

Developments in car crash safety since the 1980s

- divided for gender and age groups

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Slide 3-7 results published at IRCOBI 2020 (IRC-20-14)

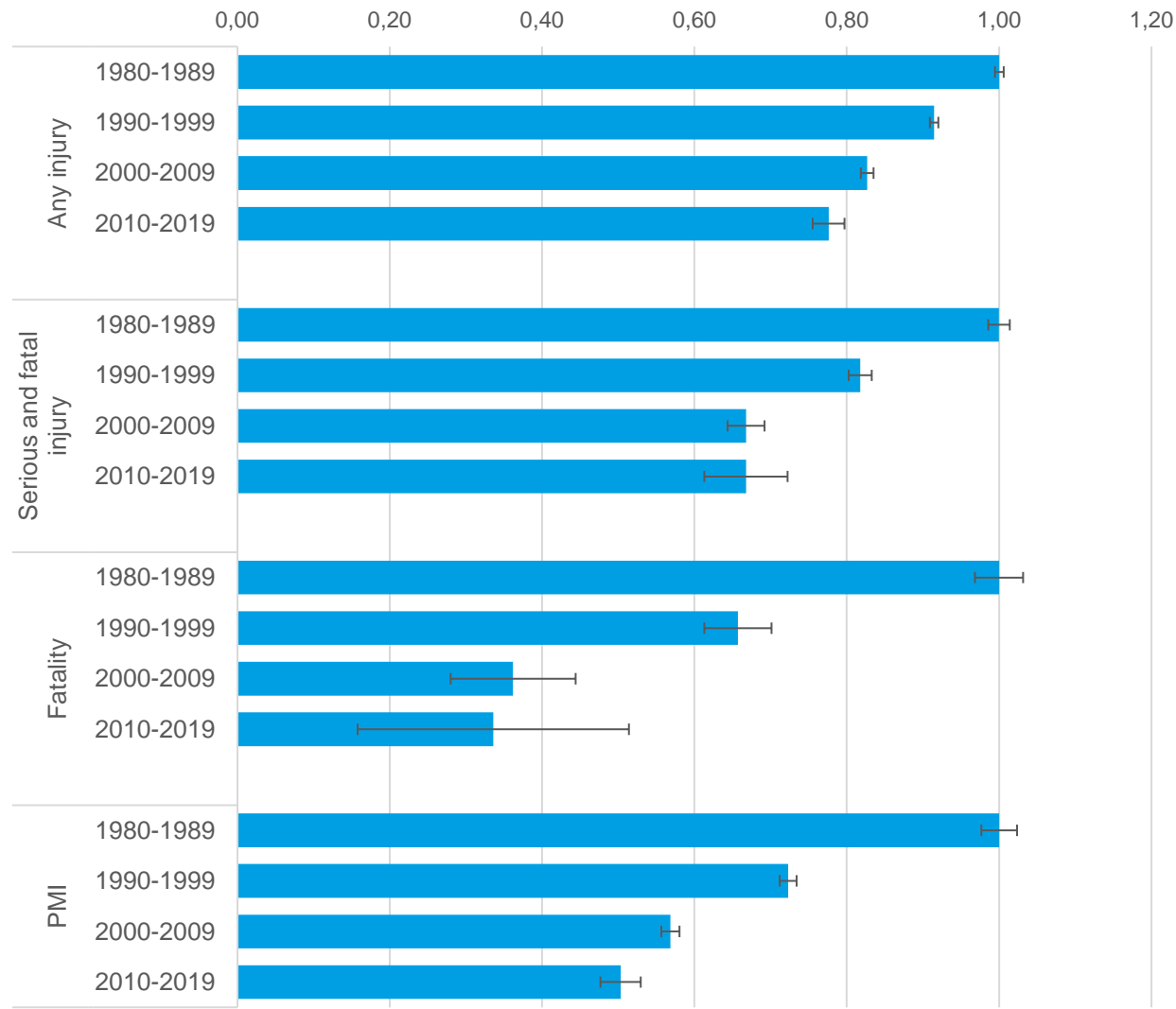
Slide 8-9 results published at Transportforum (Swedish conf.) jan 2020

Material - method

- 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 separated for body regions
- Separated for gender and age groups
- The cars were categorised in ten-year periods according to 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

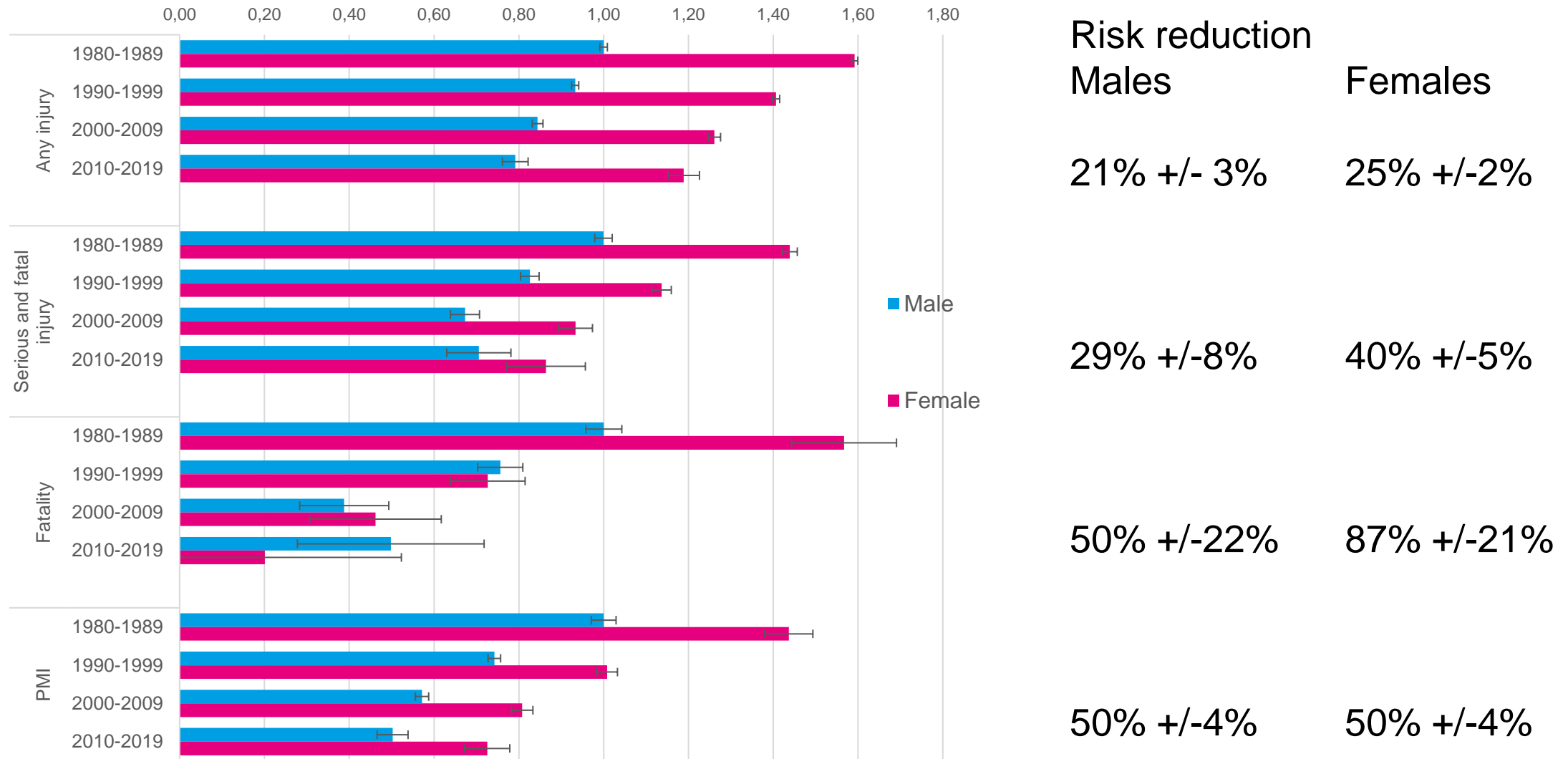
All injuries 22% (+/-2%)

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

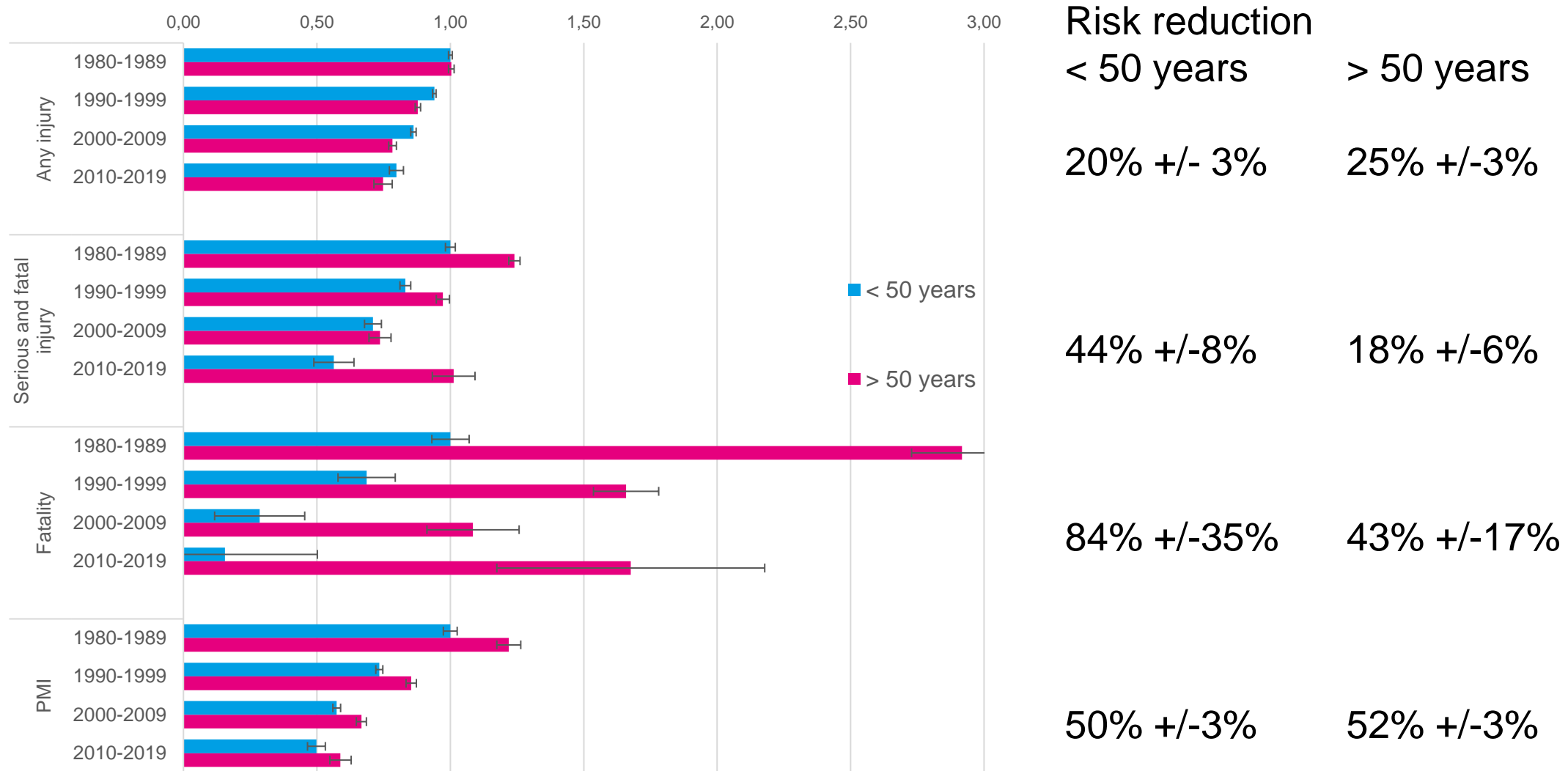
Fatal 66% (+/-17%)

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

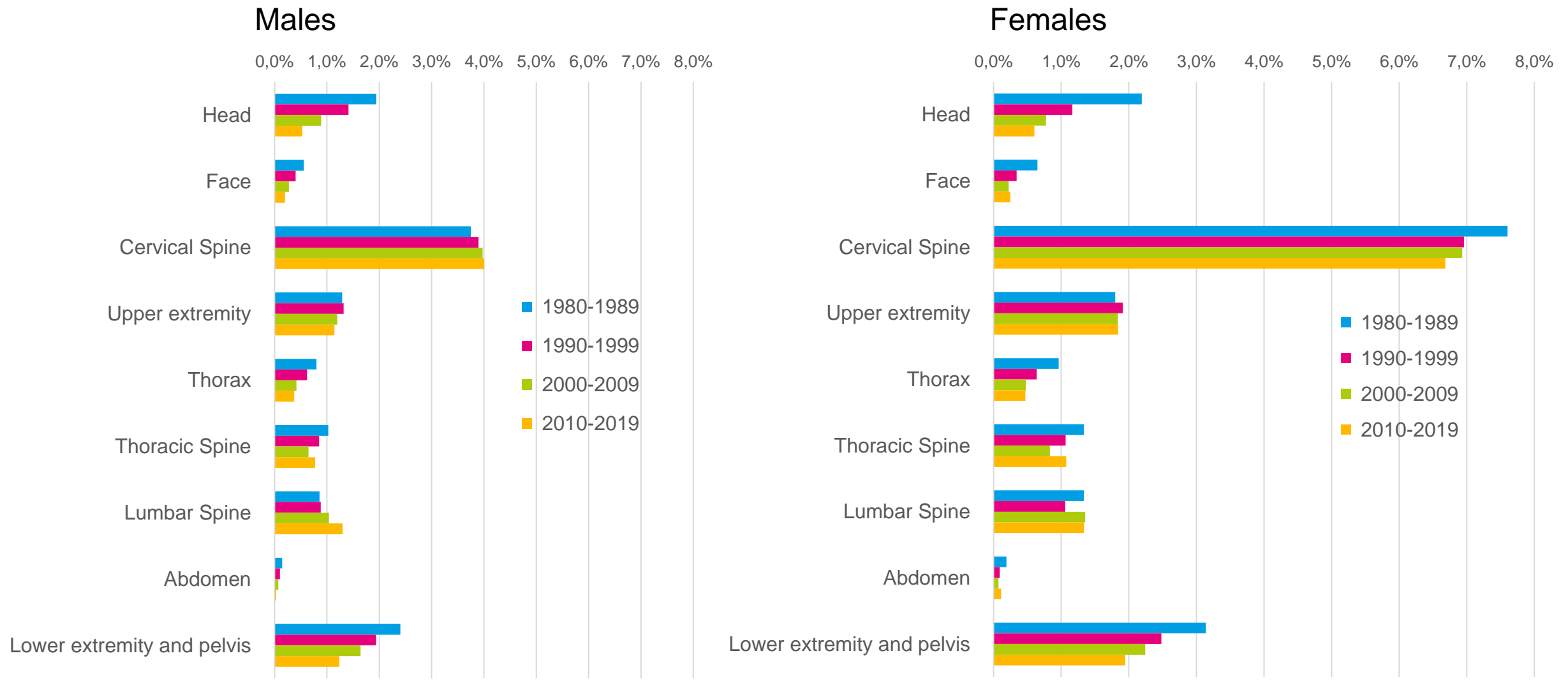
Development in relative injury risk split for gender



Development in relative injury risk split for age groups



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



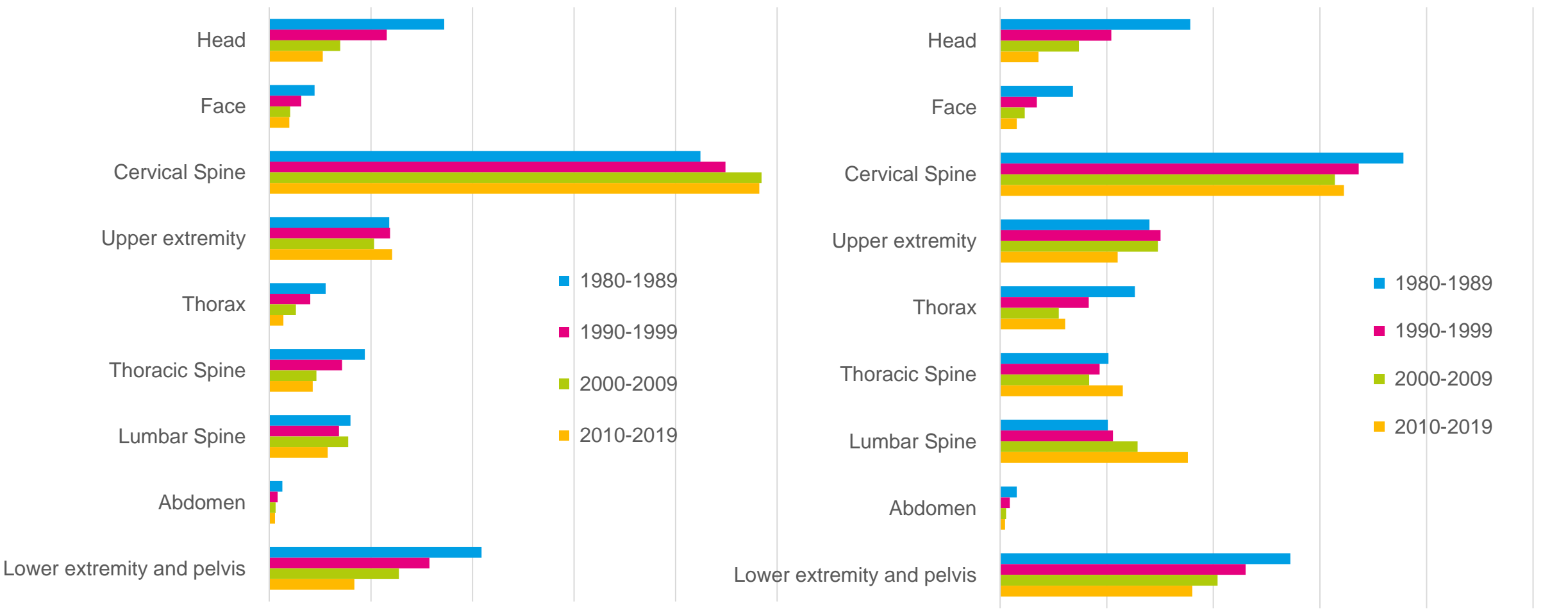
Development of risk for PMI (>1%) to different body regions

< 50 years age

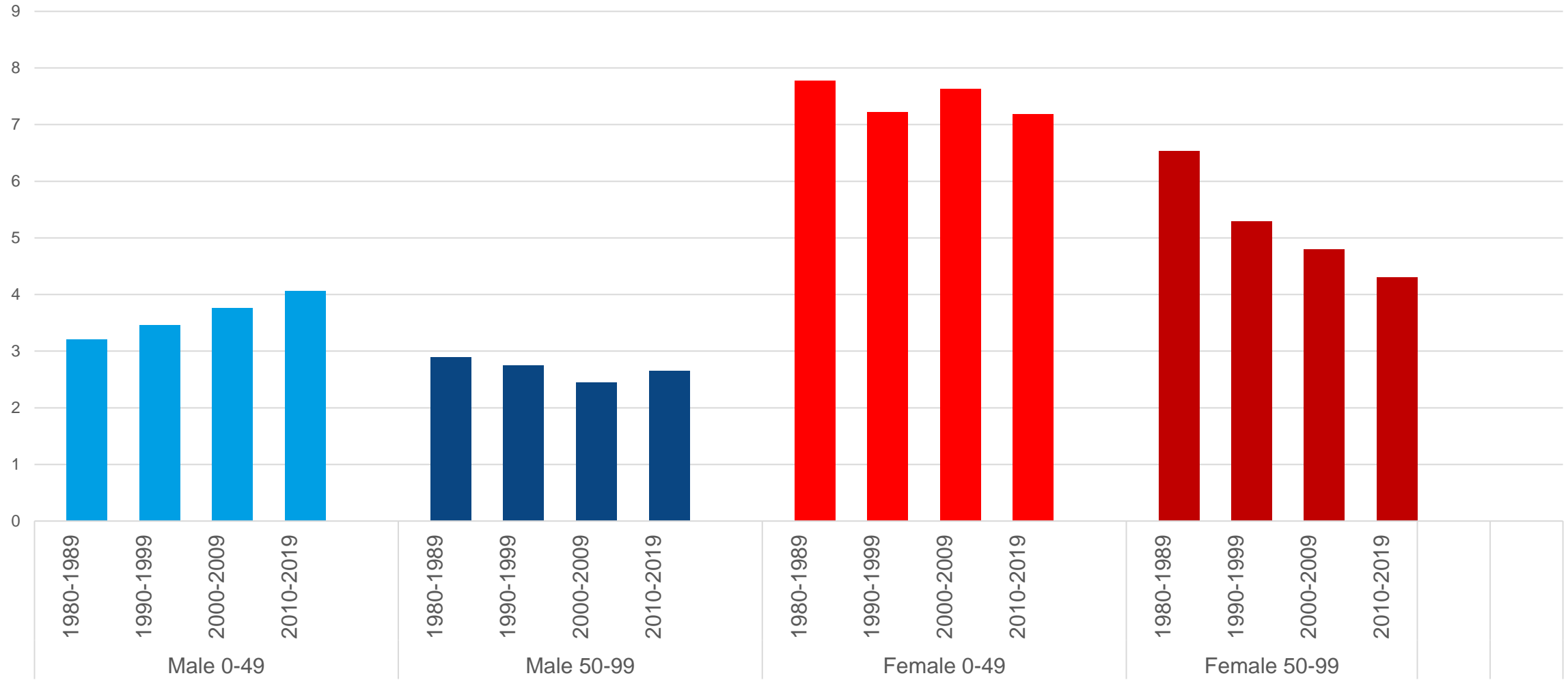
> 50 years age

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

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



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



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

