Background

- UCSD is a large urban university with nearly 60,000 students, faculty, and staff.
- Several heavily-used sidewalks and pathways where pedestrian traffic intersects with bicycle, skateboard, and motorized cart traffic.
- To reduce the risk of injuries, UCSD has developed policies on vehicle use and posted campus signage, and UCSD police administer fines for infractions.

Objectives

To evaluate:
- Distribution and condition of signage
- Adherence to UCSD policies
- Frequency of written warnings and fines

Methods

- Comprehensive inventory of signage in nine areas: the six colleges, University Center, the medical school, and North campus during January 2018
  - Locations geo-mapped
  - Signs photographed and classified as intact, weathered, unreadable, and/or having graffiti
  - Acreage for density calculations obtained from UCSD campus map
- 15-minute video recordings conducted in fourteen pathways from February to April 2018
  - Counted pedestrians and personal vehicle riders (e.g. bicycle, skateboard, scooter)
  - Infraction data provided by campus police
  - Data entry and analysis performed using Epi Info and R

Results

Where are the signs on campus and what condition are they in?

- Number of problems per sign:
  - None (n=32)
  - One (n=31)
  - Two (n=27)
  - Three (n=13)

Does the UCSD population adhere to policies?

Personal vehicle use rate/100 pedestrians in pathways prohibited (n=10) and not prohibited (n=4) by policies, UCSD, 2018

Pathways # vehicles # pedestrians rate/100

Prohibited

- Reveille Plaza 299 1330 17
- Ridge Walk 1 147 996 15
- Ridge Walk 2 113 804 14
- Ridge Walk 3 138 1028 13
- Library to Marshall 134 1315 10
- Warren Mall to PC 141 1398 10
- Warren Mall 153 1814 8
- Career Services 155 2209 7
- Library Walk 1 120 2517 5
- Library Walk 2 159 3471 5

Not Prohibited

- Side of Center Hall 87 953 9
- Side of Bookstore 73 1126 6
- Town Square 1 27 456 6
- Town Square 2 17 893 2

TOTAL 1693 20309 8

Enforcement of bicycle and skateboard policies, UCSD, 2017

<table>
<thead>
<tr>
<th>Method</th>
<th>n</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Warning</td>
<td>281</td>
<td>75%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>28</td>
<td>7%</td>
</tr>
<tr>
<td>Written Warning</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Citation (fine)</td>
<td>50</td>
<td>13%</td>
</tr>
<tr>
<td>Skateboard</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>377</td>
<td>100%</td>
</tr>
</tbody>
</table>

How many warnings and fines are being issued?

- 377 total warnings and fines issued
- Verbal warnings are the most common form of enforcement
- Bicycle and skateboard policies are not equally enforced

Conclusions

- Bicycle and skateboard signage is neither equally distributed nor adequately maintained
- Citations and fines are rarely issued
- Pathways that prohibit personal vehicles have a higher ratio of vehicle to pedestrians than those where they are allowed
- Efforts are needed to augment and replace damaged signage, educate personal transport riders, and conduct additional enforcement