal management model. Meaningful goals and milestones are not published, data systems for monitoring effort and performance are inadequate, program impacts are not scientifically evaluated, and initiatives are reactive and episodic rather than strategic. *p216*

The benchmark nations and all U.S. states prepare traffic safety plans that state goals for the jurisdiction's traffic safety program for a period of several years and describe the strategies for meeting the goals. U.S. state plans as well as those of the benchmark nations commonly declare a primary goal of reducing aggregate fatalities by a certain percentage by a certain year. Such a goal is likely to be useful only if it is backed up by a quantitative plan for attainment. Otherwise, it lacks credibility and does not entail accountability. A "stretch" goal (such as Sweden's Vision Zero program) can be constructive as a declaration of values in a high-level policy statement, but a state's safety plan should be thought of as a business plan, which must lay out practical means to reach the stated objectives. *p216*

In the U.S. institutional setting, strong cooperation among government agencies and levels of government is a prerequisite for such a systems approach to safety. *p220*

Leadership by individual states has been crucial for safety progress and should be fostered. *p221*

The guidelines strongly emphasize the essential step of identifying a lead agency in government and endowing it with the necessary powers, resources, and responsibility. *p69*

Look at pages 70–73

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Political Leadership and Public Support

Although no universal prescription can be offered for earning political and popular support for ambitious traffic safety interventions, the international case studies and the experiences of U.S. states that the committee examined suggest the following observations on how support came about:

- Building support commonly is a long-term process. …
- Creating new high-level institutional structures has been a vital step in the evolution of programs in certain of the benchmark nations. …
- The programs have emphasized transparency with respect to goals and in public communications. …
- In at least some of the benchmark countries,regular communication channels exist among the road safety agency, police, and researchers, and forums exist for interaction of legislators with professionals and researchers. …
- Public administrators and professionals often have been the initial leaders in educating and developing support among elected officials and the public. …
- Most programs have used sustained, large-scale, and sophisticated social marketing. …

p239

The benchmark nations' publicity campaigns serve dual functions: they directly affect driver behavior, amplifying the effect of enforcement, and in the longer term they affect public attitudes toward unsafe driving and rigorous enforcement. *p241*

Recommendations

If state and local governments seek to match the performance of the benchmark nations, they should recognize that additional resources for enforcement will be required. *p237*

The states and USDOT should give high priority to initiatives to encourage adoption of camera enforcement and regular use of sobriety checkpoints. *p238*

Police in all states should have authority under state law to operate sobriety checkpoints and to use speed cameras. *p238*

Mark Butcher, (425) 837 3737, markfb@mac.com

Washington *outclassed…*

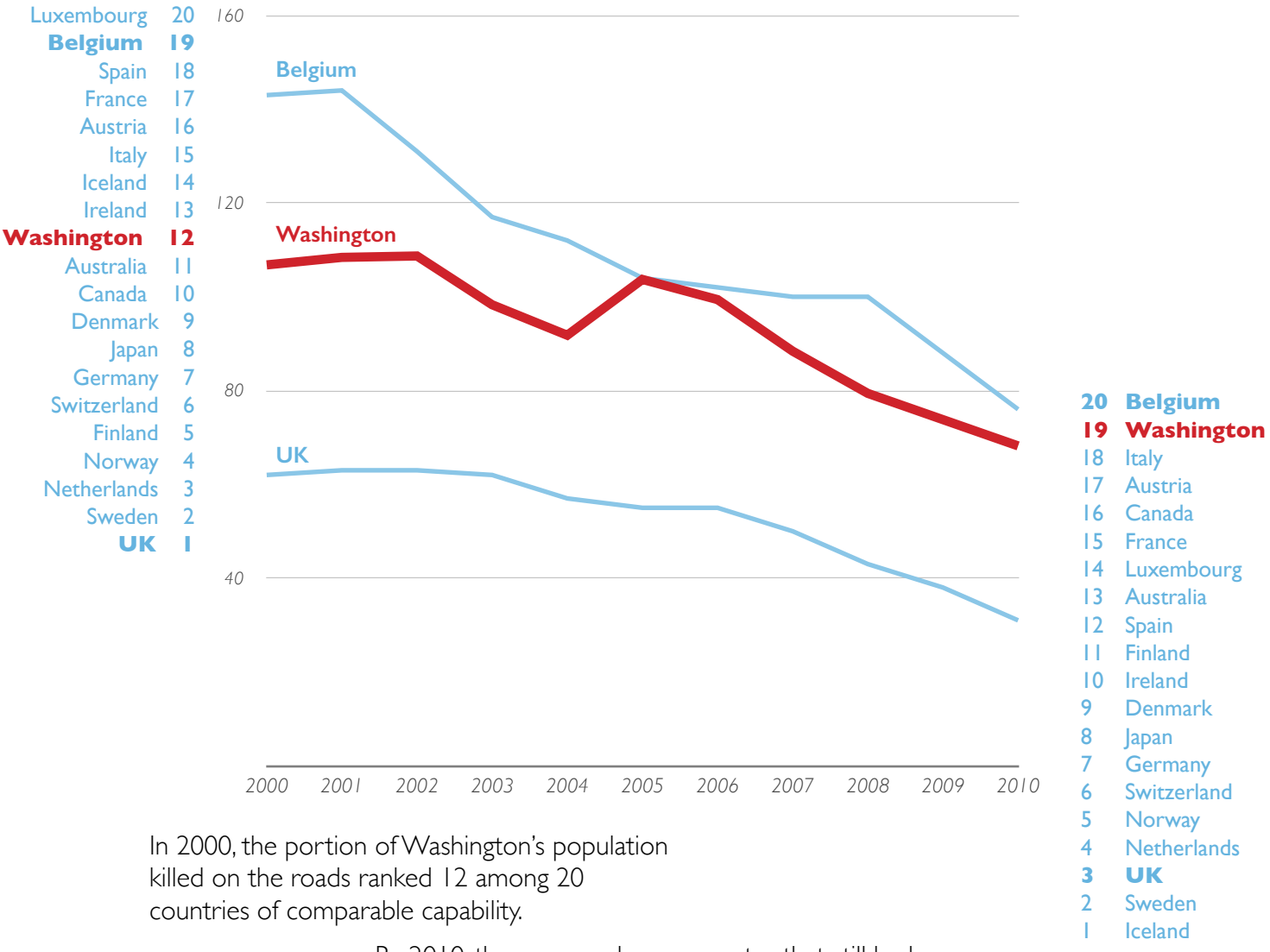
Road Fatalities 2000–2010

Washington has not improved its capability to reduce road fatalities in line with international trends.

Other developed countries, which share comparable resources, wealth, education, established infrastructure, transparency, law enforcement, and emergency medical care to Washington, have been implementing and refining proven road safety strategies for decades. Washington has not been keeping up with these developments, and as a result has been consistently dropping further behind.

Without updating our capability of reducing road fatalities, this trend will continue.

Road Fatalities per Million Inhabitants 2000–2010



In 2000, the portion of Washington's population killed on the roads ranked 12 among 20 countries of comparable capability.

By 2010, there was only one country that still had a higher portion of its population killed on its roads than Washington. As road fatalities drop, it becomes increasingly difficult to maintain the trend. However, other countries still experience rapid declines.

Since 2010, Washington road fatalities have remained level. In addition to the continuation of existing improvements, new strategies will be required to change this trend.

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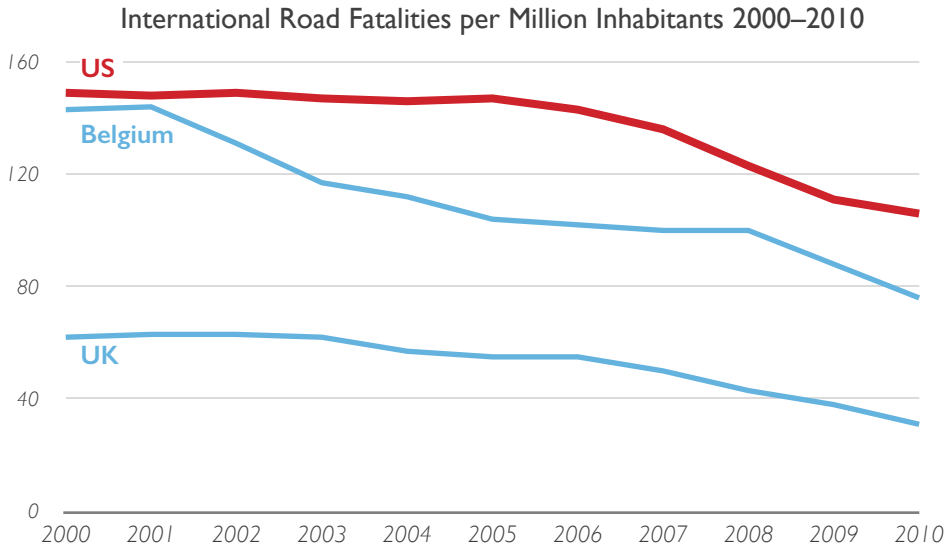
Sources: OECD, NHTSA, WTSC

Washington *misguided…*

Washington has taken the US as the exclusive benchmark country against which to measure its road safety performance. But the US has the highest portion of its population killed on its roads, thereby making US roads the least safe. For years, Washington has been using the worst performing country as its benchmark for progress.

Luxembourg	20
US	19
Belgium	18
Spain	17
France	16
Austria	15
Italy	14
Iceland	13
Ireland	12
Australia	11
Canada	10
Denmark	9
Japan	8
Germany	7
Switzerland	6
Finland	5
Norway	4
Netherlands	3
Sweden	2
UK	1



20	US
19	Belgium
18	Italy
17	Austria
16	Canada
15	France
14	Luxembourg
13	Australia
12	Spain
11	Finland
10	Ireland
9	Denmark
8	Japan
7	Germany
6	Switzerland
5	Norway
4	Netherlands
3	UK
2	Sweden
1	Iceland

Washington *underdeveloped…*

The single most important safety feature in every vehicle is always the driver.

Developing Safe Drivers with Training and Testing

Driver training and testing is crucial to ensure new drivers meet an adequate standard of safety, including comprehensive and early observation, recognizing situations with potential risk, and ability to react effectively to eliminate a wide range of potential hazards.

The practical test to determine if a new driver meets the required safety standards, in Australia and Germany takes 30+ mins, in UK 40 mins, in France and Norway 60+ mins. The practical driving test in Washington only takes 10+ mins to complete.

To make matters worse, Washington is putting unsupervised licensed drivers on the road typically 2 years younger than their counterparts internationally.

It is also important that testing minimizes the possibility of inadequately competent drivers passing, to ensure licensed drivers meet minimum standards.

Maintaining Safe Drivers with an Integrated Road Safety System

Everything is interconnected, and to improve Washington's performance, we must add more effective programs, without impeding the existing programs.

The two highest priority safety issues are DUI and speeding. Internationally, the established, widespread and proven effective deterrents for these are **automated speed cameras**, and frequent **random sobriety checkpoints**, to give a credible chance of being caught. To be effective, these work in conjunction with both a **penalty point license system** to discourage repeat offenses, and also a targeted, coordinated and persistent **PSA campaigns** spread over several years to encourage safe practices and discourage unsafe behaviors.

For integrated road safety systems to be effective, not only are the components necessary, but also the quality of coordination, communication, planning, and implementation is essential for success. With strategic planning, priorities driven by data, programs driven by priority, results and indicators monitored and evaluated to improve and maximize effectiveness, and achievable intermediate objectives backed by accountability.

Penalty point license system

Purpose is to deter repeat offenses for all drivers. Additionally, newly licensed drivers will typically have a 2-year probation period with less leniency and harsher penalties to discourage early bad habits.

Automated speed cameras

Speed was involved in nearly 40% of fatalities and 30% of serious injuries in WA.

There are 3 types in use: Mobile Automated Speed Cameras, Fixed Automated Speed Cameras, and more recently, Average Speed Cameras.

Of the 19 countries in the chart, 14 have more than 50 speed cameras per million inhabitants (equivalent to 350+ for Washington), and 7 have more than 100 per million inhabitants (equivalent to 700+ for Washington).

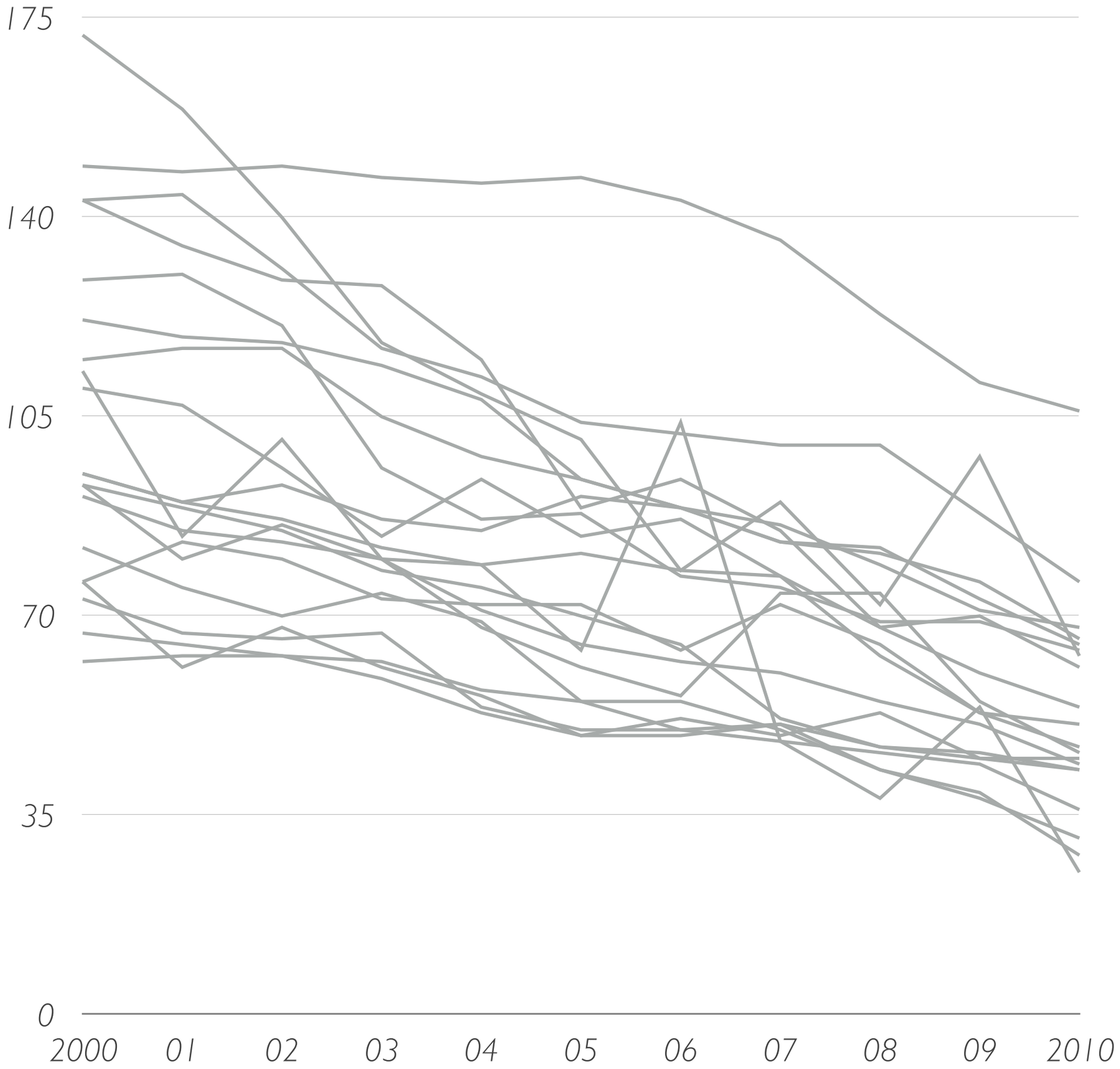
Random sobriety tests

Impaired driving is in 50% of all fatal collisions in Washington.

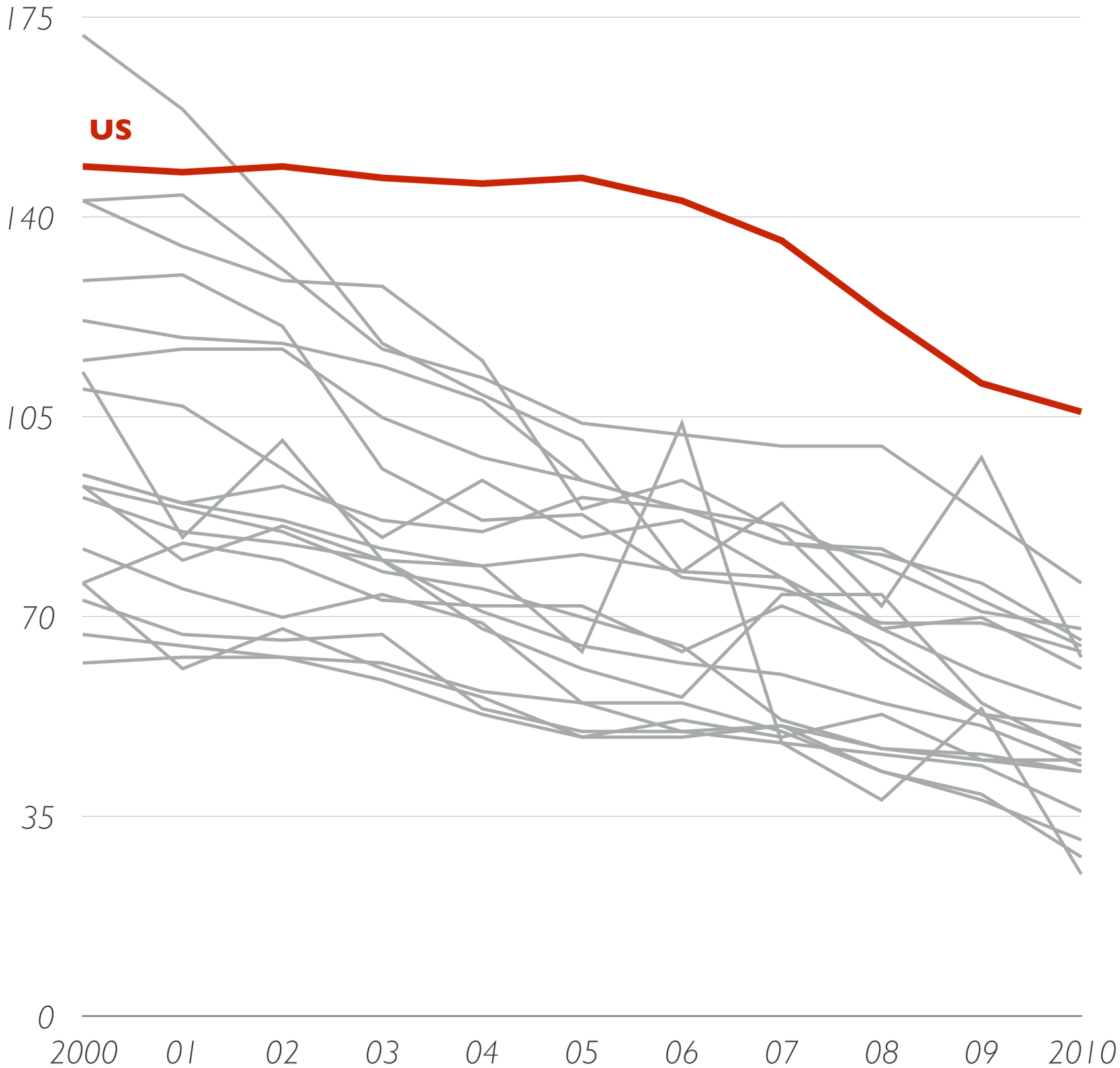
Objective is to administer enough that an individual motorist faces a significant chance of being tested.

Most countries have a BAC of 0.05, Washington has 0.08.

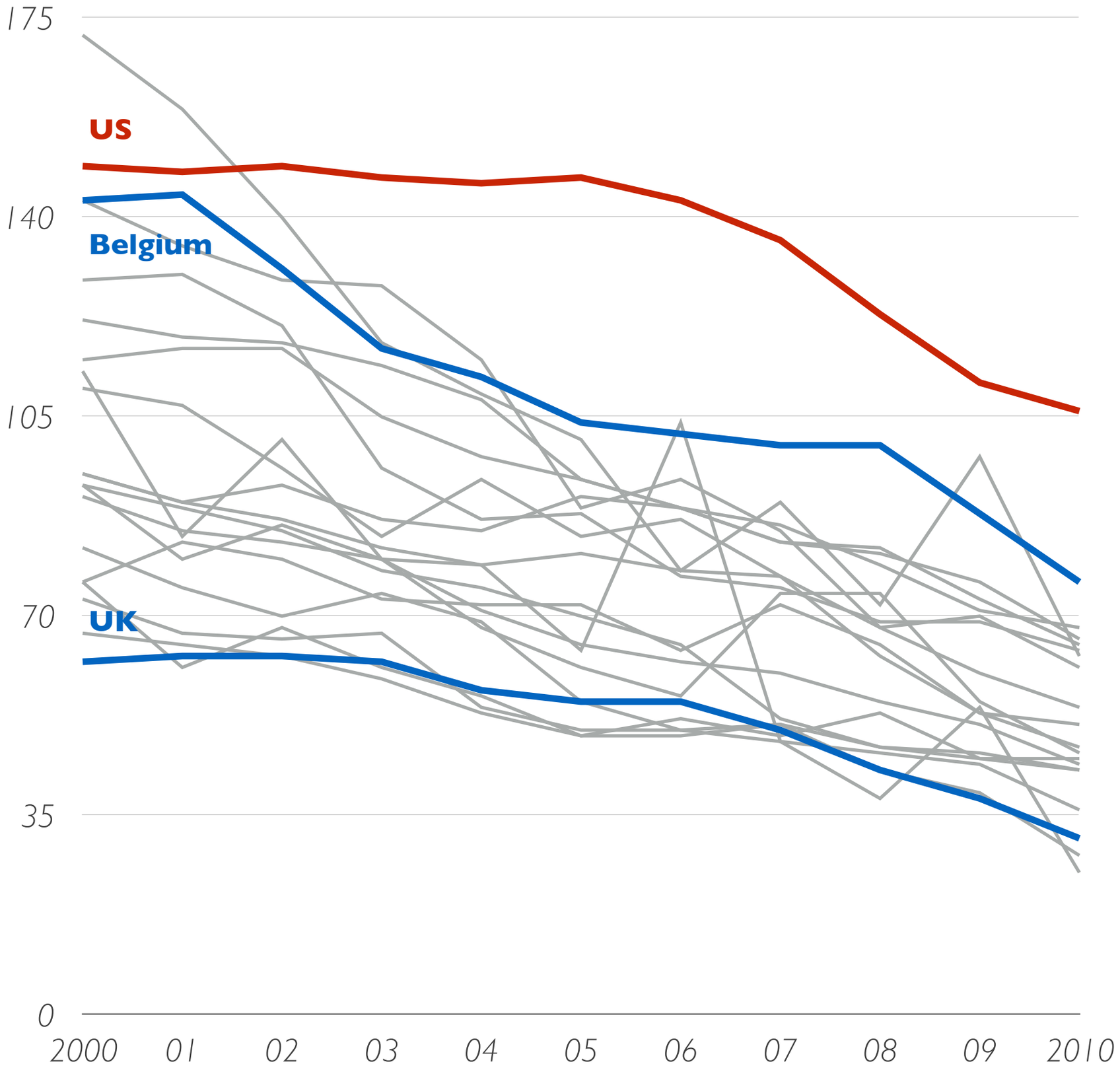
Road Fatalities per Million Inhabitants 2000–2010



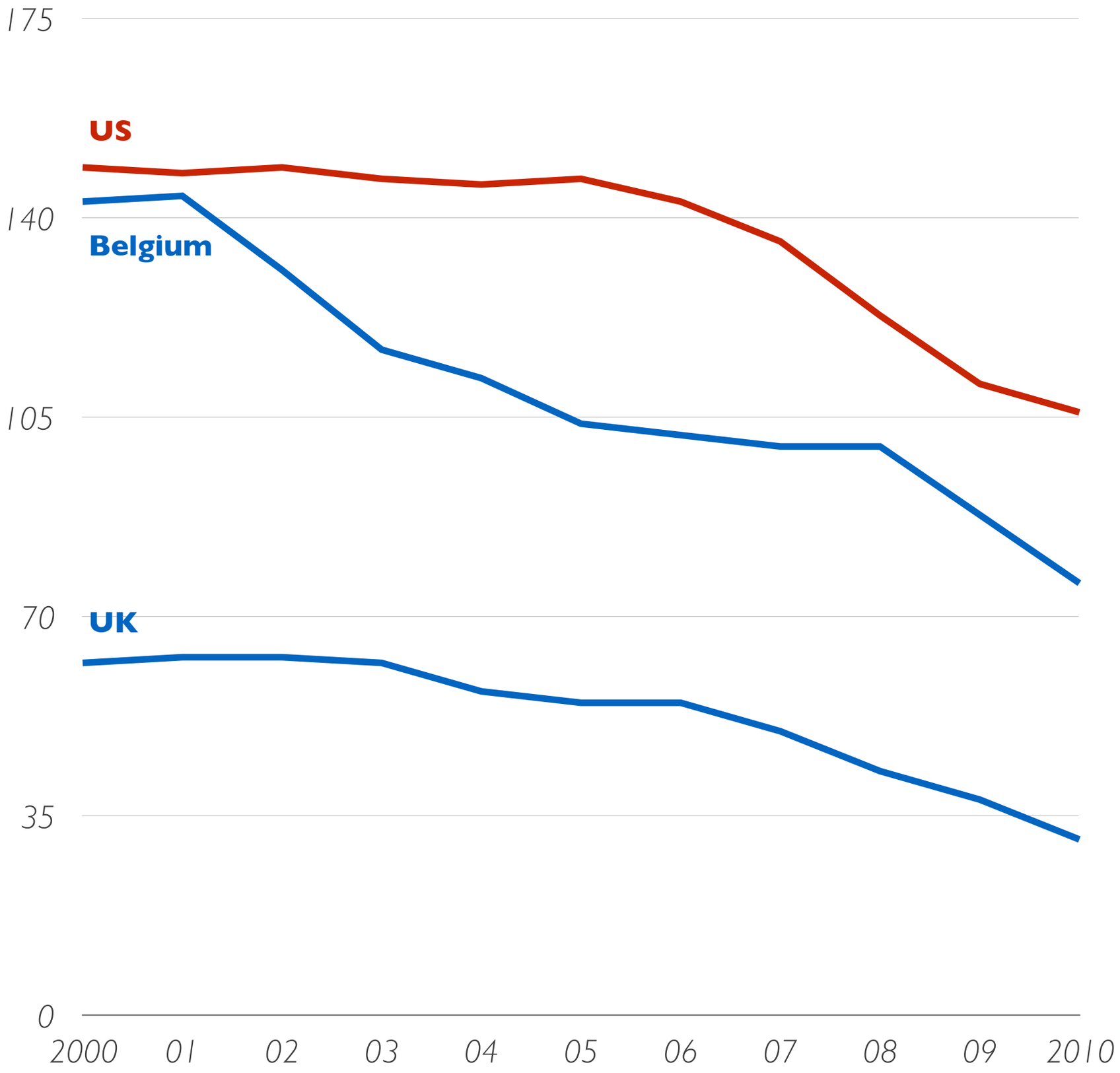
Road Fatalities per Million Inhabitants 2000–2010



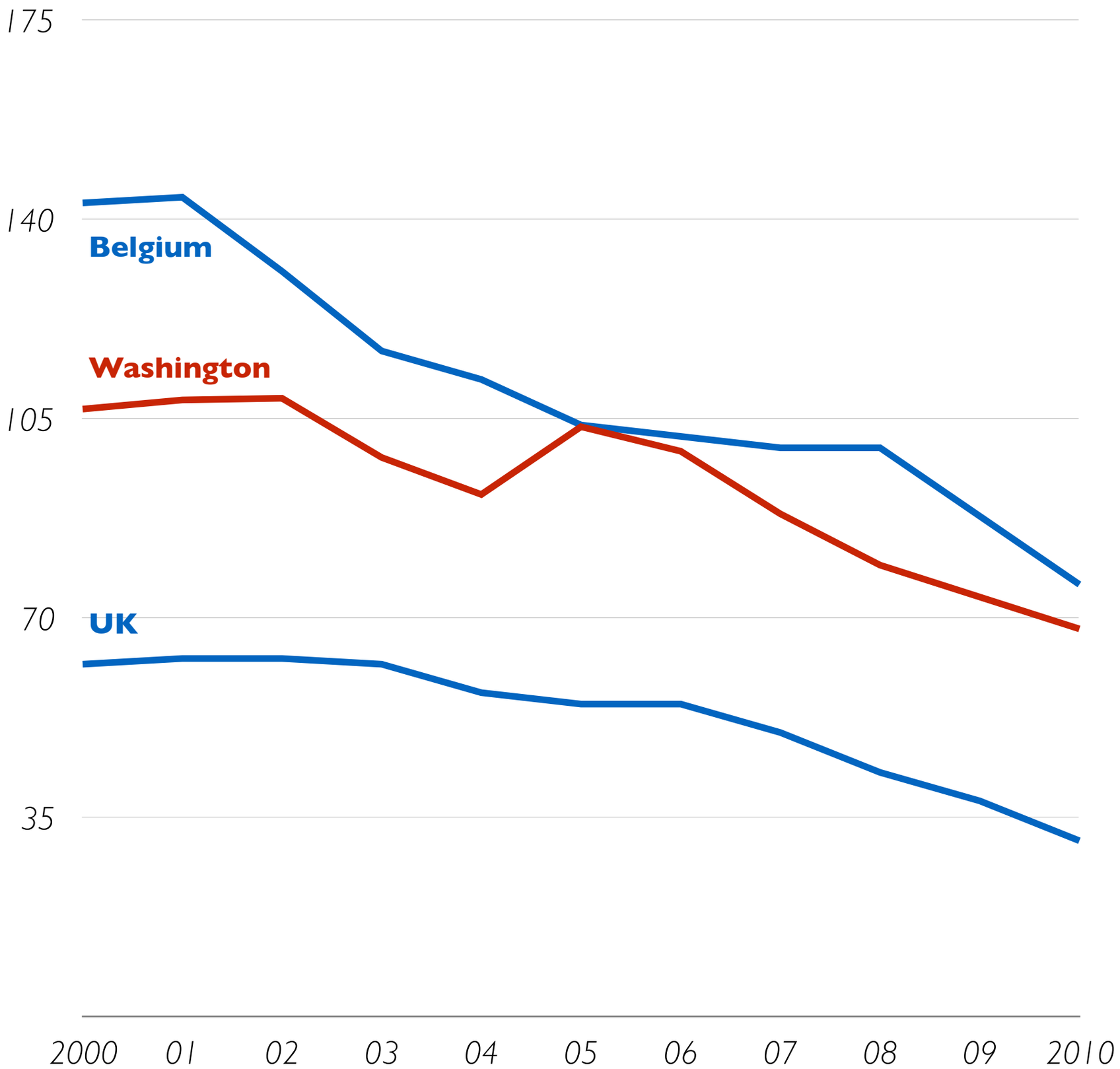
Road Fatalities per Million Inhabitants 2000–2010



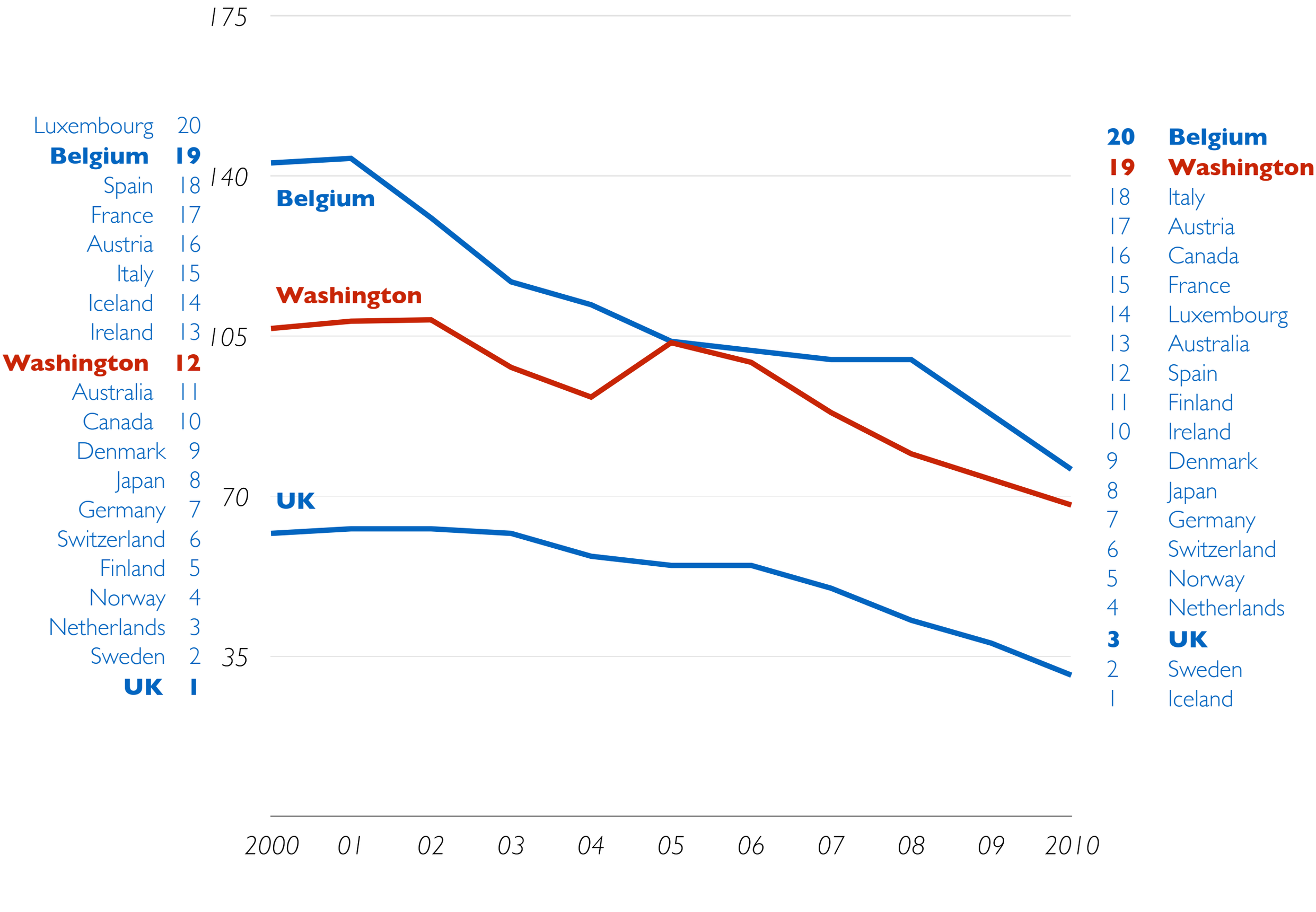
Road Fatalities per Million Inhabitants 2000–2010



Road Fatalities per Million Inhabitants 2000–2010



Road Fatalities per Million Inhabitants 2000–2010



International Transport Forum

Road Safety Annual Report 2014

irtad
International Traffic Safety Data and Analysis Group

OECD

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

SPECIAL REPORT 300

Achieving Traffic Safety Goals in the United States

Lessons from Other Nations

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

TRB SR-300

Countermeasures

- Speeding
- DUI
- Seatbelt
- Helmet
- Roadway design

Benchmark countries

- Australia
- France
- Sweden
- UK

TRB SR-300: key US deficiencies

- Overall lessons from the benchmark nations
- Management & planning of safety programs
- Technical implementation of specific countermeasures
- Political support & leadership

Planning & Management

- Integrated & multi-agency systems approach

- Specific goals and milestones, methods, schedule, and resource requirements, with agency accountability

- **Regular monitoring to identify problems & measure progress toward overall goals, with ongoing evaluation of effectiveness of intermediate actions**

Guidelines strongly emphasize the essential step of identifying a lead agency in government and endowing it with the necessary powers, resources, and responsibility

Common Practice

"The [UK] fatality rate per vehicle kilometer was higher than in the United States in the 1970s and earlier and close to the U.S. rate in the 1980s; since the late 1980s the rate has been lower than in the United States, and it is still declining more rapidly than the U.S. rate."

- Driving test 60 mins behind-the-wheel
- Minimum unsupervised driving age 18
- GDE matrix
- Persistent & targeted PSA's
- Network of automated speed cameras
- High-frequency random sobriety checkpoints
- BAC 0.05%
- Penalty point license system
- On the spot fines

France

Total fatalities fell by 49 percent from 1997 to 2008, including a 21 percent reduction from 2002 to 2003

- Sustained high-level political direction
- Centralization of administration, multi-agency oversight
- Effective action has been facilitated by strong capabilities for data collection, evaluation, research, and planning
- Public attitudes and public communication probably have been major factors

Australia

The fatality rate per vehicle km, more than 50 percent higher than the U.S. rate in the 1970s, has been lower than the U.S. rate since 2001

Between 1997–2008, traffic fatalities fell 18% while traffic grew 33%

- Safer speeds
- Safer roads and roadsides
- Safer vehicles
- Safer road users

Sweden

Has been lower than the U.S. rate since the late 1970s. The 2008 rate was 0.51 fatalities per 100 million vehicle km, compared with 0.78 in the United States and 0.70 for the 15 non-U.S.

- Centralized control
- Enforcement is at a high level of intensity, with strong countermeasures for speeding and drink driving
- Strong capabilities for targeting and monitoring of intermediate outputs
- Safe road design

U.K.

The 2005 study estimated that the frequency of serious injuries and deaths was reduced by 42% at the camera sites, over and above the nationwide trend of a 3.5% per year reduction in frequency of deaths and serious injuries.

U.K. rate has continued its decline, falling 28 percent from 1997 to 2007.

- Speed control
- Young driver training and testing
- PSA campaigns

Speed Cameras

- Fixed
- Mobile
- Average speed

Seattle

Mar 2010 – Sep 2010, weekdays 9am –11am

	Elliott Avenue 16 days	35th Avenue 19 days
Drop in average speed	5.6 MPH (15.6%)	2.5 MPH (6.8%)
Reduction in 85th percentile speed	3.2 mph	3.6 mph
Decrease in % of vehicles triggering a violation	67%	64%

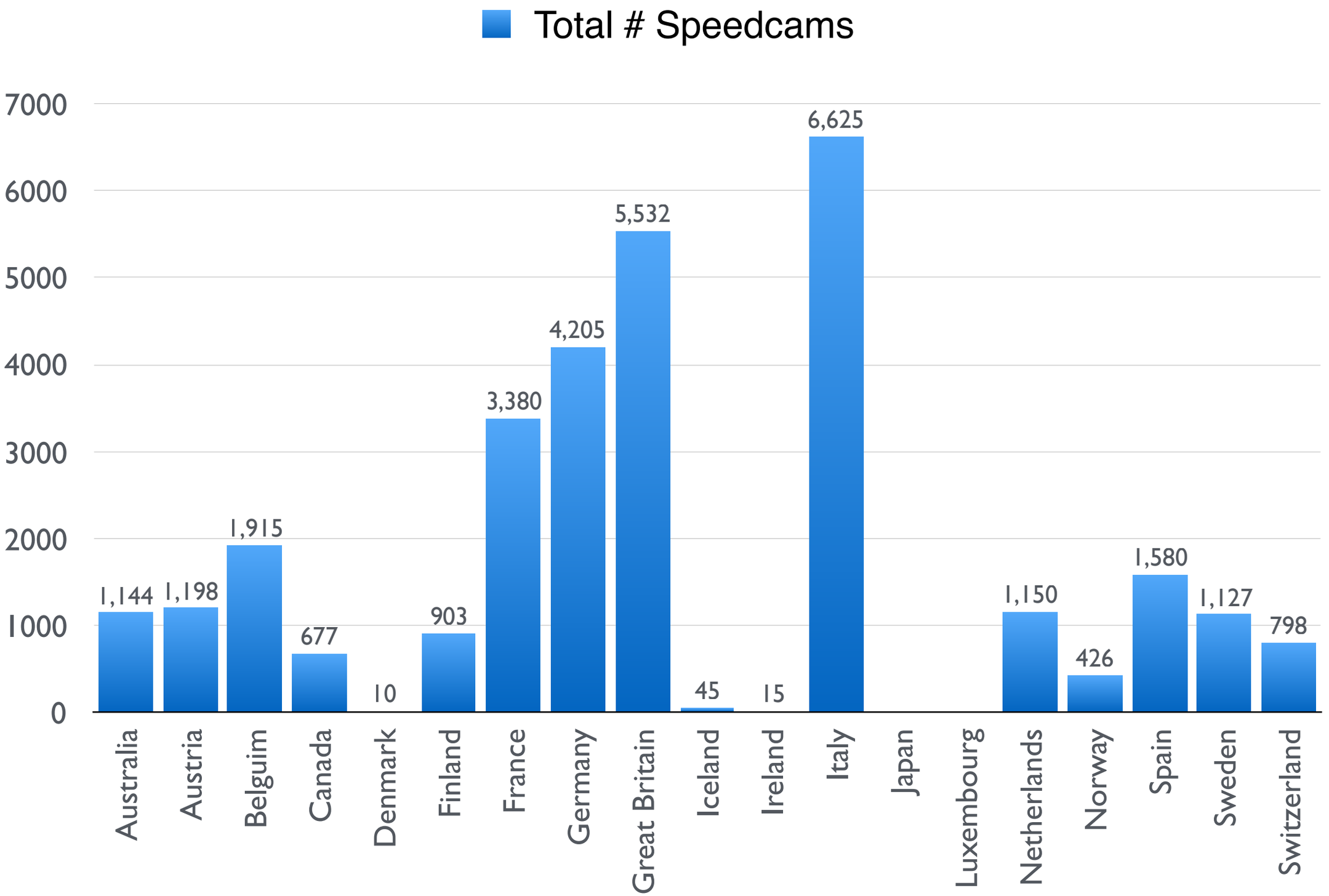
Tacoma

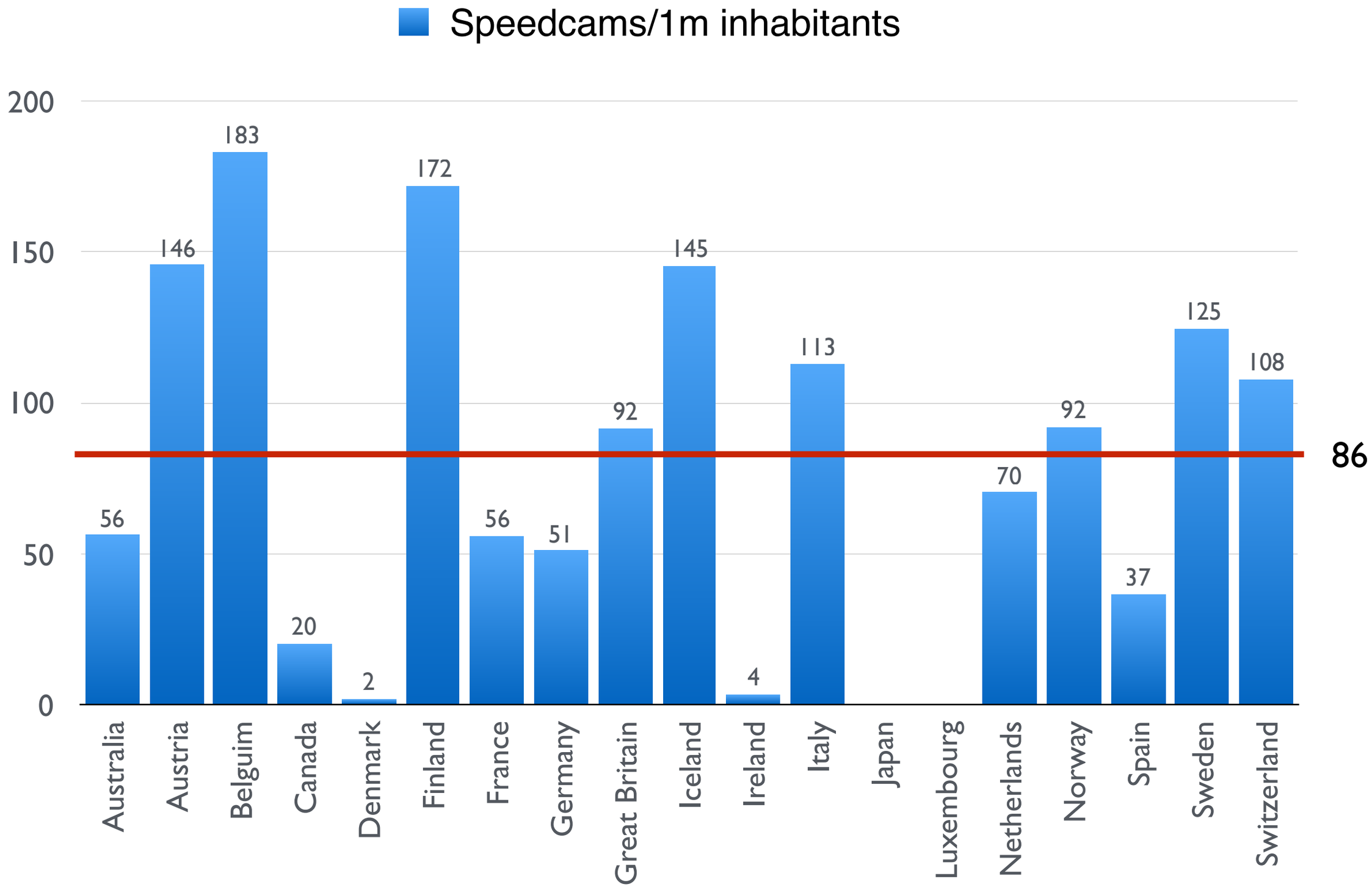
Dec 2009 – Oct 2010, 24/7

- The number of violations (vehicles triggering the camera) decreased by 62.9%

- Infractions issued to speeding vehicles decreased by 53.0%

- The violation rejection rate also decreased by over two-thirds, from 26.7% to 7.3%


Total # Speedcams
7000
6000
5000
4000
3000
2000
1000
0
1,144
1,198
1,915
677
10
903
3,380
4,205
5,532
45
15
6,625
1,150
426
1,580
1,127
798
Australia
Austria
Belguim
Canada
Denmark
Finland
France
Germany
Great Britain
Iceland
Ireland
Italy
Japan
Luxembourg
Netherlands
Norway
Spain
Sweden
Switzerland


Speedcams/1m inhabitants
200
150
100
50
0
146
183
172
92
145
113
92
125
108
56
70
56
51
20
2
4
37
86
Australia
Austria
Belguim
Canada
Denmark
Finland
France
Germany
Great Britain
Iceland
Ireland
Italy
Japan
Luxembourg
Netherlands
Norway
Spain
Sweden
Switzerland

Sobriety Checkpoints

WA Constitution art.1, sec.4.

"No person shall be disturbed in his private affairs, or his home invaded, without *authority of law*".

4th Amendment

"The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause …"

Seattle v. Mesiani

Ruling

"Seattle's sobriety checkpoint program unconstitutionally gave police officers unbridled discretion to conduct intrusive searches. There was no statutory constraint on the discretion of the police."

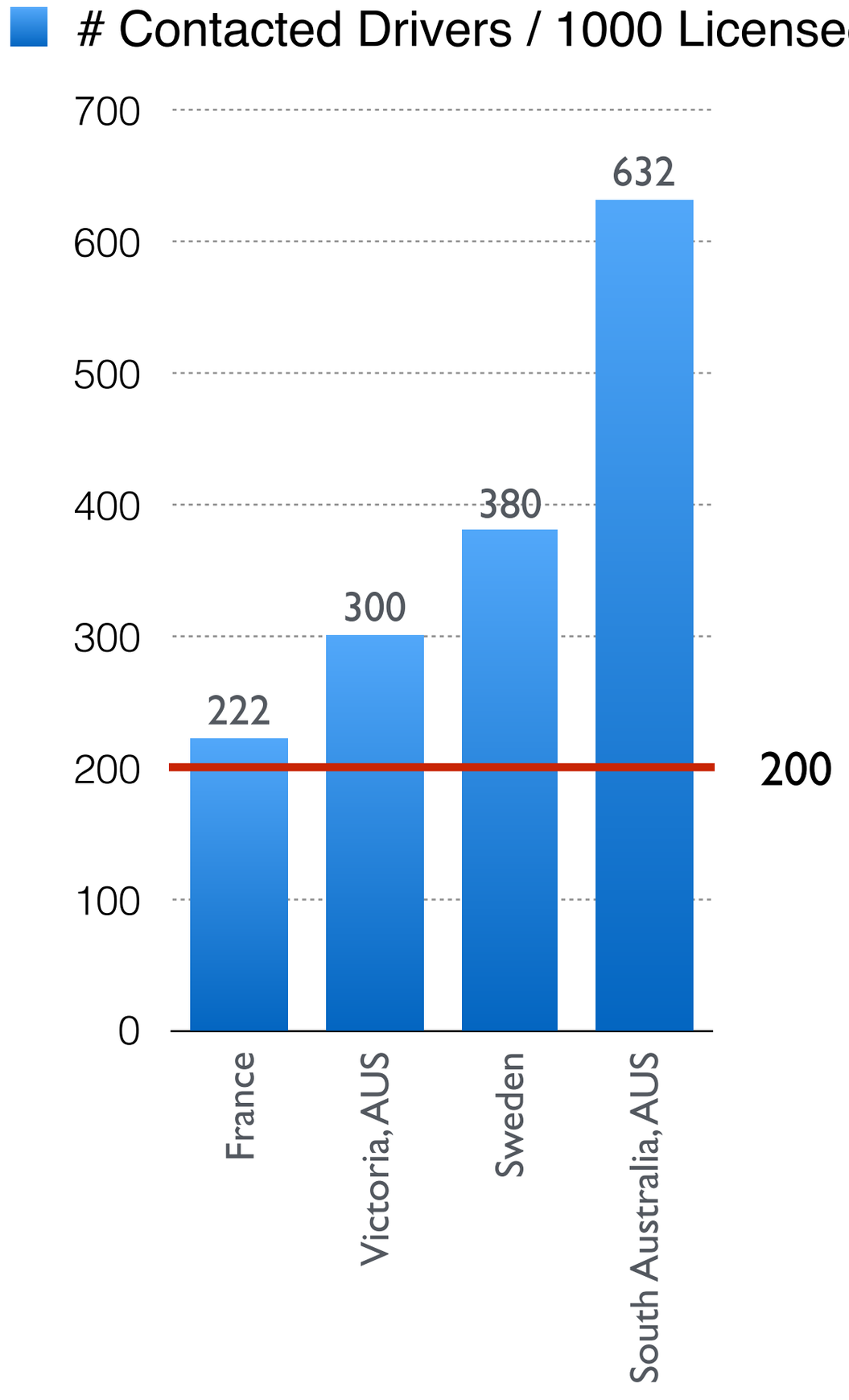
Brown v. Texas balance test

- The gravity of the public concerns served by the seizure
- The degree to which the seizure advances the public interest
- The severity of the interference with individual liberty

Seattle v. Mesiani

Factors to Consider

- The amount of discretion permitted individual officers at the checkpoint
- The checkpoint location
- The sufficiency of an advance notice to approaching drivers
- The safety of the checkpoint
- The notice to the public at large
- The amount of time drivers are detained
- The thoroughness of the program's guidelines
- The vehicle selection process


Contacted Drivers / 1000 Licensed Divers
700
600
500
400
300
200
100
0
222
300
380
632
200
France
Victoria,AUS
Sweden
South Australia,AUS

RBT v. SBT

- RBT quicker
- RBT less intrusive
- Some drinkers believe they can get through SBT, which can miss 62% with BAC 0.08%

  RBT: 1.1m / year, 3000 / day
  SBT: 1.8m / year, 4860 / day

- SBT requires highly skilled officers
- BAC 0.05% becomes harder with SBT
- SBT offers no benefits over RBT

Strategic Planning

1. Preparation to lay foundation:

- Legislation for automated speed cameras & sobriety checkpoints
- Centralize baseline data for speeding and DUI offenses
- Persistent and targeted PSAs for speedcams & checkpoints

2. Average to level playing field:

- 600 speed cams & 1.1m contacted drivers
- Continued PSA campaign

3. Best to match top performers:

- 1500 speed cams & 3m contacted drivers
- Continued PSA campaign

4. Objective Target Zero:

- Whatever is necessary to achieve zero

TRB SR-300:
2-bits

- Any effective traffic safety system has to include automated speed cameras and high-frequency sobriety checkpoints

- Most significant shortcoming to US traffic safety is in the quality of our management and planning

Key lessons

- WA has rapidly dropped behind
  Success is not simply a drop in fatality rate
  Define success in terms of what is achievable

- Improve familiarity of what best performers are doing
  US-centric advice has limited value

- WA is missing many key components of a modern, integrated traffic safety system

- Aware of level of enforcement intensity required
  What level of development we need to produce the results we want

- RBT not SBT

- BAC 0.05%