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Creating a Network of Networks for Interdisciplinary Surveillance



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CPHAZ Symposium

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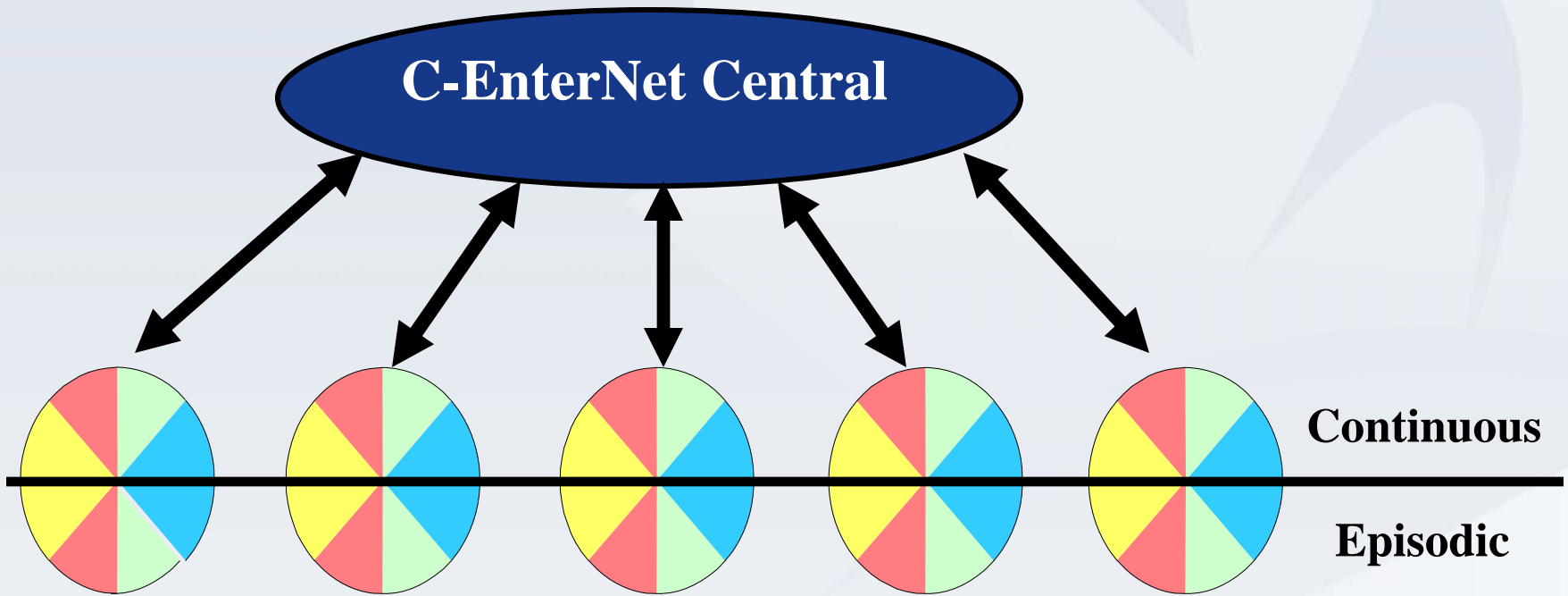
C-EnterNet Background

C-EnterNet is an integrated surveillance program designed to monitor human enteric illness and to inform food & water safety policy

OBJECTIVES:

- Detect changes in trends of **human enteric disease** incidence and **pathogen exposure** levels from food, animal and water sources
- **Source Attribution** – determine the proportion of human cases that are due to water, food & animal contact
 - Critical need to strengthen source attribution efforts in Canada and determine statistically significant risk factors for enteric illness

Framework



Sentinel Sites across Canada

Yellow	Human
Red	Food
Green	On-farm
Blue	Water

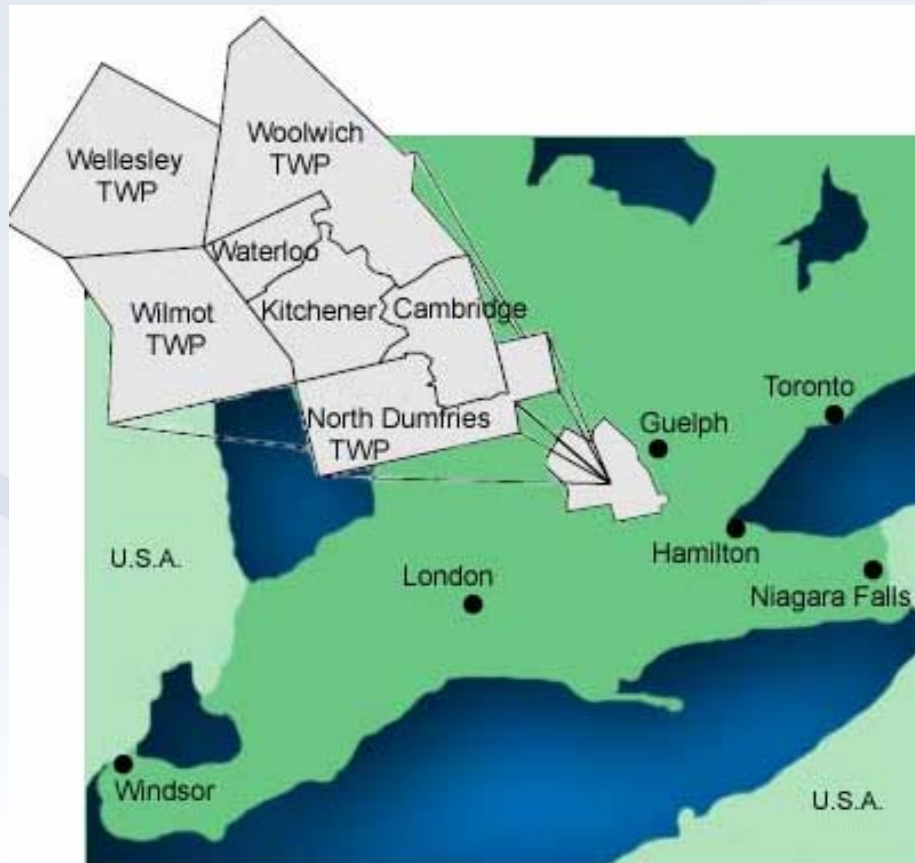
Pathogen Detection

Continuous and **Episodic**

	Human	Retail	Agriculture	Water
Bacteria	<i>Campylobacter</i> <i>Salmonella</i> <i>E. coli (O157:H7)</i> <i>Yersinia</i> <i>Listeria</i> <i>Shigella</i>	<i>Campylobacter</i> <i>Salmonella</i> <i>E. coli-generic</i> VTEC <i>Listeria</i> <i>Yersinia (pork)</i>	<i>Campylobacter</i> <i>Salmonella</i> <i>E. Coli (O157:H7)</i> <i>Yersinia (swine)</i> <i>Listeria</i>	<i>Campylobacter</i> <i>Salmonella</i> <i>E. coli (generic and O157:H7)</i> <i>Yersinia</i>
Viruses & Parasites	<i>Giardia</i> <i>Cryptosporidium</i> <i>Cyclospora</i> <i>Entamoeba</i> <i>Hepatitis A</i>	<i>Giardia</i> <i>Cryptosporidium</i> <i>Rotaviriu</i> <i>Norovirus</i>	<i>Giardia</i> <i>Cryptosporidium</i> <i>Rotaviriu</i> <i>Norovirus</i>	<i>Giardia</i> <i>Cryptosporidium</i>

Pilot Sentinel Site

Region of Waterloo



Selection Criteria

- Population: 508,000
- Innovative and pro-active Health Unit
- Urban and rural mix
- Grand River watershed passes through the cities and rural areas

C-EnterNet Exposure Assessment



Human case information
and enhanced risk factor information
collected through standardized
questionnaires

Enhanced
Lab
Testing



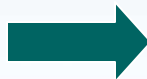
Meat sampling
•raw pork chops
•ground beef
•chicken breasts

Enhanced
Lab
Testing



Animal / Farm sampling
•Beef Dairy
•Swine Poultry

Enhanced
Lab
Testing



Surface Water testing
•5 sites
•Physical parameters
and pathogens

Enhanced
Lab
Testing

Outputs

- Annual Reports
 - 2005/2006 (1st 12 months)
 - 2006, (1st complete calendar year)
 - 2007 short and full reports
 - 2008 short report

<http://www.phac-aspc.gc.ca/c-enternet/index.html>

http://www.phac-aspc.gc.ca/c-enternet/index_f.html



- Presentations and Publications
- Other Activities
 - Newsletters
 - Enhancing Public health capacity
 - Training, education, lab capacity
- Network of Networks

Collaborating Labs Meeting

- Nine laboratories
- Clinical, food, water and animal
- Methodology issues
- Help understand each others roles and contributions to overall surveillance



Thank you!



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Ministry of Agriculture,
Food and Rural Affairs



Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada



Bureau of Microbial Hazards
BMH  BDM
Bureau des dangers microbiens



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