Active travel in children and adolescents

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Beneficial effects

Bone strength

Academic performance

Body composition

Metabolic syndrome

Aerobic fitness

Physical activity

Prosocial behaviour

Cardio-metabolic biomarkers

Quality of life/well being

Motor skill development

Null (or lack of consistent evidence) effects

Poitras et al (2016)

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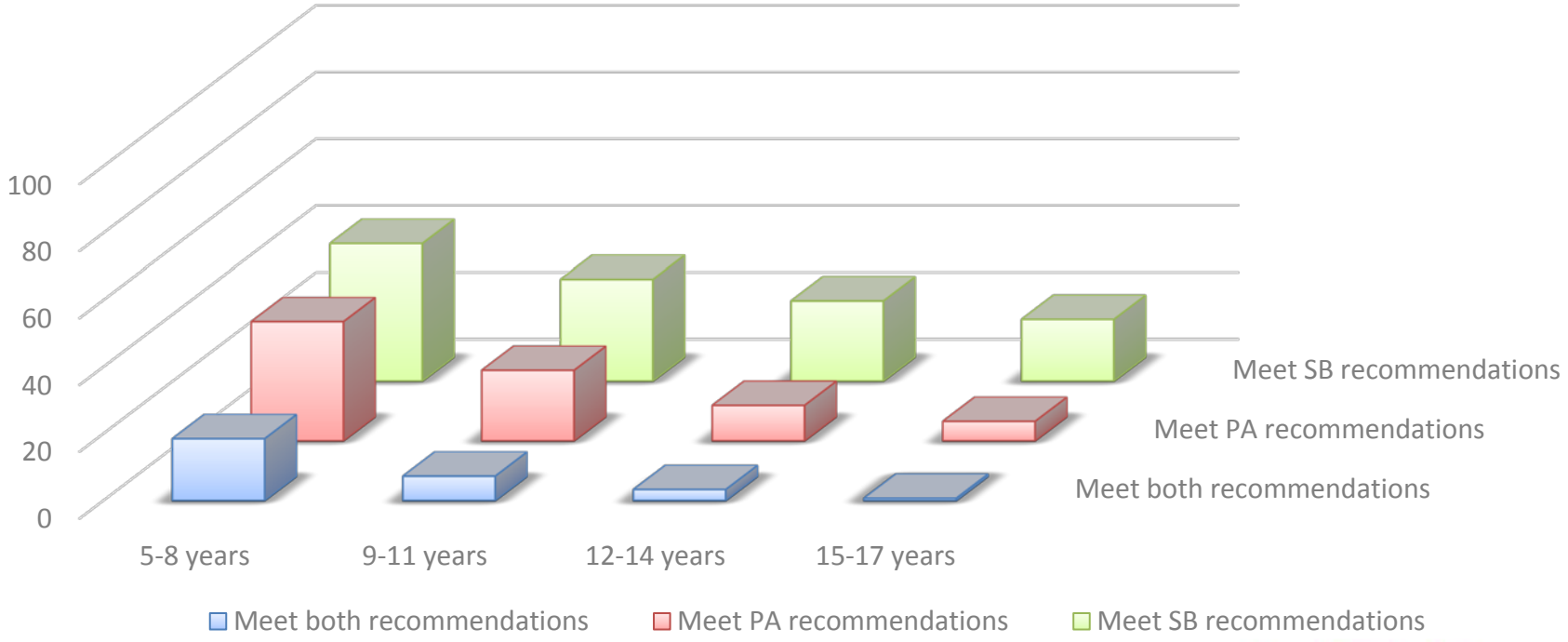
National PA and SB guideline compliance



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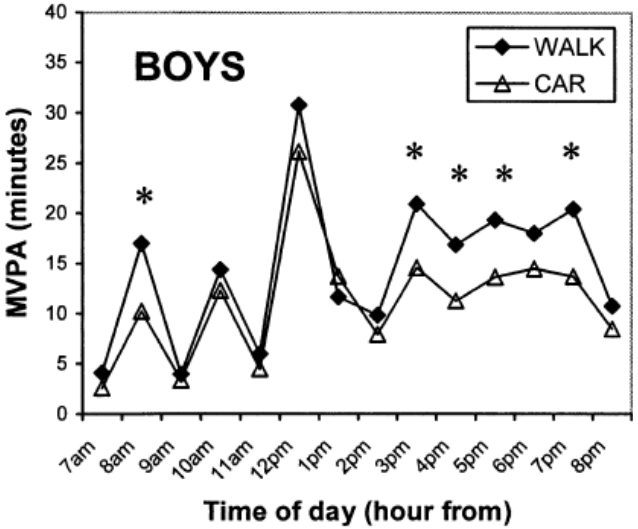
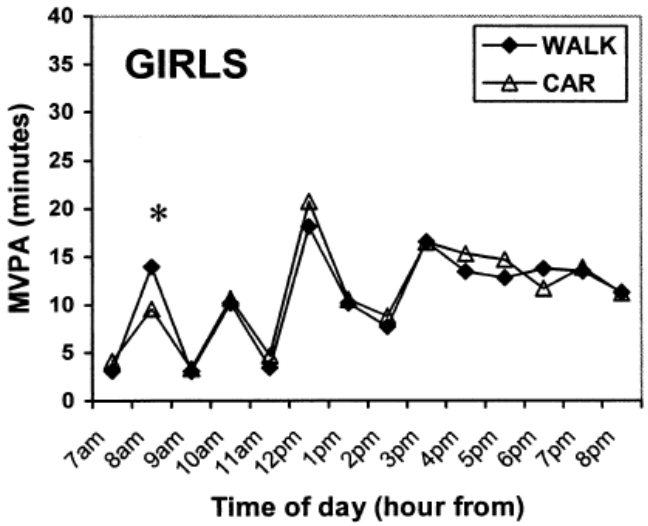
Active vs car travel to school





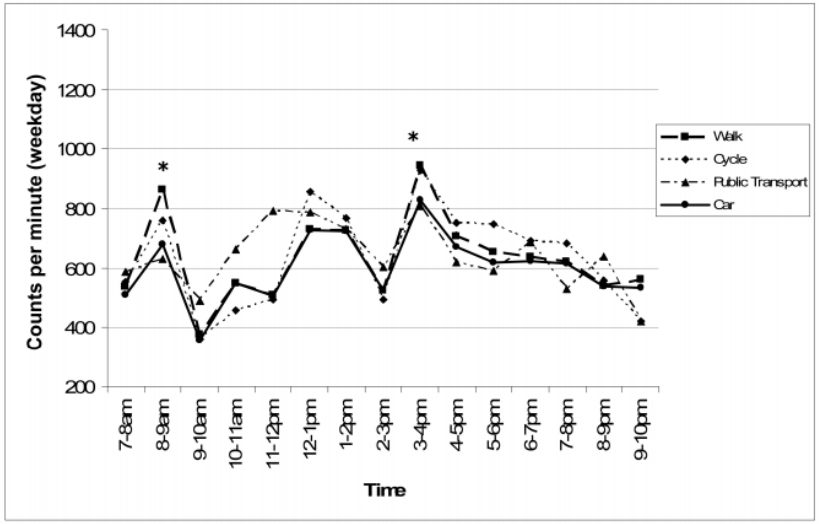
- Children who walked to school were more active than those who travelled by car
- Largely explained by boys results

- Boys who walked to school were more active after school than those who travelled by car (extra 30 min/day)
- Activity synergy – participation in one active behaviour increases PA at other times

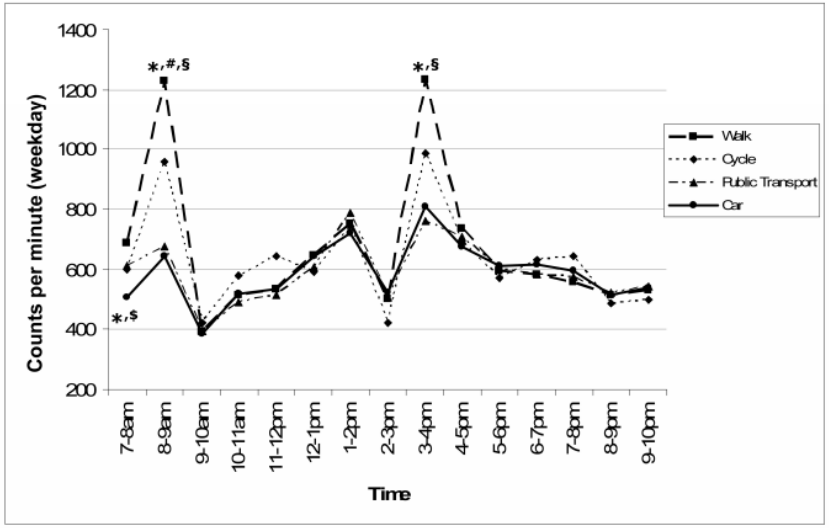
Cooper et al (2003) AJPM

Impact of active travel to daily PA

A: Less than 0.5 mile (N=1219)



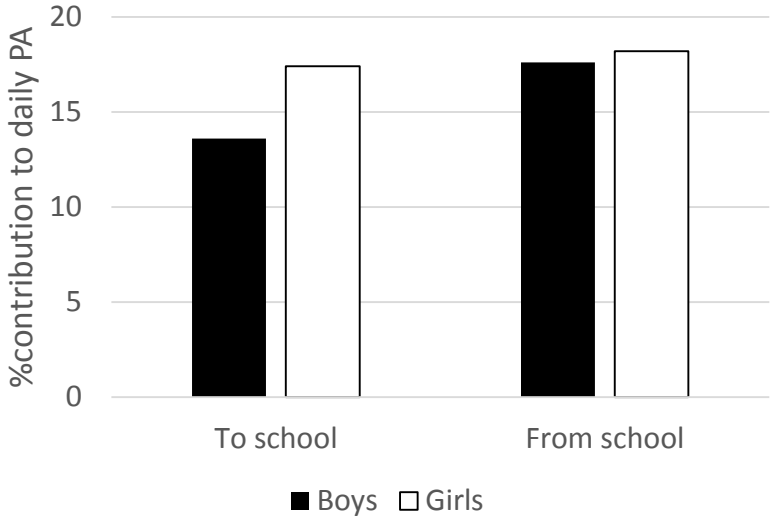
C: 1 to 5 miles (N=1779)

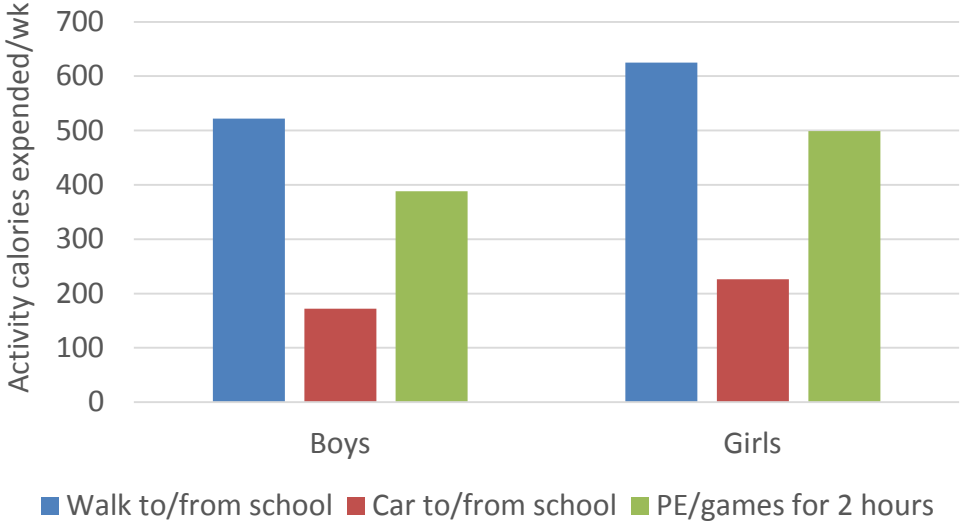


- Association between travel mode & PA increases as distance to school increases
- Children walking to school (0.5-5 miles) accumulate **6-10 min** more MVPA than car travellers

van Sluijs et al (2009) Prev Med

Contribution of active travel to daily PA





Linear relationship also found between distance walked & MVPA
(Southward et al., 2012, AJPM)

Active travel to/from school expends greater energy than 2 hour PE lesson in adolescents
(Mackett & Paskins, 2007, Children & Society)

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Australia's PA Report Card

ACTIVE HEALTHY KIDS AUSTRALIA

- Developed by Active Healthy Kids Australia
- Collaboration of physical activity researchers across Australia
  - Research Working Group consists of 13 researchers from 7 universities
- Led by Prof Tim Olds, A/Prof Grant Tomkinson, and Dr Natasha Schranz (UniSA)
- Part of Active Healthy Kids Global Alliance (38 countries involved in 2016)
- If you want to find out more:
- http://www.activehealthykidsaustralia.com.au/

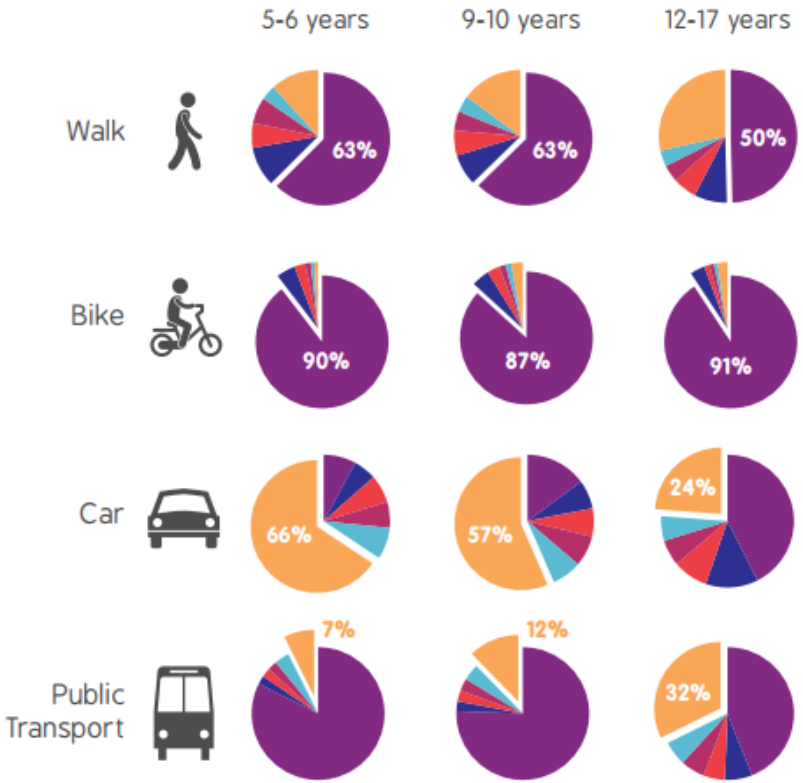
Snapshot of grading process

- Accessed national and state/territory physical activity data from children and young people
- Data synthesised against 12 indicators (9 core, 3 additional)
  - E.g. Overall physical activity levels, organised sport participation, active play, active transportation, sedentary behaviours, school (etc)
- Grades assigned to indicators following discussions by Research Working Group (2 day meeting)
- Graded confidence in how representative and robust data were (3 star scale)

Grades

Grade	Explanation
A	Succeeding with a large majority of children and young people (81-100%)
B	Succeeding with well over half of children and young people (61-80%)
C	Succeeding with about half of children and young people (41-60%)
D	Succeeding with some but less than half of children and young people (21-40%)
F	Succeeding with very few children and young people (0-20%)
INC	Incomplete - inadequate data to assign a grade

Active travel from school



- Large proportion of children not using active travel from school

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Do we make the grade?

ACTIVE TRANSPORT C-

Confidence Rating ☆☆

+ National data indicate that 41–43% of secondary school students aged 12–17 years usually travel to and/or from school using active transport[42, 43].
+ State/territory-based data report that 19–53% of primary school students usually travel to and/or from school using active transport[45, 46, 51, 57, 62]

The Netherlands
A

Zimbabwe
A-

Denmark*
B

*Ties with Finland, Hong Kong, Japan, Kenya, Nigeria, and Thailand

Tremblay et al (2016)

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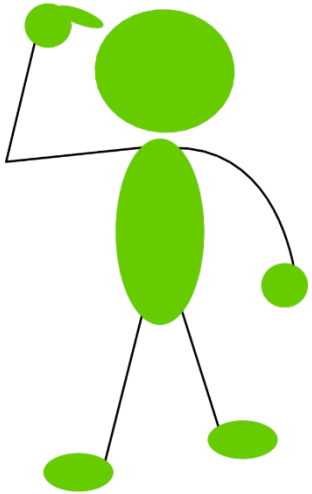
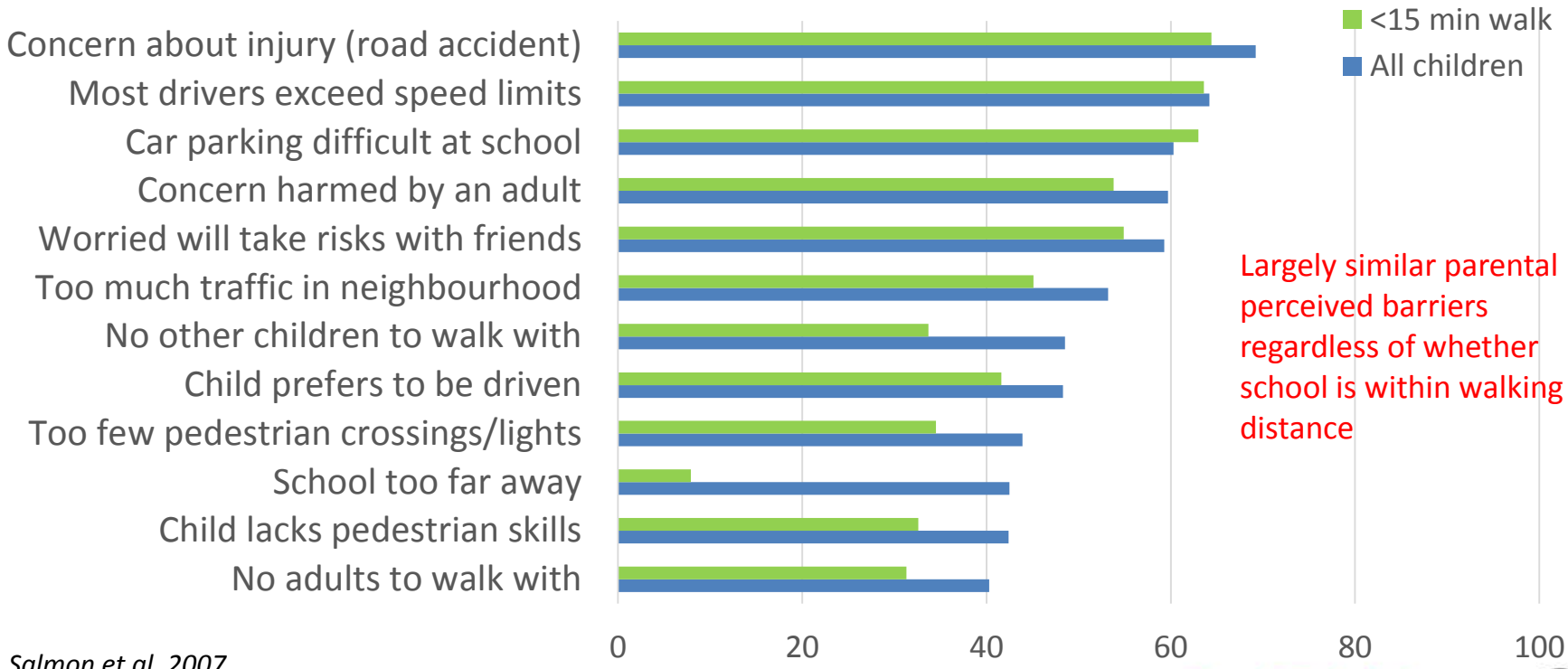
How can we improve the grade?



1. (How to) address the barriers



Largely similar parental perceived barriers regardless of whether school is within walking distance

Salmon et al. 2007

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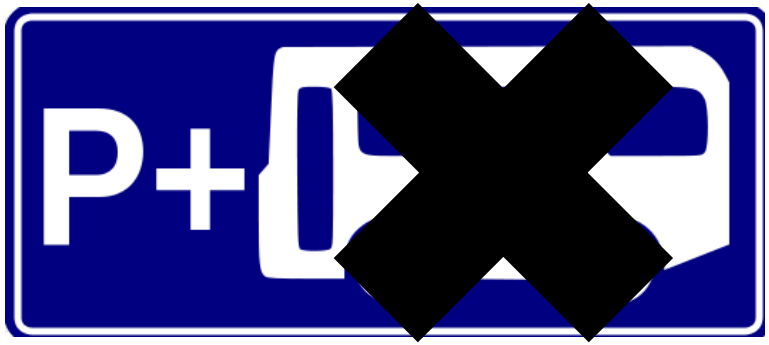
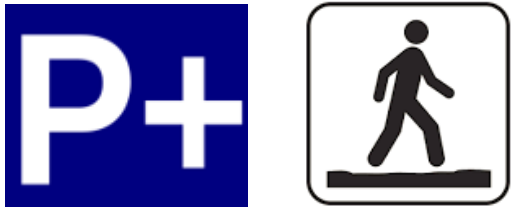
2. How to incorporate active travel into daily life





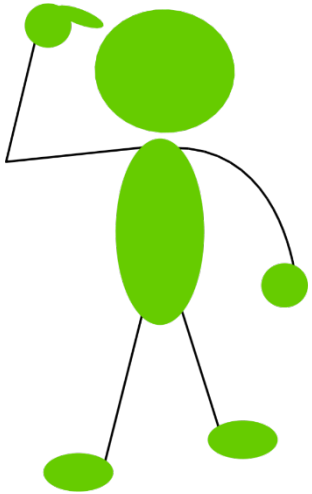
3. Structural changes

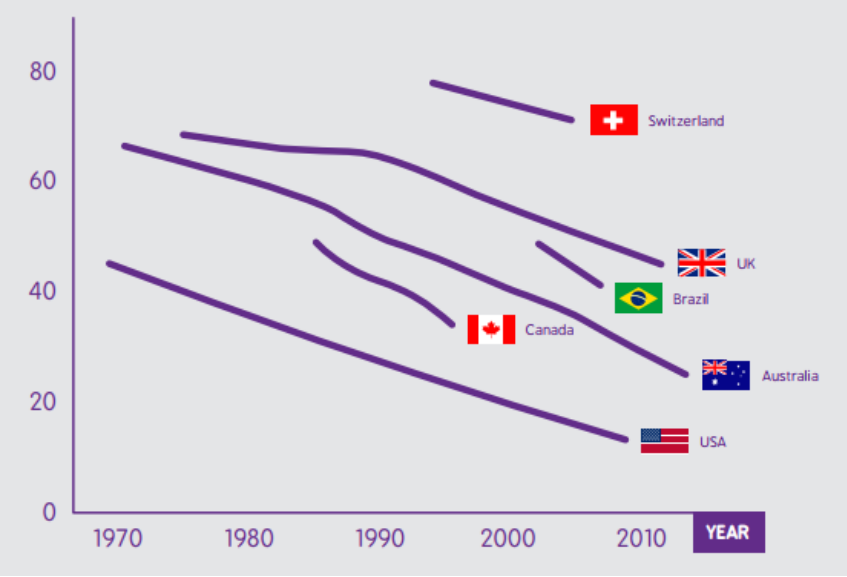
- Funding and government mechanisms to support safe walking and cycling for children and adolescents
  - Eg. Black Spots programs *(Lindberg et al. 2016)*

- Dedicated, well-connected infrastructure; separation; safe speeds; traffic calming; safe crossings

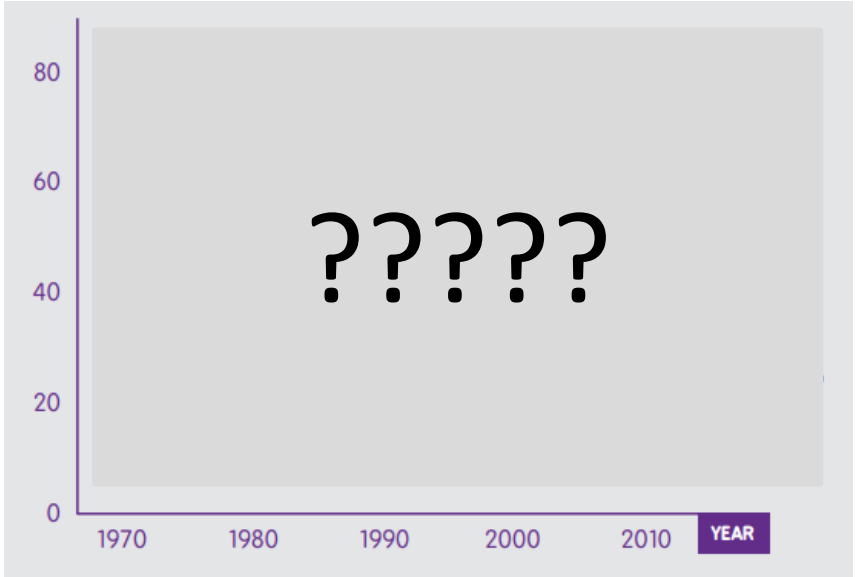
- Take back the streets – awareness of shared spaces; priority to/awareness of pedestrians/cyclists

What do we need to know?





Shows trends in percentage of children and/or young people using active transport to and from schools



Trends in population-representative data regarding active transport used to other destinations (including those using public transport)

From AHKA Report Card (2015)

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Conclusion

- Active transport can help meet health (and environmental) goals
- Active travel an important contributor to daily physical activity
  - Activity synergy?
- Distance to school strongest predictor
  - Those who make the longer journeys using active travel more active
  - Strategies to encourage part-way walking/cycling?
- Parental fears similar regardless of whether school is within walking distance
  - Walk/cycle friendly communities critical

Thank you!