

# Getting to Know Target Populations When You Know Little About Them

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# The Air Quality Health Index (AQHI) is an initiative involving



# Who are the people at risk?

## People with existing respiratory or cardiovascular conditions



## Young children



## The elderly



## Those active outdoors





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## Canadian Weather

 Environment Canada / Environnement Canada

Current Conditions





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## Air Quality Health Index

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### Current AQHI Conditions

<a href="#">Calgary</a>	3 - Low Risk
<a href="#">Charlottetown</a>	1 - Low Risk
<a href="#">Edmonton</a>	3 - Low Risk
<a href="#">Fredericton</a>	1 - Low Risk
<a href="#">Halifax</a>	1 - Low Risk
<a href="#">Montréal</a>	
<a href="#">Ottawa (Kanata - Orléans)</a>	2 - Low Risk
<a href="#">Prince George</a>	2 - Low Risk
<a href="#">Québec</a>	
<a href="#">Regina</a>	2 - Low Risk
<a href="#">Saint John</a>	2 - Low Risk
<a href="#">Saskatoon</a>	2 - Low Risk
<a href="#">St. John's</a>	2 - Low Risk
<a href="#">Toronto</a>	3 - Low Risk
<a href="#">Vancouver</a>	2 - Low Risk
<a href="#">Winnipeg</a>	2 - Low Risk

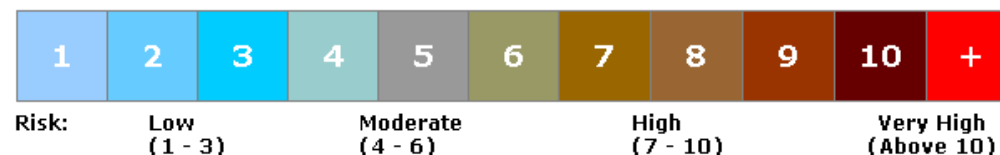
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## Air Quality Health Index

### Toronto



#### Current

Observed at  
3:00 PM EDT Monday 17  
October 2011



#### At-Risk Population:

- Enjoy your usual outdoor activities.
- [Find out if you are at risk](#)

#### General Population:

- Ideal air quality for outdoor activities.

### Forecast Maximums

Issued at 6:00 AM EDT Monday 17 October 2011



#### Who is at risk?

People with heart and lung conditions are most affected by air pollution.

To find out if you are at risk, consult [the health guide](#), your physician, or your [local health authority](#).

Visit the [national AQHI Web site](#) to learn more about the AQHI.

#### Did you know...?

You will breathe in less traffic-related pollution while exercising if you stay away from busy streets and highways.

# Air Quality Health Index Messages

Health Risk	Air Quality Health Index	Health Messages	
		At Risk Population*	General Population
Low Risk	1 - 3	<b>Enjoy</b> your usual outdoor activities.	<b>Ideal</b> air quality for outdoor activities.
Moderate Risk	4 - 6	<b>Consider reducing</b> or rescheduling strenuous activities outdoors if you are experiencing symptoms.	<b>No need to modify</b> your usual outdoor activities unless you experience symptoms such as coughing and throat irritation.
High Risk	7 - 10	<b>Reduce</b> or reschedule strenuous activities outdoors. Children and the elderly should also take it easy.	<b>Consider reducing</b> or rescheduling strenuous activities outdoors if you experience symptoms such as coughing and throat irritation.
Very High Risk	Above 10	<b>Avoid</b> strenuous activities outdoors. Children and the elderly should also avoid outdoor physical exertion.	<b>Reduce</b> or reschedule strenuous activities outdoors, especially if you experience symptoms such as coughing and throat irritation.

\*Unsure if you are at risk? Consult this [health guide](#) to help you determine if you are at risk from air pollution. People with heart or breathing problems are at greater risk. Follow your doctor's usual advice about exercising and managing your condition.

# Environment Canada lacked an “at risk” population database

# We Used Survey Data to Find the Traits of Population at Risk

## Canadian Community Health Survey

## NADbank

## 2006 Adjusted Census

### Variables of Interest

#### Conditions

Has asthma – Yes

Has chronic bronchitis – Yes

Has diabetes – Yes

Has emphysema – Yes

Has heart disease – Yes

#### Exercise/Activity

Leisure and transportation physical activity index

Active

Moderately Active

Inactive

Times Participate [Per Wk]  
– Running & Jogging

Construction trades

Occupations unique to agriculture, excluding labourers

Occupations unique to forestry operations, mining, oil and gas extraction and fishing, excluding labourers

Primary production labourers

Trades, Transport and Equipment Operators and related occupations

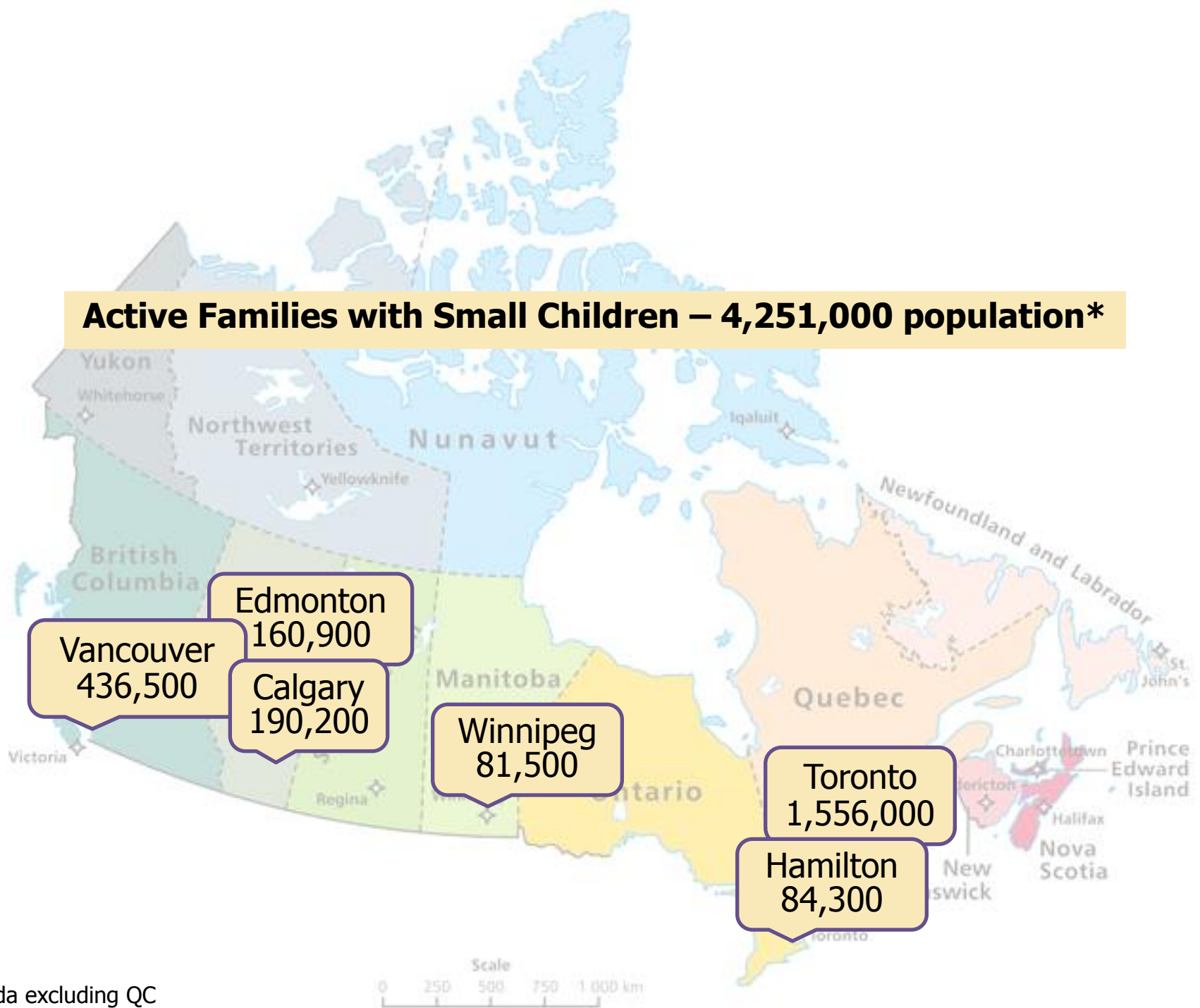
Natural and applied sciences and related occupations

# Canada excluding Quebec Segments



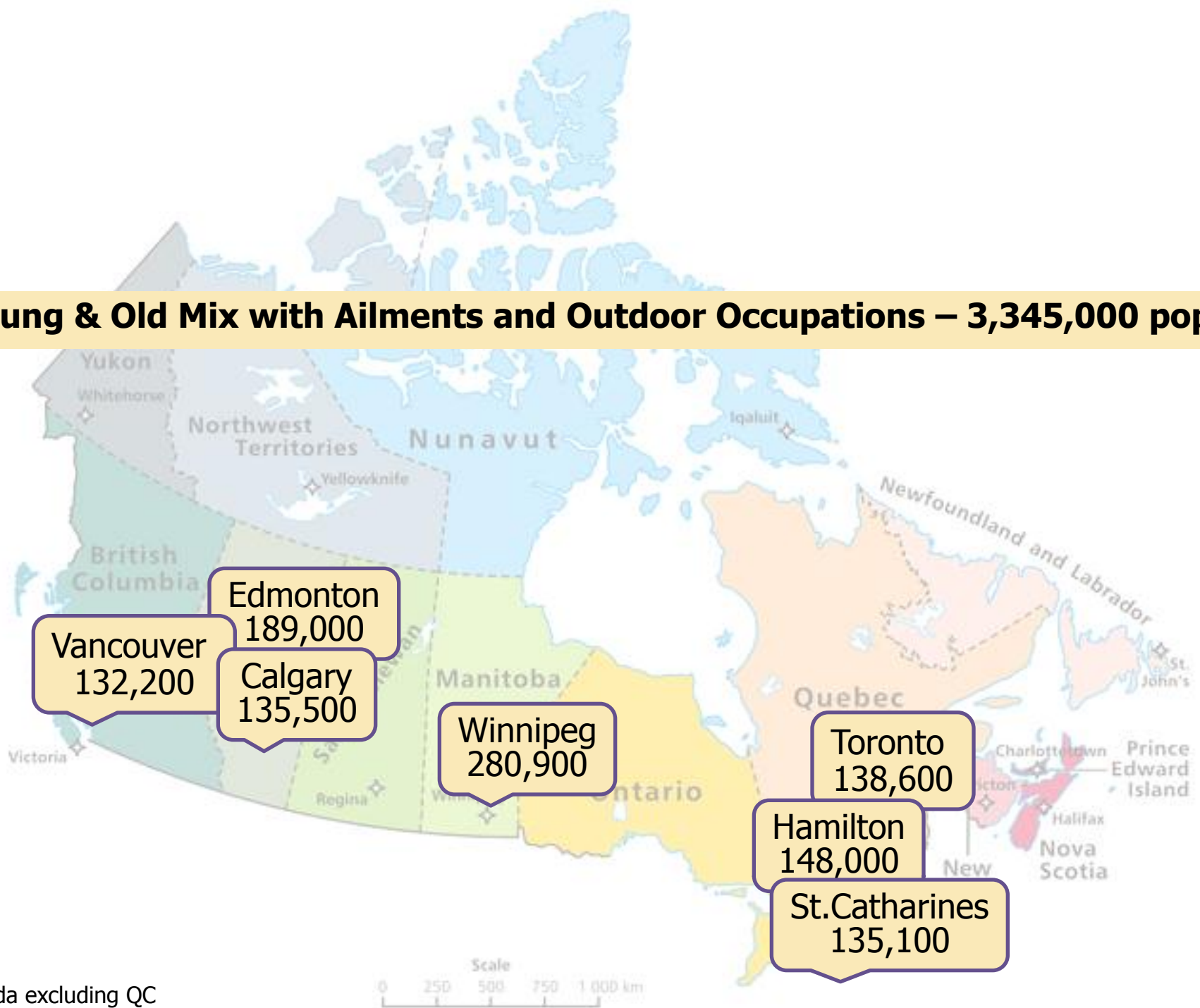
	<b>Health Conditions</b>	<b>Physical Activity</b>	<b>Outdoor Occupation</b>
Urban Empty Nesters with Ailments	Yes		
Middle-Aged Townies			Yes
Mature Singles & Couples with Ailments	Yes		
Mature with Ailments and Outdoor Occupation	Yes		Yes
Young & Old Mix with Ailments and Outdoor Occupation	Yes		Yes
Active Families with Small Children		Yes	Yes
Young Families Not at Risk		Yes	
Not at Risk		Yes	

**Active Families with Small Children – 4,251,000 population\***



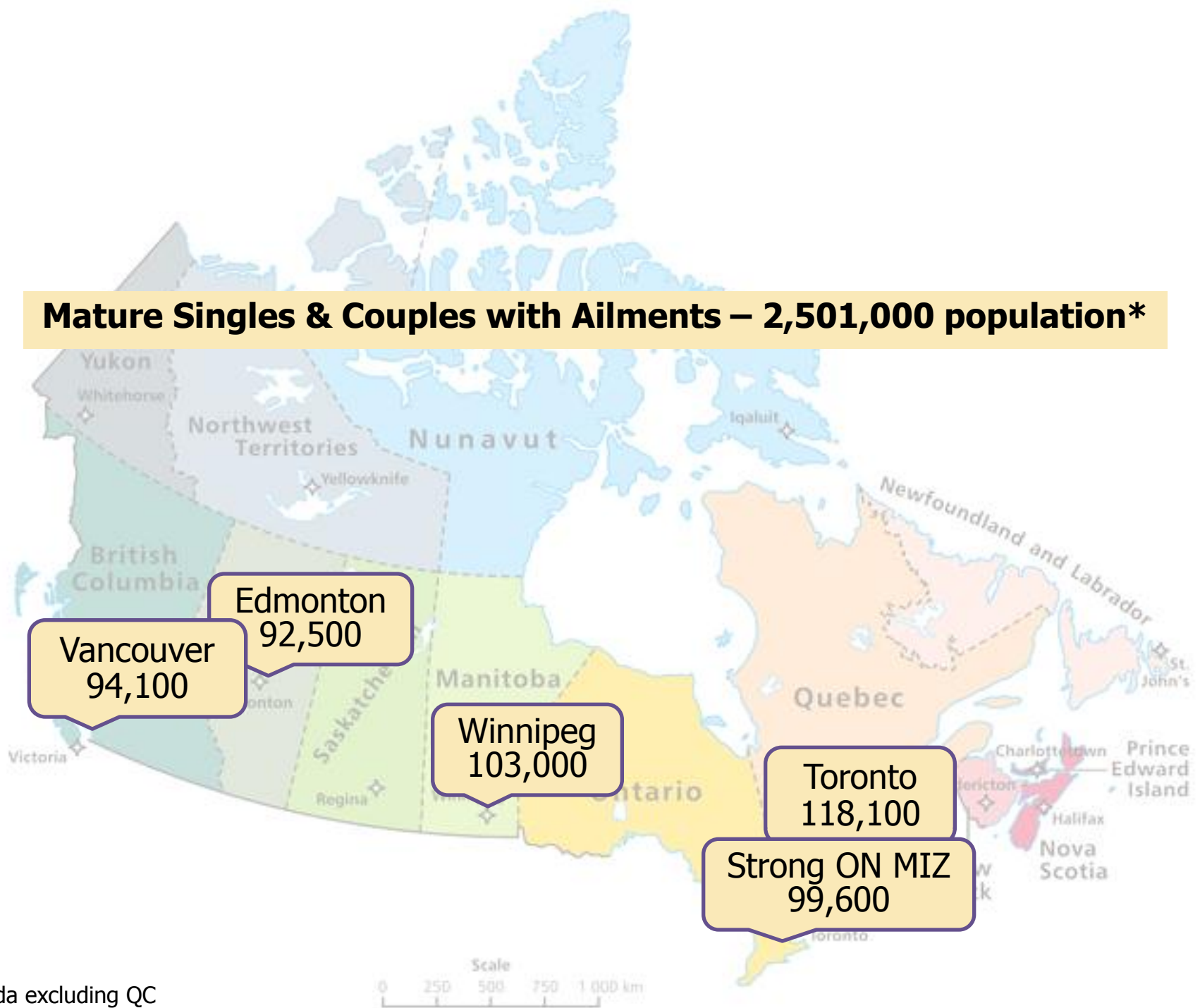
\* Canada excluding QC

**Young & Old Mix with Ailments and Outdoor Occupations – 3,345,000 pop\***



\* Canada excluding QC

**Mature Singles & Couples with Ailments – 2,501,000 population\***



\* Canada excluding QC

# Quebec Segments



	<b>Health Conditions</b>	<b>Physical Activity</b>	<b>Outdoor Occupation</b>
Older Singles & Couples with Ailments	Yes		Yes
Young Urban Singles & Couples with Ailments	Yes	Yes	Yes
Less Educated Downscale Young		Yes	Yes
Educated Active Young		Yes	
Urban Young & Mature with Ailments	Yes		
Families with Teenagers and Ailments	Yes		Yes
Families with Young Children			Yes
Mature Families with Outdoor Occupations		Yes	Yes
Mature Families		Yes	

**Families with Young Children – 747,000 population in QC**

**Young Singles & Couples with Small Children – 436,200 pop in QC**

**Older Singles & Couples with Ailments – 860,900 pop in QC**

Québec  
58,700

Gatineau  
44,800

Lévis  
28,400

Montréal  
24,800

Terrebonne  
24,000

Sherbrooke  
21,600

Montréal  
229,900

Longueuil  
52,400

Québec  
40,800

Sherbrooke  
29,400

Montréal  
59,000

Québec  
36,800

Laval  
31,600

Saguenay  
27,700

Longueuil  
18,700

Trois-Rivières  
16,100

# Segments in Hamilton

# 369,154 people in Hamilton included in the segments

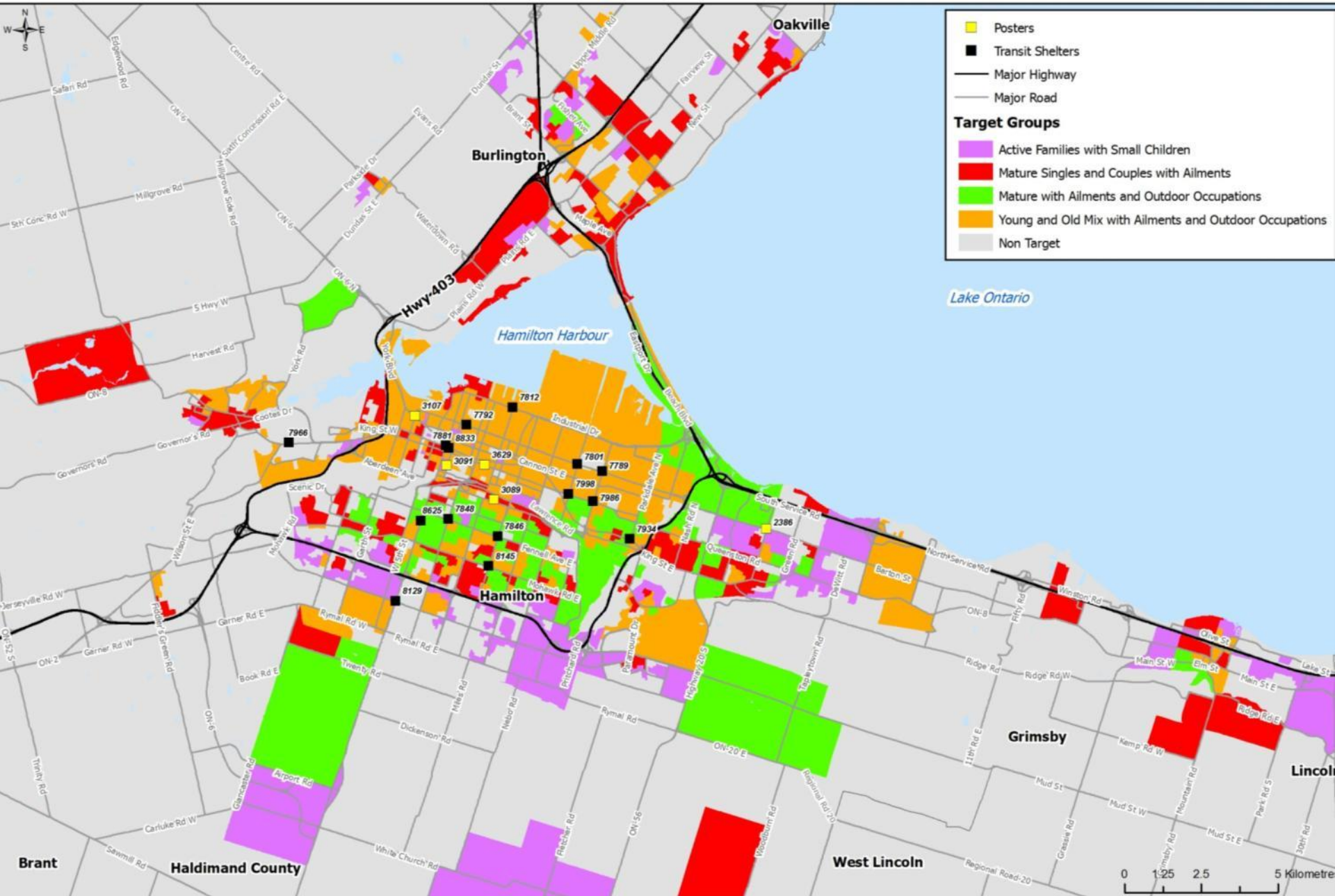
## Trade Area: Hamilton CMA Benchmark: Canada (Country)

Target Group	Trade Area	
	Count	% Comp
Active Families with Small Children	84,304	11.36
Mature Singles & Couples with Ailments	84,133	11.34
Mature with Ailments and Outdoor Occupations	52,678	7.10
Young & Old Mix with Ailments and Outdoor Occupations	148,039	19.95
<b>Total</b>	<b>741,926</b>	<b>100.00</b>
<i>Target</i>	<b>369,154</b>	<b>49.76</b>
<i>Non-Target</i>	372,772	50.24

### Target Group Definitions

- Young & Old Mix with Ailments and Outdoor Occupations (28,51,53,54,59,60,62)*
- Mature Singles & Couples with Ailments (19,24,38,43)*
- Mature with Ailments and Outdoor Occupations (32,39,40,55,56,57)*
- Active Families with Small Children (21,22,23,30,41,46)*

Trade Area: Hamilton CMA  
Benchmark: 2006 Country  
Base: Total Population



# Different Demographics for Different Segments

## Active Families with Small Children



- Urban, suburban, exurban
- Ages 35 to 44 -presence of small children
- Larger households (3 to 4 persons)
- Below average presence of respiratory ailments
- Physically active

## Mature with Ailments and Outdoor Occupations



- Town and rural
- Ages 65+ many retired
- Smaller households (2 persons)
- Heart disease, emphysema and diabetes
- Outdoor occupations

## Young & Old Mix with Ailments and Outdoor Occupations



- Urban
- Mix of young and old household maintainers
- Smaller households (1 person)
- Asthma, emphysema and chronic bronchitis
- Outdoor occupations in construction and trades

## Mature Singles & Couples with Ailments



- Suburban
- Ages 65+ many retired
- Smaller households (1 to 2 persons)
- Heart disease and chronic bronchitis
- Not physically active

# Different Social Values for Different Segments

## Active Families with Small Children



- Time stressed
- Low adaptability to complexity

## Young & Old Mix with Ailments and Outdoor Occupations



- Put work ahead of personal health
- Do not respond well to complexity

## Mature with Ailments and Outdoor Occupations



- Risk averse; desire security and stability
- Reluctant to adopt new technology

## Mature Singles & Couples with Ailments



- Very similar to Mature with Ailment and Outdoor Occupations
- Risk averse
- Likely to respond to traditional media

# Different Ways to Reach Different Segments

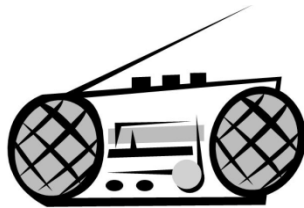
## Active Families with Small Children



## Young & Old Mix with Ailments and Outdoor Occupations



## Mature with Ailments and Outdoor Occupations



## Mature Singles & Couples with Ailments



# The Solution – what Hamilton did to reach out



**BE AIR AWARE: KNOW WHEN TO BE ACTIVE**

The new Air Quality Health Index relates air quality to your health on a simple scale from 1 to 10. The lower the number, the lower the risk.

**1** **2** **3** **4** **5** **6** **7** **8** **9** **10 or more**

Breathe with ease    Slow down if at risk    Watch for warning signs    Be active indoors!

**AQHI**  
Air Quality Health Index

Hamilton  
Public Health Services

Ontario    Protect your health. Know the numbers. Visit [www.hamilton.ca/aqhi](http://www.hamilton.ca/aqhi)    Canada



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# Questions?

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