Te Ara Mua – Future Streets
Suburban and institutional change

NZCPHM ASM
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Active transport – what works?

- Encouragement ineffective \( \text{Ogilvie 2004, 2007} \)
- Little evidence for organisational travel plans \( \text{Macmillan 2013} \)

**Natural experiments:**
- Self selection bias a problem
- Improvements in destination access → more walking \( \text{Giles-Corti 2013} \)
- New walking/cycling infrastructure → more walking & cycling @ 2 years \( \text{Goodman 2014} \)
- Model communities NZ → less decline than controls \( \text{Keall 2015} \)
Background: Self Explaining Roads

With an **equity** focus,

**measure** integrated effects of retrofitting low income suburban streets

**model** generalisable costs/benefits

demonstrate a **process** for community participatory design and implementation of suburban retrofit

**influence** institutional change
Controlled before-after intervention

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<tr>
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<th>Intervention area Māngere Central</th>
<th>Control area Māngere East</th>
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<tbody>
<tr>
<td><strong>Before</strong></td>
<td>Traffic behaviour</td>
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<td></td>
<td>• Motorist speed &amp; volume measures</td>
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<td>• Video of behaviour</td>
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<td>• Ped &amp; cyclist movements</td>
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<td><strong>Resident surveys</strong></td>
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<td>• Mode use to local destinations</td>
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<td>• Physical activity</td>
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<td>• Neighbourhood perceptions</td>
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<td>• Injuries (self report &amp; data linkage)</td>
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<td>• Children &amp; adults</td>
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<td><strong>Air quality measurements</strong></td>
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<td>• NO$_2$ monitoring</td>
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<tr>
<td><strong>After</strong></td>
<td>Intervention and control areas were matched for:</td>
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<td></td>
<td>• Access to amenity destinations</td>
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<td></td>
<td>• Street layout and age of development</td>
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<td>• Demographics</td>
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Adult travel patterns

- Work (583)
- Study (264)
- Shops (1112)
- Indoor rec (346)
- Outdoor rec (426)
- Social (724)
- Church (573)

Types of transport:
- Motor bike
- Van/truck
- Car/taxi
- Public transport
- Cycle
- Walk
Summary

• Baseline: low active transport, large safety barriers
• Participatory street changes

Challenges
  – Business as usual inertia
  – Funding/timeline uncertainty

Achievements
  – Comprehensive baseline data
  – Construction almost finished
  – Strong community engagement
  – Institutional changes