**INTRODUCTION**
- Speed is the most critical road safety factor.
- Speeding contributes to 30–40% fatal crashes.
- Speed management ... enforcing compliance with speed limits.

Where and when do drivers speed? – The answer is useful for enforcement planning. Instead of relying on crashes, we used speed(ing) from probe vehicle data.

We studied feasibility of using probe data from the perspective of speed enforcement planning.

1. Sample of probe data was validated through comparison with average speed control data.
2. Descriptive analysis was performed, focusing on speeding in individual hour intervals.
3. Statistical models explained which road parameters contribute to speeding.

**DATA**

Five road corridors in Prague identified by Traffic Police Directorate as prone to speeding:
- Length 1 – 7 km
- Relatively flat terrain
- Mostly 2 lanes in each direction, divided by median (some parts 1+1 lane, without median)
- Speed limits 50, 70, 80 km/h
- AADT 10,000 – 50,000 veh/day

Examples:
- 2+2 lanes + shoulders
- 1+1 lane (no median)

- Speed limit 80 km/h
- Speed limit 50 km/h

Probe vehicle data (Jan – Dec 2017) obtained from a third party
- Approx. 10,000 company vehicles fleet
- No information on specific vehicles and drivers available
- Estimated 80/20 split between personal and heavy goods vehicles
- Data = GPS positions (1 – 3 per 1 min) + speed

**ANALYSIS**

1. **SAMPLE VALIDATION**
   (representativeness of sample of probe vehicle speed data against “ground truth” – average speed control data)

Example:
- Non-parametric statistical tests:
  - on sections < 1 km ... differences < 4 km/h

Potential analysis issues:
- Not based on free-flow speeds
- Vehicle fleet representativeness?
- Selection of “ground truth”?
- Link between speeding and crashes?
- Some variables less quantitative
- Multicollinear variables?

The feasibility study was successful.
- Probe data help answer where and when drivers speed.
- Useful for improving effectiveness of planning speed enforcement.

Future research: free-flow speed estimation, validation, relationship to crashes...

Next steps? optimization of enforcement, revision of speed limits...

2. **DESCRIPTIVE ANALYSIS OF SPEEDING**

71 homogeneous segments < 1 km
+ road parameters (cross-section, geometry...)
+ % speeding (# records / total)

**DATA**

WHERE AND WHEN?

**DISCUSSION AND RESULTS**

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