

EqOP – BAST 5-6 Sep 2023

Summary field data analyses Folksam 2013-2023

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Data sources:

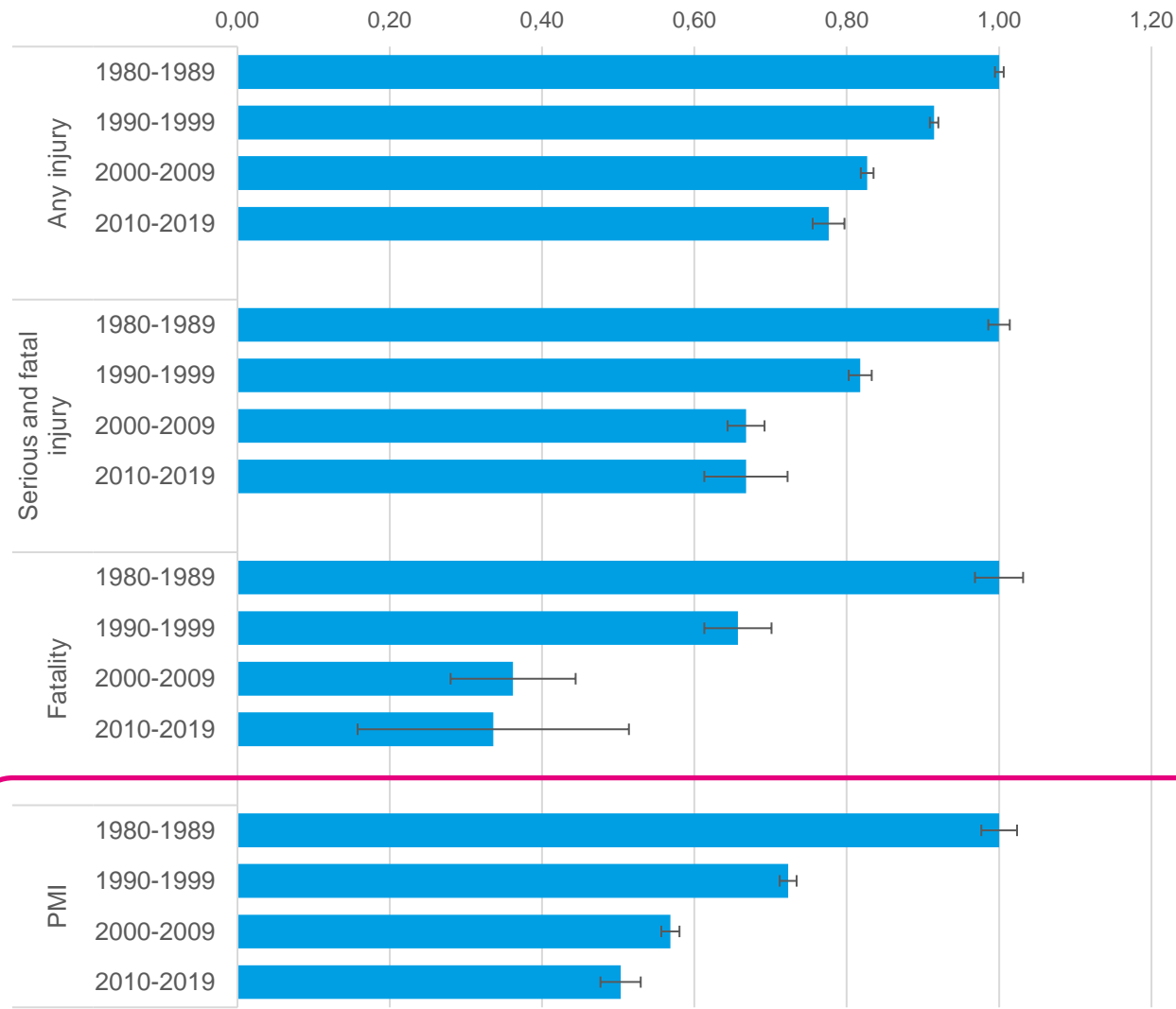
- IRCOBI 2013
- ADSEAT
- IRCOBI 2020
- Transportforum (Swedish conf.) jan 2020
- New unpublished analysis based on IRCOBI 2020

Development in injury risks – males/females

- Crashes and injuries occurring years 2000–2019 reported to STRADA (Swedish national traffic accident database)
 - Two-car crashes reported by the police to calculate relative risk of any injury, fatal and serious injury and fatality respectively
 - Occupant injuries reported by Swedish hospitals to assess risk for permanent medical impairment
- Adjustments made for accident year and car mass
- Injuries leading to permanent medical impairment were also separated for body regions
- Separated for gender and age groups
- Cars categorised in ten-year periods according to model year of introduction.

Inj. type		Car mass	
		Case	Other
Any inj.	Male	1428	1397
	Female	1334	1399
KSI	Male	1450	1417
	Female	1350	1419
Killed	Male	1449	1417
	Female	1350	1418

Development in relative injury risk cars launched 1980–89 to 2010–19 (95% CI incl.)



Risk reduction in cars launched 2010–2019 compared to 1980–1989

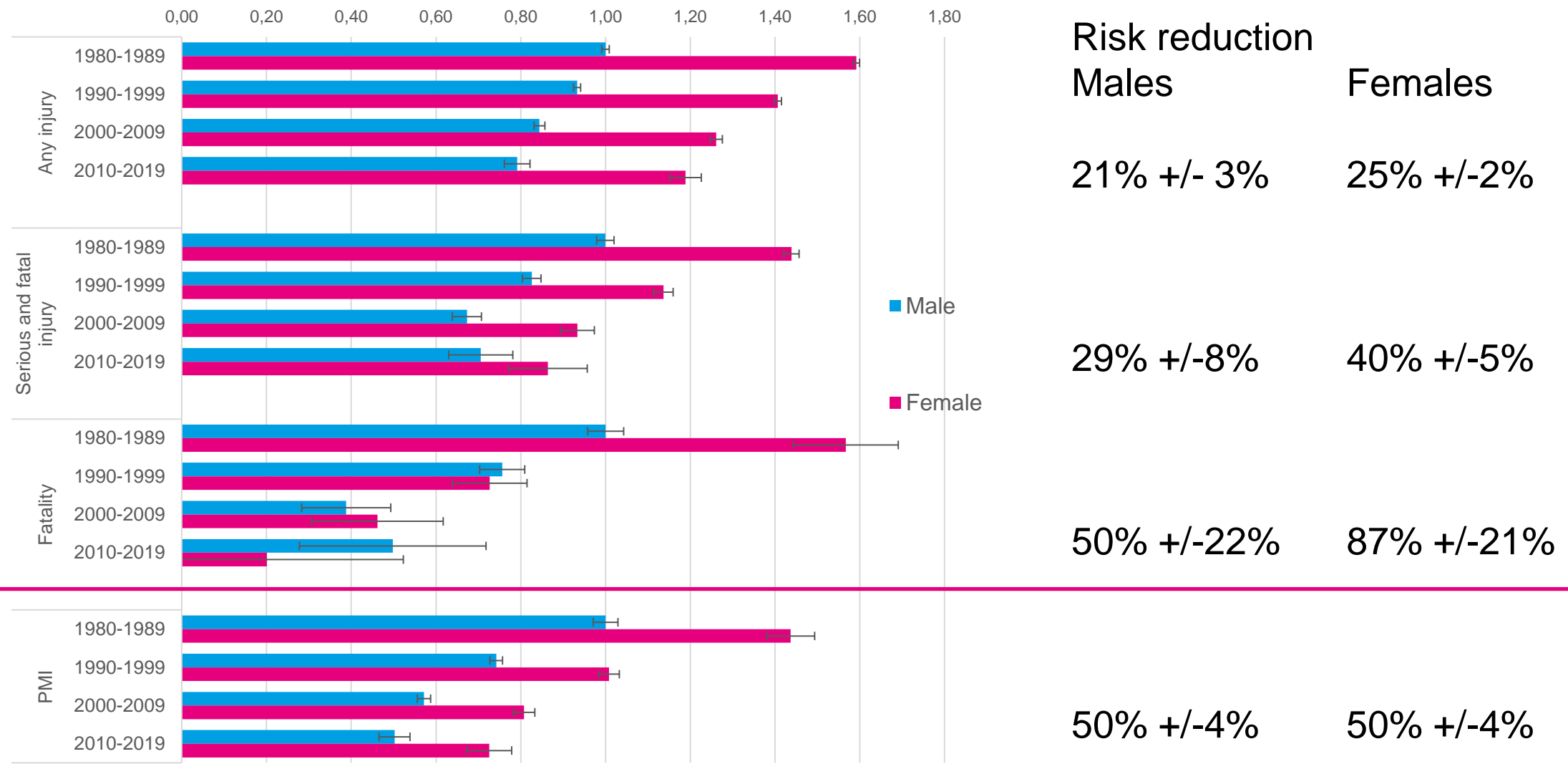
All injuries 22% (+/-2%)

Fatal and serious 33% (+/-5%)

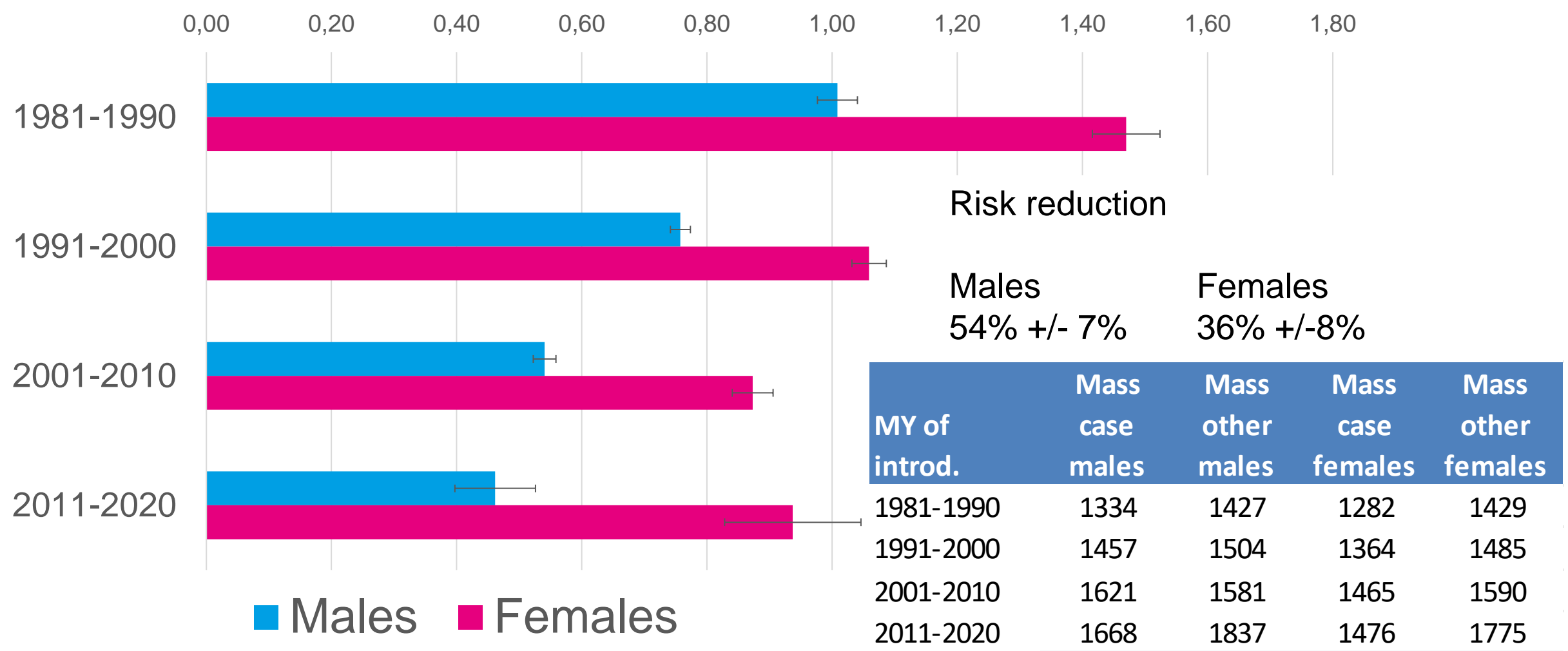
Fatal 66% (+/-17%)

PMI (>10%) 50% (+/-3%)

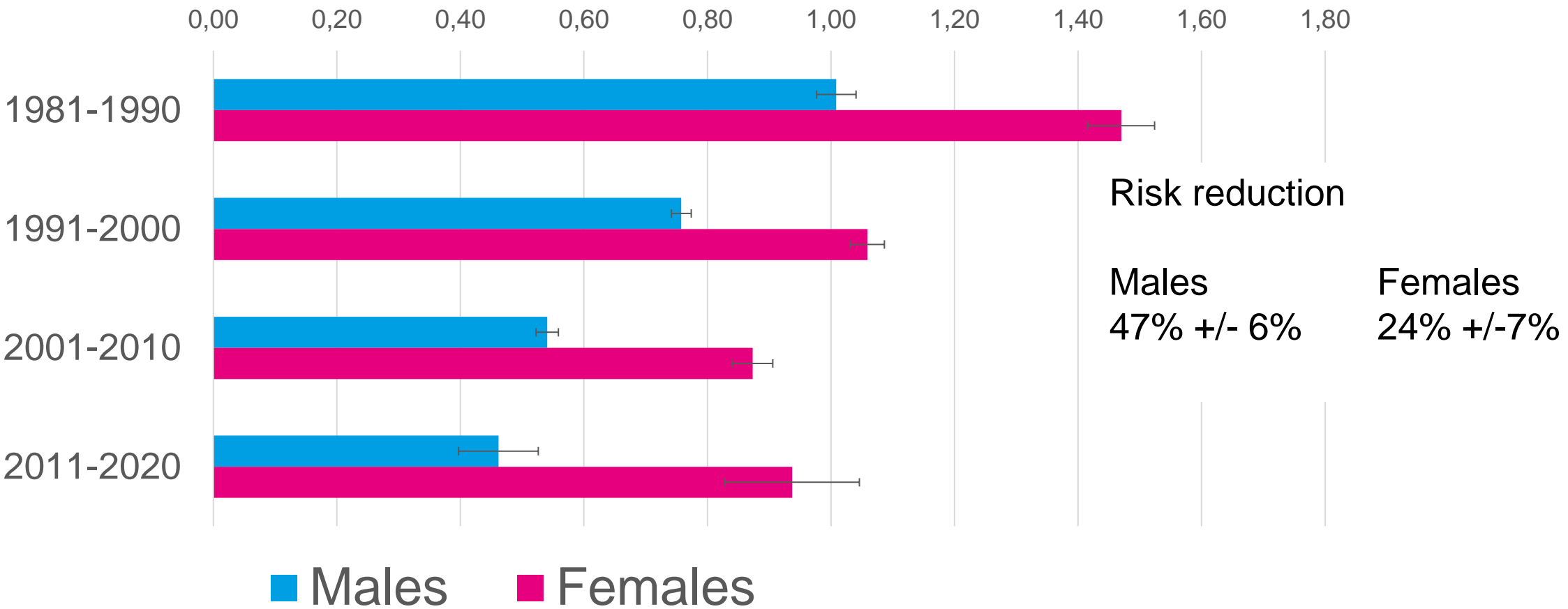
Development in relative injury risk - all crashes



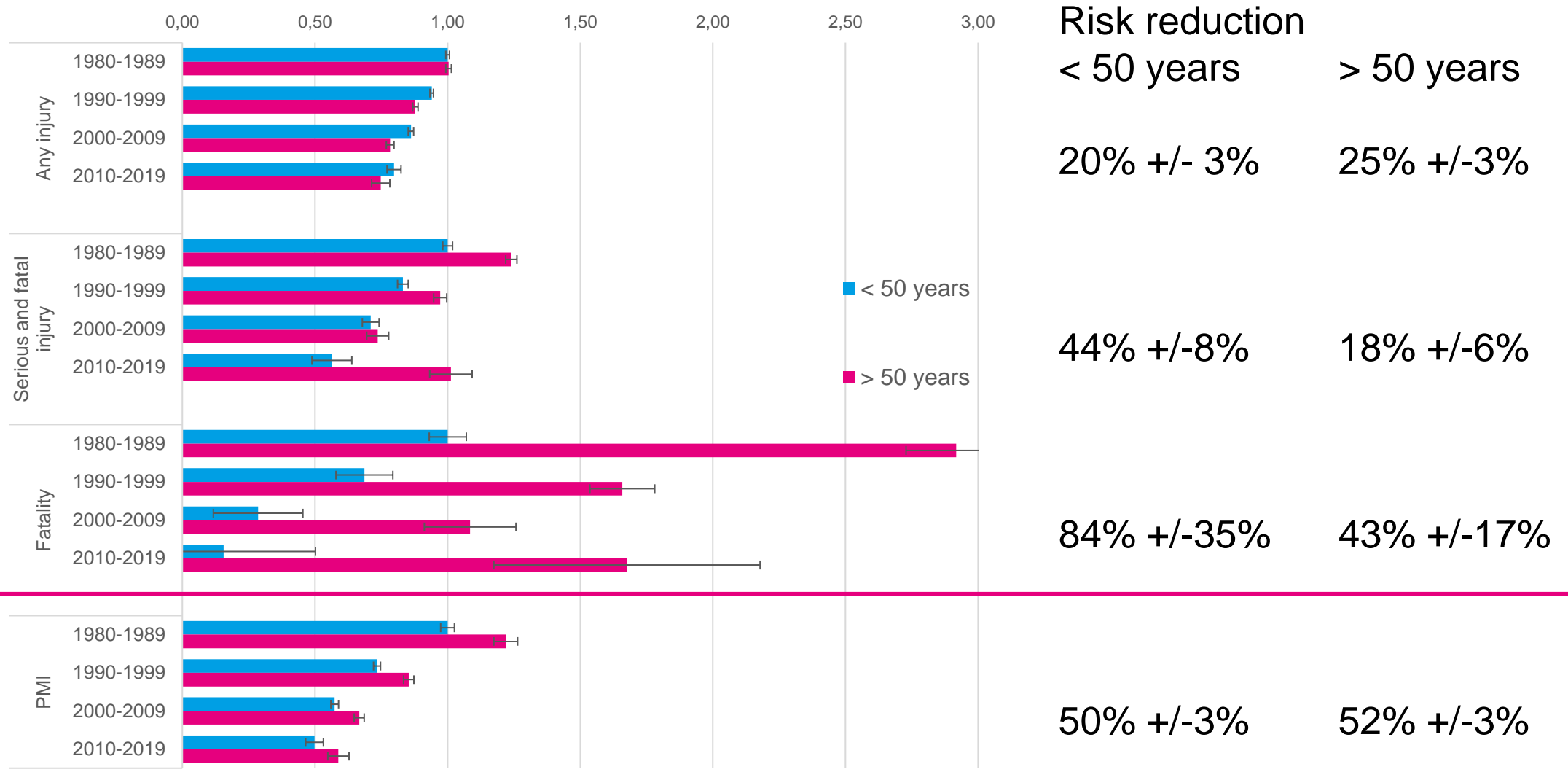
Risk for pmi (>10%) in rear-end crashes (both struck and striking)



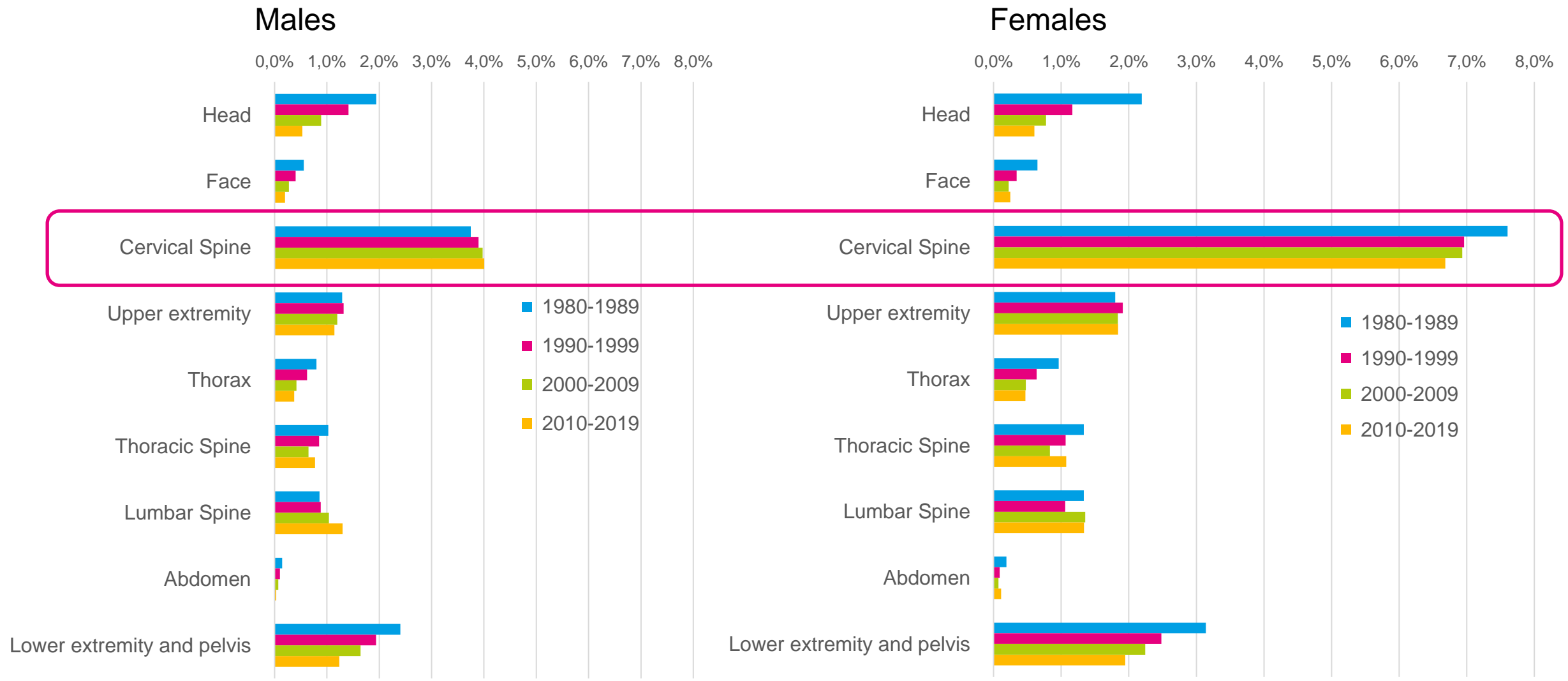
Risk for pmi (>10%) in rear-end crashes – not adjusted for mass differences



Development in relative injury risk split for age groups



Development of risk for PMI (>1%) to different body regions



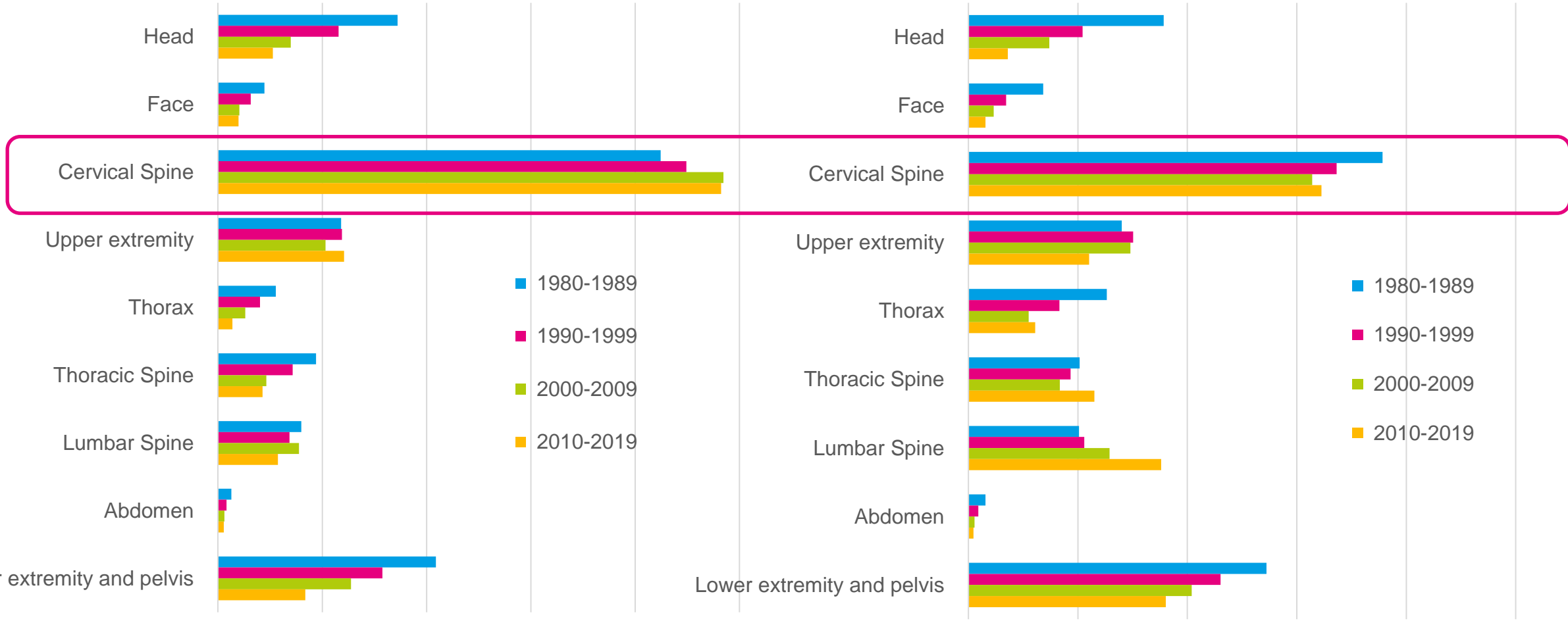
Development of risk for PMI (>1%) to different body regions

< 50 years age

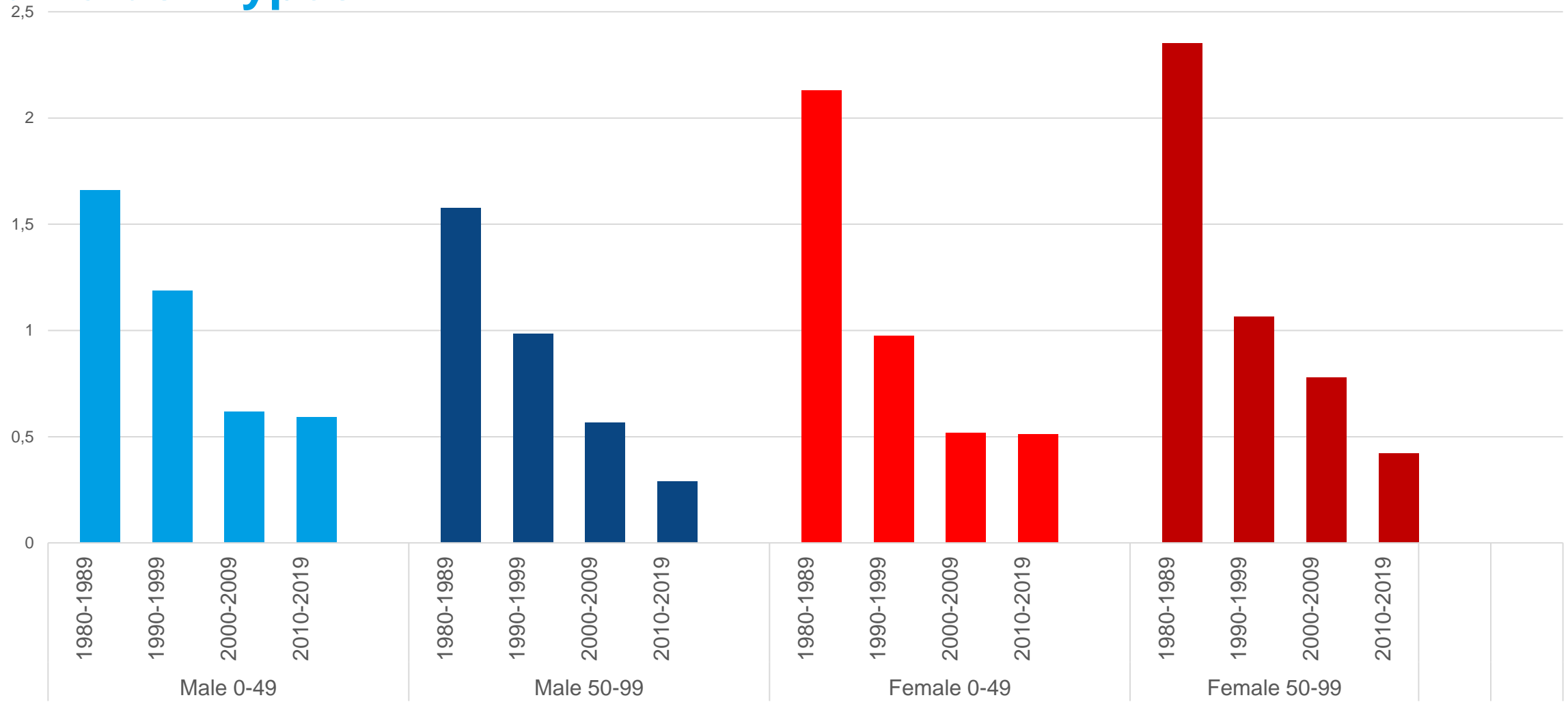
> 50 years age

0,00% 1,00% 2,00% 3,00% 4,00% 5,00%

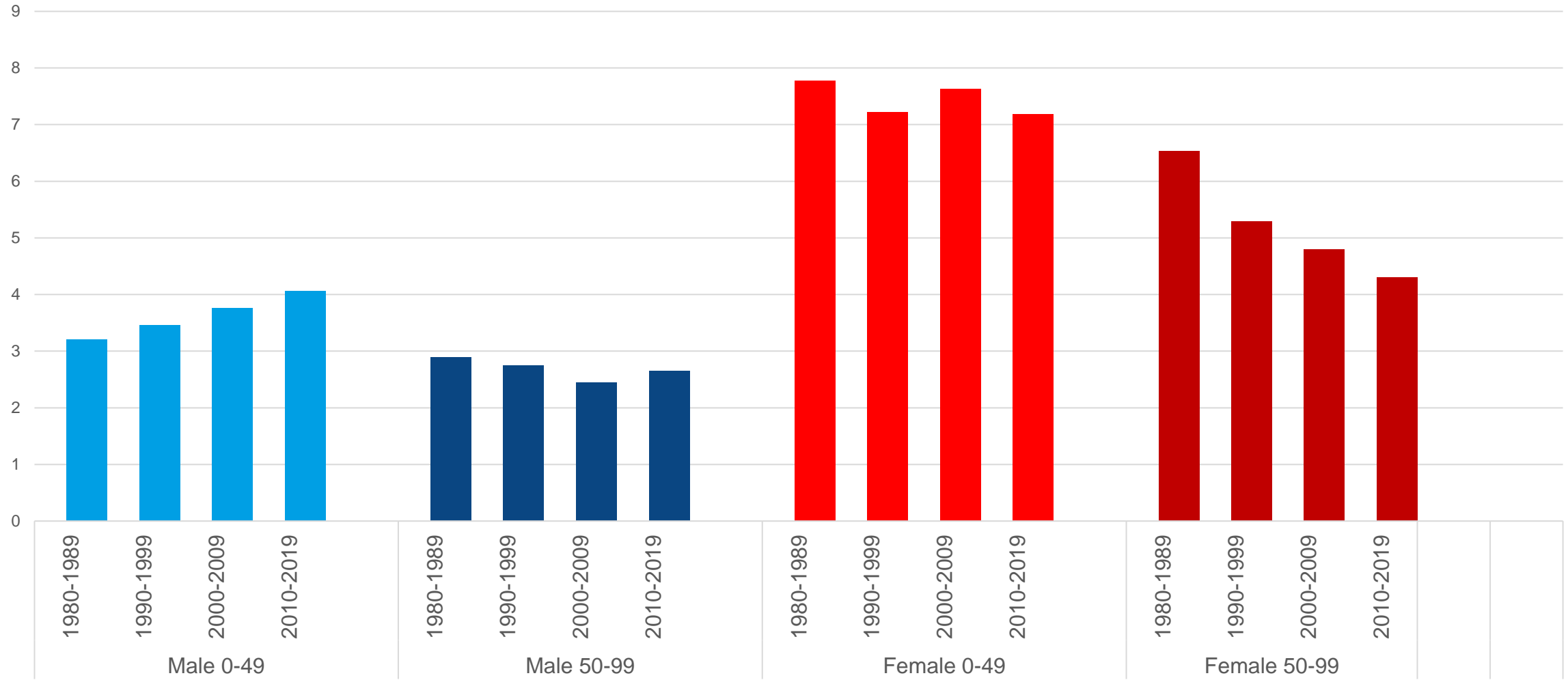
0,00% 1,00% 2,00% 3,00% 4,00% 5,00%



Head injury development (RPMI 1%+) gender and age – all crash types

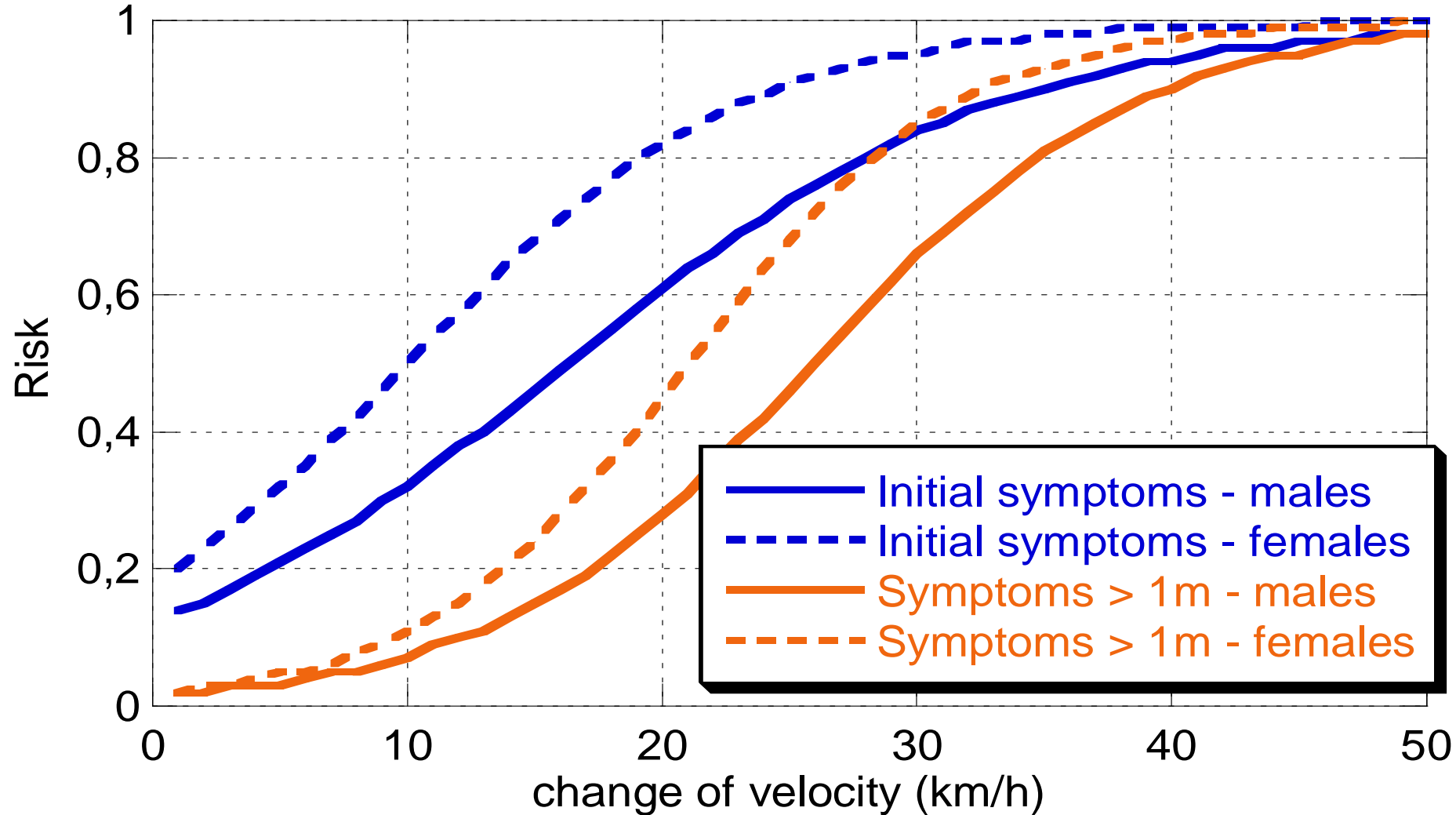


Neck injury development (RPMI 1%+) gender and age – all crash types (front-rear-side)



ADSEAT - Risk for WAD rear-end (Toyota models) – males/females

Crash severity measured with on-board crash recorders

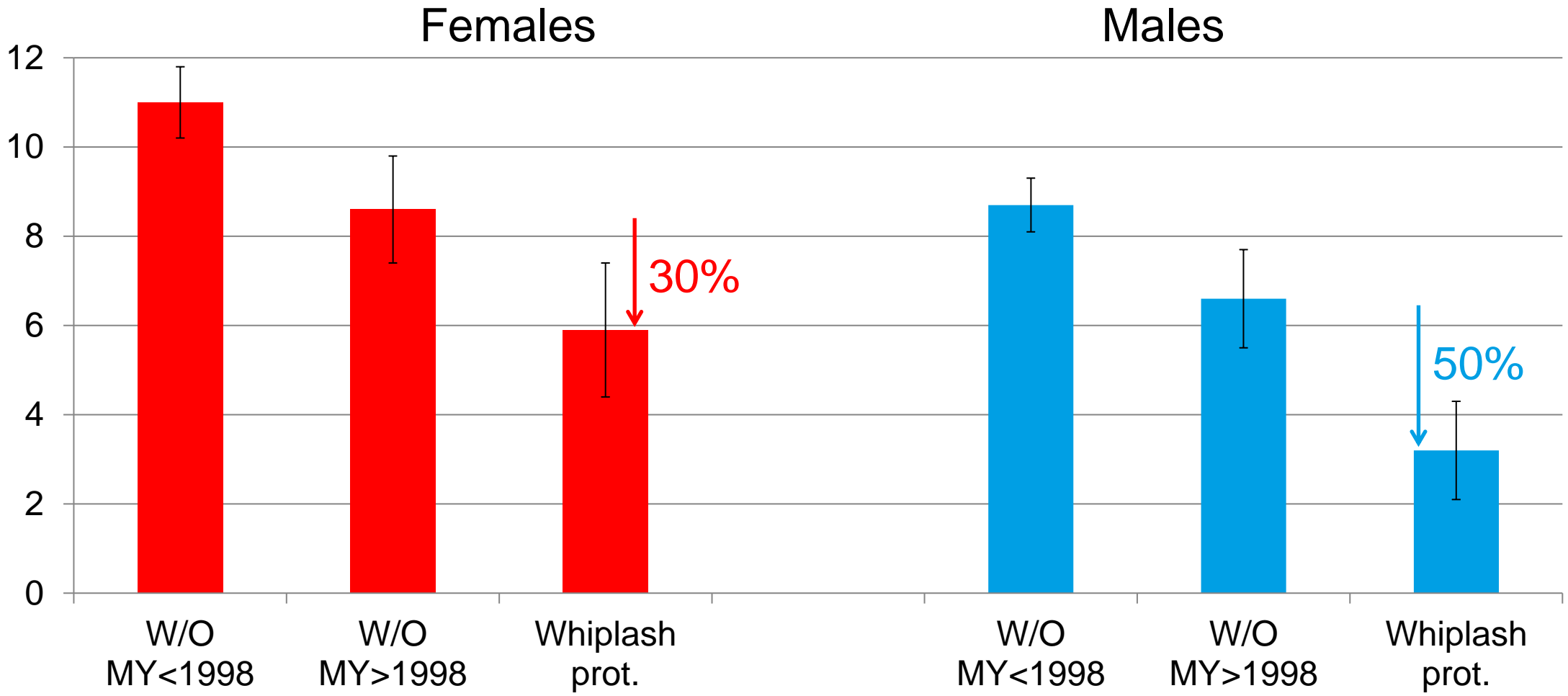


IRCOBI 2013

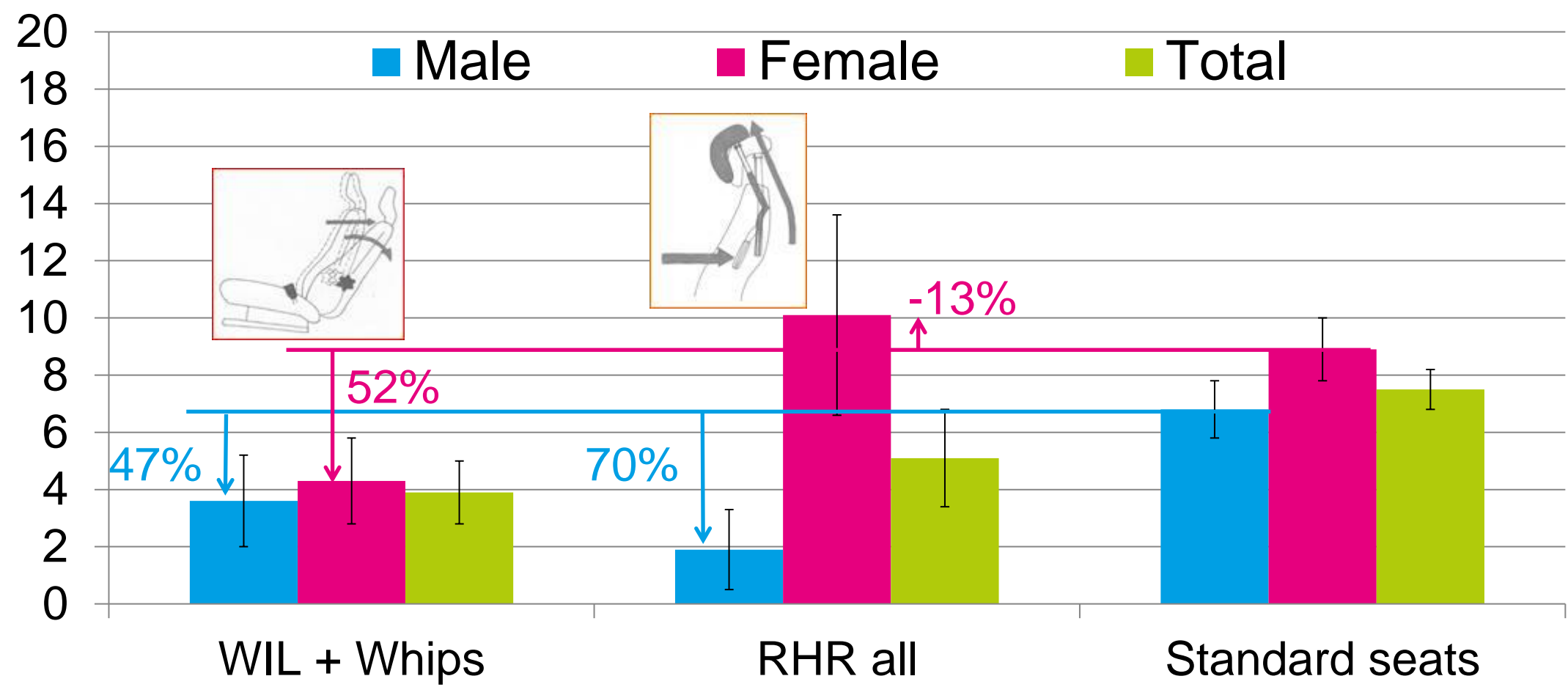
Development of Whiplash Associated Disorders for Male and Female Car Occupants in Cars Launched Since the 80s in Different Impact Directions

Anders Kullgren, Helena Stigson, Maria Krafft

Cars with and without whiplash prot. Proportion leading to pmi of those reporting WAD



Whiplash concepts, risk reduction pmi



Risk for pmi of those reporting WAD

Tabell 2b. Provade säten med tillhörande whiplash-skadedata för kvinnor och män
(statistik från Folksam september 2014).

Säte (bilmärke/årsmodell/whiplashsystem)	Folksamdata – Kvinnor				Folksamdata – Män				Risk kvinnor / Risk män		
	n	n pmi	Risk pmi	95% CI	n	n pmi	Risk pmi	95% CI			
Volvo V70	00-06	WhiPS	244	4,3	1,74%	1,64%	126	2,1	1,63%	2,21%	1,1
Toyota Yaris	99-05	WIL1	461	6,8	1,48%	1,10%	141	1,3	0,89%	1,55%	1,7
Toyota Avensis	<u>03-08</u>	WIL1	385	3,4	0,89%	0,94%	218	0,9	0,41%	0,85%	2,2
Toyota Corolla	<u>02-07</u>	WIL1	728	8,8	1,20%	0,79%	287	7,4	2,59%	1,84%	0,5
VW Golf	<u>04-10</u>	RHR	166	5,0	3,01%	2,60%	90	0,0	0,00%	0,00%	∞
Saab <u>9-3</u>	<u>98-02</u>	SAHR1	163	7,8	4,79%	3,28%	80	0,0	0,00%	0,00%	∞
Saab <u>9-5</u>	<u>98-09</u>	SAHR1	525	4,4	0,83%	0,78%	248	1,2	0,50%	0,88%	1,7
Audi A4	<u>95-00</u>	-	486	7,3	1,50%	1,08%	413	10,4	2,53%	1,51%	0,6
VW Passat	<u>97-05</u>	-	699	9,2	1,32%	0,85%	544	6,2	1,13%	0,89%	1,2