The Rhône road trauma Registry: it shows their specificities and it enables to generalise results outside the Rhône area, since it does not depend on the urbanisation rate.

Abbreviated Injury Scale
- injuries are coded with an international trauma scale, the AIS
- includes fatalities, inpatients and outpatients
- based on all hospital health units of the county (and surroundings)
- covers the Rhône county; population = 1,6 million

Cyclist types:
- children, 0-10 years old (n= 3349)
- teens and adults injured outside towns (n=1719)

Injury severity, according to cyclist type
Increased injury severity with type of cyclists:
1st = children
2nd = teens and adults injured in towns
3rd = teens and adults injured outside towns

MAIS: Max.AIS= AIS of the most severe injury

Background
- bicycle use increases in some French cities
- bicycle use is encouraged as a means of transport (sustainable development)
- what are the cyclists' injury patterns?

Material and method
The Rhône road trauma Registry:
- covers the Rhône county; population = 1.6 million
- based on all hospital health units of the county (and surroundings) that receive and treat road casualties
- includes fatalities, inpatients and outpatients
- injuries are coded with an international trauma scale, the AIS: Abbreviated Injury Scale
- over 1996-2006: 14,437 cyclist casualties, included 55 killed

Type of crash antagonist, according to cyclist type
- most casualties = bicycle-only crash
- crashes with antagonist: the proportion is correlated with cyclist type
- most frequent antagonist = cars

Injured body regions are mostly upper and lower limbs, face and head.
In children, the face is the most frequently injured body region.

Possible fatal injuries are mostly located at the head, and at a much lower scale at the thorax in adults.

Adjusted risk factors for injury severity (MAIS3+)
Multivariate analysis, results at 5% error-level:
- age: U shape, OR=2.7 in 10-14 years old, and OR=4.3 in 45-54 y.o. up to OR=8.2 in 75+ (vs 20-24 years old)
- crashes in rural area: OR=3.1 (vs urban cluster)
- on 90km/h roads: OR=1.9 (vs streets or local roads)
- private trip: OR=1.5 (vs work-related trip)
- during a motorized antagonist: OR=1.4 (vs bicycle-only crash)
- at night: OR=1.4 (vs during day)
- un-helmeted: OR=1.4 (vs helmeted)
- male: OR=1.2 (vs female)

Results
Incidence of bicycle injuries, per 100 000 inhabitants, Rhône
Higher incidence in men than in women (more cycling and more risk-taking behaviour).
Incidence peaks at: 13-15 years old in males, and 6-9 in females

Injuries; however age is not correlated with the injured body regions nor with the type of injuries; however age is:
- children = learning and recreative use
- injured in towns = mostly commuting cyclists; bicycle = means of transport
- injured outside towns = mostly sports cyclists

At equal injury severity, the place of crash (in towns/outside towns) is not correlated with the injured body regions nor with the type of injuries; however age is:
- age: U shape, OR=2.7 in 10-14 years old, and OR=4.3 in 45-54 y.o. up to OR=8.2 in 75+ (vs 20-24 years old)
- crashes in rural area: OR=3.1 (vs urban cluster)
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