



Pilot Mercury Fever Thermometer Take Back Program

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What is Mercury?

- Is a shiny silver-white, odourless liquid metal
- Is used in thermometers, blood pressure gauges, dental fillings, and other products
- Is released through human activities such as:
 - coal burning,
 - metal smelting, and
 - product breakage.



Why are we concerned?

- Levels of mercury in the environment have significantly increased
- Mercury vapours carried by wind currents can travel great distances
- Mercury may then be deposited in lakes, streams, forests and fields
- Mercury can be converted by bacteria to a more toxic form called methylmercury



Why are we concerned?

- Mercury concentrations increase up the food chain through a process called biomagnification
- Is toxic at very low levels and can have long-term negative effects on the health of ecosystems, wildlife and ultimately people.

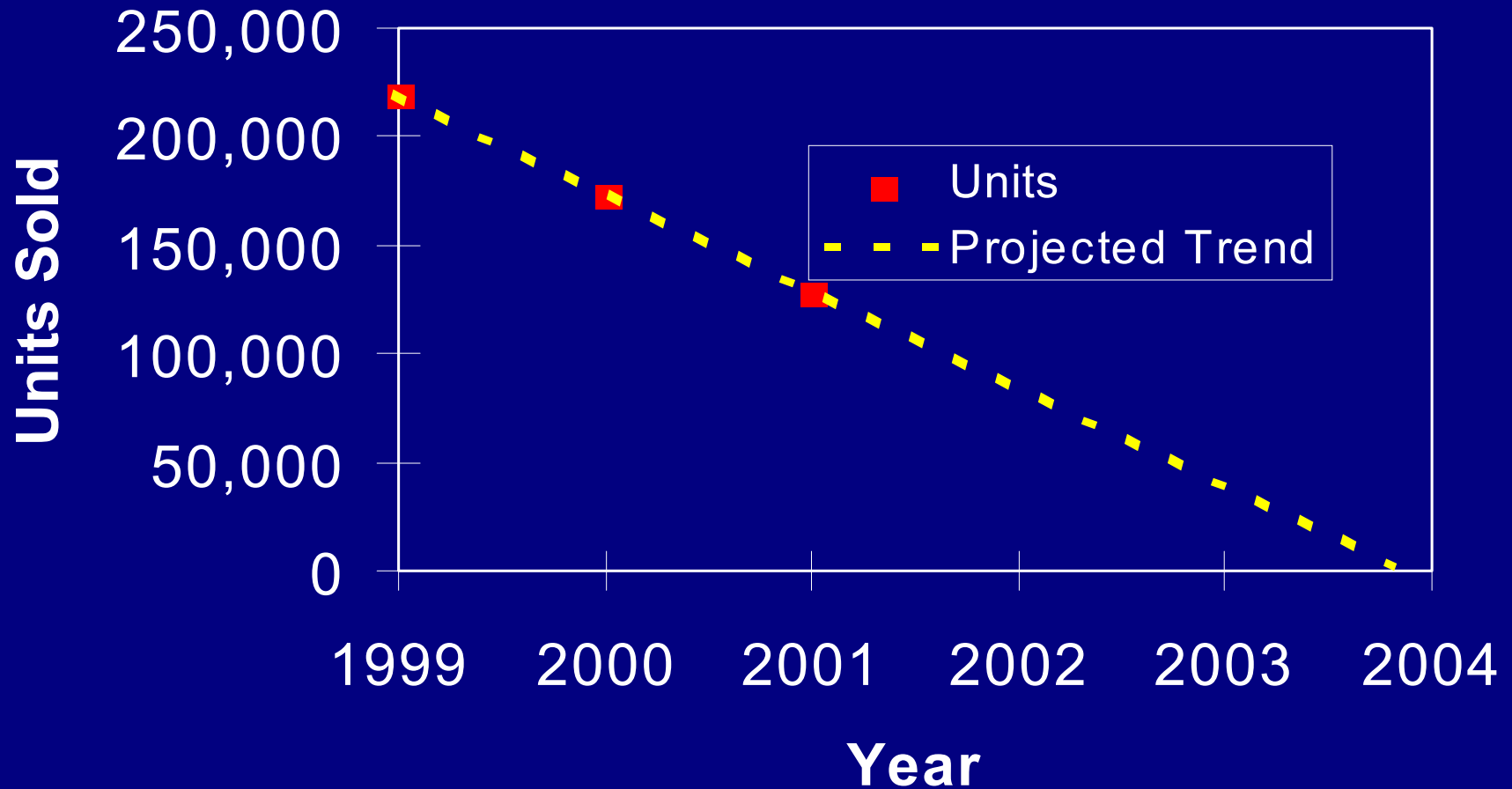


Our National Mercury Program

- **Canada-wide Standards under Canadian Council of Ministers of the Environment**
- **North American Regional Action Plan on Mercury**
- **Communications Program**
 - Mercury and the Environment web site
 - Mercury Knowledge Management System (USEPA/EC)
- **Scientific & Policy Research**
 - directed at filling gaps in science info for policy development
- **Reductions of Mercury Emissions from Products**
 - auto switches
 - dental amalgams
 - mercury fever thermometers, etc.



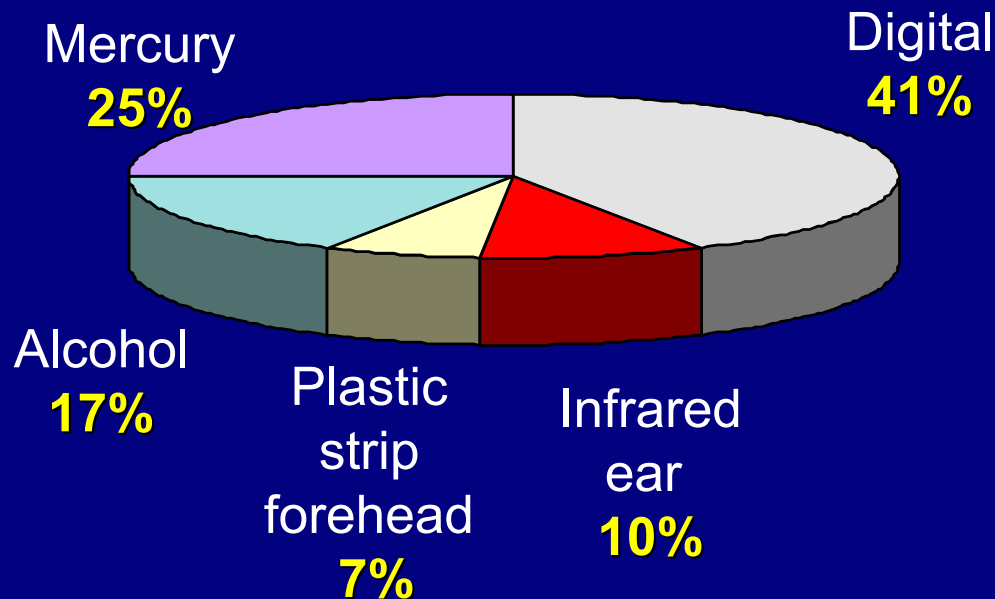
Mercury Fever Thermometer Sales





Fever Thermometers in Canadian Homes

There are about **2.7 million mercury fever thermometers** in Canadian homes* which is equal to approximately **2.7 tonnes**



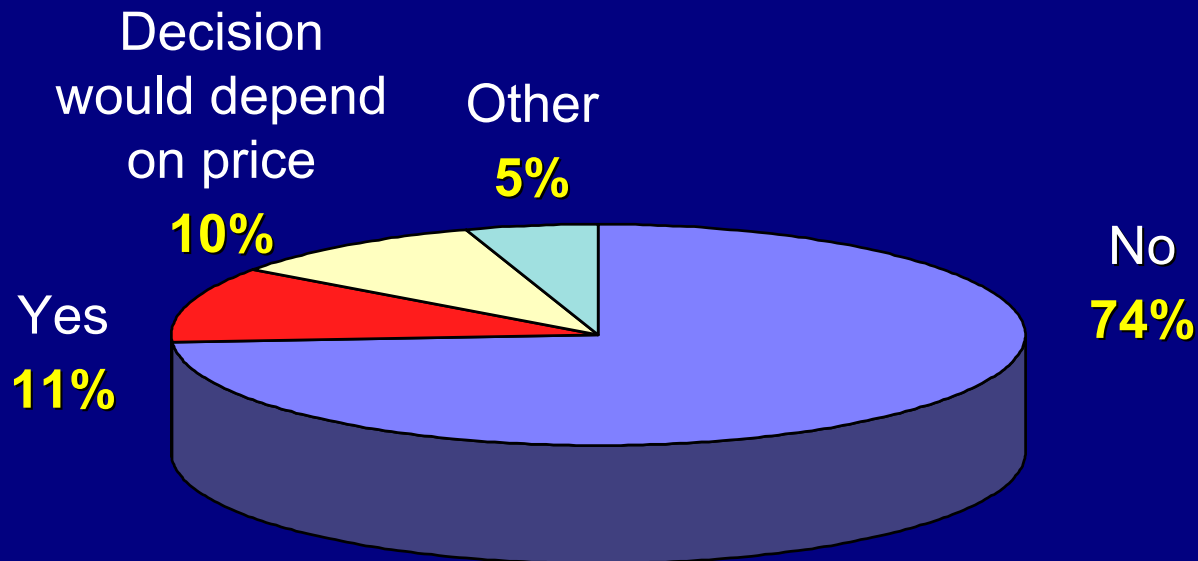
Total: 10.7 million
thermometers

* based on Environics Focus Canada survey of 2014 Canadian homes



Educating Consumers

Would you have bought your mercury thermometer if you had known that mercury thermometers are potentially dangerous to children and the environment?





Broken Mercury Thermometers

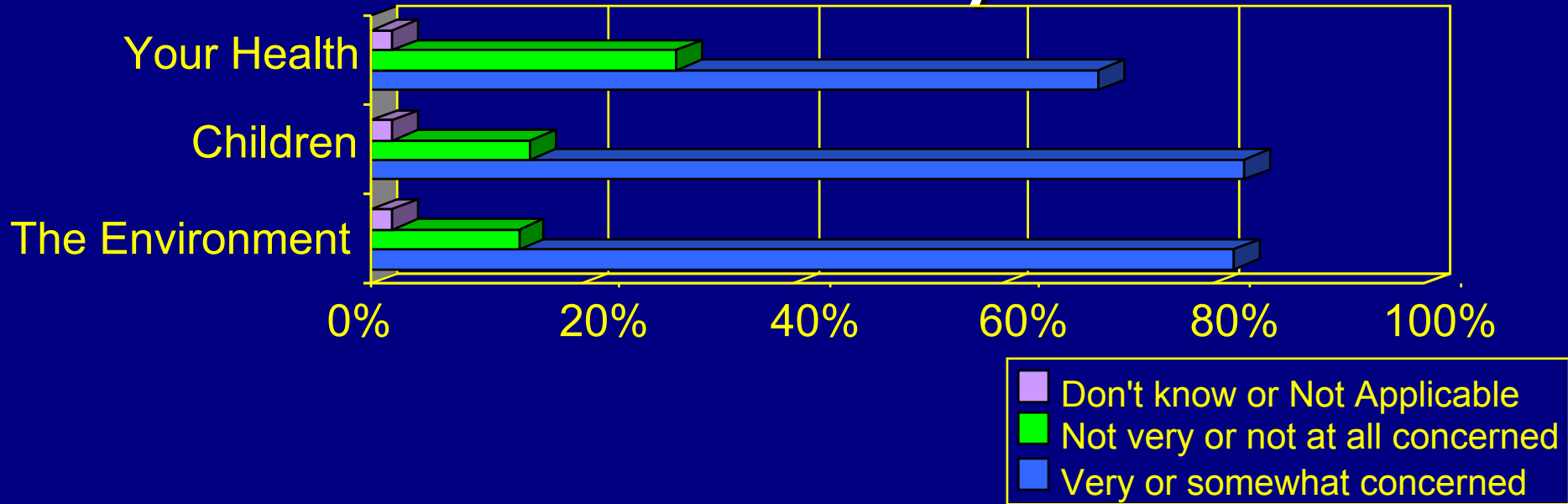
- 11% of those that have owned a mercury fever thermometer have broken one in the past five years.
- Up to 290,000 mercury fever thermometers could be broken in the next five years.
- Gaseous Elemental Mercury as an Indoor Air Pollutant ¹:
 - Exposure to mercury via indoor air is second only to fish consumption as a source of mercury in the general population.
 - Elevated mercury levels in study indicative of mercury from broken thermometers / thermostats.



What did people do with broken mercury thermometers?

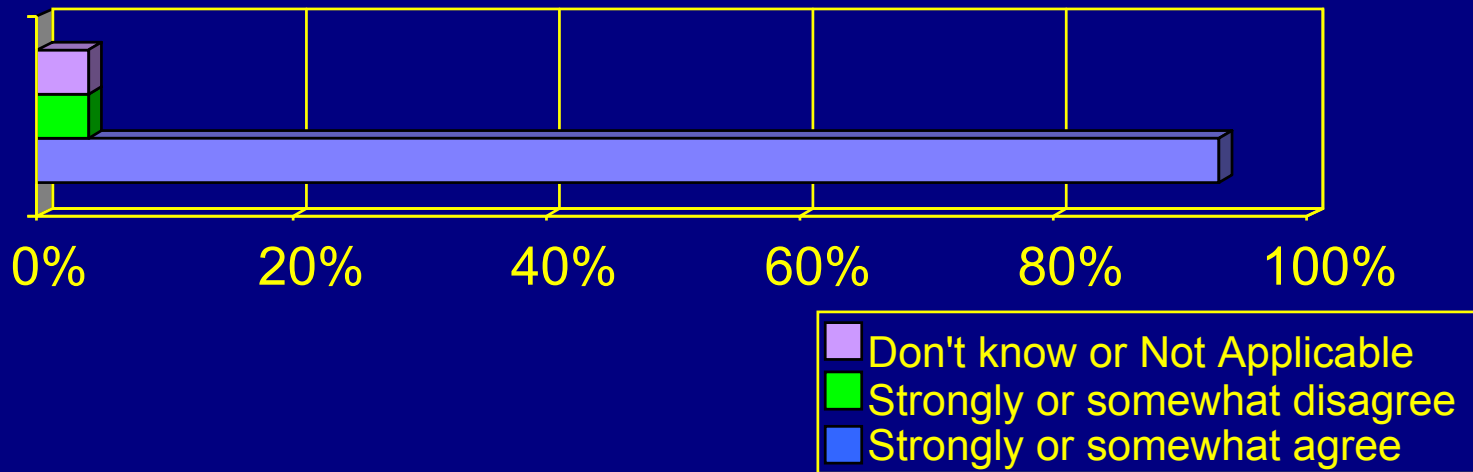
Disposal Method	% of sample
Disposed of in the sink or household garbage	57%
Collected by hand or by using a cloth	17%
Disposed of at hazardous or special waste depot	12%
Someone else took care of it	8%
Used a vacuum cleaner to clean up	1%
Other / Don't Know / Did Nothing	13%

How concerned are you about the effect of mercury on...?



Do you agree that...

Mercury pollution makes some fish unsafe to eat.





Pilot Mercury Thermometer Take Back

- Starts with interest from a thermometer distributor.
- Retail pharmacies are appropriate venue for thermometer return - product stewardship.
- Inform public of mercury product issues.
- How we proceeded . . .



U.S. Actions to Eliminate Mercury Thermometers

- Cities and states have enacted mercury thermometer bans.
- Most major U.S. retailers no longer selling mercury fever thermometers.
- Vermont state-wide Take Back.



Stakeholder Consultation

- Invited representatives from major pharmacies, associations, distributors, waste haulers, government and environmental groups.
- Presented information on why we were seeking a voluntary reduction of mercury thermometers.
- Asked for input on a pilot take-back program.



Challenges

- Waste transportation requirements
- Coupons
- Timing
- Handling mercury thermometers within pharmacies
 - Spills
 - Biomedical
- Cost and participation rate



Pilot Program Outline

- Three Ontario cities with previous mercury program activities: Thunder Bay, Ottawa and London.
- February 15 to March 15, 2002.
- Pharmacists to collect and store thermometers.
- Waste collected for recycling or other suitable disposal.



Pilot Program Agreement

- **Retailers**

- Eliminate mercury thermometer sales;
- Provide employee time / training; and,
- Advertising, including coupons, as feasible.

- **EC offers to provide:**

- Collection materials, with spill kits;
- Waste hauling and disposal;
- Pamphlets, other promotion;
- Public survey.



Pharmacy Participation

- Over 100 pharmacies participated.
 - Wal-Mart
 - Shopper's Drug Mart
 - Pharma-Plus, Rexall, Medicine Shoppe
 - Medi-Plus
 - Plus 12 independent pharmacies
- Many decided to participate "last minute".
- Therefore, limited additional promotion directly by pharmacies.

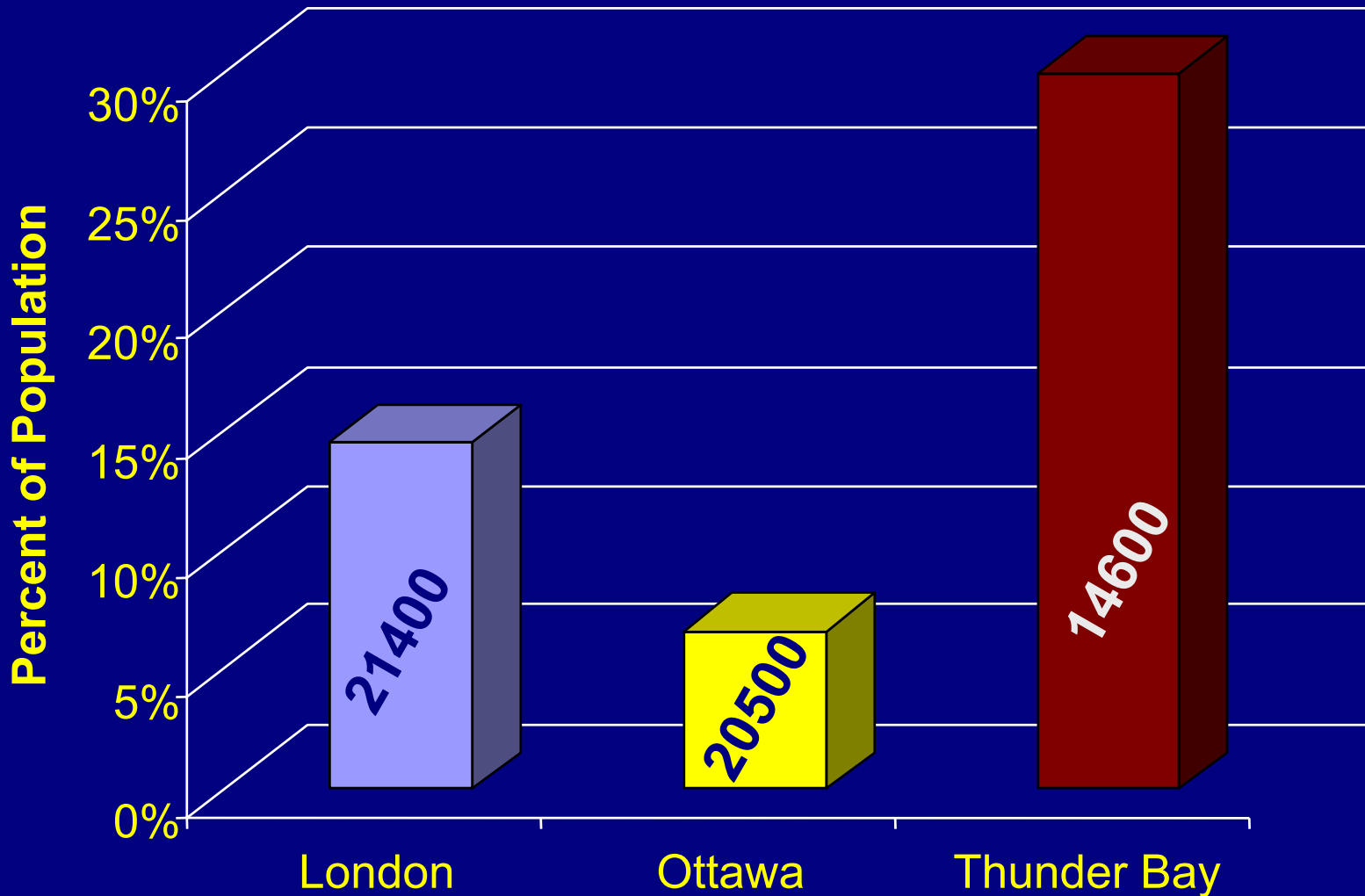


Media Coverage

- Program launch in Ottawa with Minister of Environment.
- Newspaper articles, radio coverage.
- Local television; Roger's Cable.
- Advertising in Thunder Bay, courtesy of EcoSuperior.



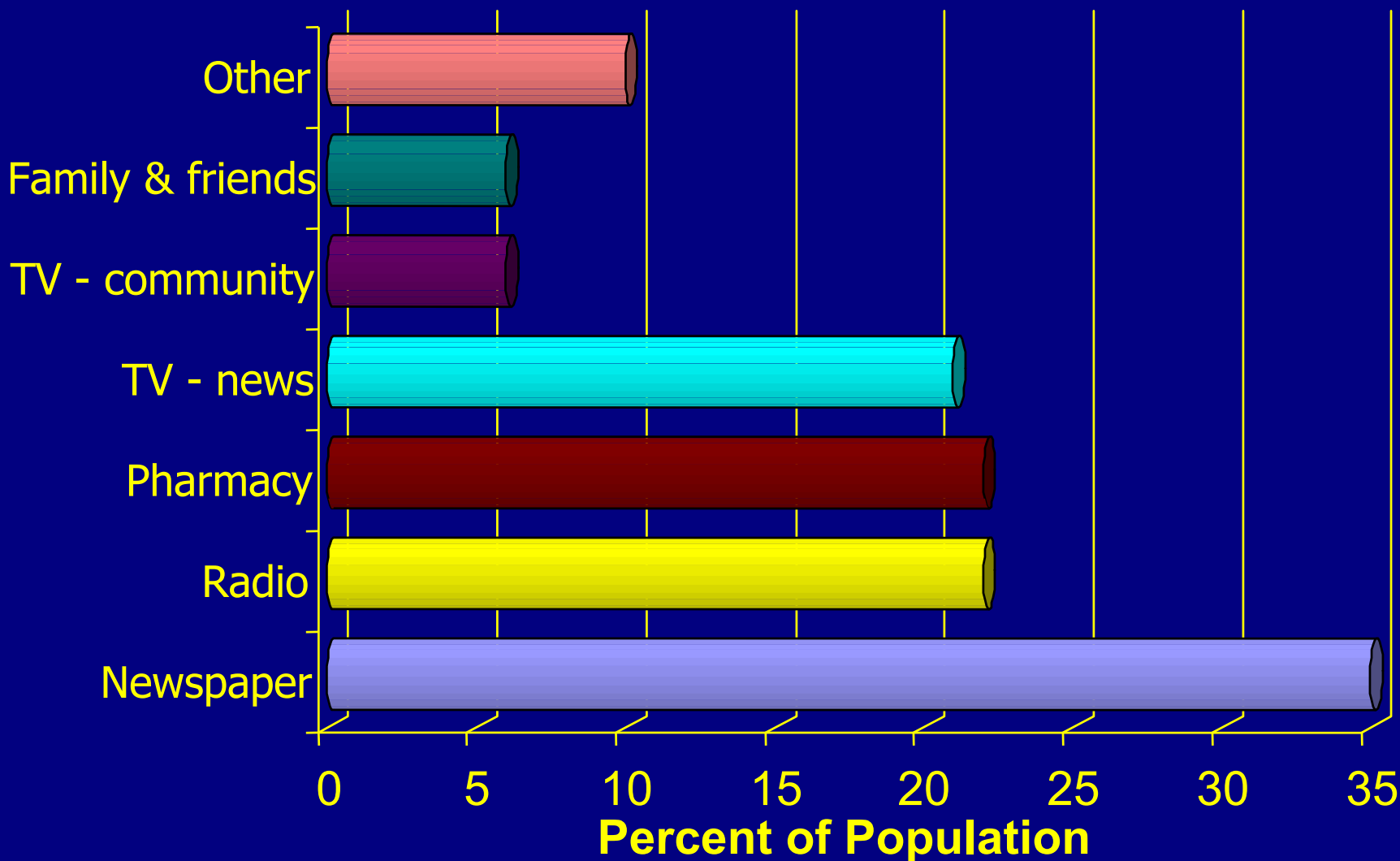
Results - Awareness





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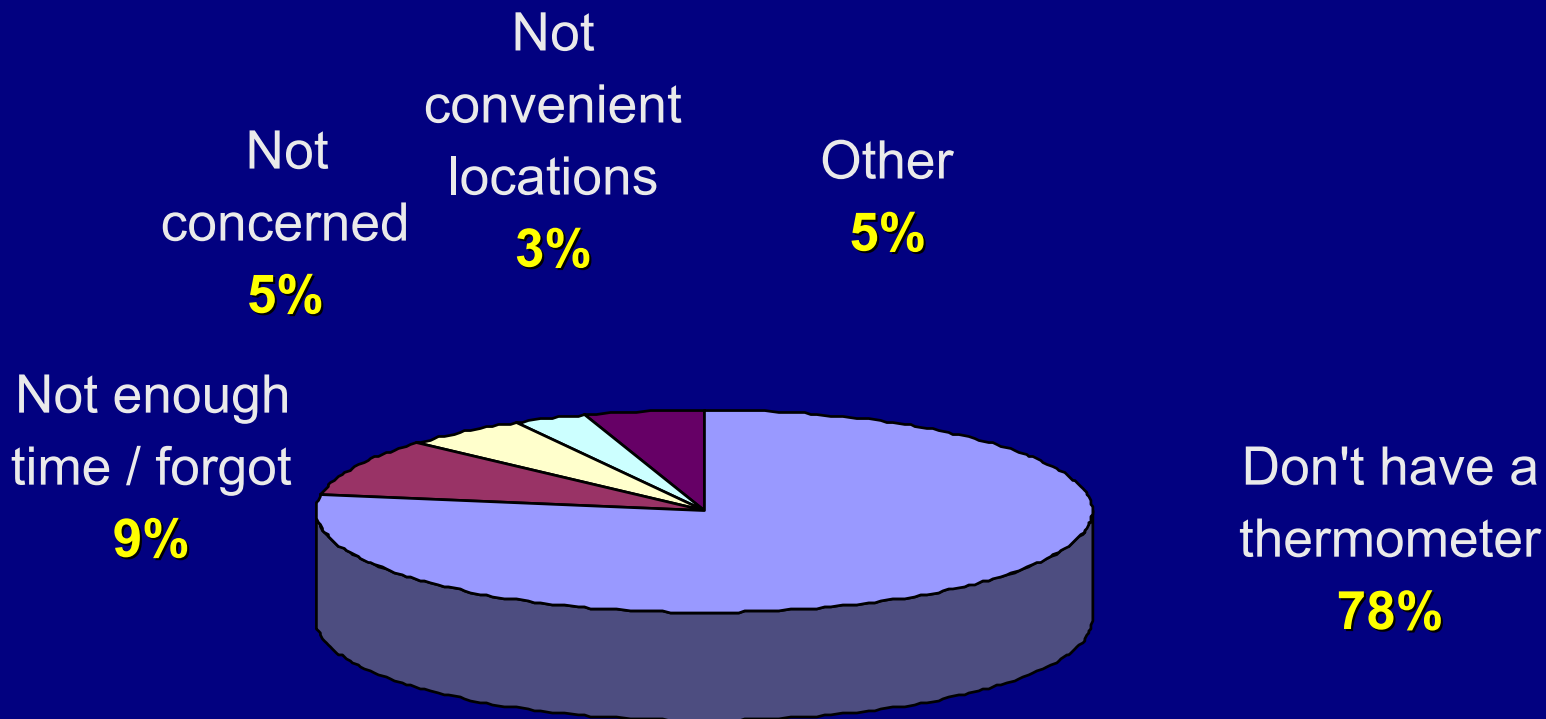
How did you hear about the program?



Results - Interest

Heard about the program, did not participate.

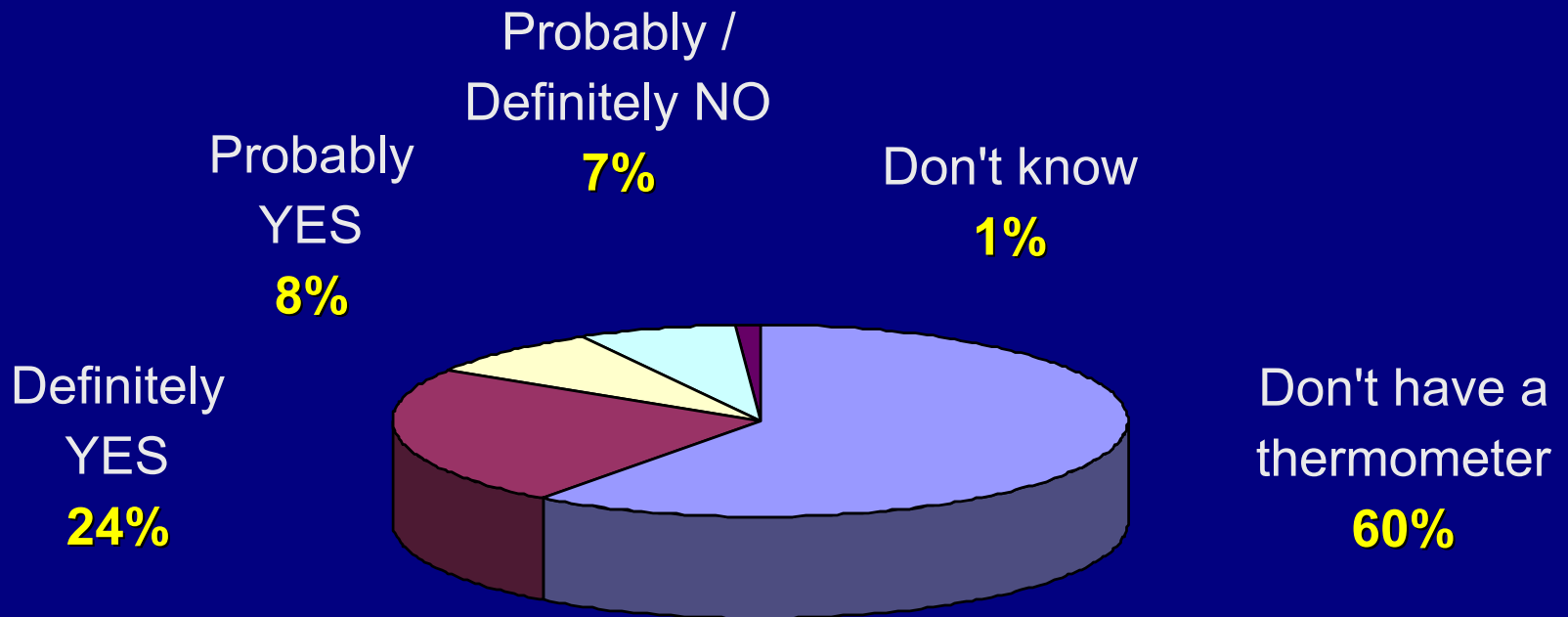
(78 out of 454)





Results - Interest

Those that did not hear about the program. Would they want to participate? (384 out of 454)





Results - Participation

- Overall, 1400 thermometers returned.
- Zero to 115 thermometers per pharmacy.
- Household participation rates:
 - London 2.9%
 - Ottawa 0.7%
 - Thunder Bay 2.5%




“From the Field”

Responses from Pharmacists

- Customers brought other products in - 16%
 - Accepted other products - 4%
- Displayed brochure - 41%
- Provided a coupon - 14%
- Want to participate again - 90%
- Don't want to participate:
 - Depends on head office - 7%
 - Toxic - 1%
 - Not our business - 1%
 - Too much trouble - 1%



Path Forward

- 
- Work towards eliminating sale voluntarily before next 'flu season
 - Now have an outline for developing national program.
 - Further work on cost reductions and exploring partners for National Take Back.





Mercury and the Environment Web Site

For More information please visit:



www.ec.gc.ca/mercury www.ec.gc.ca/mercure