

SURVEY SUMMARY REPORT

2010 County of Lambton
Lambton Community Health Study
Telephone Survey

November 2010

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1. Summary

Introduction

- The overall purpose of this telephone survey was to provide representative data on the views of Lambton County residents on potential health impacts related to industrial pollution.
- Overall results for the full sample of 500 respondents are accurate to within +/-4.4% at the 95% confidence level.

Highlights of Results

Demographics

- Respondents were sampled throughout the Region of Lambton County, with just over half living in Sarnia (54%).
- In total, 61% of respondents were female, and approximately equal proportions were 45-54 years of age (24%), 55-64 years of age (25%), or 65 years and older (26%).
- Over one-third (38%) reported living in those areas closest to industry.
- About half (49%) reported they or someone in their household works or has worked in the chemical or petrochemical industries in Lambton County.

Importance of and Participation in Health Study

- The vast majority of respondents (88%) reported that it is important to conduct a Health Study in Lambton County; however, only about half (51%) reported they would be willing to participate in a Health Study and 33% reported they were unsure about their participation.

Community Concerns

- Respondents appeared to be most concerned with (very concerned or concerned) unemployment and the local economy (74%), not having clear answers about health risks (73%), health risks from living near local industries (70%), and health risks from working in local industries (67%).

Sources of Pollution

- The level of concern with the various sources of pollution was relatively high. The following seemed to generate the highest levels of concern: surface water pollution (81%), industrial air pollution (79%), groundwater pollution (77%), soil pollution (73%), and industrial accidents (72%).

Health Concerns

- About four out of five respondents (79%) reported that they think pollution from the industries causes health problems for residents of Lambton County.
- The most common type of health problems that respondents feel the industries are causing include respiratory or breathing problems (71%) and cancer (57%).
- When asked what types health concerns should be studied, about nine in ten reported that respiratory or breathing problems (94%) and cancer (91%) should be studied. Somewhat fewer respondents, but still relatively high proportions, reported that child development problems (71%), reproductive problems (68%), and circulation problems (66%) should be studied.

2. Introduction

2.1. Background

In Lambton County, adverse health impacts associated with environmental exposures has been a long-standing concern among stakeholder groups and their representatives. In early 2007, a meeting of community leaders and stakeholders took place and it was agreed that a study of the health effects associated with exposure to environmental contaminants is a public health priority. Multiple phases of that study have been undertaken since that time.

This telephone survey project was administered as part of the larger Community Health Study for Lambton County which is designed to investigate the incidence of specific diseases in Lambton County and determine their relationship to the presence of the petrochemical manufacturing industries in Lambton. The telephone survey component was designed to gain important information regarding the views of Lambton County residents on potential health impacts related to industrial pollution.

The Lambton County Health Study Board will use the data collected from this survey to identify priority areas of public concern and direct future investigations.

2.2. Survey Purpose

The purpose of this survey was to gather public input regarding environmental health concerns. The broad questions that the Lambton County Health Study Board seeks information on include:

1. Are Lambton County residents concerned about the health impacts of living near petrochemical industries?
2. What are their specific concerns related to:
 - a. Routes of exposure (air, water, soil)?
 - b. Types of exposure (specific emissions, releases)?
 - c. Types of health effects related to these exposures?
3. What concerns would Lambton County residents most like to see addressed in a Community Health Study?

3. Methodology

3.1. Survey Instrument Design

Representatives from the County of Lambton, Community Health Services Department, provided CCI Research Inc. (CCI Research) with a survey instrument designed to capture the views of Lambton County residents on potential health impacts related to industrial pollution. CCI Research reviewed the survey instrument and provided feedback on the design and content. In consultation with the Health Services Department, the survey instrument received minor revisions and modifications.

A copy of the complete survey instrument is attached as Appendix A.

3.2. Target Populations and Sampling

The target population for this survey included respondents in Lambton County who were 18 years of age or older.

The survey sampling frame consisted of individual random-listed household telephone numbers for the census division of Lambton County with the numbers supplied by *Survey Sampling International (SSI)*. The 'most-recent birthday' method was applied during fielding for selection of respondents within households.

3.3. Survey Pilot

A pilot test of the survey was conducted by CCI Research on October 5th, 2010 to check the flow and logic of the survey. For the pilot, experienced interviewers used a Computer-Assisted Telephone Interview (CATI) system to complete a total of 25 surveys. As a result of the pilot changes were made to the survey. Specifically, two questions were removed from the survey and questions 10a and 11b were changed to close-ended, multiple-response type questions from open-ended questions. Although these modifications changed the question type, it was decided that the content of the questions did not change and, as such, pilot results are included in the final dataset.

3.4. Data Collection

3.4.1. Interviewer Training

A standardized procedure was employed to ensure that all telephone interviewers had complete familiarity with the details of the survey and the CATI system of data entry. Each interviewer was thoroughly trained prior to interviewing and was supervised throughout the interviewing process.

Each interviewer was provided with a comprehensive training package, which detailed the procedure for telephone interviews. The package provided specific directives and resource information needed to ensure proper handling of all calls, including: handling of all types of call attempts and call-backs, respondent refusals, unease, questions, comments, and provision of contact information.

3.4.2. Calling Period

Data collection for the County of Lambton Community Health Study Survey took place during the period of October 5th to October 29th, 2010. Trained interviewers used a CATI system to complete a total of 500 surveys with respondents from Lambton County. Calls were made at various times of the day and week; on weekdays between 9:00 a.m. and 9:00 p.m., and weekends between 11:00 a.m. and 4:00 p.m., Eastern time. All data for the survey were entered via CCI Research's customized CATI system, which includes automatic skips and verifications to ensure accuracy. Respondents were free to refuse to answer any question in the survey, or to end the interview at any time.

3.4.3. Average Survey Lengths

The average survey length was 12 minutes for Lambton County.

3.4.4. Call Monitoring

A minimum of 10% of all completed calls for each survey were monitored by CCI Research supervisors or management to ensure that the survey was being administered as intended. During monitoring, interviewers were checked for the following: (1) proper qualification of respondents, (2) proper data entry of answers, (3) correct reading of the survey, and (4) lack of bias (not leading respondents). Interviewers were monitored more intensely during their first several interviews, and additional monitoring of all interviewers took place throughout the entire survey process.

3.4.5. Call Dispositions

Up to 10 call attempts were made to each of the sample telephone numbers in order to obtain the required number of completed surveys, unless the telephone number was coded at some earlier point into a category such as "not in service." A table of call dispositions for the project is shown below in Table 3-1.

For each survey, the overall response rate was calculated according to the following formula:

$$\text{response rate} = x / (x + z),$$

$$\text{where } x = \text{CO}, \text{ and } z = (\text{AM}+\text{CB}+\text{CA}+\text{HU}+\text{LA}+\text{IR}+\text{LB}+\text{NA}+\text{NR}+\text{PT}+\text{RF}+\text{RO}+\text{TE}).^1$$

¹ Not eligible numbers (NE), business numbers (BU), wrong numbers (WN), not in service numbers (NS), moved – no new number given (MV), and fax/computer line numbers (FX) are not included in calculation of the response rate.

Table 3-1 Call Dispositions for the 2010 Lambton Community Health Study Survey			
Call Type	Abbreviation	Frequency	Percent
Complete	CO	500	22%
Answering Machine	AM	9	0%
Business Number	BU	11	0%
Call Back, no specific time	CA	46	2%
Call Back	CB	17	1%
Fax/Computer line	FX	7	0%
Hang Up	HU	245	11%
Interpreter Required	IR	0	0%
Language Barrier	LA	9	0%
Line is Busy	LB	0	0%
Moved, no new number given	MV	0	0%
No Answer	NA	7	0%
Not Eligible	NE	39	2%
Not in Service	NS	275	12%
Number Removed at Respondent's Request	NR	17	1%
Refused	RF	713	31%
Refused by Someone Other than Qualified Respondent	RO	60	3%
Wrong Number	WN	0	0%
Partial/Continue Survey Later	PT	1	0%
Terminate	TE	319	14%
Total Call Dispositions		2275	
Total Calls Made		8477	
Total Records		4000	
Response Rate		26%	
*The "terminate" call disposition means that a survey was not completed after 10 call attempts to that number. Note: Percentages may not add exactly to 100% due to rounding.			

3.5. Statistical Accuracy

Overall results for the full sample of 500 respondents are accurate to within +/-4.4% in the worst-case scenario (i.e., results measuring proportions near 50%) at the 95% confidence level.

4. Analysis

For the purposes of this report, first-level data analysis includes the presentation of descriptive statistics (frequencies) for survey items in text, tables, and figures, as appropriate. The following should be noted with regard to the presentation of frequency data:

- Percentages are based on all responses for each item (i.e., “don’t know” and “refused” are included in the calculations).
- All percentages are rounded to the nearest whole number based on computer-generated analysis. For single response items, percentages may not total to 100% due to rounding. Similarly, rounded percentages for individual response options may not total exactly to combined percentages due to rounding. Therefore, percentages in text and tables may appear to differ by 1% due to rounding.

Detailed frequencies for each item on the survey are available in the accompanying data tables. These data tables show the overall results for the Community Health Survey, along with breakdowns by county area, gender, age group, and previous working experience in the chemical and petrochemical industries in Lambton County.

5. Sample Demographics

5.1. Community of Residence

The following sections show the demographic results for the survey which indicate in general that the sample appears to be a reasonable representation of the population in Lambton County.

Table 5-1a shows the demographic information for community of residence for the survey sample. Respondents most commonly reported living in Sarnia (54%), St Clair (13%), Lambton Shores (9%), or Plympton-Wyoming (9%). Tables 5-1b and 5-1c show the results for the community of residence grouped by those closest to industry and by area, respectively. Overall, 38% of respondents reported they lived in those areas closest to the industry (Table 5-1b).

Table 5-1a Demographics – Community		
Community	n	%
Sarnia (Bright's Grove)	270	54%
St. Clair (Brigden, Courtright, Corunna, Froomfield, Kimball, Mooretown, Port Lambton, Sombra, Wilkesport)	63	13%
Lambton Shores (Arkona, Forest, Grand Bend, Port Franks, Thedford, Ipperwash Beach, Northville, Ravenswood)	45	9%
Plympton-Wyoming (Aberarder, Camlachie, Reece's Corners, Uttoxeter, Wanstead)	43	9%
Petrolia	21	4%
Enniskillen (Oil City, Marthaville)	20	4%
Brooke-Alvinston (Alvinston, Inwood, Rokeby)	14	3%
Warwick (Warwick, Watford)	12	2%
Point Edward	4	1%
Dawn-Euphemia (Bentpath, Cairo, Dawn, Edys Mills, Florence, Garville, Langbank, Rutherford and Shetland)	3	1%
Aamjiwnaang First Nation (Sarnia Reserve 45, Chippewas of Sarnia First Nation)	2	0%
Kettle and Stony Point First Nation (Kettle Point 44)	1	0%
Oil Springs	0	0%
Walpole Island First Nation (Walpole Island 46)	0	0%
Other	2	0%
Don't know	0	0%
Refused	0	0%

Table 5-1b Demographics – Closest to Industry		
Area	n	%
South Sarnia/Aamjiwnaang/North St. Clair	190	38%
Rest of County	310	62%

Table 5-1c Demographics – County Grouped		
Area	n	%
Sarnia/Point Edward/Aamjiwnaang	276	55%
St.Clair	63	13%
Lambton Shores/Kettle Point/Plympton-Wyoming/Warwick	101	20%
Petrolia/Enniskillen/Brooke-Alvinston/Dawn-Euphemia	58	12%

As shown in Table 5-2, respondents most commonly reported they had lived in their community for 30 or more years (49%) and similarly, had lived in Lambton County for 30 or more years (65%).

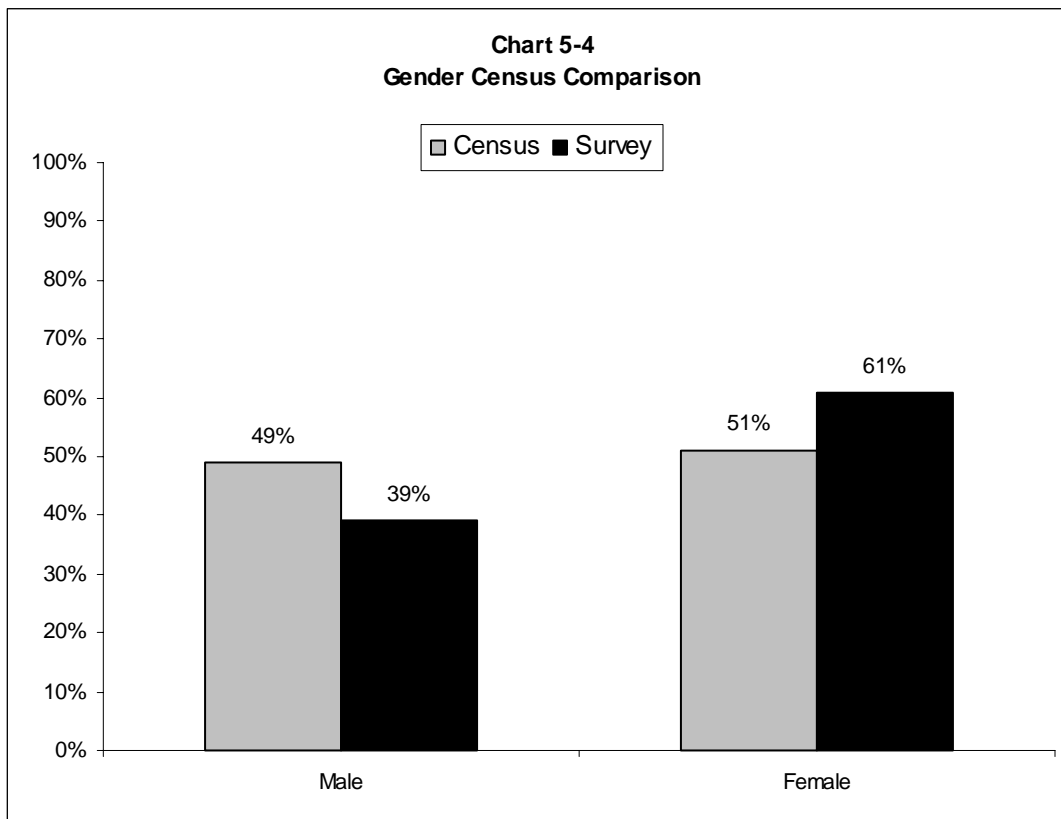
Table 5-2 Demographics – Length of Residence				
Length	Community		Lambton County	
	n	%	n	%
Less than 1 year	9	2%	4	1%
1-4 years	46	9%	24	5%
5-9 years	44	9%	25	5%
10-14 years	39	8%	19	4%
15-19 years	34	7%	24	5%
20-24 years	46	9%	41	8%
25-29 years	35	7%	37	7%
30 or more years	247	49%	325	65%
Don't know	0	0%	1	0%
Refused	0	0%	0	0%

5.2. Gender

Table 5-3 shows the demographic information for gender for the survey sample, while Chart 5-4 displays the gender breakdown in comparison to the available 2006 Census information.

Table 5-3 Demographics - Gender		
Gender	n	%
Male	197	39%
Female	303	61%

As shown in Chart 5-4, males appear to be somewhat underrepresented and females somewhat overrepresented, in comparison to the 2006 Census information.



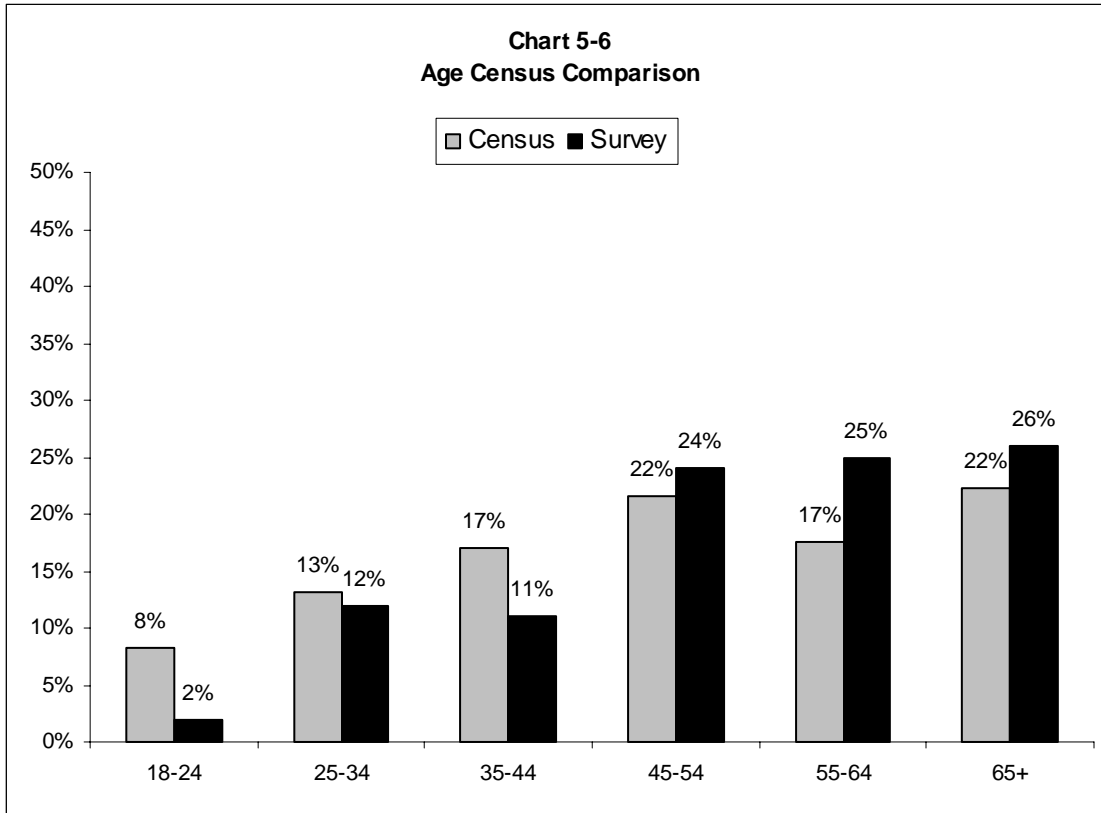
5.3. Age

Table 5-5 shows the demographic information for age for the survey sample, while Chart 5-6 displays the age breakdowns in comparison to the available 2006 Census information.

Respondents most commonly reported they were 45-54 years of age (24%), 55-64 years of age (25%), or 65 years and older (26%) (Table 5-5).

Table 5-5 Demographics – Age		
Age	n	%
18-24	12	2%
25-34	60	12%
35-44	54	11%
45-54	118	24%
55-64	124	25%
65 and older	132	26%
Don't know	0	0%
Refused	0	0%

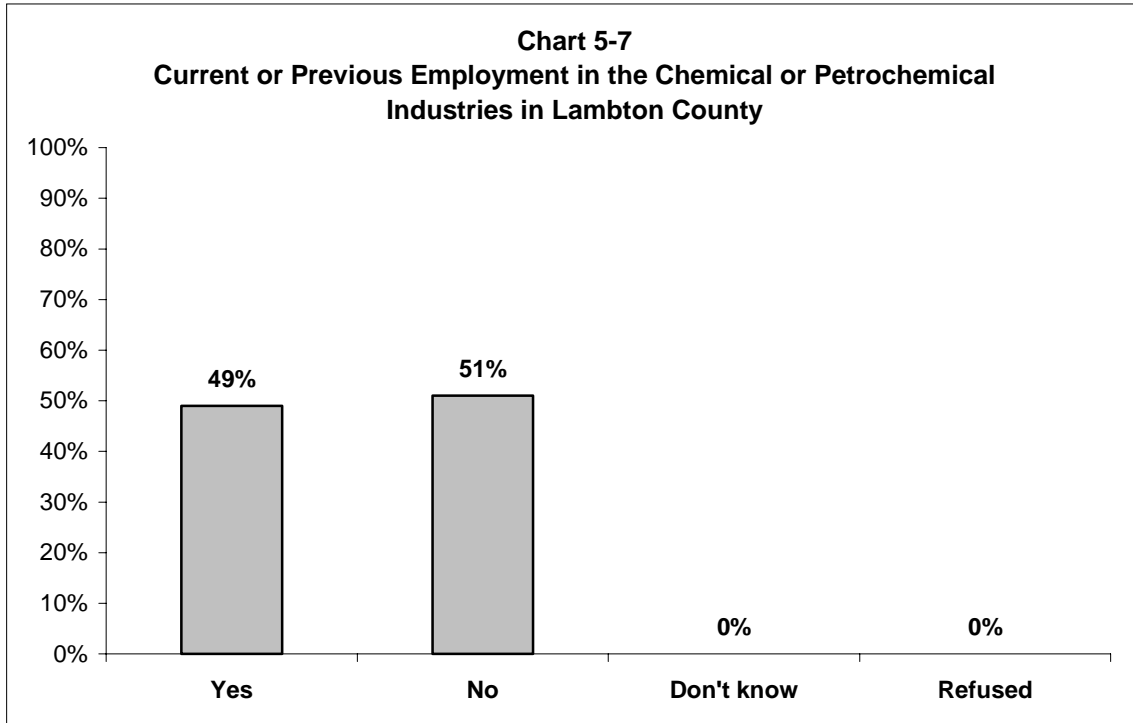
In comparison with the 2006 Census information, the survey sample provides coverage of all relevant age groupings, although it appears to be somewhat under-represented in the 18-24 years old and the 35-44 years old categories and somewhat over-represented in the older age categories (55-64 years, and 65+) (Chart 5-6).



*Note that this comparison is an approximation as the census results for the 18-24 age grouping includes only ages 20 to 24 (i.e. not ages 18 and 19), while the survey results are for those aged 18-24.

5.4. Employment in Chemical or Petrochemical Industry

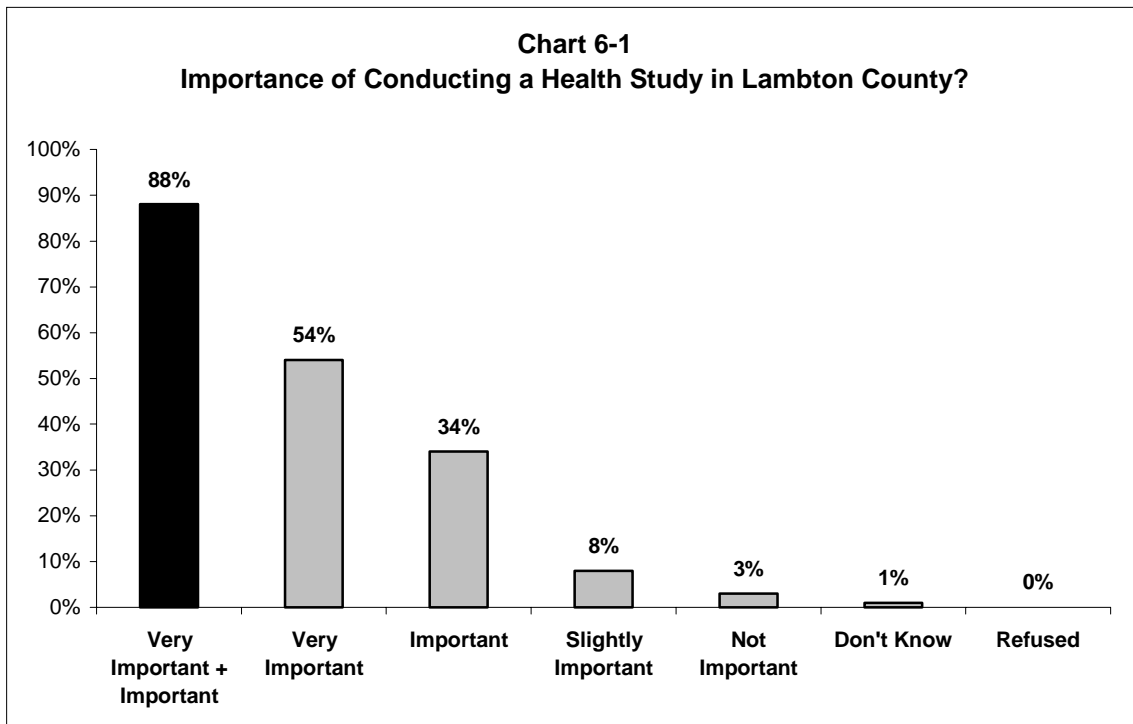
About half (49%) of respondents indicated they or anyone in their household either works or has worked in the chemical or petrochemical industries in Lambton County (Chart 5-7).



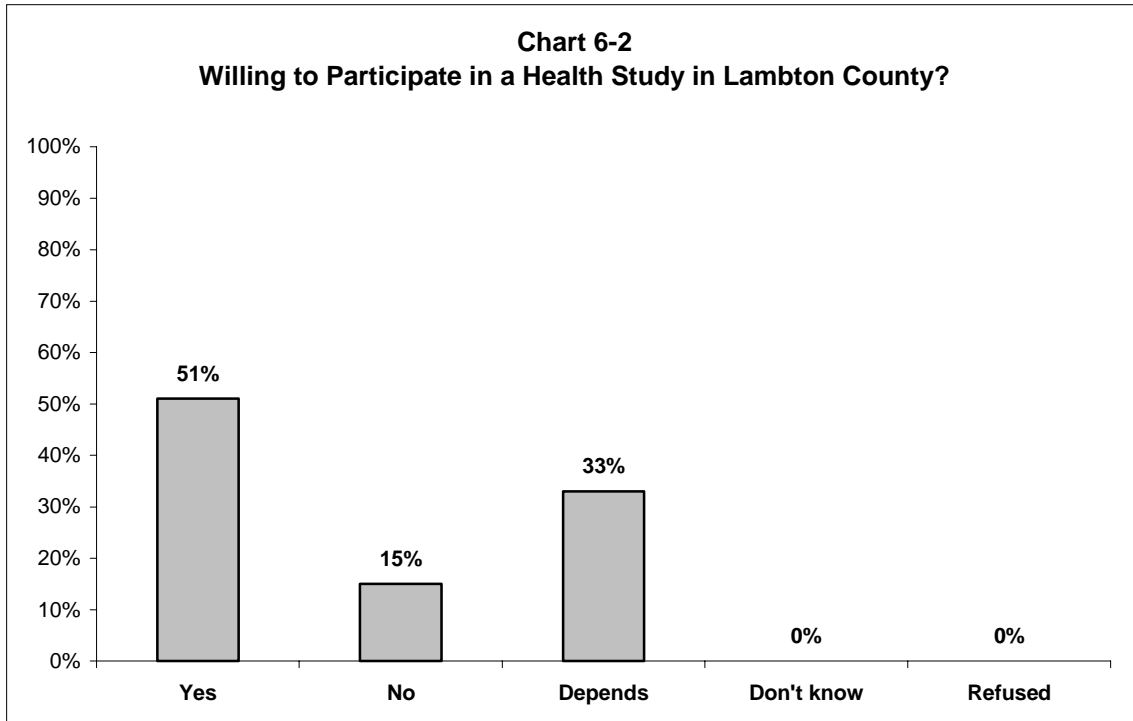
6. Survey Results

6.1. Importance of and Participation in Health Study

When asked about the importance of conducting a Health Study in Lambton County, the overwhelming majority of respondents (88%) reported that it is either very important or important (Chart 6-1). Only 8% reported it was slightly important while 3% reported it was not important.



It is interesting to note that although 88% of survey respondents agreed that it is important to conduct a Health Study (see Chart 6-1), only about half (51%) reported they would be willing to participate in a Health Study in Lambton County if one were to be conducted, with 33% unsure (Chart 6-2).



As shown in Table 6-3, respondents most commonly indicated they would like to be informed of the Health Study's progress through a print medium – 42% indicated newspapers and 35% indicated through the mail. Also common were radio/TV (34%) and a website (29%).

Table 6-3 How Would You Like To Be Informed Of The Health Study's Progress?	
Newspapers	42%
Short progress reports in the mail	35%
Radio/TV	34%
Website	29%
Drop-in meetings with the researchers at a community centre	10%
Other	2%
Don't know	1%
Refused	0%

6.2. Community Concerns

Respondents were asked a series of questions regarding their level of concern regarding issues in their community.

Overall, respondents reported a high level of concern (very concerned or concerned) about unemployment and the local economy (74%), not having clear answers about health risks (73%), health risks from living near local industries (70%), and health risks from working in local industries (67%) (Table 6-4). There was notably less concern regarding other people's perceptions of the area (49%) or property values (46%), although about half of the survey respondents were very concerned or concerned about these issues.

Table 6-4 Level of Concern Regarding Community Issues							
	Very Concerned + Concerned	Very Concerned	Concerned	Slightly Concerned	Not Concerned	DK	RF
Unemployment and the local economy	74%	38%	36%	13%	11%	1%	0%
Not having clear answers about health risks	73%	41%	32%	14%	12%	1%	0%
Health risks from living near local industries	70%	36%	34%	16%	13%	0%	0%
Health risks from working in local industries	67%	39%	29%	14%	17%	1%	0%
Other people's perceptions of the area	49%	18%	31%	20%	28%	3%	0%
Property values	46%	16%	30%	21%	30%	2%	0%

6.3. Potential Impacts Of The Chemical and Petrochemical Industries On the Physical Environment in Lambton County

6.3.1. Sources Of Pollution

The next set of questions on the survey related to respondents' level of concern regarding the impacts that chemical and petrochemical industries may have on the physical environment in Lambton County.

Overall, the level of concern regarding the various sources of pollution was fairly high. Specifically, about four out of five were concerned about surface water pollution (81%), industrial air pollution (79%), and groundwater pollution (77%), while 73% were concerned with soil pollution and 72% were concerned with industrial accidents (Table 6-5). There was somewhat less concern about odours, although almost two-thirds (64%) of respondents reported concern about odours.

Table 6-5 Level of Concern Regarding the Following Sources of Pollution in Your Community							
	Very Concerned + Concerned	Very Concerned	Concerned	Slightly Concerned	Not Concerned	DK	RF
Surface water pollution (e.g. river, lakes, streams)	81%	52%	29%	13%	6%	0%	0%
Industrial Air pollution (All types)	79%	47%	32%	13%	7%	1%	0%
Groundwater pollution	77%	49%	28%	13%	8%	2%	0%
Soil pollution	73%	44%	30%	15%	11%	1%	0%
Industrial accidents (e.g. spills, leaks)	72%	43%	29%	17%	10%	1%	0%
Odours	64%	34%	31%	18%	17%	0%	0%

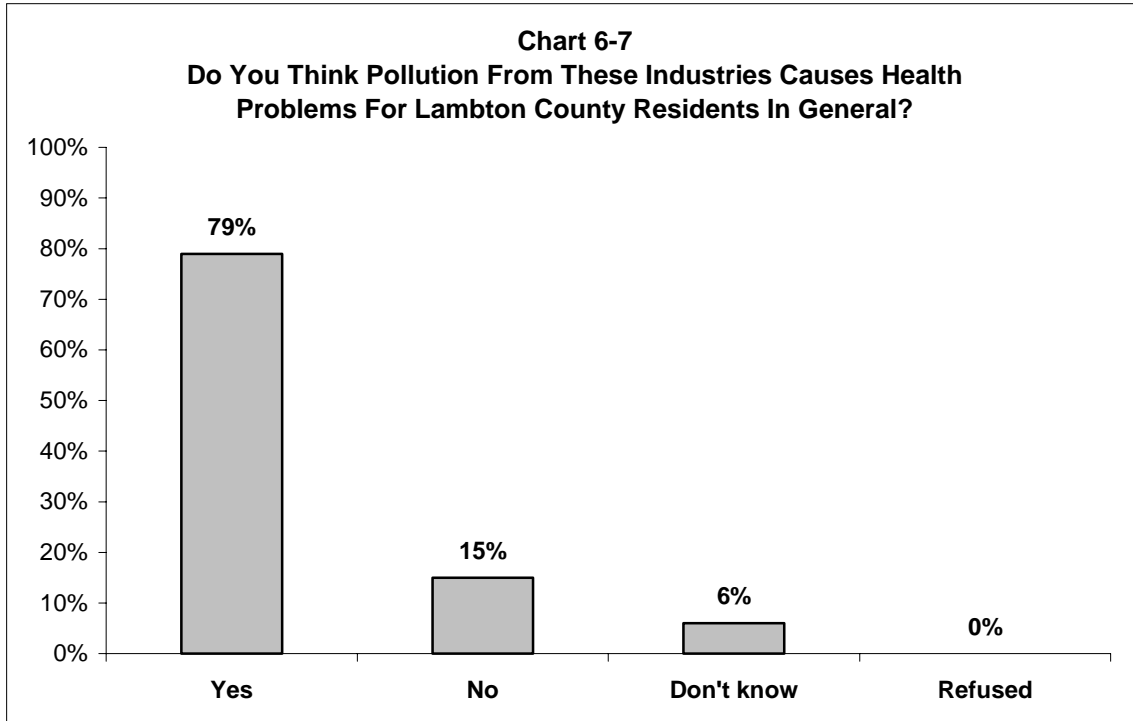
Respondents who indicated they had any level of concern (slightly concerned, concerned, or very concerned) to two or more of the above sources of pollution were asked to indicate which one was their number one concern. As shown in Table 6-6, industrial air pollution (49%) was the number one concern among those who had more than multiple concerns.

Table 6-6 Source of Pollution That is Most Concerning	
Industrial Air pollution (All types)	49%
Industrial accidents (e.g. spills, leaks)	15%
Groundwater pollution	14%
Surface water pollution (e.g. river, lakes, streams)	11%
Odours	6%
Soil pollution	2%
Don't know	3%
Refused	0%

All respondents were asked if there were any other specific concerns about pollution in their community related to local chemical and petrochemical industries. Overall, 16% of respondents (n=79) mentioned some other type of concern, and these were captured verbatim. Generally, respondents re-stated some of the concerns already asked in the survey (see Table 6-6) such as odours, air pollutions, water pollution, and soil pollution. Others took this opportunity to state that they would like to be more informed about the situation, while others mentioned that they felt people in Lambton County were more likely to have certain conditions or illnesses.

6.3.2. Health Concerns

Approximately four out of five (79%) respondents think that pollution from the chemical and petrochemical industries causes health problems for residents of Lambton County, while 15% reported they do not think the pollution causes health problems (Chart 6-7).



When asked what types of health problems that pollution from the industries is causing, respondents most commonly indicated respiratory or breathing problems (71%) and cancer (57%) (Table 6-8).

Respondents were next asked what types of health concerns they think should be studied, and almost all reported cancer (91%) and respiratory or breathing problems (94%). Child development (71%), reproductive (68%), and circulation and heart problems (66%) were the next most indicated concerns, while about half of respondents thought that stomach/digestion (53%) and mental health problems (52%) should be studied.

Those respondents who indicated that more than one type of health concern should be studied were subsequently asked to indicate their number one concern. In response, cancer was mentioned by 52% as a first priority while 30% reported respiratory or breathing problems as their number one concern.

Table 6-8 Types of Health Problems That Pollution From Chemical and Petrochemical Industries Causes and Should Be Studied			
	Health Problems Caused	Health Concerns That Should Be Studied	Primary Health Concern
Respiratory or breathing problems (e.g. asthma, allergies)	71%	94%	30%
Cancer	57%	91%	52%
Child development problems (e.g. birth defects, delayed development)	5%	71%	7%
Reproductive problems (e.g. difficulties conceiving a baby, miscarriages)	3%	68%	2%
Circulation and heart problems (e.g. stroke, heart attack)	2%	66%	3%
Mental health problems (e.g. depression, anxiety)	1%	52%	2%
Stomach/digestion problems	1%	53%	1%
Other	7%	4%	0%
Don't know	4%	1%	3%
Refused	0%	0%	0%

Of those who indicated there were other health problems caused (n=21), common verbatim responses were related to skin issues and skin irritation. Of those who indicated 'other' when asked what health problems should be studied, respondents commonly mentioned that they felt there were none at all or none should be studied.

Respondents were next asked to indicate why that particular health concern (see Table 6-8 above) was their primary health concern. About one in five reported they think it is more common in Lambton than other areas (22%) or that they have heard of a lot of people with it (21%) (Table 6-9). The next most common reasons included: family members have it (15%), family/friends have died from it (13%), that it is related to the environment (11%), or that that they have it (10%). Note that 26% (n=117) reported some other reason and were asked to specify. These comments were reviewed and themes were developed based on the health concern they selected (see Table 6-8 above). Looking at the most commonly mentioned primary concerns (cancer, respiratory or breathing problems, and child development problems) respondents had different reasons for concern. Specifically, those who identified cancer as their primary concern reported reasons such as the non-discriminatory nature of the disease (can affect anyone at anytime) and that there is no cure. Those who identified respiratory or breathing problems as their primary concern reported reasons such as the prevalence of air pollution and the critical life function of breathing. Respondents who made reference to child development problems as a primary concern reported reasons such as having children of their own or the idea of children being the future.

Table 6-9 Reason For Concern	
I think that it is more common in Lambton than in other areas	22%
I have heard of a lot of people with it	21%
Family member/s have it	15%
Family/friends have died from it	13%
I think that it is related to our environment/environment concerns	11%
I have it	10%
I have heard of people dying from it	4%
Other	26%
Don't know	3%
Refused	0%

Those respondents who had indicated that cancer was a health concern that should be studied were asked to specify the types of cancer that they felt were important to study. Slightly less than half (46%) specified lung cancer, while 36% responded more generally and stated all types of cancer (Table 6-10). Breast cancer was mentioned by 15%, while brain cancer, colon cancer, leukemia, and melanoma were reported by 5% to 9%.

Table 6-10 Types Of Cancer That Should Be Studied	
Lung cancer	46%
All types of cancer	36%
Breast cancer	15%
Brain cancer	9%
Colon cancer (or Colorectal)	8%
Leukemia	6%
Melanoma	5%
Prostate cancer	4%
Kidney cancer	3%
Ovarian cancer	3%
Pancreatic cancer	3%
Bladder cancer	2%
Non Specified Lymphoma	2%
Cervical cancer	1%
Hodgkin's Lymphoma	1%
Non-Hodgkin's-Lymphoma	1%
Thyroid cancer	1%
Endometrial cancer	0%
Other	16%
Don't know	7%
Refused	0%

Of those who indicated some other type of cancer (n=72), the most common types mentioned were skin cancer, liver cancer, bone cancer, throat cancer, and stomach cancer.

Additionally, at the end of the survey respondents were given the opportunity to express any other concerns they had that relate directly to the chemical and petrochemical industries located in Lambton County. In total, 18% of respondents (n=91) provided a comment. Some common themes included:

- the desire to remain informed,
- the close proximity of industry to towns,
- the potential for accidents/spills,
- reiterations of earlier topics – breathing issues, air quality & air pollution, water pollution (rivers, lakes), and
- somewhat less commonly, a small proportion mentioned employment concerns and the dependence of jobs on the chemical/petrochemical industry.

Appendix A – Survey Instrument

I1. Hello, my name is <insert interviewer name> and I am calling from CCI Research Inc. on behalf of the County of Lambton, Community Health Services Department. I would like to speak to someone in the household who is 18 years of age or older and who had the most recent birthday (i.e. last birthday). Is that you?

- | | |
|---------------------|------------------------------------|
| 1. Speaking | Go to I4 |
| 2. Goes to get them | Go to Call back screen |
| 3. Later | Go to Call back screen |
| 4. Refused | Thank you for your time. Good bye. |

I2. Hello my name is <insert interviewers name> and I am calling from CCI Research Inc. on behalf of the County of Lambton, Community Health Services Department.

I am told that you are 18 years of age or older and have had the most recent birthday. Is this correct?

- | | |
|---------------------|------------------------------------|
| 1. Speaking | Go to I4 |
| 2. Goes to get them | Got to I3 |
| 3. Later | Go to Call back screen |
| 4. Refused | Thank you for your time. Good bye. |

I3. Hello my name is <insert interviewers name> and I am calling from CCI Research Inc. on behalf of the County of Lambton, Community Health Services Department.

I am told that you are 18 years of age or older and have had the most recent birthday. Is this correct?

- | | |
|---------------------|------------------------------------|
| 1. Speaking | Go to I4 |
| 2. Goes to get them | Thank you for your time. Good bye |
| 3. Later | Go to Call back screen |
| 4. Refused | Thank you for your time. Good bye. |

I4. Great! As you know, there is a large industrial area located in Lambton County that includes oil refineries, petrochemical plants, chemical plants, hazardous waste disposal facilities and other industrial manufacturers. In response to community concerns about the potential health effects of these industries, the Lambton Community Health Study Board of Directors has come together to oversee the development of a Health Study in Lambton County.

The purpose of this survey is to collect information that will help researchers design and conduct this Community Health Study. We will be able to design a better study if we have input and feedback from Lambton County residents.

(Interviewer prompt: If the respondent has any concerns about this research project they can contact Kevin Churchill @ 519-383-6231 ext. 3505)

Are you willing to participate in this survey with me now?

1. Yes Go to I5
2. Later Go to Call back screen
3. Refused Thank you for your time. Good bye.

I5. Thank you. This survey is voluntary and all responses will remain confidential. You may refuse to answer any question or stop the interview at any time. The information gathered will be used for reporting purposes ONLY and cannot be linked to you in any way. This survey will take approximately 10 minutes of your time and may be recorded and or monitored for quality assurance purposes.

May I continue?

1. Yes Go to Q1
2. Not later Go to Call back screen
3. Refused Thank you for your time. Good bye.

First, I have some general questions about where you live in Lambton County. In which municipality do you currently live?

1. Aamjiwnaang First Nation (Sarnia Reserve 45, Chippewas of Sarnia First Nation)
2. Brooke-Alvinston (Alvinston, Inwood, Rokeby)
3. Dawn-Euphemia (Bentpath, Cairo, Dawn, Edys Mills, Florence, Garville, Langbank, Rutherford and Shetland)
4. Enniskillen (Oil City, Marthaville)
5. Kettle and Stony Point First Nation (Kettle Point 44)
6. Lambton Shores (Arkona, Forest, Grand Bend, Port Franks, Thedford, Ipperwash Beach, Northville, Ravenswood)
7. Oil Springs
8. Petrolia
9. Plympton-Wyoming (Aberarder, Camlachie, Reece's Corners, Uttoxeter, Wanstead)
10. Point Edward
11. Sarnia (Bright's Grove) Go to Q1a
12. St. Clair (Brigden, Courtright, Corunna, Froomfield, Kimball, Mooretown, Port Lambton, Sombra, Wilkesport) Go to Q1d
13. Walpole Island First Nation (Walpole Island 46)
14. Warwick (Warwick, Watford)
15. Other specify:
16. Don't know
17. Refused

1a. Do you live north or south of Highway 402?

1. North
2. South
3. Don't Know - Go to Q1b.
4. Refused

1b. May I have your postal code please?

1. Record response _____
2. Don't know
3. Refused

1c. Confirm postal code (using Alpha Numeric)

1d. Are the first three digits of your postal code NON or NOP?

1. NON
2. NOP
3. Other specify
4. Don't know
5. Refused

2. How long have you lived in <insert from Q1>?

1. Less than 1 year
2. 1-4 years
3. 5-9 years
4. 10-14 years
5. 15-19 years
6. 20-24 years
7. 25-29 years
8. 30 or more
9. Don't know
10. Refused

3. How long have you lived in Lambton County?

1. Less than 1 year
2. 1-4 years
3. 5-9 years
4. 10-14 years
5. 15-19 years
6. 20-24 years
7. 25-29 years
8. 30 or more
9. Don't know
10. Refused

4. How important do you feel it is to conduct a Health Study in Lambton County? Do you feel it is.....

1. Very important
2. Important
3. Slightly important
4. Not important
5. Don't know
6. Refused

The next few questions are about your level of concern regarding issues in your community?

5. Are you NOT CONCERNED, SLIGHTLY CONCERNED, CONCERNED OR VERY CONCERNED about the following issues in your community?

	Not Concerned	Slightly Concerned	Concerned	Very Concerned	Don't Know	Refused
5a. Health risks from living near local industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5b. Health risks from working in local industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5c. Property values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5d. Other people's perceptions of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5e. Not having clear answers about health risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5f. Unemployment and the local economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The next few questions are about your level of concern regarding the impacts that chemical and petrochemical industries may have on the physical environment in Lambton County.

6. Are you NOT CONCERNED, SLIGHTLY CONCERNED, CONCERNED OR VERY CONCERNED about the following sources of pollution in your community?

	Not Concerned	Slightly Concerned	Concerned	Very Concerned	Don't Know	Refused
6a. Industrial Air pollution (All types)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6b. Industrial accidents (e.g. spills, leaks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6c. Surface water pollution (e.g. river, lakes, streams)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6d. Groundwater pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6e. Soil pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6f. Odours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. (Note: Ask if Q 6 = two or more and coded slightly concerned, concerned or very concerned)
Of the pollution sources you selected which one is your NUMBER ONE concern? Is it.....

1. Industrial Air pollution (all types)
2. Industrial accidents (e.g. spills, leaks)
3. Surface water pollution (e.g. river, lakes, streams)
4. Groundwater pollution
5. Soil pollution
6. Odours
7. Don't know
8. Refused

8. Do you have any other specific concerns about pollution in your community related to local chemical and petrochemical industries that the Study Team may not be aware of?

1. Yes - Record response
2. No
3. Don't know
4. Refused

Now, I would like to ask you a few questions about potential health effects of chemical and petrochemical industries located in Lambton County.

9a. Do you think that pollution from these industries causes health problems for Lambton County residents in general?

1. Yes
2. No - Goes to 10.
3. Don't know
4. Refused

b) What health problems do you think pollution from these industries causes for Lambton County residents as a whole?

(Do not read select all that apply)

1. Cancer
2. Respiratory or breathing problems (e.g. asthma, allergies)
3. Reproductive problems (e.g. difficulties conceiving a baby, miscarriages)
4. Child development problems (e.g. birth defects, delayed development)
5. Circulation and heart problems (e.g. stroke, heart attack)
6. Mental health problems (e.g. depression, anxiety)
7. Stomach/digestion problems
8. Other (please describe)
9. Don't know
10. Refused

10. As I read this list please indicate what types of health concerns you think we should study?

(Select all that apply)

(Interviewer Probe; Are there any other health concerns not listed you think we should study?)

1. Cancer - Go to 10a.
2. Respiratory or breathing problems (e.g. asthma, allergies)
3. Reproductive problems (e.g. difficulties conceiving a baby, miscarriages)
4. Child development problems (e.g. birth defects, delayed development)
5. Circulation and heart problems (e.g. stroke, heart attack)
6. Mental health problems (e.g. depression, anxiety)
7. Stomach/digestion problems
8. Other (please describe)
9. Don't know
10. Refused

10.a You mentioned cancer, what types of cancer ?

(Select all that apply)

1. All types of cancer
2. Bladder cancer
3. Brain cancer
4. Breast cancer
5. Cervical cancer
6. Colon cancer (or Colorectal)
7. Endometrial cancer
8. Hodgkin's Lymphoma
9. Non Specified Lymphoma
10. Kidney cancer
11. Leukemia
12. Lung cancer
13. Melanoma
14. Non-Hodgkin's-Lymphoma
15. Ovarian cancer
16. Pancreatic cancer
17. Prostate cancer
18. Thyroid cancer
19. Other specify:
20. Don't know
21. Refused

Ask if 10 = more than one response

11. Of the health concerns you selected, which one is your NUMBER ONE concern?

1. Cancer
2. Respiratory or breathing problems (e.g. asthma, allergies)
3. Reproductive problems (e.g. difficulties conceiving a baby, miscarriages)
4. Child development problems (e.g. birth defects, delayed development)
5. Circulation and heart problems (e.g. stroke, heart attack)
6. Mental health problems (e.g. depression, anxiety)
7. Stomach/digestion problems
8. Other (please describe)
9. Don't know
10. Refused

b) Why is <insert from Q11> your number one concern?

(Select all that apply)

1. I have it
2. Family member/s have it
3. I have heard of a lot of people with it
4. Family/friends have died from it
5. I have heard of people dying from it
6. I think that it is related to our environment/environment concerns
7. I think that it is more common in Lambton than in other areas
8. Other specify:
9. Don't know
10. Refused

12. Do you have any other concerns that directly relate to the chemical and petrochemical industries located in Lambton County?

1. Record response
2. No
3. Don't know
4. Refused

13. How would you like to be informed of the Health Study's progress?

(Select all that apply)

1. Short progress reports in the mail
2. Drop-in meetings with the researchers at a community centre
3. Newspapers
4. Radio/TV
5. Website
6. Other (please describe)
7. Don't know
8. Refused

14. We appreciate your participation in this survey. If a Health Study is conducted in Lambton County, would you be willing to participate?

(Interviewer prompt: If asked what would be involved in a Health Study reply with “ The Health Study has not been designed yet, so we cannot predict what will be involved. We are asking your willingness to participate at this time, but understand that this may change depending on the nature of the study”)

1. Yes
2. No
3. Depends
3. Don't know
4. Refused

15. In which age range do you belong?

1. 18-24
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. 65 and older
7. Don't know
8. Refused

16. Do you or anyone in your household currently, or have they previously, work in the chemical and petrochemical industries located in Lambton County (employee, contractor, etc.)?

1. Yes
2. No
3. Don't know
4. Refused

17. Gender of respondent

(Do not ask)

1. Male
2. Female

We have come to the end of the survey but before I let you go I would like to inform you of a series of Community Open Houses being held throughout Lambton County this November. Times and locations will be advertized locally. For more information visit the Lambton Community Health Study website at www.lambtonhealthstudy.ca or contact Kevin Churchill @ 519-383-6231 ext. 3505.

Now, on behalf of the County of Lambton, Community Health Services Department I would like to thank you for your participation today. Thanks again and have a great day/evening.

(Interviewer prompt: If the respondent has any concerns about this research project contact Kevin Churchill @ 519-383-6231 ext. 3505)