



Moving Towards Zero Safety Action Plan

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Moving Towards Zero: Action Plan

- May 2016 - initial update
- December 2016 – detailed strategy
- Annual updates

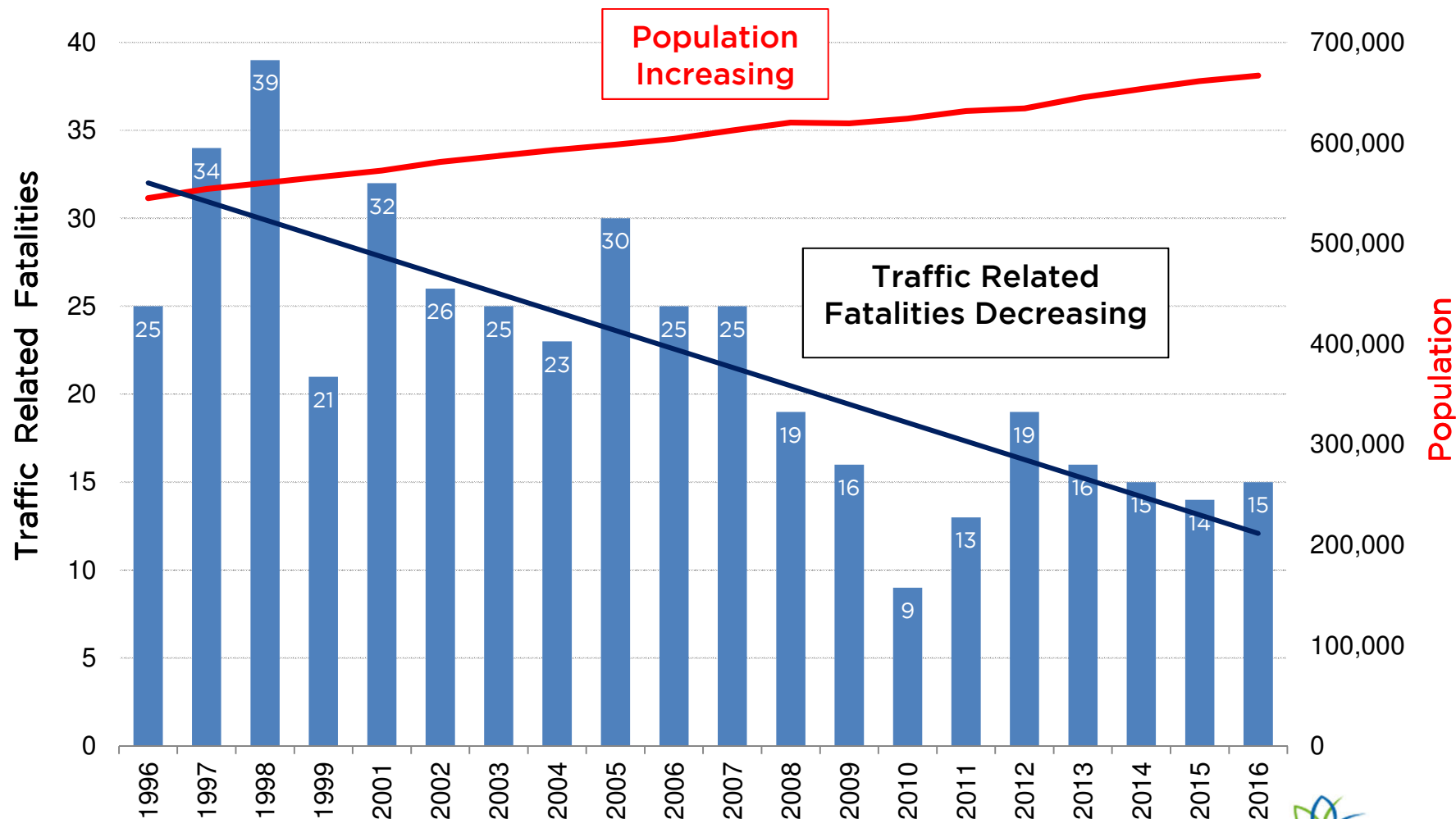
Moving Towards Zero: Action Plan

1. Enhanced Data
2. Evaluate and Prioritize Locations
3. Engineering Action Plan
4. Education & Public Outreach
5. Enforcement
6. Next Steps

1. Enhanced Data: Current Data Sources

- **Transportation Related Fatalities – VPD**
 - Summary reports as they occur
 - Annual review
- **Collisions involving – ICBC**
 - 2014-15 data received in mid 2016
 - Serious injury data – included since 2014
 - Annual review
- **NEW- Hospital injury data-Vancouver Coastal Health**

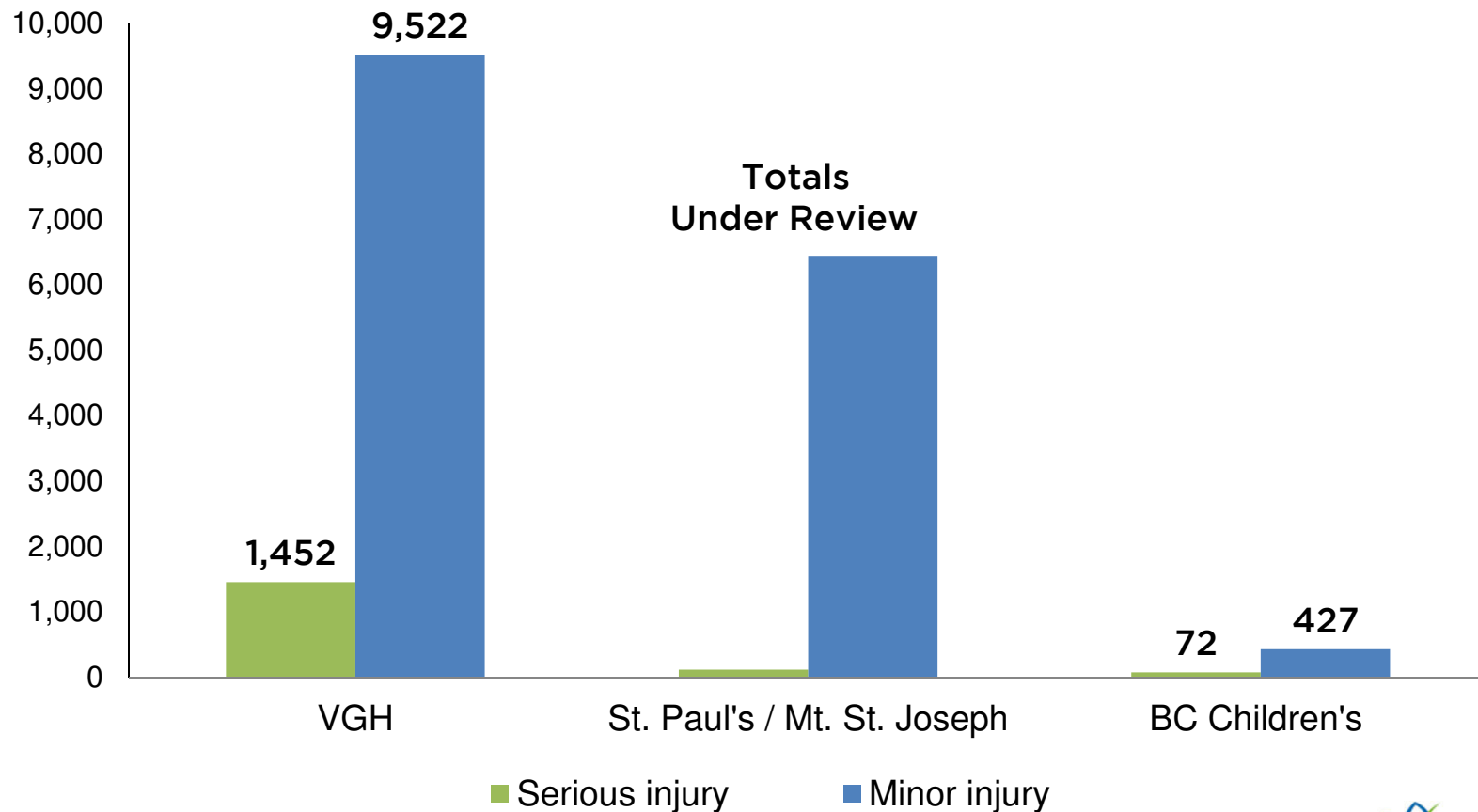
Traffic-Related Fatalities - Summary



Source: VPD Traffic Fatality Data (1996-2016)

Hospital Injury Data Pilot

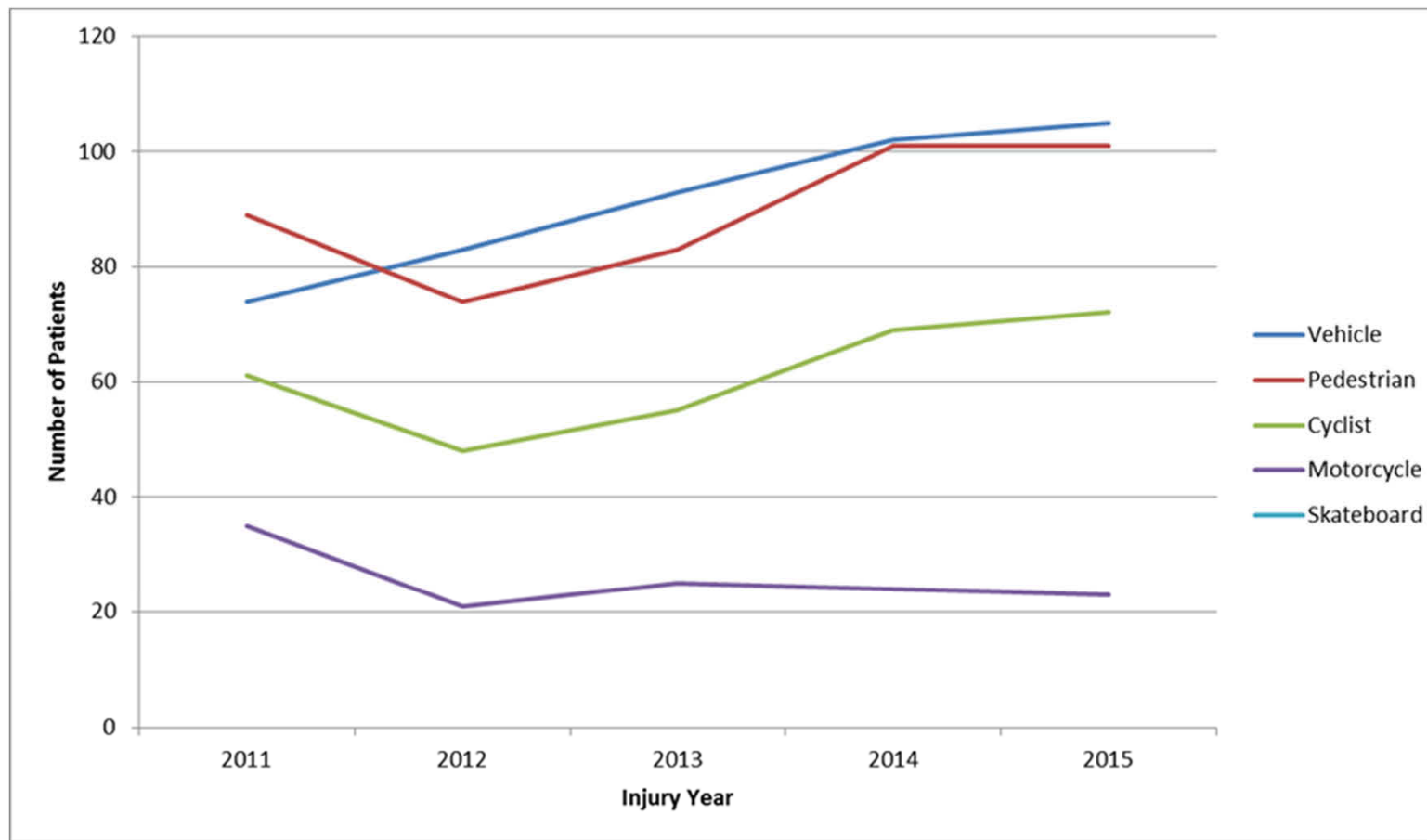
Patient Totals



Source: VGH, SPH, MSJ Traffic Injury Data (2011- Jun 2016)
BCCH Traffic Injury Data (2011- 2013)

Hospital Injury Data Pilot

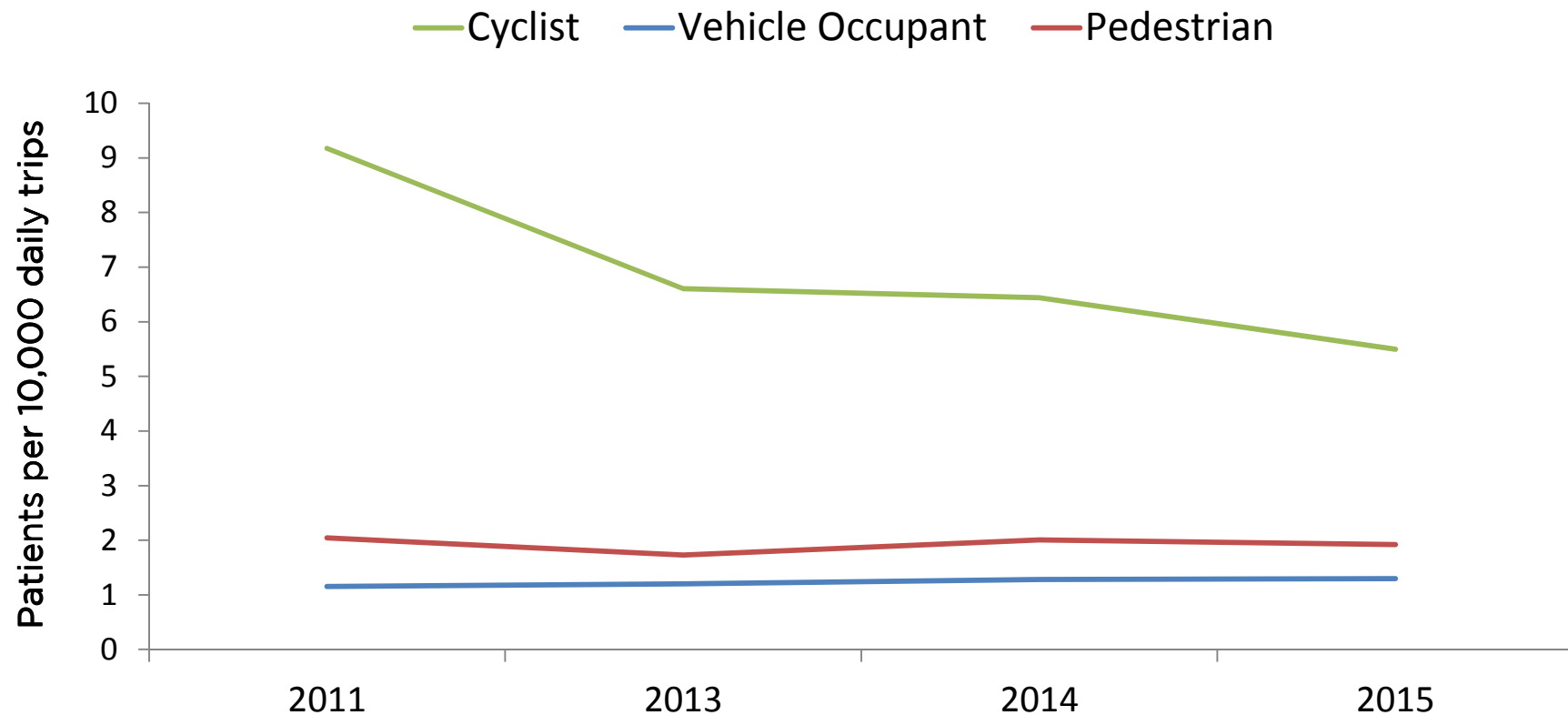
VGH Fatal & Serious Injury Patients by Mode and Year



Source: VGH Traffic Injury Data (2011-2015)

Hospital Injury Data Pilot

VGH Fatal & Serious Injury Patients per 10,000 Daily Trips



Sources: Translink Trip Diary 2011 , COV Panel Survey 2013-15, VGH Traffic Injury Data 2011-15

Hospital Injury Data Pilot

Benefits:

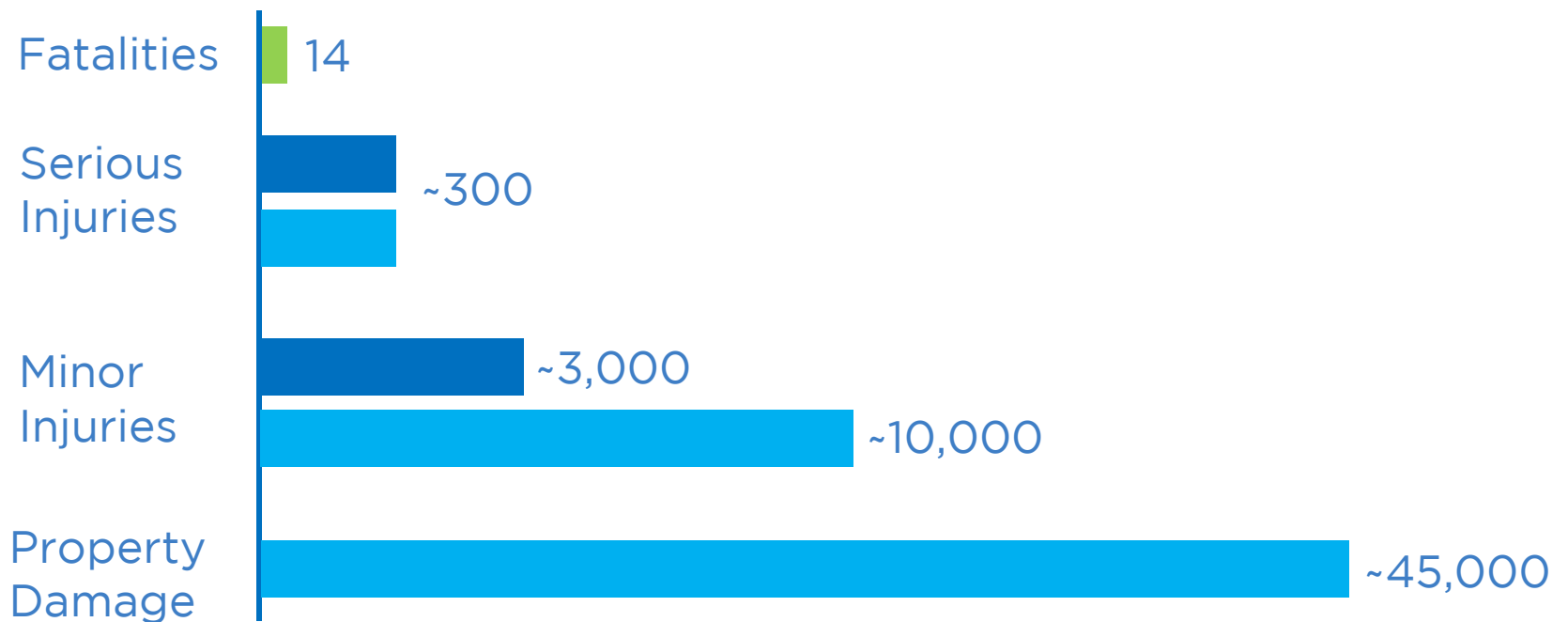
- Quarterly updates
- Demographics
- Serious injuries
- Non- Motor Vehicle Collisions
 - ICBC – only motor vehicle related
 - 53% of cycling injuries do not involve a motor vehicle (BICE Study)

Challenges:

- VGH Incidents Only
- Data Quality
 - Location (i.e. outside COV)
 - Description
 - Miscoding (i.e. sports, falls)
 - Returning patients

1. Enhanced Data: Summary

2015 Statistics:



Source of Data:

■ VPD ■ Hospitals ■ ICBC

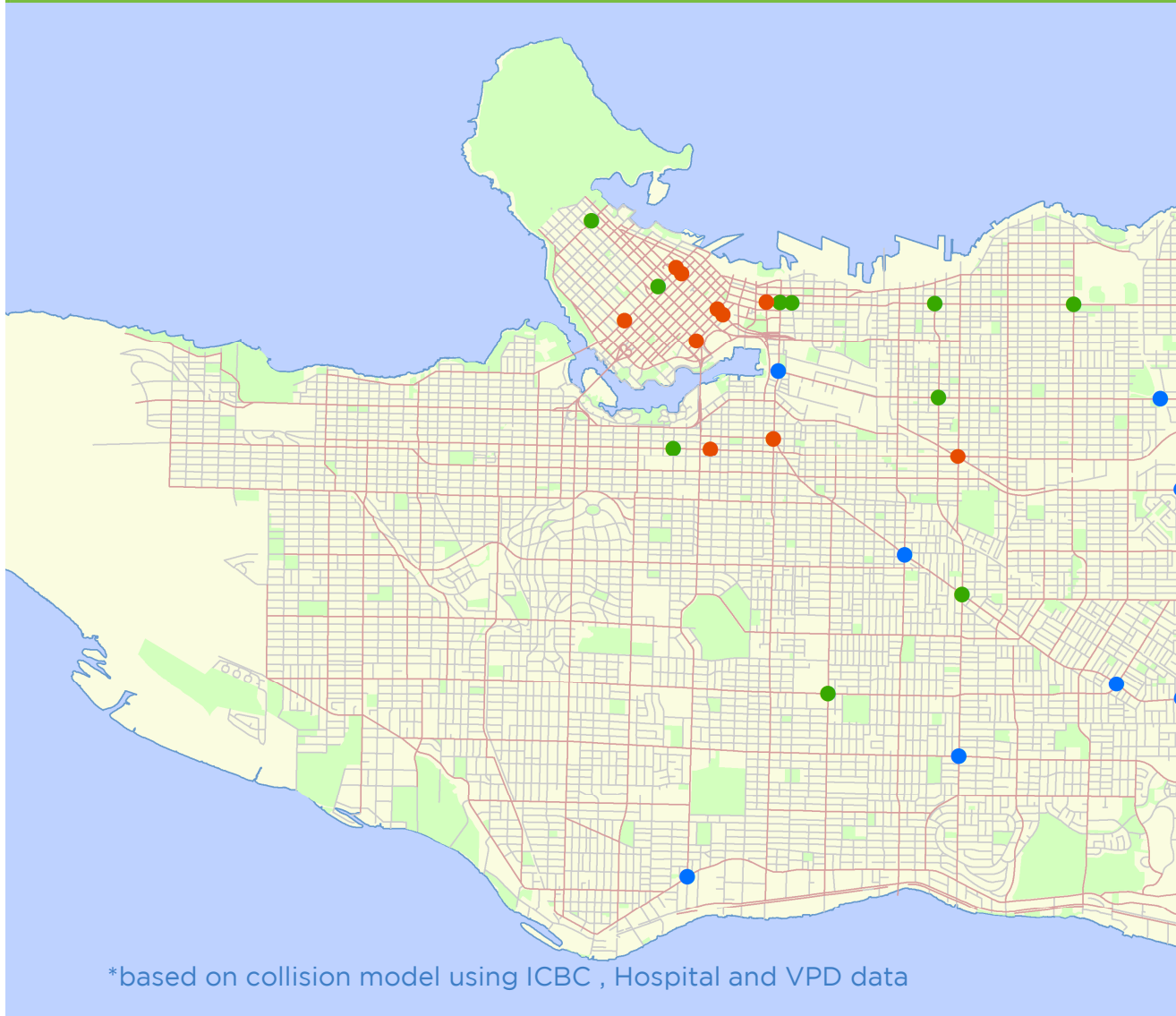
*Injuries and property damage are based on number of collisions, Fatalities are total number of people

2. Evaluate & Prioritize Locations

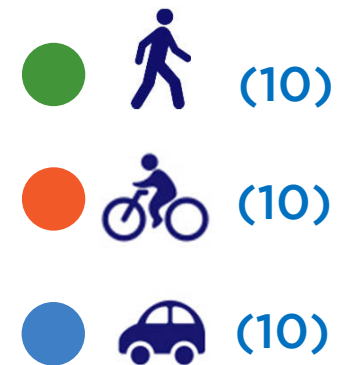


- **Identified Priority Intersections & Corridors**
 - Top locations for deep dive
 - By vulnerable road users (i.e. seniors, children, etc.)

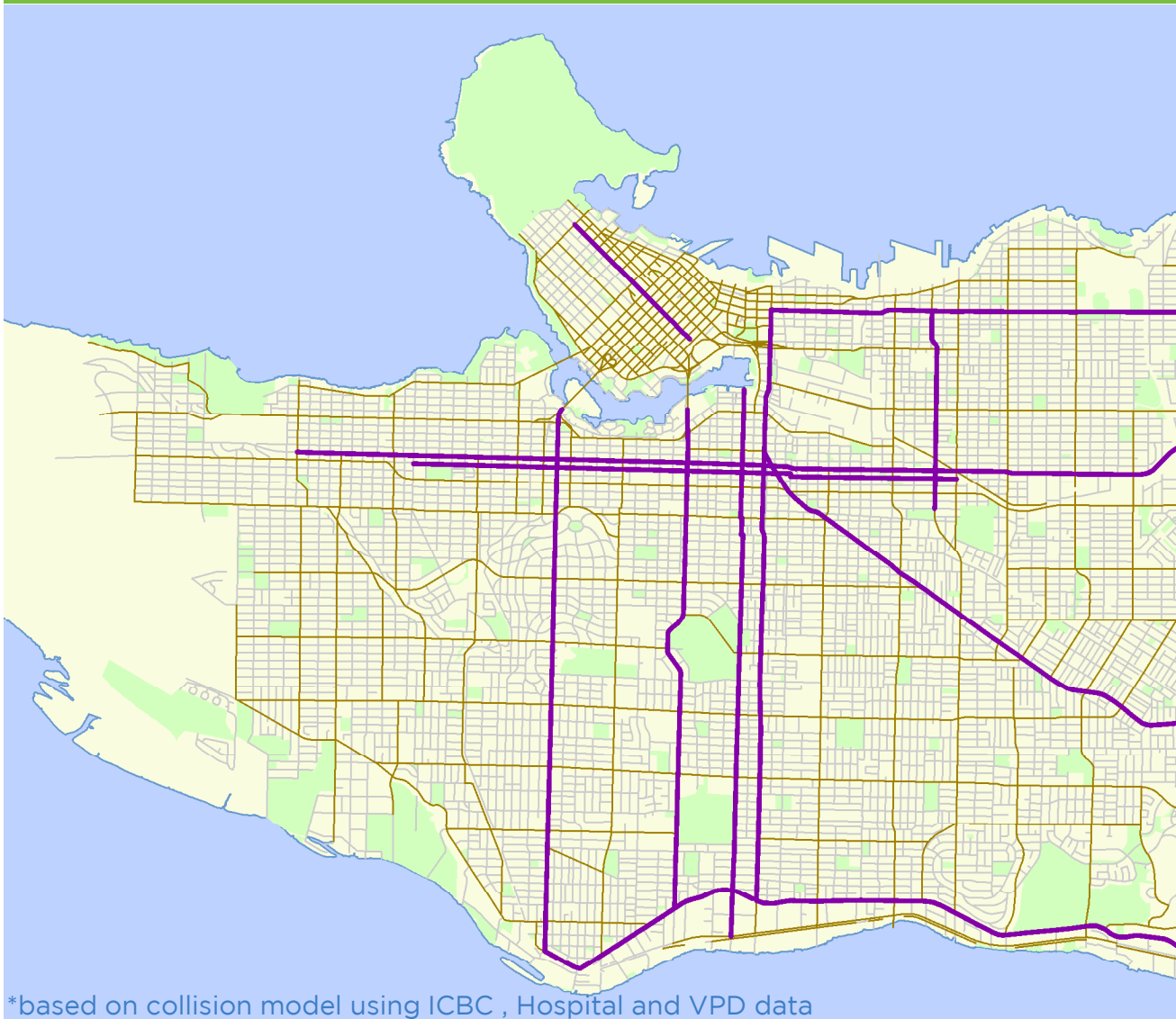
2. Evaluate & Prioritize Locations



Top Intersections for Deep Dive



2. Evaluate & Prioritize Locations



**Top Corridors for
Deep Dive**

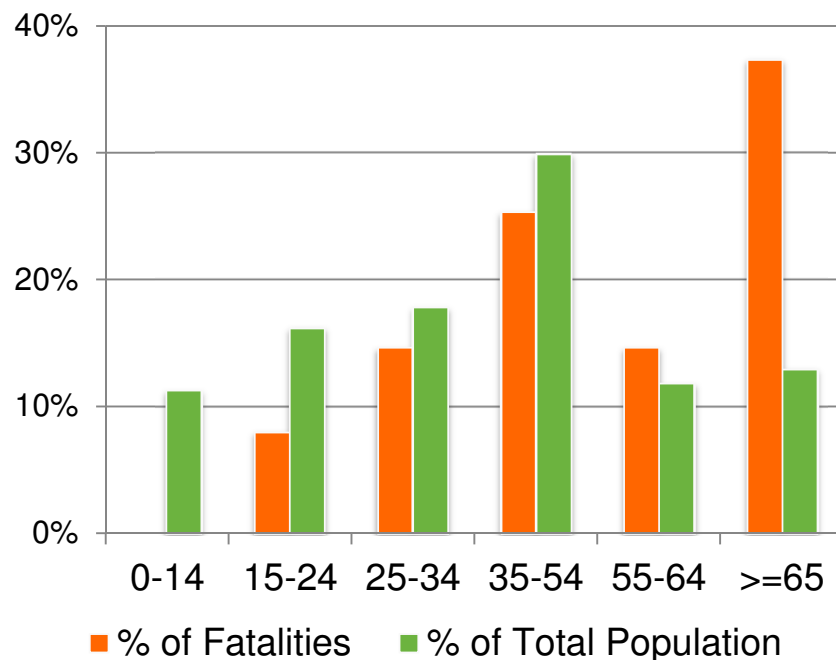


*based on collision model using ICBC , Hospital and VPD data

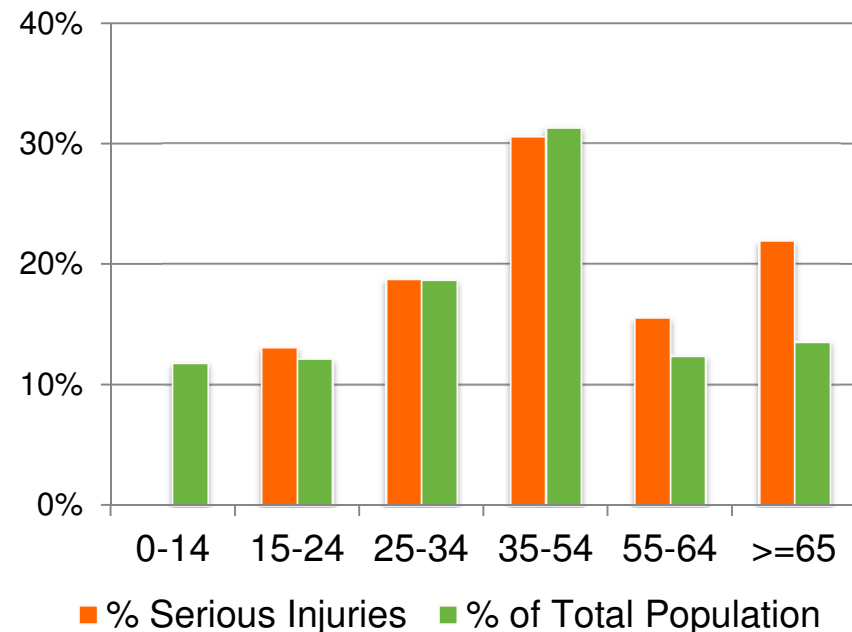
2. Evaluate & Prioritize Locations

Seniors: Higher risk of fatality & serious injuries

Fatalities by Age

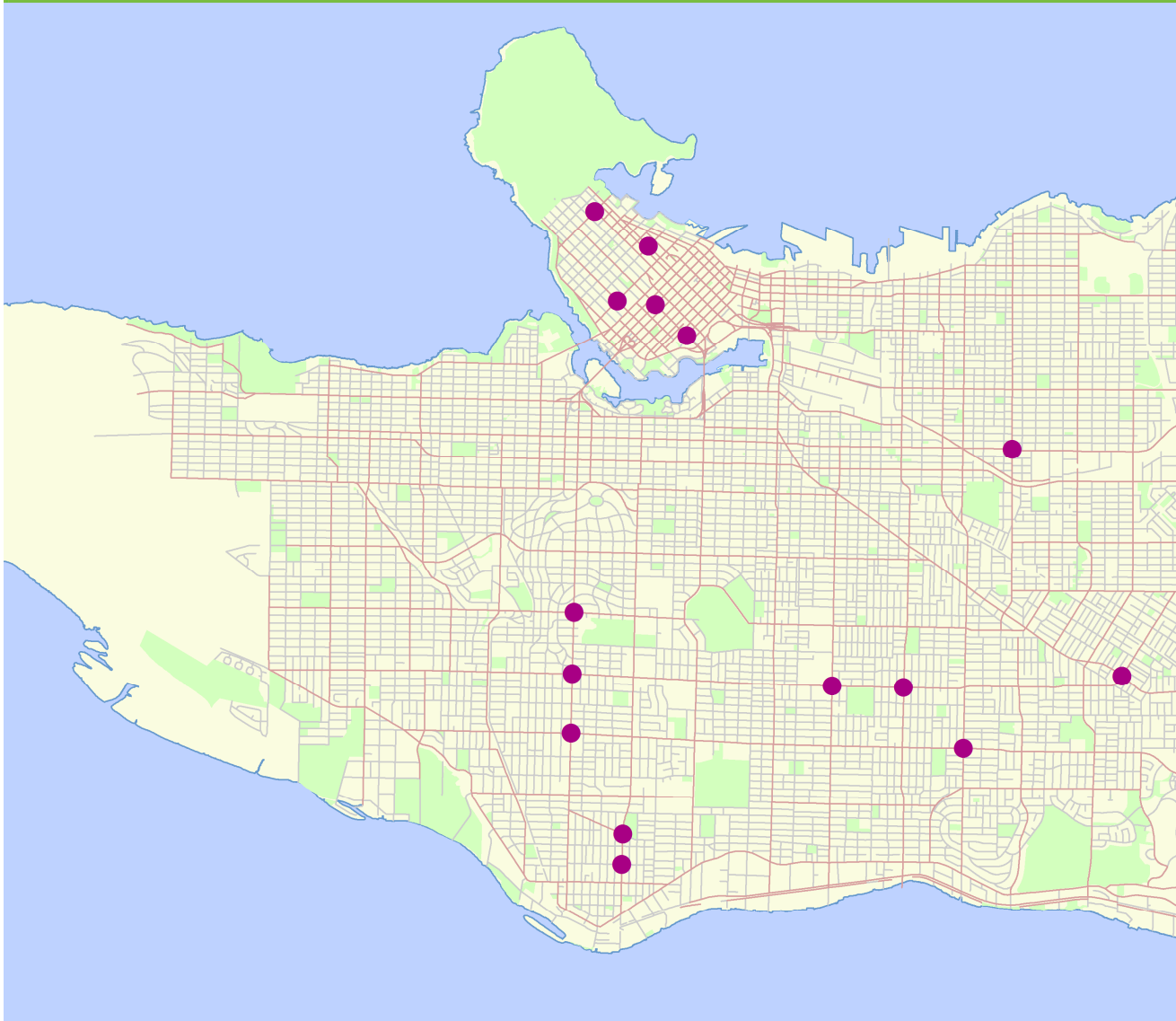


Serious Injuries by Age



Source: VPD Traffic Fatality Data (2011-2015), VGH Traffic Injury Data (2011-2015)

2. Evaluate & Prioritize Locations



Top Senior Locations

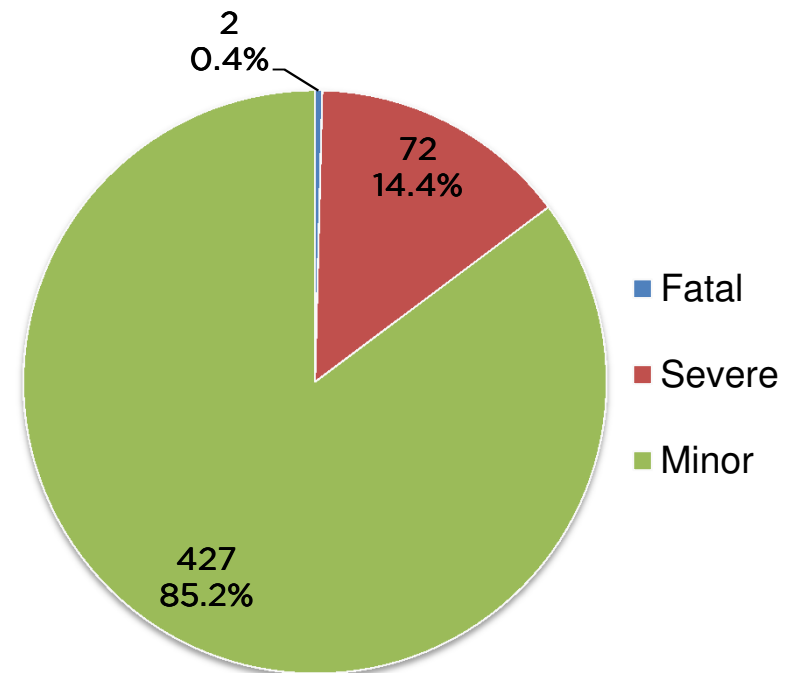
15 locations of focus

Sources of data:

- VGH senior collisions
- ICBC data around:
 - High senior density areas
 - Senior housing

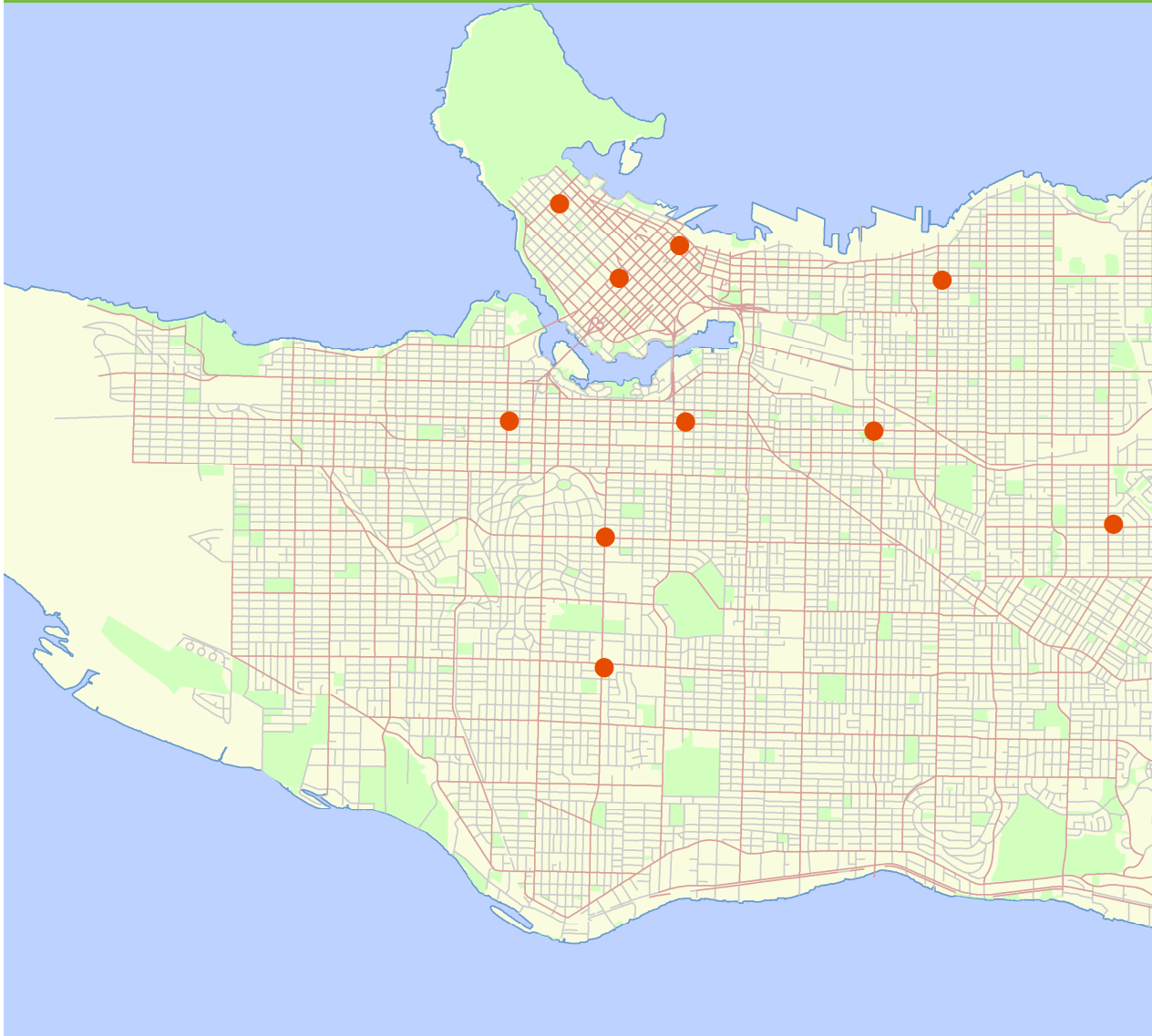
2. Evaluate & Prioritize Locations

- Hospital data
 - Most children treated at BCCH
 - No location info
- ICBC data
 - Collisions adjacent to schools & during school days
 - ~2% of all City collisions



Source: BCCH Traffic Injury Data
2011-13

2. Evaluate & Prioritize Locations



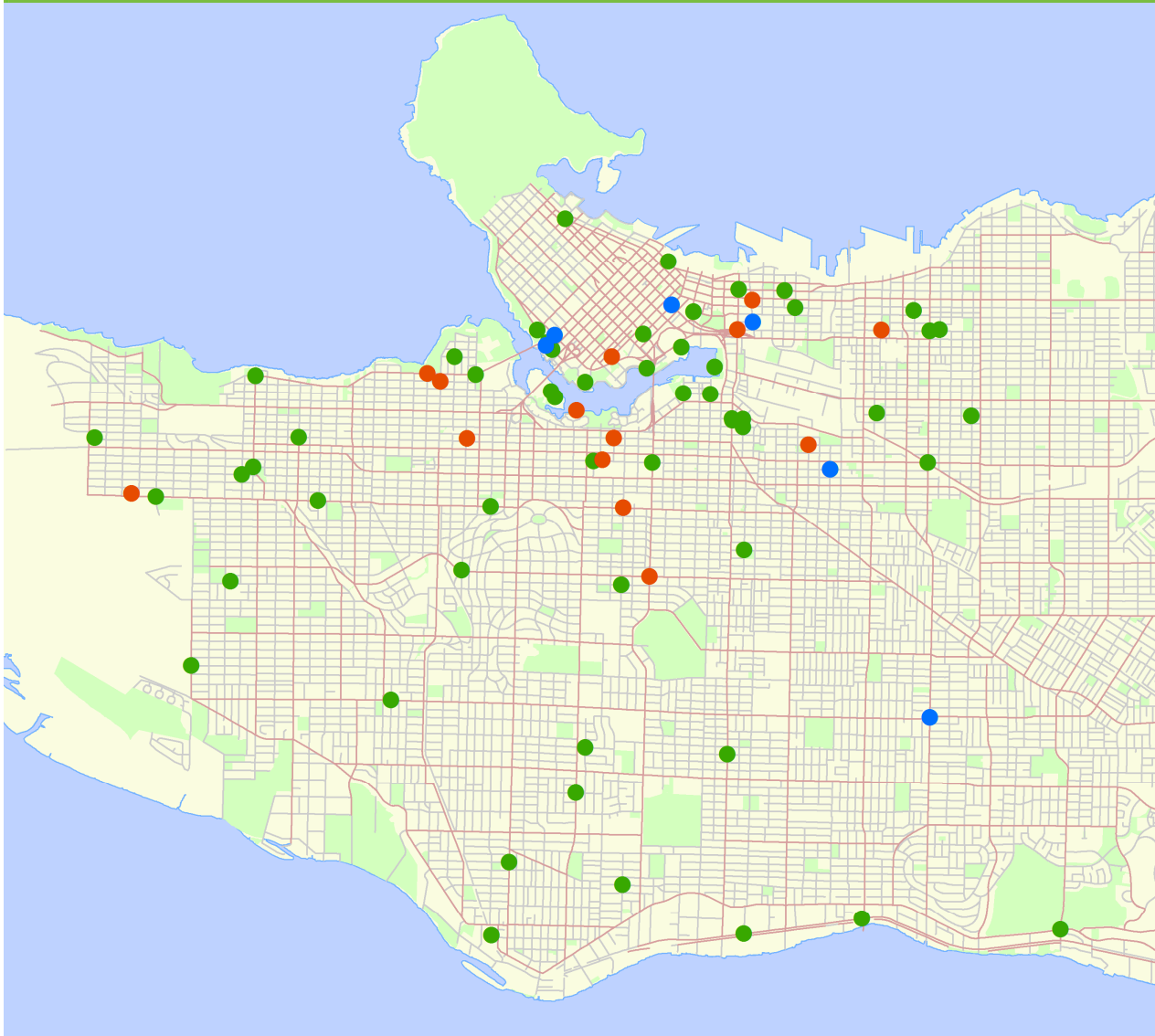
Top Schools

10 schools selected

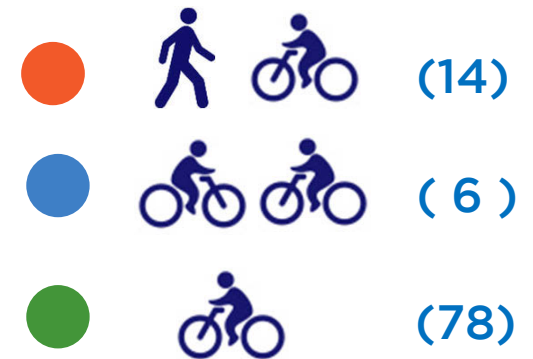
Schools selected:

- Adjacent to two arterial roads
- Adjacent to signalized intersections
- High exposure

2. Evaluate & Prioritize Locations



Non- motorized:
Serious injuries
locations



2. Evaluate & Prioritize Locations

Conduct detailed safety studies at priority locations

- Monitor locations to identify potential conflicts
- Automated video conflict analysis at priority ranked locations
- Identify strategies to reduce injuries



3. Engineering Action Plan

Develop best safety practices toolkit & select the most effective solutions to address priority locations

- Validate toolkit
- New Pilot Programs
- Develop countermeasure based strategy
- Action plan for high priority areas

Toolkit Validation: Pedestrian Safety Improvements

Validated through Vancouver Implementation

Upgrades	Locations Completed	Collision Reduction	
		Pedestrian	All (Fatal & Injury)
New Pedestrian Signals	2	-96%	-20%
LT Arrows	5	-38%	-26%
LED Lighting	18	-27%*	-46%*
Countdown Timers	33	-28%	-10%
Slower Walking Speeds	4	-12%	

*After dark collisions only

Toolkit Validation: Cycling Spot Improvements

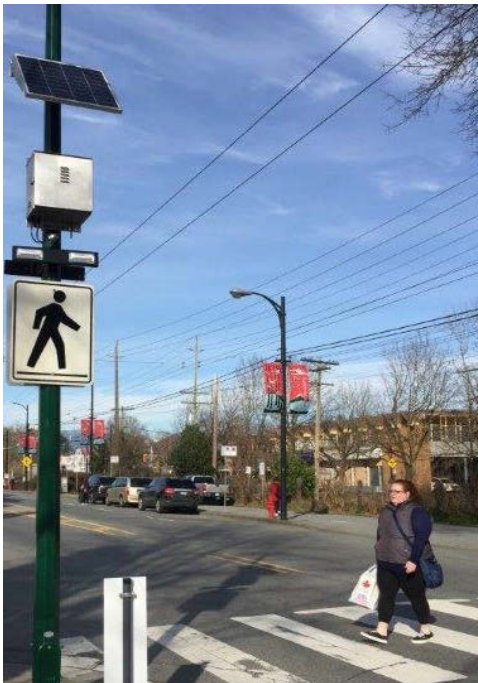
Validated through Vancouver Implementation

Upgrades	Locations Completed	Collision Reduction	
		Cycling	All (Fatal & Injury)
Removal of traffic circles	2	-100%	-60%
Median extension - RT more difficult	1	-42%**	-33%**
Adding lighting	1	-25% *	0%*
Green Paint at Conflict Areas	6	Data not sufficient to assess	

*After dark collisions only

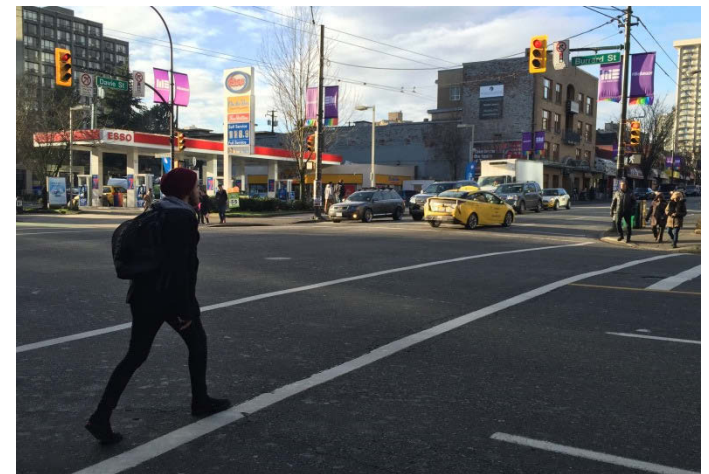
** RT collisions only

Engineering Action Plan: New Pilot Programs



**Rectangular Rapid
Flashing Beacons**
3 locations in pilot

**Accessible
Pedestrian Signals**
4 locations in pilot



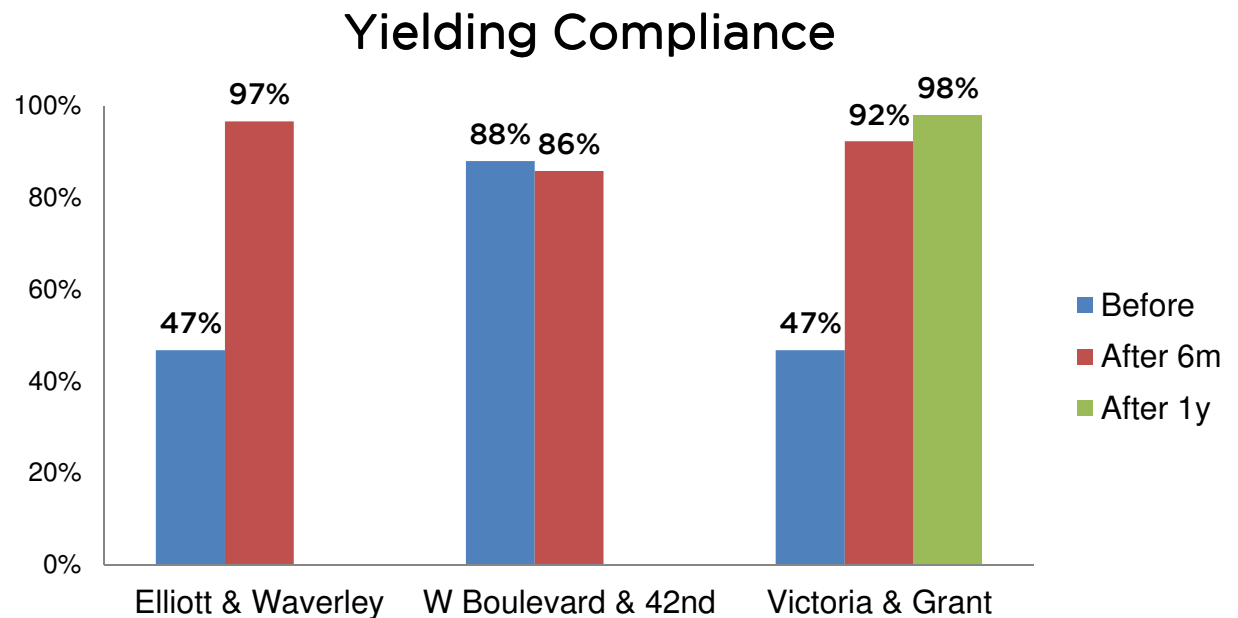
**Leading Pedestrian
Intervals**
1 location in pilot

Engineering Action Plan: Evaluate Pilot Programs



**Rectangular
Rapid Flashing
Beacons**
**3 locations in
pilot**

- Increased driver yielding compliance
- Increased distance of yielding
- Positive feedback (surveys, webpage & 311)
- Evaluating reliability of solar power, technical issues at one location
- Concerns from Disabilities committee - audibles



Engineering Action Plan: New Pilot Programs



Accessible
Pedestrian Signals
4 locations in pilot

- Developed requirements in consultation with CNIB and ASIC
- Some trial locations have technical/operational challenges
- Working with suppliers to address issues
- Received updated products and undertook extensive technical testing
- New trial location at Hornby/Helmcken installed recently
- Install at new/rehab signals
- Prioritized list of locations

Engineering Action Plan: New Pilot Programs

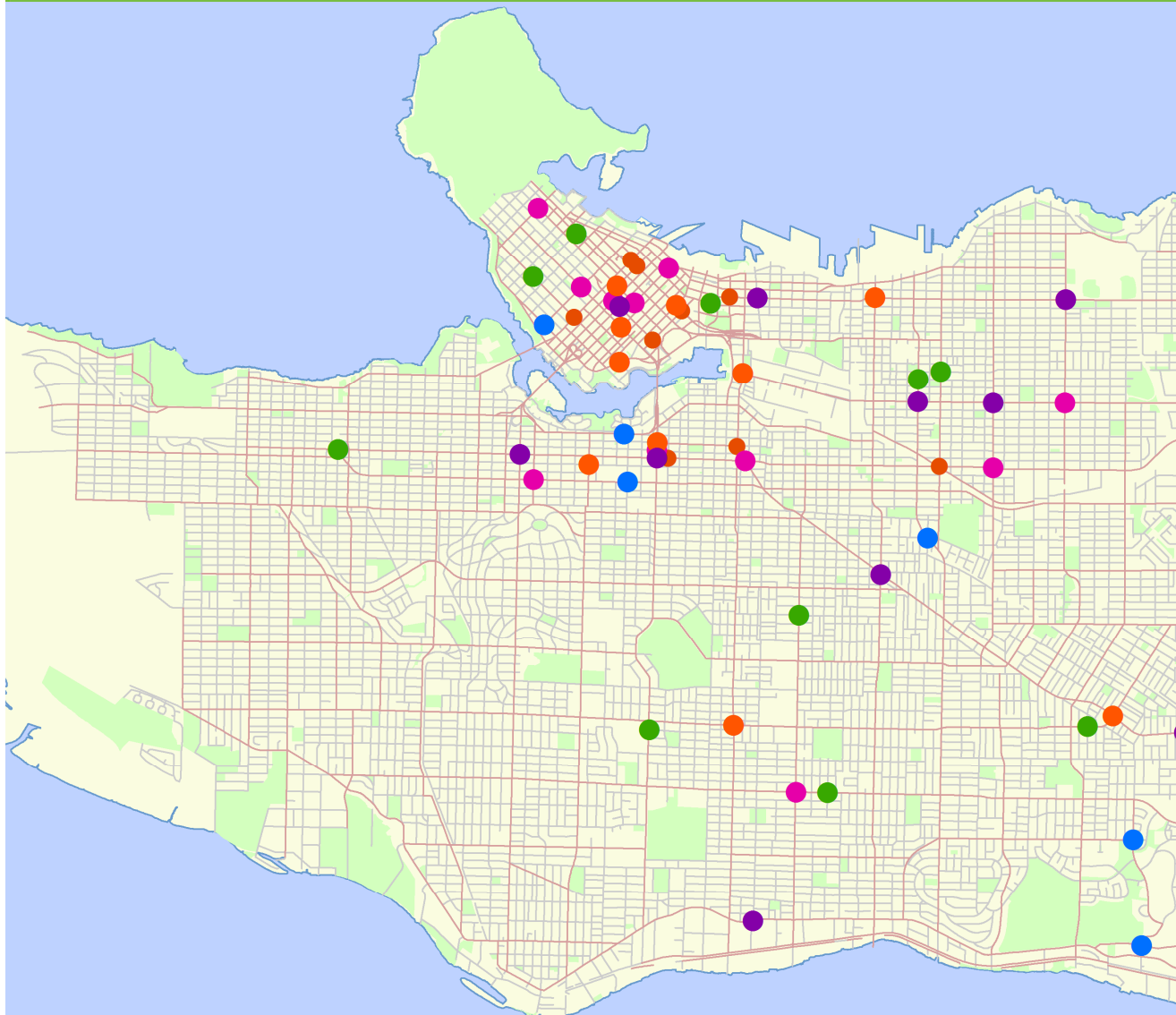


Leading Pedestrian
Intervals
1 location in pilot

- One pilot location with reduced severity of conflicts
- Success in other areas of region
- 6 new locations recommended for further pilot

Engineering Action Plan

Example : Pedestrian Countermeasures



By countermeasure

Treat overrepresented types of collisions:

- Ped & Left turn
- Ped & Right turn
- Driver failure to yield
- Jaywalking
- Collisions after dark

- LPI (6)
- Turning Mov. Changes (12)
- RRFB/Ped. Signal (10)
- LED Lighting (10)
- Countdown timers (7)
- Slower Walk Speeds (29)
- Ped Recall (1)

Expected Injury Reduction

- Countermeasure based approach:

↓ 15-20%
Fatal & Injury Collisions

- Deep dive locations
 - Intersections & Corridors
 - Schools
 - Senior Locations

↓ TBD
Fatal & Injury Collisions



4. Enforcement

- Work with VPD to develop targeted enforcement programs to tackle dangerous behaviors at priority locations
- VPD Commercial Vehicle Team inspections with other municipalities and provincial Commercial Vehicle Safety & Enforcement (CVSE)
- VPD Established Targeted enforcement team to target unsafe and reckless pedestrian and cycling behaviors in high incident areas



5. Education and Public Outreach

Engage Vancouverites to travel safely & continue to work in cooperation with safety partners

Actions:

- Create a Moving Towards Zero Transportation Fatalities website
- Report annual progress
- Work with VPD & ICBC on safety education campaigns
- Continue to work with Traffic Safety Working Group



Chinese Community Policing Centre volunteers with VPD Traffic Officers



6. Next Steps

- Undertake detailed assessments at priority intersections, corridors and focus areas
- Establish a safety advisory group
- Implement Countermeasures
- Progress update Spring 2017

