

CITY OF HAMILTON

PUBLIC HEALTH SERVICES
Planning & Business Improvement

TO: Mayor and Members Board of Health	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: June 18, 2012	
SUBJECT/REPORT NO: 2011 Annual Report to the Community and 2011 Research & Evaluation Report (BOH12010) (City Wide)	
SUBMITTED BY: Elizabeth Richardson, MD, MHSc, FRCPC Medical Officer of Health Public Health Services Department	PREPARED BY: Teresa Bendo (905) 546-2424 Ext. 7999
SIGNATURE:	Tara Hall (905) 546-2424 Ext. 2643

RECOMMENDATION

- (a) That the 2011 Report to the Community attached to Report BOH12010 as Appendix A be endorsed;
- (b) That the 2011 Research & Evaluation Report attached to Report BOH12010 as Appendix B be endorsed.

EXECUTIVE SUMMARY

The *Public Health Services 2011 Report to the Community and Research & Evaluation Report* fulfil the Board of Health's (BOH) commitment to disseminate information about the health of the community and about the programs and activities undertaken by PHS that support health promotion, health protection and disease prevention.

The objectives for the Public Health Services 2011 Report to the Community and Research & Evaluation report are to:

- Keep the community informed and up-to-date on current public health initiatives, including research activities;
- Demonstrate the work of public health practitioners and the impact of programs and services on the community;
- Provide access to the role of public health professionals and the services they provide to community agencies and residents of Hamilton; and
- Highlight the Board of Health goals for 2012.

Alternatives for Consideration – See Page 4

FINANCIAL / STAFFING / LEGAL IMPLICATIONS (for Recommendation(s) only)

Financial: Design, print and distribution costs approximately \$2,500 for 300 copies of the *Public Health Services 2011 Report to the Community* and 50 copies of the *2011 Research & Evaluation Report*. These costs are provided for within the 2012 budget.

There is no cost for translating the reports into French since as the MOHLTC French Language Translation service in Welland will be utilized.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND (Chronology of events)

PHS produced annual reports for 2006 and 2007 (BOH07014 and BOH08025). An annual report to the community was not developed for 2008 due to the redeployment of staff resources to respond to both waves of the H1N1 pandemic. A streamlined annual report was produced for 2009 and 2010 (BOH09016 and BOH11017).

PHS developed its first comprehensive research registry in 2009 (BOH09016) and has been producing them annually since then.

POLICY IMPLICATIONS

N/A

RELEVANT CONSULTATION

N/A

ANALYSIS / RATIONALE FOR RECOMMENDATION

(include Performance Measurement/Benchmarking Data, if applicable)

A majority of Ontario public health units/departments use similar means to communicate with their communities on an annual basis.

Feedback has been received from our community partners that they welcome ongoing information about public health programs and services. The annual report is a method to provide that ongoing communication.

The research report is disseminated amongst our public health colleagues across the province and to our local community partners. It raises the profile of public health research and evaluation within the City of Hamilton contributing to greater knowledge, partnership development and ultimately health of our community.

The 2011 report uses stories and statistics to describe the PHS Vision themes of innovation, efficiency and effectiveness. To reduce historic production costs, the size of the report was scaled down from 12 to 8 pages two years ago and will remain at that smaller size this year. Also, the number of printed copies was historically 1,000. Over the past several years this has been reduced to 300, as an electronic version is available on our website.

To improve efficiency and effectiveness, the report will again be distributed via electronic means to stakeholders who require multiple copies. A limited number of printed copies of the 2011 Research & Evaluation Report will be distributed to common stakeholders at the same time. Increasingly, more and more Public Health units are using electronic means to distribute their annual reports.

The 2011 Report to the Community will be available in English and French, as well as, in accessible formats upon request. Both the Report to the Community and the Research & Evaluation Report will be posted on the PHS website.

Research and evaluation are core aspects of the services PHS provides to both our local community and to the greater public health field. The release of the 2008 Ontario Public Health Standards signalled a new mandate for Ontario Public Health, where research and evaluation take an even more prominent role in public health practice. The Research & Evaluation report has been developed to highlight the breadth and depth of our work in this area.

ALTERNATIVES FOR CONSIDERATION

(include Financial, Staffing, Legal and Policy Implications and pros and cons for each alternative)

The BOH may choose not to endorse the reports.

Pro: None identified

Con: Lost opportunity to communicate to the community, and to demonstrate PHS impact in Hamilton and the province.

CORPORATE STRATEGIC PLAN (Linkage to Desired End Results)

Focus Areas: 1. Skilled, Innovative and Respectful Organization, 2. Financial Sustainability, 3. Intergovernmental Relationships, 4. Growing Our Economy, 5. Social Development, 6. Environmental Stewardship, 7. Healthy Community

Intergovernmental Relationships

- ◆ Maintain effective relationships with other public agencies

Social Development

- ◆ Residents in need have access to adequate support services

Healthy Community

- ◆ An engaged Citizenry
- ◆ Adequate access to food, water, shelter and income, safety, work, recreation and support for all (Human Services)

APPENDICES / SCHEDULES

Appendix A - 2011 Report to the Community to Report BOH12010

Appendix B - 2011 Research & Evaluation Report to Report BOH12010

Public Health Services 2011 Annual Report to the Community



Message from the Chair of the Board of Health

On behalf of the City of Hamilton, it is a tremendous honour to present the remarkable accomplishments and stories of service provision from Hamilton's Public Health Services.

Public Health Services is an essential keystone in the City of Hamilton. Through effective, innovative, and efficient programs, Public Health Services continues to improve the well-being of Hamilton citizens.

Public Health Services is comprised of an outstanding team of professionals and community

partners; and I thank them for their tireless and essential efforts. I want to congratulate Public Health Services for all of their hard work in 2011, as they work towards the promotion of innovation, engaging citizens, and providing diverse economic opportunities.

Hamilton is a community for all people and I am proud that the Public Health Services continues to hold the priorities of our citizens in the utmost regard.

Sincerely,

Robert Bratina
Mayor, City of Hamilton
Chair, Board of Health

Message from the Medical Officer of Health

The past year has seen many accomplishments for Public Health Services. We are working to decrease obesity in childhood, have developed a by-law to decrease exposures to smoking in parks and recreation areas, and implemented a new way to report the health effects of day-to-day air quality.

We're also excited about greater collaboration with the healthcare sector by beginning plans to move staff into the McMaster Downtown Health Campus.

I would like to thank the Board of Health members for their governance and support throughout 2011. I would also like to thank our dedicated staff, community partners, and volunteers who help us deliver our various programs and services to the community. With our combined efforts, we will make Hamilton the healthiest community possible.

Sincerely,

Dr. Elizabeth Richardson
Medical Officer of Health,
City of Hamilton
Public Health Services



Board of Health/ Councillors

Brian McHattie
Jason Farr
Bernie Morelli
Sam Merulla
Chad Collins
Tom Jackson
Scott Duvall
Terry Whitehead
Brad Clark
Maria Pearson
Brenda Johnson
Lloyd Ferguson
Russ Powers
Robert Pasuta
Judi Partridge



Calendar helps children learn and grow

It's a big step for a child to head off to Kindergarten and how is a parent to know if their little one is ready for learning? The Let's Go! calendar is a multi-agency collaboration that provides parents who register children in Kindergarten with tips on everything from nutrition to literacy.

Under the umbrella of Hamilton Best Start, the calendar subcommittee, led in 2011 by Public Health Services staff from

Family Health, brought together community partners to produce the calendar. Six thousand calendars were provided to parents at both school boards in Hamilton as they registered their children for Kindergarten.

The calendars provide monthly tips on helping children get ready for school. Hamilton Public Health Services provides such diverse information as getting to school safely, healthy eating and menu planning, physical activity, immunizations, healthy teeth, and childhood development.

Learn about pregnancy and birth from the comfort of home

In the Fall, a new on-line Prenatal Program was launched. It's an exciting alternative for parents who prefer on-line learning or cannot attend conventional childbirth classes due to bed-rest, scheduling conflicts or time constraints.

This interactive, web-based program includes animated illustrations, videos, voice-overs and games. Parents-to-be can access the online prenatal education from the comfort of their own home at times that are convenient for them. The program also provides optional sessions for participants to meet with a Public Health Nurse to practice hands on skills and get additional support.



Since its launch, about 100 people have begun their classes at their convenience.

What parents like about the program:

We liked how easy it was to navigate. Also, we enjoyed the videos. And, we appreciated the broad topics introduced. **I liked working at it from home at my own pace.** We didn't have to spend a bunch of Saturdays sitting in a class room. **The information provided was highly useful.** We could complete it at our own pace.



- A total of more than 525 participants registered in the Hamilton Prenatal Nutrition Project.
- 4,812 participant visits to the HPNP groups.
- 598 couples attended prenatal classes, 58 couples initiated on-line prenatal classes
- 279 car seats checked at car seat clinics and in partnership with Hamilton Police
- 1,144 parents provided 1:1 education and information about car seats
- 4,540 postpartum telephone contacts and 976 postpartum home visits to new mothers through the Healthy Babies, Healthy Children Program
- Approximately 6,000 calls to Health Connections

Coming together for healthier schools

When school staff, students, parents and the community engage in what's needed to support student learning it makes a difference for students. Elements of a Health Promoting School include:

- High-quality instruction and programs
- A healthy physical environment
- A supportive social environment
- Community partnerships

Public Health Services together with school boards have designated 48 elementary schools and all Public and Catholic high schools as Health Promoting Schools.

One example is at Saltfleet District High School where students became upset about a website that allows anonymous posting that they felt was cyberbullying. Students, staff, parents, the Public Health Nurse, and members of the community, came together as the Health Action Team to make bullying less acceptable. The <3notH8 (love not hate) campaign was born. This is a

School Immunization Program

With the provincial government seeking to have more students immunized through school-based immunization programs, Hamilton Public Health Services explored factors that influence parents providing consent. The

comprehensive strategy that saw students develop a number of initiatives bringing their theme of love not hate to other students. A flash mob organized in the atrium brought home the message in an innovative way. Positive messages were written on the sidewalk in chalk and even a trivia contest was organized. The Health Action Team partnered with student parliament and Positive Space groups to participate in the Day of Pink. A photo booth was set up and students, staff, public health, the police and community leaders were photographed wearing rings embedded with the <3notH8 message. The engagement of students and staff has led to a healthier learning environment for students.

What are the benefits of Health Promoting Schools?

- enhanced student voice and leadership development
- increased concentration and ability to learn
- reduced use of drugs, alcohol and tobacco
- improved fitness
- reduced dropout rate

immunizations are voluntary and offer protection against Meningococcal disease, Hepatitis B, and Human Papillomavirus (HPV).

In the Summer of 2011, a review of available literature was conducted and found that parents want information provided in plain, easy to understand language with infographics to explain difficult



- 4,700 clinical sessions provided to children and youth at Child and Adolescent Services.
- 1,594 individuals served for concerns about alcohol, drugs, or gambling
- 22 presentations in the community regarding issues of alcohol, drugs, and gambling
- 1,638 Chlamydia cases were reported and investigated in 2011. This is an increase of 96 cases from 2010.
- 3,951 claims for Dental Treatment were provided for children 0-18 under the Children in Need of Treatment program (CINOT) and Healthy Smiles Ontario (HSO).
- 11.5% of all JK, SK, and Grade 2 students screened through the School Dental program had urgent dental needs.
- 5,796 doses of HPV vaccine, 8,586 doses of Hepatitis B vaccine, and 5,081 doses of Meningococcal vaccine administered in school and community-based clinics.
- 750 appointments at the smoking cessation clinic and 120 new clients visited the clinics.
- 3,066 inspections conducted under the Smoke-Free Ontario Act resulting in 4 prohibitions, 40 warnings and a total of 181 charges.

concepts. They also prefer different levels of information such as basic information including references and where to look for more details. People want to know both the risks of diseases and the potential risks associated with the vaccines. Parents' diverse information needs can be met through the use of a variety of media such as print, social media, email, professional advice, and internet.

The literature said that this is what parents wanted but Hamilton

Air Quality Health Index helping Hamilton breathe easier

The average person takes about 20,000 breaths a day. That's an amazing 10,000 litres of air that pass through your lungs every day and now you can find out how all that air affects your health and when it's best to be active. The Air Quality Health Index is a new tool that measures air quality in terms of your health.

The Air Quality Health Index is simple. It measures air quality in relation to your health on a scale from 1 to 10. A reading of 1 represents a low risk to your health and 7 or greater represents a high risk. (On rare occasions, the Air Quality Health Index may be 10+, which means a very high risk.)

The Air Quality Health Index is

Public Health wanted to be sure that this was also what parents in this community wanted. In the Fall, Public Health surveyed 376 parents across Hamilton to confirm the findings of the literature review. Based on the results, Hamilton Public Health Services will be developing new resources to provide parents with the information that they want and need about the immunizations available through the schools.

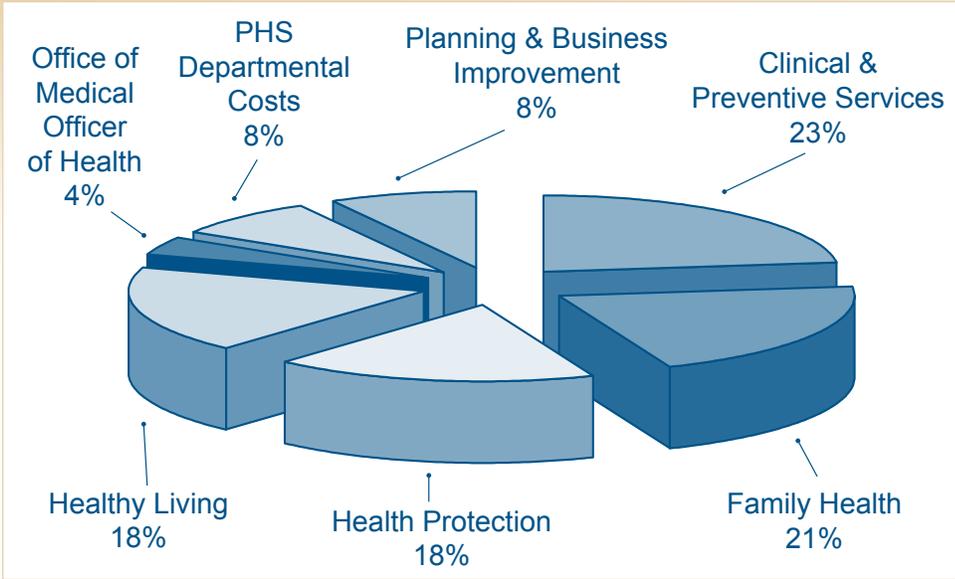


more than just a number – it's a tool that helps you plan a healthy day. Since strenuous activities increase the amount of air you breathe, the Air Quality Health Index can help you decide when to enjoy the benefits of physical activity and when to reduce or reschedule your activity.

You can also get more information about the Index at www.hamilton.ca/aqhi and our local reading at ww.airhealth.ca. Information is updated hourly and a forecast is also provided for the next day.

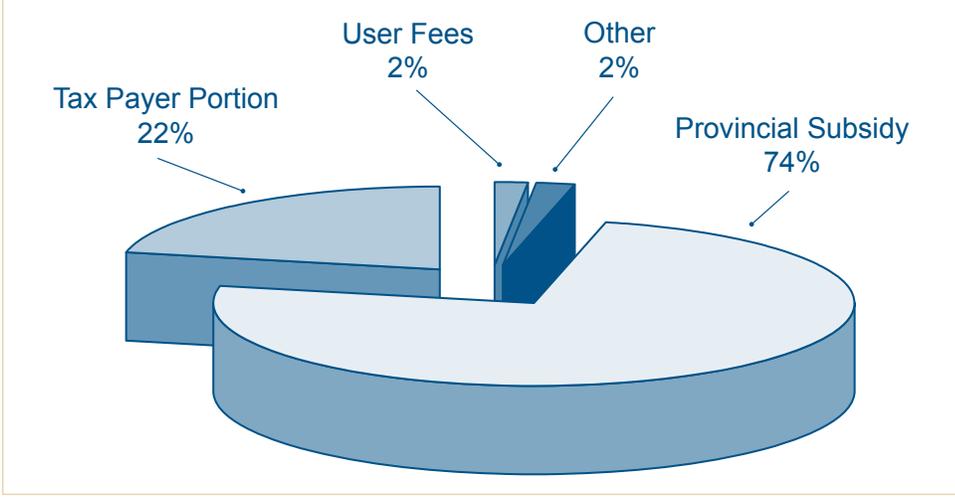
- 1,298 human exposure investigations conducted through Rabies Control
- 56 people received rabies post exposure vaccine to prevent human rabies
- 50 reports of adverse public drinking water events investigated through the Safe Water Program
- 82 Risk Assessments conducted on regulated Small Drinking Water Systems
- 397 calls to the Safe Water Information Line
- 100% inspection completion rate for recreational water facilities
- 1,539 Health Hazard complaint investigations conducted
- 406 Food Safety complaint investigations conducted
- 1,127 Reportable Disease investigations conducted (Non Sexually Transmitted Infections)
- 131 Institutional outbreaks investigated
- 2,221 routine inspections conducted on Personal Service Settings, Daycares and Residential Care Facilities
- 5,461 routine food premises inspections
- 2,552 food handlers trained and certified through the Food Safety program
- 38 ticks submitted and identified
- 127 West Nile Virus Standing Water Complaints Investigated
- 42 adult mosquito traps set weekly June to October with 31 positive results for West Nile virus in 18 of the traps
- 183,261 catch basins treated over four rounds to control developing mosquitoes
- 193 treatments to 73 water sites to control developing mosquitoes in surface waters on City lands

2011 B U D G E T



Division	Gross Budget	Percentage
Clinical & Preventive Services	10,943,740	23%
Family Health	9,851,312	21%
Health Protection	8,504,530	18%
Healthy Living	8,677,260	18%
Office of Medical Officer of Health	1,859,370	4%
PHS Departmental Costs	3,709,850	8%
Planning & Business Improvement	3,868,270	8%
Total	47,414,332	100%

R E V E N U E



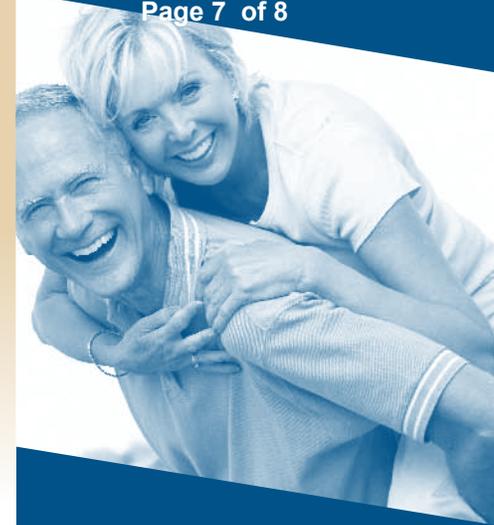
Moving Forward

2012 aspirations

- Finalize plans for Downtown McMaster Health Campus and consolidation of Public Health Services
- Reduce health inequities through Neighbourhood Strategy & reorienting programs to impact Social Determinants of Health
- Develop mental health and addictions services coordination strategy with community partners
- Develop strategy to decrease low birth weight by targeting smoking, nutrition, and access to primary care
- Improve access to children and family services in collaboration with community partners through the development and implementation of a single access point initiative
- Develop a plan to prevent childhood obesity
- Protect, promote, and support breastfeeding for healthy mothers and babies by achieving Baby Friendly Community Accreditation status by 2014
- Implement Smoke-Free Outdoor Recreational Areas by-law
- Reduce health risks related to environmental issues
- Develop and deliver an environmental lead awareness program to reduce exposure to environmental lead for high-risk groups
- Improve analysis and use of data in evidence-based decision making and management
- Continue to implement electronic systems for client scheduling and registration, documentation, and clinic management
- Ensure critical demand services are provided in a timely manner

2012 challenges

- Planning for proposed consolidation of services and staff in downtown Hamilton
- Incorporating the social determinants of health approach into practice
- Success of health goals is dependent upon multi-sector collaboration
- Provincial Accountability Agreement continues to evolve
- Continuing evolution of the provincial public health system
- Skill development for staff in core Public Health competencies and management
- Service delivery review & performance measurement
- Upgrading technology to meet client needs, professional standards, and mobile workforce
- Staff recruitment, especially for technical positions



PUBLIC HEALTH SERVICES

OUR Vision

To be the best place in Canada to raise a child, promote innovation, engage citizens and provide diverse economic opportunities.

OUR Mission

WE provide quality public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Values

ACCOUNTABILITY
COST CONSCIOUSNESS
EQUITY
EXCELLENCE
HONESTY
INNOVATION
LEADERSHIP
RESPECT
TEAMWORK

GENERAL CONTACT INFORMATION

Alcohol, Drug and Gambling Services	905-546-3606
Child and Adolescent Services	905-570-8888
Community Mental Health Program	905-528-0683
Dental Clinic	905-546-2424, ext. 3789
Environmental Health Inspection Duty Line	905-546-3570
Health Connections	905-546-3550
Nutrition and Physical Activity Promotion	905-546-3630
Reportable Diseases Line	905-546-2063
Safe Water Program	905-546-2189
STD and Sexual Health Hotline	905-528-5894
Tobacco Hotline	905-540-5566
Tuberculosis (TB) Information and Reporting	905-546-2424, ext. 6636
Vaccine Information Line	905-540-5250
West Nile Virus Information	905-546-3575
Workplace Health	905-546-2424, ext. 3065

For clinic locations and information, and for all other inquiries please visit our website: www.hamilton.ca/publichealth

Or e-mail us at
publichealth@hamilton.ca

City of Hamilton Information Line:
(905) 546-CITY

Mailing Address:
**Office of the Medical Officer of Health
1 Hughson Street North, 4th Floor
Hamilton, Ontario L8R 3L5**



Ontario Council
on Community
Health Accreditation

Acknowledgements

This report was prepared by the Applied Research & Evaluation Team, Planning & Business Improvement Division at the City Of Hamilton, Public Health Services. Project leads provided the summaries for the individual research and evaluation projects.

The report is available on the City Of Hamilton website.
The report is available in French. Ce rapport est disponible en français.

For more information or for a copy of the report in French please contact:

Colleen Van Berkel
Manager, Applied Research & Evaluation
Planning & Business Improvement
Public Health Services, City of Hamilton
1 James St. South, 8th Floor
Hamilton, Ontario
L8P 4R5
905-546-2424 ext 5916
Colleen.VanBerkel@hamilton.ca

Recommended citation:

Hamilton Public Health Services. (2012), 2011 Public Health Services Research and Evaluation Project Report. Hamilton, ON: Author.

Copyright information:

Copyright for this document belongs to the City of Hamilton, Public Health Services. Permission is granted for the reproduction and or adaptation of this document for non-commercial and educational purposes as long as City of Hamilton, Public Health Services is credited.

Preface

I am pleased to share with you the 2011 Public Health Services Research and Evaluation Project Report. This report highlights research and evaluation initiatives undertaken at Hamilton Public Health Services. Research and evaluation are core aspects of the services we provide to both our local community and to the greater public health field

Many of our research and evaluation projects are undertaken with collaborative partners. By working with our partners, both within the City of Hamilton and across the province, we are able to achieve a much greater impact in our public health initiatives.

We hope you find this report interesting and informative. If you would like additional information about any of the projects summarized within the report please do not hesitate to contact the designated health unit contact for that study.

Colleen Van Berkel
Manager, Applied Research & Evaluation
Planning & Business Improvement
Public Health Services, City of Hamilton

Research Partnerships

The research and evaluation projects highlighted in this report would not be possible without supportive, collaborative relationships with our many partners. We would like to take the opportunity to thank and acknowledge our valuable research and evaluation partners.

Catholic Children's Aid Society of Hamilton
Children's Aid Society of Hamilton
Public Health Research Education Development Program
Community Child Abuse Council
Hamilton Best Start
Hamilton Community Foundation
Health Canada Matthew Lawson
McMaster Child Health Research Institute
Ministry of Children and Youth Services
Nursing Secretariat
Ontario Ministry of Health and Long-Term Care
Ontario Ministry of the Environment Matthew Lawson
Provincial Centre of Excellence for Children and Youth Mental Health at CHEO
Randolph Group

TABLE OF CONTENTS

Acknowledgements..... 1
Preface2
Research Partnerships2

FOUNDATIONS

Management Learning Needs Assessment4

CHRONIC DISEASE & INJURIES

Falls Prevention in Older Adults Situational Assessment.....5
Workplace Health Situational Assessment6
Comparison of a Provincial Fixed Date/Hospital Admission vs. Regional Respiratory
Syncytial Virus (RSV) Activity in Determining Seasonal RSV Prophylaxis.....7

FAMILY HEALTH

Feasibility & Acceptability of the Nurse-Family Partnership
Home Visitation Program in Ontario.....8
Evaluation of Public Health Nurse Secondment Role with
Hamilton Family Health Team.....9
Perinatal Mood Disorder Resource Package: Impact on
Primary Care Providers' Attitudes and Practices 10

INFECTIOUS DISEASE

Vaccine Preventable Disease (VPD) School Program Situational Assessment..... 11
West Nile Virus Communication Survey 12
Tick and Lyme Disease Knowledge and Awareness Evaluation..... 13

ENVIRONMENTAL HEALTH

North Hamilton Child Blood Lead Study..... 14
City of Hamilton Air Quality Health Index (AQHI) Special Events Outreach Evaluation
Report 2011 15

FOUNDATIONS

Project Title: Management Learning Needs Assessment

Investigators: Kelty Hillier, Carolyn Hureau, Luanne Jamieson, Angie Bennett, Colleen Van Berkel & Work Group 6 Members: Franci Carr, Marie Verbickas, Michelle Baird & Debbie Sheehan

Health Unit Contact Person: Kelty Hillier

Background: Public Health Services (PHS) does not currently have a formal training and development program for managers, but the need for such a program has been identified by both PHS staff and the Organizational Structural Review conducted by the Randolph Group in 2010. Work Group 6 (WG6) and the Applied Research & Evaluation team were asked to conduct a Needs Assessment to determine the learning and professional development requirements for PHS managers.

Research Objectives: 1) To determine the current competency development requirements of PHS managers in the City of Hamilton; and **2)** To align PHS managers' priority learning and development needs with identified priorities from Public Health Services Management Team (PHSMT), corporate Human Resources/Senior Management Team, and the current research evidence.

Methods: A mixed methods design was employed that included a literature review, an online survey available to all PHS managers and PHSMT members; and a focus group involving a small group of managers across all five PHS divisions.

Results: Managers identified four important competency areas for training and development: Financial Management, Developing Others, Conflict Management, and Communication. PHS managers also noted that the ideal format for the program would incorporate several different learning modalities and consider both the individual's preferred learning style and the suitability of the medium to the message (i.e. content).

Conclusions: PHSMT and WG6 are working to develop a Management Development Program based on the recommendations from the Needs Assessment.

Project Timeline: November 2010 – August 2011

Project Funding Source and Amount: Internal funding

CHRONIC DISEASE & INJURIES

Project Title: Falls Prevention in Older Adults Situational Assessment

Investigators: Linda Strobl, Corinne Filer, Erin Fuller

Health Unit Contact Person: Sue Connell

Background: Falls have been identified as a major Public Health issue for Hamilton. The area of falls prevention in older adults has been recognized as requiring increased resources from Public Health Services. A situational assessment was deemed to be required to assist Hamilton Public Health Services to determine next steps in programming to address falls prevention in older adults.

Research Question: What strategies are recommended for Hamilton Public Health Services to address falls prevention in older adults in Hamilton?

Methods: Data was gathered primarily through a literature review and quantitative surveys of internal and external stakeholders.

Results: The literature review revealed that there is much research at the individual level and some research available at the community and policy levels; however, minimal literature exists related to falls prevention with community-dwelling older adults at the interpersonal and organizational levels. Results from the surveys of internal and external stakeholders showed that there is a variety of work occurring in Hamilton related to falls prevention, but it is rarely coordinated and is not always identified as falls prevention work.

Conclusions: The situational assessment exposed many gaps in best practice falls prevention activities in Hamilton and a lack of community collaboration and engagement on the issue; these gaps present a wide variety of opportunities for PHS. Overall, the gaps are most profound at the interpersonal, organizational, and community/policy levels of the ecological model. Given the interactions between the individual and their environments, it is critical that falls prevention activities include both individual and environmental level interventions in order to achieve the greatest changes in health behaviour.

Project Timeline: March to August 2011

Project Funding Source and Amount: PHS Staff Time

CHRONIC DISEASE & INJURIES

Project Title: Workplace Health Situational Assessment

Investigators: Angie Bennett, Eunice Chong, Kelty Hillier, Lisa Beaudoin, and Stephanie Sciberras

Health Unit Contact Person: Lisa Beaudoin

Background: This project was undertaken to inform the development of supportive environments and implement related policies for workplace health in accordance with the 2008 Ontario Public Health Standards Population Health Assessment & Surveillance Protocol requirements.

Research Questions: **1)** What are Hamilton workplaces currently doing in terms of workplace health? **2)** What is the most effective role for public health in creating supportive environments and related policies in workplaces? **3)** What supports would Hamilton workplaces need to create supportive environments in relation to chronic disease risk factors to enhance workplace health in their workplaces?

Methods: Internal and external stakeholder feedback was gathered using: **1)** semi-structured interviews with staff currently or previously involved in the Healthy Workplace Team; and **2)** survey data from participants at a workplace health event. Additional information came from a literature review and from Hamilton-specific population health data.

Results: Most Hamilton workplaces focus on program-level interventions and identify health and safety as their main workplace health priority. Workplaces identified lack of leadership from senior management as the main barrier to implementing workplace health initiatives, followed by poor employee engagement and lack of on-site trained staff. Workplaces need assistance to create supportive cultures, resource support and incentives. The project identified that the role of public health should be in supporting and collaborating with workplaces, providing resources and networking opportunities, and advocating for policy change at both the local and provincial levels. Mental health was also identified as an area that requires more attention in workplaces.

Conclusions: The workplace health promotion team should: **1)** Explore ways to enhance interest from senior management and employees' engagement on workplace health and wellness initiatives; **2)** Continue to emphasize the roles of public health in advocacy and resource support in comprehensive workplace health promotion; **3)** Include workplace mental health and work stress as one of the components in a comprehensive workplace health promotion strategy; and, **4)** Understand the differences in needs from businesses of different sizes and sectors to more effectively promote and support workplace health and wellness initiatives.

Project Timeline: May 2010 – February 2011

Project Funding Source and Amount: PHS staff time

CHRONIC DISEASE & INJURIES

Project Title: Comparison of a Provincial Fixed Date/Hospital Admission vs. Regional Respiratory Syncytial Virus (RSV) Activity in Determining Seasonal RSV Prophylaxis

Investigators: Bosco Paes, Andrew Latchman, Carole Craig, Wendy Pigott, & Nancy Greaves

Health Unit Contact Person: Nancy Greaves

Background: The start of the RSV season is defined by a fixed date that is set provincially. The end is defined by RSV admission activity to local hospitals. This is influenced by both the populations serviced and by the admission patterns of individual physicians. The defined prophylaxis period may result in inadequate or excessive doses. Recently, lab testing results have become more timely and literature suggests that percent positivity can predict the RSV season at the regional level.

Research Objective: To evaluate the use of laboratory isolate data on a regional basis (Hamilton) and scientific guidelines to better predict the RSV season so prophylaxis can be provided more logistically, adequately, and cost-effectively.

Methods: Local virology lab data was used to determine regional RSV percent positivity. The definition of the RSV season was modified and evaluated by comparing the proportion of RSV positive & negative isolates that fall in and outside of the defined RSV season and then applied to regional historical data as the standard. The RSV seasons were described by: start and finish dates, duration, and number of prophylactic doses required for high risk infants. As well, the current provincial approach of setting the dates for the RSV season was compared with using a fixed date to annually set the season based on five years of previous data.

Results: The Hamilton RSV pattern closely reflects provincial seasonality. The common RSV season definition excluded a substantial number of positive tests when applied to all isolates but not when applied to isolates from children 0-18 years. The prophylactic period definitions were similar; however both provided a longer coverage window than was required for the observed RSV season.

Conclusions: The prophylactic period defined by percent positivity performed equally well compared to the prophylactic period defined by fixed date/admissions. Since the former is easier to apply in a practical setting, it could be used as an alternative method, particularly in regions that may substantially differ from the provincial RSV season pattern. Improvements can be made by reducing the number of excess doses administered to high-risk infants which suggests there is value in exploring prospective surveillance of laboratory isolates for setting prophylactic period dates.

Project Timeline: 2011- 2012

Project Funding Source and Amount: PHS Staff Time

FAMILY HEALTH

Project Title: Feasibility & Acceptability of the Nurse-Family Partnership Home Visitation Program in Ontario

Investigators: Dr. Susan Jack, Dr. Harriet MacMillan, Debbie Sheehan, Dr. Michael Boyle, Dianne Busser, Dr. Jean Clinton, Dr. Christine Kurtz-Landy, Dr. Christopher Mackie, Dr. Alison Niccols, Ruth Schofield and Dr. Olive Wahoush.

Health Unit Contact Person: Dianne Busser

Background: The Nurse-Family Partnership (NFP) is an intensive nurse home visitation program delivered from early pregnancy until the child is two years old. The NFP model of home visitation has been identified to improve maternal-child health and prevent child abuse and neglect. While the NFP has been extensively evaluated and implemented in the US, its effectiveness in Canada is still unknown.

Research Questions: 1) Can the NFP intervention be implemented in Canada?
2) What adaptations are required to increase the acceptability of the intervention to health service providers and to meet the needs of Canadian families?

Methods: Pilot study recruitment occurred between June 2008 and Sept 2009. A total of 424 prenatal referrals were assessed for NFP eligibility criteria: 21 years of age or less, low-income, referred before the end of the 28th week of pregnancy and first time birth. Of these referrals 135 were eligible and 108 women consented to participate.

Results: To date 54 of the 108 participants have graduated from the program. In-depth interviews were conducted with 38 NFP clients, 14 family members and 24 community professionals. Processes to adapt and implement the NFP were explored across seven focus groups with public health nurses and managers. Eighty documents were reviewed to identify implementation challenges.

Conclusions: The NFP is acceptable to mothers, public health nurses, and community partners. Participants value the relationship developed with the PHN, expert knowledge, continuity of care provider, and accessibility of this form of health services. Nurses feel intervention helps in meeting the needs of hard-to-engage clients and their families, allows them to work to the full scope of practice, and report an increased sense of professionalism. Community partners feel that it meets the needs of an under serviced population, provides a unique focus on prevention, is an innovative evidence-based program, and value the expert nurse knowledge, diversity of skills, and autonomy to collaborate. The NFP model requires minor adaptations to increase the acceptability of the intervention to Canadian stakeholders.

Project Timeline: 2008 - 2012

Project Funding Source and Amount: \$284,149 from multiple funders: Children's Aid Society of Hamilton, Catholic Children's Aid Society of Hamilton, Community Child Abuse Council, Hamilton Community Foundation, City of Hamilton PHRED, McMaster Child Health Research Institute, Ministry of Children & Youth Services, Nursing Secretariat - Ontario Ministry of Health and Long-Term Care and the Provincial Centre of Excellence for Child and Youth Mental Health at CHEO

FAMILY HEALTH

Project Title: Evaluation of Public Health Nurse Secondment Role with Hamilton Family Health Team

Investigators: Loretta M. Hillier, Tracy Hussey, Dr. Carrie McAiney, Jaclyn Busser-Grodecki and Dr. Jean Clinton

Health Unit Contact Person: Jaclyn Busser-Grodecki, Public Health Nurse

Background: Hamilton Public Health Services (PHS) partnered with the Hamilton Family Health Team (HFHT) to facilitate the use of the Enhanced Well Baby Visit (WBV) in HFHT practices. This visit includes the use of the Rourke Baby Record (RBR) and the Nipissing District Developmental Screen, (NDDS). This project involved the secondment of a Public Health Nurse (PHN) to act as a mentor for the staff and to develop educational tools and materials to support successful incorporation of the expanded visit into everyday practice.

Research Objectives: **1)** To describe the HFHT sites, population and PHN interventions; **2)** To describe the 18 month Well Baby (18WBV) Visit process and content prior to this initiative; **3)** To determine whether short-term outcomes/objectives were achieved; and, **4)** To describe the process of developing and implementing this initiative

Methods: Initiative, referral, service and education tracking data were collected by the PHN from Sept 15, 2009 to Dec 15, 2010. Site checklists, chart audits, parent satisfaction surveys, health professional surveys and key stakeholder interviews were also conducted.

Results: Results from this project showed an increased use of: RBR and NDDS screening tools; health professional knowledge regarding child development and PHS; and increased use and referral to early childhood services and resources. Further, all of the parents reported that they were satisfied with the visit. Some of the facilitating factors identified include: a physician champion to advocate for this project, reimbursement for extended 18WBV, and interest in RNs working toward full scope of practice. Some of the challenges identified surrounding practices include: remaining updated on guidelines that change regularly, availability of resources for parents in different languages, and the time consuming nature of the 18WBV. Some initiative challenges include: different charting systems across FHTs, and maintaining good communication with sites.

Conclusions: The initiative was well-received by HFHT practices. They were satisfied with the support received from the PHN and the resulting changes to their practice. The objectives of this partnership were met, with the exception of establishing a registry of at risk children. Given the positive outcomes for this project, the PHN part time secondment will continue with the HFHT for 2012.

Project Timeline: The evaluation took place from Sept 15, 2009 to Dec 31, 2010. PHN secondment to the FHT started in September 2009 and continues to date.

Project Funding Source and Amount: PHRED funding 2009

FAMILY HEALTH

Project Title: Perinatal Mood Disorder Resource Package: Impact on Primary Care Providers' Attitudes and Practices

Investigators: Wendy Sword; Melissa Simoes; Dianne Busser, Laurie Doma and Holly Bowler

Health Unit Contact Person: Dianne Busser

Background: A 2006 study conducted by Hamilton Public Health Services, titled "Evaluation of Screening for Postpartum Depression Project", revealed that being screened for Postpartum Mood Disorders (PPMD) was acceptable and assisted women to become better informed about PPMD. A 2007 study, "Care Seeking among Women Following Public Health Referral for Probable Postpartum Depression", suggested the need for strategies to improve awareness of PPMD and care coordination among primary care providers. The current study assesses the impact of a PPMD resource package on influencing primary care providers' attitudes and practices.

Research Objectives: **1)** To identify change in skills, general approach and attitudes regarding PPMD among primary care providers who use the Perinatal Mood Disorder Resource package; and **2)** To identify if the resource package a useful tool.

Methods: Participants of the initial phase included Family Physicians, Pediatricians and Obstetricians and Gynecologists currently practicing in the Hamilton area. Upon request from the Perinatal Mental Health Coalition, the study was replicated with a convenience sample of Midwives. The study used a pre-test post-test survey design. Participants received a mailed pre-test questionnaire (regarding skills, general approach and attitudes towards prenatal and postnatal depression) prior to distribution of the PPMD Resource Package. To maximize response rates participants received five mailings before and after the Resource Package was sent, including: 1) an advance notification letter; 2) the questionnaire; 3) a thank you note/reminder; 4) a replacement questionnaire package; and, 5) final contact. The mailed post-test questionnaire was sent approximately three months after distribution of the resource package.

Results: Preliminary analysis is complete for the Primary Care Provider data and is currently underway on the Midwife sample. Primary Care providers found the resource package to be a useful tool. A high percentage familiarized themselves with the materials, found it useful, and are using the Perinatal Mood Disorder Desk Reference. There was no statistical change in the perception of how primary care providers managed maternal depression or in attitudes regarding maternal depression.

Conclusions: Pending

Project Timeline: January 6, 2010 to February 28, 2011 - initial study with Physicians
January 1, 2011 to September 15, 2011 - secondary study with Midwives.

Project Funding Source and Amount: PHRED \$15,000 (2010) and Hamilton Best Start \$10,000 (2010)

Conference Poster/Presentation/Journal Article: Conference Presentation: 5th National Community Health Nurses Conference, May 16-18, 2011 Halifax Nova Scotia

INFECTIOUS DISEASE

Project Title: Vaccine Preventable Disease (VPD) School Program Situational Assessment

Investigators: Kelty Hillier, Carolyn Hureau, Colleen Van Berkel, Fiona Newton-Brown, Kim Dias

Health Unit Contact Person: Kelty Hillier

Background: The VPD School Program has been experiencing declining vaccine coverage rates over the last decade, but have not been able to explain this decrease. The program would like to improve coverage rates and has asked AR&E for their aid in determining why coverage rates have declined and how best to improve them. This project has been divided into two phases. Phase 1 was completed in 2011 and Phase 2 began in early 2012.

Research Questions: 1) What inadequacies in communication, information dissemination and student recruitment exist in the current program delivery model? 2) What are the perceptions of the program by: school boards & staff, students, parents and the VPD staff who administer the program and are there ways to better collaborate? 3) How can coverage rates of Hepatitis B, Meningococcal & HPV be increased in the school-based immunization program?

Methods:

Phase 1 (2011) – A comprehensive literature review with recommendations and the development of a survey tool.

Phase 2 (2012) – Data collection and analysis, implementation of recommendations and revisions to the VPD School Program (as appropriate).

Results: The comprehensive literature review identified several challenges to vaccine-preventable disease programs in general, and to school-based vaccine programs specifically. The literature review informed the development of the survey tool for Phase 2 and provided several recommendations to improve the existing program.

Conclusions: Phase 2 began in January 2012 and is ongoing.

Project Timeline: **Phase 1:** January 2011-December 2011. **Phase 2:** January 2012-June 2012.

Project Funding Source and Amount: Internal funding

INFECTIOUS DISEASE

Project Title: West Nile Virus Communication Survey

Investigators: Public Health Services: Carolyn Bannon, Natasha Mihas, Ioana Lupascu, Sam McGee; McMaster Institute of Environment and Health: Marie McKeary

Health Unit Contact Person: Susan Harding-Cruz

Background: The West Nile virus programs include an annual communication campaign. It is important to gauge how the public wants to receive the messages surrounding West Nile virus.

Research Objective: To determine the publics' opinion of their preferred media outlet to receive West Nile virus related health information and more specifically their preferred local radio station.

Methods: This evaluative tool was implemented at Binbrook Fair toward the end of the West Nile season. PHS staff surveyed 212 individuals over this three day event in September.

Results: Of the 212 respondents, 183 (86%) believed that radio was an effective method to communicate health information. The top five preferred radio stations included:

- 102.9 K-Lite FM,
- FM 94.7 CHKX,
- Y108,
- AM 900 CHML and
- AM 1150 CKOC.

In 2011, Hamilton PHS placed WNV radio advertisements in four of the top five preferred stations. The fifth station targets younger listeners and therefore did not fall within the targeted audience for WNV communication (risk of severe WNV infection is to the older adult).

Conclusions: Hamilton Public Health Services will continue to use radio in WNV communication.

Project Timeline: September 16th, 17th, and 18th, 2011

Project Funding Source and Amount: PHS Staff Time

INFECTIOUS DISEASE

Project Title: Tick and Lyme Disease Knowledge and Awareness Evaluation

Investigators: Carolyn Bannon, Tim Jaynes, Ioana Lupascu, Sam McGee, Natasha Mihas, Jessica Morris, Carmen Priescu, Edward Smith

Health Unit Contact Person: Susan Harding-Cruz

Background: Lyme Disease is an emerging vector borne disease in Ontario, with concern that the black legged tick responsible for transmission of Lyme Disease to humans will become established in more areas across southern Ontario through climate change.

Research Objective: To determine the level of awareness that people living in or visiting Hamilton have of Lyme Disease, if they know ticks transmit the disease, whether they know how to identify any tick, and whether they have seen any ticks in Hamilton (and where). The evaluation tool was used to gather data about knowledge and awareness in order to inform future communication strategies.

Methods: The four question survey was administered by public health inspectors, the vector borne disease specialist, the environmental health promoter, or by West Nile virus field and lab technicians at the Vector Borne Disease booth (West Nile virus, Lyme Disease, and rabies information) at four festivals in the summer of 2011: Buskerfest in June, It's Your Festival in July, The Winona Peach Festival in August, and Binbrook Fair in September.

Results: Of those polled, 79% have heard of Lyme disease; 61% stated Lyme disease is caused by ticks; 57% stated they know what a tick looks like; and 82% said they have not seen ticks in Hamilton. Of those who saw a tick in the City of Hamilton in 2011, Glanbrook (including Binbrook) and Stoney Creek (including Winona) followed by Dundas were the three areas where most ticks were noticed.

Conclusions: While the majority of respondents are aware of Lyme Disease and know that ticks transmit the disease most people responding to the survey have not seen any ticks in Hamilton. This may mean ticks of any species may be in low numbers or are not yet well established in Hamilton. The 2012 Communication Plan could include a campaign to increase the public's knowledge of how to identify ticks. The three identified areas where ticks have been seen may also be places to further investigate to determine if black legged ticks (they transmit Lyme Disease) are present.

Project Timeline: June 2011 to October 2011

Project Funding Source and Amount: PHS Staff Time

ENVIRONMENTAL HEALTH

Project Title: North Hamilton Child Blood Lead Study

Investigators: Dr. Elizabeth Richardson (principal); Wendy Pigott, Carole Craig, Nancy Greaves, Matthew Lawson, Dr. Lesbia Smith (co-investigators).

Health Unit Contact Person: Matthew Lawson

Background: This prevalence study is intended to provide quantitative information on children's exposure to lead from environmental sources in the City of Hamilton. It will help to provide support of existing or newly proposed guidelines and public health programming by using data from the most susceptible group in the population, children 6 years of age and under.

Research Objectives: To "determine if Hamilton has a lead problem" by: **1)** providing estimated prevalence of blood lead levels (BLL) $\geq 0.48 \mu\text{mol/L}$ and $> 0.19 \mu\text{mol/L}$ among children 6 years of age or under residing within a geographic area judged to be at increased risk of environmental lead exposure; and **2)** exploring the influence of risk factors and environmental lead levels on children's blood lead levels.

Methods: The study consisted of the following components: survey of children's blood lead levels (n=643); interviews with parents/guardians to determine family and household characteristics; environmental testing for lead levels in tap water and dust from a sub-sample of the households; lead levels in soil around a sub-sample of the dwellings; air lead sampling data for the study area; and data for water samples taken from fire hydrants and to respond to requests from the public.

Results: The geometric mean BLL was $0.107 \mu\text{mol/L}$; 0.9% of observations were above the national guidance value. Significant predictors of BLLs included housing construction date pre-1920, lower household income, male sex, recent home renovations and a proxy measure for industrial lead emissions. This proxy demonstrated a strong association with BLL at or above the study follow-up threshold and may reflect long-established, urban neighbourhoods that are also adjacent to long-established lead-emitting industry with unmeasured risks from multiple sources. The distribution of environmental lead sources across the study area is uneven; some neighbourhoods have relatively higher risks of multiple lead sources and are of lower socio-economic status with fewer resources to counteract lead exposure.

Conclusions: Several risk and mitigation factors for lead exposure are tightly interwoven with various determinants of health. This suggests the need for a multi-pronged collaborative approach involving an assortment of disciplines/programs within public health, local physicians serving identified populations at risk, and community stakeholders involved in neighborhood development strategies.

Project Timeline: Fall 2008 to Summer 2011

Project Funding Source and Amount: PHRED (\$350,000 for 2008 & 2009), PHS program budgets and the Ontario Ministry of the Environment.

Conference Poster/Presentation/Journal Article: The Ontario Public Health Convention (TOPHC) 2012. *North Hamilton Child Blood Lead Study* - poster presentation by Carole Craig, Wendy Pigott, Matthew Lawson on April 3, 2012.

ENVIRONMENTAL HEALTH

Project Title: City of Hamilton Air Quality Health Index (AQHI) Special Events Outreach Evaluation Report 2011

Investigators: Sally Radisic

Health Unit Contact Person: Matthew Lawson

Background: Federal, provincial and municipal governments collaborated in order to develop the AQHI as a numeric tool that could be used by health professionals and the public to determine what associated health risks are related to a quantity of air pollution at a given time. Promotion of the AQHI in the City of Hamilton is instrumental to raising awareness about this risk communication tool. Special events (i.e. community fairs) in the City of Hamilton, are open to the public and have been used to promote other public health programs. Therefore, outdoor special events were selected as a promotional channel to raise AQHI awareness in the City of Hamilton.

Research Questions: **1)** How effective are the current promotional media channels in raising AQHI awareness among the population in the City of Hamilton? **2)** How effective are special events/fairs as a promotional channel in raising AQHI awareness among the population in the City of Hamilton?

Methods: AQHI promotion at special events was done in conjunction with existing public health program promotion such as Vector Borne Diseases, Rabies Awareness, and the Safe Water Program. The AQHI was promoted at six special events from June 2011 to October 2011 for a four hour time period within the hours of 11 am to 5 pm. Both quantitative and qualitative data were collected at the special events.

Results: AQHI outreach was provided to a total of 944 people. AQHI awareness increases over time with the highest number of people being aware of the AQHI at the end of the special events season at 28%. A total of 8 different promotional media channels were identified as being the source of AQHI awareness. The number of AQHI promotional media channels identified, at a special event, increases from 2 in August 2011 to 6 in September 2011. Individuals placed the importance of AQHI awareness on aspects of health and environment.

Conclusions: Increase in AQHI awareness can be attributed to effective AQHI promotional media channels used in the City of Hamilton. Special events are an effective promotional channel in raising AQHI awareness and present an opportunity to gather feedback regarding present and previous AQHI promotional efforts.

Project Timeline: June 2011 to November 2011

Project Funding Source and Amount: Health Canada \$12, 600

Conference Poster/Presentation/Journal Article: Environics Analytics November 2011 Presentation, MARCOM Professional Development May 2012 Presentation