

## Cardiopulmonary Resuscitation (CPR) and Public Access Defibrillators (PAD) trends over time

Collected 2009 – 2012

Analyzed August 2016

### Monitor Introduction

This RRFSS Monitor describes the trends in training and awareness related to Cardiopulmonary Resuscitation (CPR) and Public Access Defibrillators (PADs) among Waterloo Region adults aged 18 years and older from 2009 to 2012. For information on the Community Awareness and Response to Emergencies (CARE) program, which promotes public access defibrillators in Waterloo Region, please refer to <https://resuscitation.heartandstroke.ca/>.

#### Fast Facts:

- There were no significant differences from 2009 to 2012 in the proportion of Waterloo Region adults who had ever taken CPR training or certification.
- There was a significant increase from 2009 to 2012 in the proportion of adults who had been trained in the use of cardiac defibrillators.
- There was a significant increase from 2009 to 2012 in the proportion of adults who had seen a cardiac defibrillator in a public place in Waterloo Region.

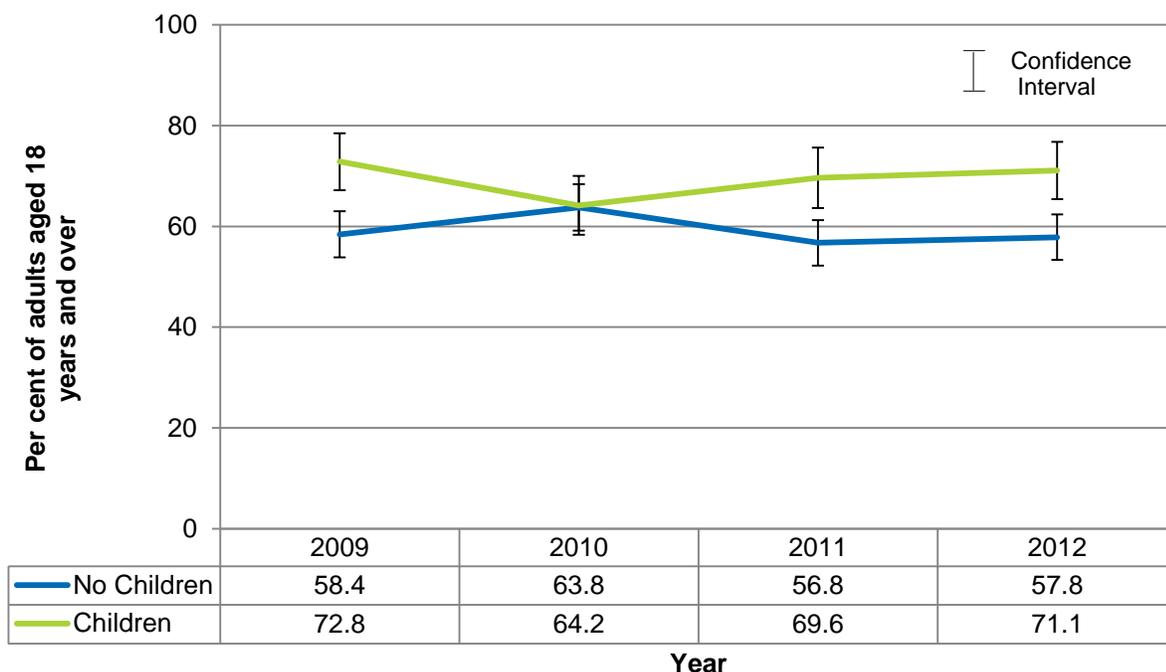
### CPR Training & Certification

From 2009 to 2012, there were no significant differences in the overall proportion of Waterloo Region adults who had ever taken a CPR course or some other type of CPR training. Year over year, almost two-thirds of Waterloo Region adults (63.7%, 64.0%, 61.3% and 62.6%, respectively) had reported taking a CPR course or another type of training in CPR.

Likewise, there were no significant differences from 2009 to 2012 in the overall proportion of Waterloo Region adults who had been certified at the end of their last CPR course. More than half of Waterloo Region adults (55.1%, 57.6%, 55.6%, and 55.2% each year, respectively) reported completing a CPR course where they were certified at the end.

However, proportions did vary over time by whether an individual lived in a household with or without children. For instance, at most time points, adults who lived in households with children were more likely to take a CPR course than those without children (Figure 1).

**Figure 1: Per cent of adults who have ever taken a CPR course or received some other type of training in CPR, by presence of children 17 years or under, Waterloo Region, 2009 to 2012**



The proportion of adults who had taken a CPR course also varied slightly by age. In 2012, adults aged 65 years and older were less likely to have taken a CPR course (45.8% (CI: 38.1 – 53.4)) compared to adults aged 25 to 44 years and aged 45 to 64 years (69.0% (CI: 62.9 – 75.1) and 68.3% (CI: 62.9 – 73.7), respectively).<sup>1</sup>

Certification trends followed a similar pattern to that of CPR training, with slight variations in proportions by age or whether adults lived in households with versus without children (data not shown).

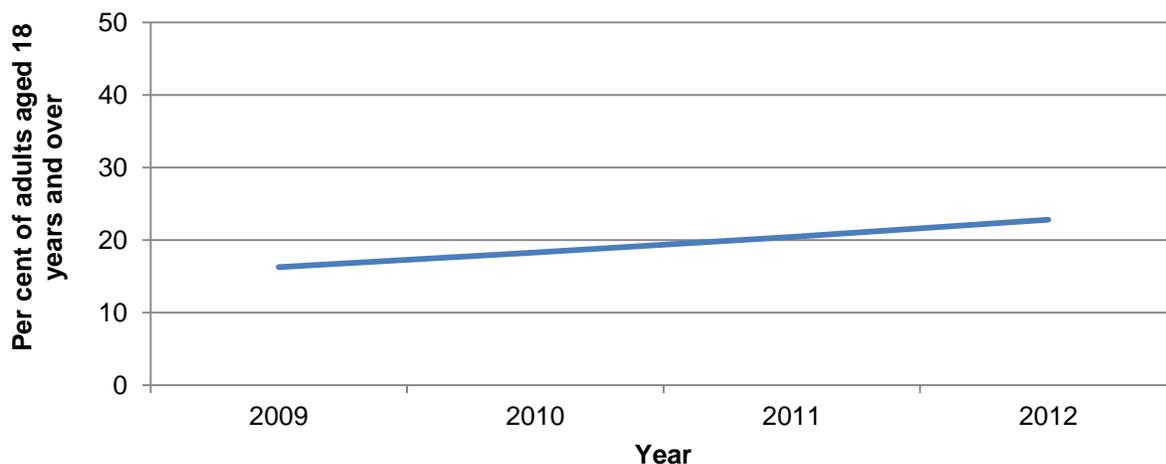
## Training in Cardiac Defibrillators

From 2009 to 2012, there was a significant increase over time in the proportion of adults who had been trained in the use of cardiac defibrillators. In 2009, 16.7% of adults had reported receiving training in the use of a defibrillator; whereas in 2012, 23.4% of adults had reported receiving training the use of a defibrillator (Figure 2).

Similar increases over time were identified by age group, gender, level of education, household income, municipality of residence, presence of children 17 years or under in the household, immigration status, employment status, marital status and by employment within the health care field.

<sup>1</sup> Cardiopulmonary Resuscitation (CPR) and Public Access Defibrillators (PAD) 2012 RRFSS Monitor, Region of Waterloo Public Health and Emergency Services, 2013. Available at: [http://chd.region.waterloo.on.ca/en/partnersProfessionals/resources/CPR\\_PAD\\_MONITOR\\_2012.pdf](http://chd.region.waterloo.on.ca/en/partnersProfessionals/resources/CPR_PAD_MONITOR_2012.pdf).

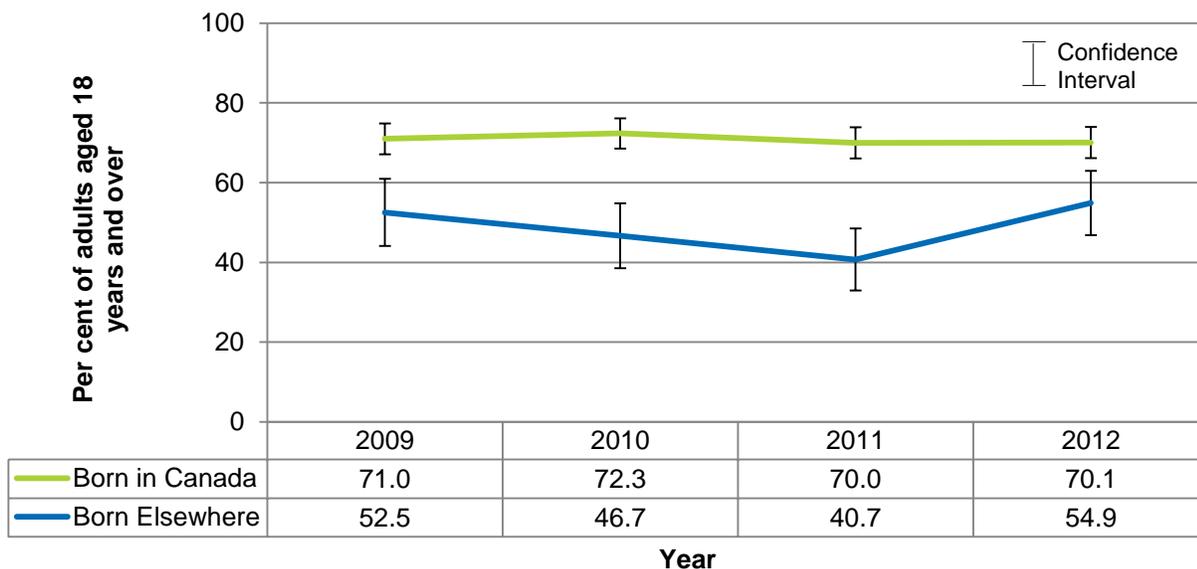
**Figure 2: Per cent of adults who had Public Access Defibrillators (PAD) training, Waterloo Region, 2009 to 2012**



### Seen, read, or heard of a PAD program

From 2009 to 2012, there were no significant differences in the proportion of Waterloo Region adults who had ever seen, read, or heard of a PAD program that puts cardiac defibrillators in public places, such as office buildings, arenas, schools, and shopping malls. Approximately two-thirds of Waterloo Region adults (67.2%, 66.4%, 63.5%, and 66.7% each year, respectively) reported having seen, read, or heard about such a program. However, proportions over time did vary slightly by immigration status (Figure 3).

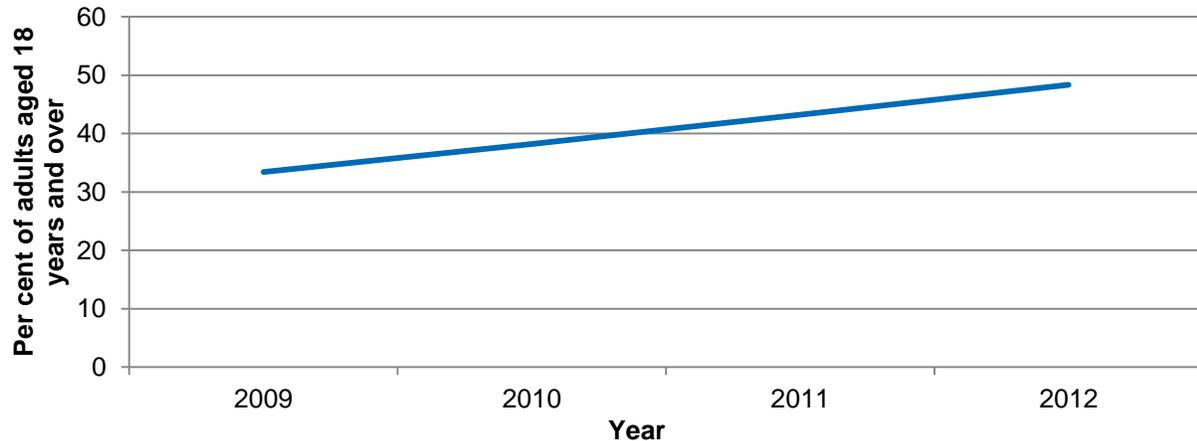
**Figure 3: Per cent of adults who have seen, read, or heard about a public access defibrillator program, by immigration status, Waterloo Region, 2009 to 2012**



## Seen a Cardiac Defibrillator in a public place in Waterloo Region

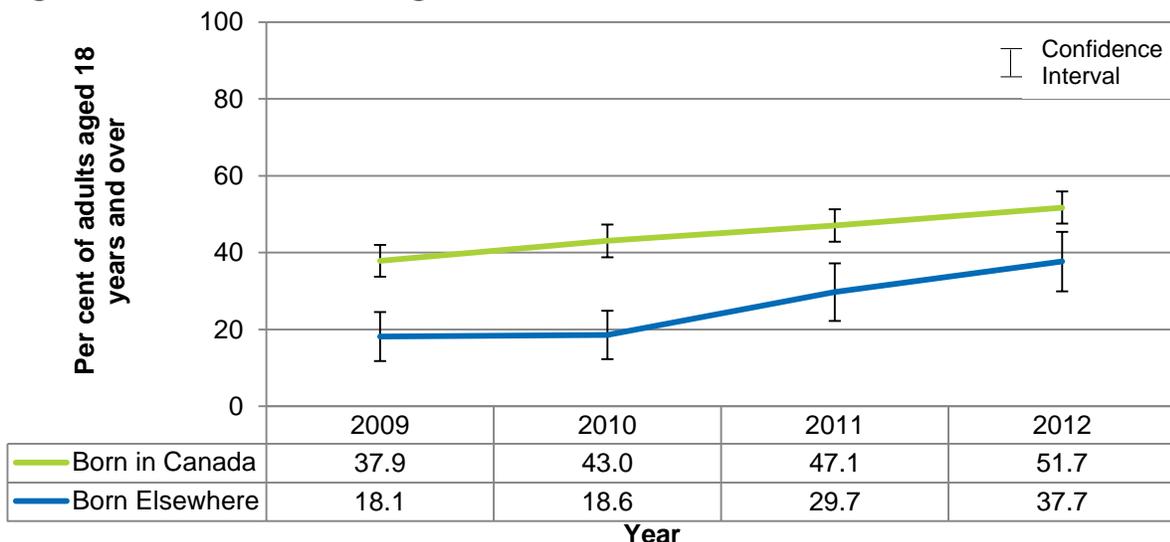
From 2009 to 2012, there was a significant increase over time in the proportion of adults who had seen a cardiac defibrillator in a public place in Waterloo Region (Figure 4). Specifically, in 2009, 33.9% of adults had reported seeing a cardiac defibrillator in a public place in Waterloo Region; whereas in 2012, that proportion increased to 48.6%.

**Figure 4: Per cent of adults who have seen a cardiac defibrillator in Waterloo Region, Waterloo Region, 2009 to 2012**



Similar increases over time were identified by age group, gender, level of education, household income, municipality of residence, presence of children 17 years or under in the household, employment status, marital status and by employment within the health care field. The proportion of adults born outside of Canada who had seen a cardiac defibrillator in Waterloo Region was consistently lower from 2009 to 2012, but it increased at a faster rate than in adults born in Canada (Figure 5).

**Figure 5: Per cent of adults who have seen a cardiac defibrillator in Waterloo Region, by immigration status, Waterloo Region, 2009 to 2012**

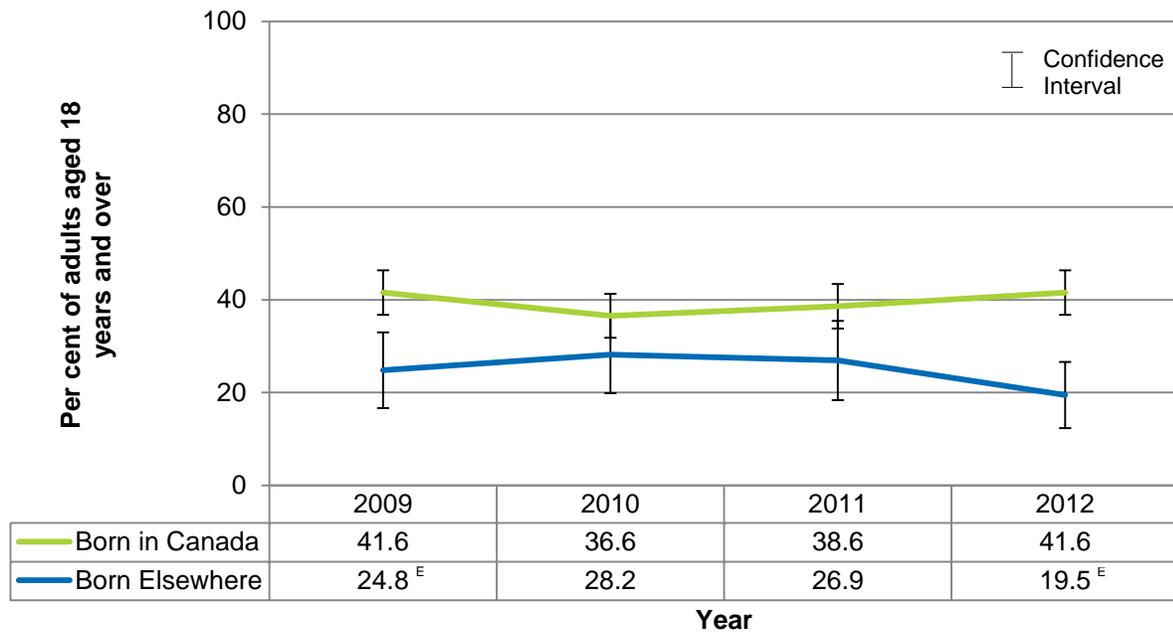


## Belief that anyone can use a Cardiac Defibrillator

From 2009 to 2012, there were no significant differences in the proportion of Waterloo Region adults who believed that anyone could use a cardiac defibrillator. Approximately one quarter of Waterloo Region adults believed that anyone could use a defibrillator (28.7%, 25.5%, 25.7%, and 26.2% each year, respectively).

However, proportions over time did vary slightly by immigration status (Figure 6).

**Figure 6: Per cent of adults who believe that anyone can use a cardiac defibrillator, by immigration status, Waterloo Region, 2009 to 2012**



## Willingness to perform CPR on a family member or friend

From 2009 to 2012, there were no significant differences in the proportion of Waterloo Region adults who would be somewhat or very willing to perform CPR on a family member or friend. The majority of Waterloo Region adults (94.2%, 91.9%, 93.7%, and 93.0% each year, respectively) said that they would be somewhat or very willing to perform CPR on a family member or friend.

No significant differences over time existed by age group, gender, level of education, household income, municipality of residence, presence of children 17 years or under in the household, immigration status, employment status, marital status, or employment within the health care field.

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## Willingness to perform CPR on someone they did not know

From 2009 to 2012, there were no significant differences in the proportion of Waterloo Region adults who would be somewhat or very willing to perform CPR on someone they did not know. The majority of Waterloo Region adults (85.3%, 84.7%, 85.4%, and 86.6% each year, respectively) said that they would be somewhat or very willing to perform CPR on someone they did not know.

No significant differences over time existed by age group, gender, level of education, household income, municipality of residence, presence of children 17 years or under in the household, immigration status, employment status, marital status, or employment within the health care field.

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## Willingness to use a cardiac defibrillator on someone that appeared lifeless or unresponsive

From 2009 to 2012, there were no significant differences in the proportion of Waterloo Region adults who would be somewhat or very willing to use a cardiac defibrillator on someone that appeared lifeless or unresponsive. Approximately two-thirds of Waterloo Region adults (66.8%, 68.8%, 66.1%, and 67.8% each year, respectively) said that they would be somewhat or very willing to use a cardiac defibrillator on someone that appeared lifeless or unresponsive.

No significant differences over time existed by age group, gender, level of education, household income, municipality of residence, presence of children 17 years or under in the household, immigration status, employment status, marital status, or employment within the health care field.

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## About RRFSS survey

Information here is presented from the Rapid Risk Factor Surveillance System (RRFSS). RRFSS is an on-going telephone survey occurring in participating public health units across Ontario. On a monthly basis, a random sample of approximately 100 adults aged 18 and older are interviewed regarding risk behaviours of importance to public health. The survey is conducted by the Institute for Social Research (ISR) at York University, on behalf of Region of Waterloo Public Health. For more information, please visit [www.rfss.on.ca](http://www.rfss.on.ca).

### Analyzed questions (total weighted sample =3254)

- Have you ever taken a CPR course or any other type of training in CPR? (weighted n=3240)
- And were you certified at the end of the course? (weighted n=3193)
- Did the course you took include training on the use of cardiac defibrillators? (weighted n=3217)
- How willing would you be to perform CPR on a family member or a close friend who appeared lifeless or unresponsive? Would you be very willing, somewhat willing, not very willing, not at all willing, or are you not sure? (weighted n=2795)
- How willing would you be to perform CPR on someone you do not know who appeared lifeless or unresponsive? Would you be very willing, somewhat willing, not very willing, not at all willing, or are you not sure? (weighted n=2612)
- Have you ever seen, read, or heard about a program that makes cardiac defibrillators available for use in public places such as office buildings, arenas, schools and shopping malls? (weighted n=3197)
- Have you ever seen a cardiac defibrillator in a public place in Waterloo Region? (weighted n=3173)
- Do you think that cardiac defibrillators CAN be used by anyone, or only by people who have been trained to use them, or are you not sure? (weighted n=2346)
- How willing would you be to use a cardiac defibrillator on someone who appeared lifeless or unresponsive? Would you be very willing, somewhat willing, not very willing, or not at all willing? (weighted n=2857)

### Analyzed indicators

- Per cent of (18+) who have ever been trained in CPR
- Per cent of adults (18+) who have been certified in CPR
- Per cent of adults (18+) who have ever been trained in the use of a cardiac defibrillator
- Per cent of adults (18+) who are willing to perform CPR on a family member or a close friends
- Per cent of adults (18+) who are willing to perform CPR on someone they don't know
- Per cent of adults (18+) who are willing to use a cardiac defibrillator on someone
- Per cent of adults (18+) who have ever seen, read, or heard of a PAD program
- Per cent of adults (18+) who have ever seen a cardiac defibrillator
- Per cent of adults (18+) who think a cardiac defibrillator can be used by anyone
- All data were analyzed according to the RRFSS Manual of Operations. The superscript "E" denotes high sampling variability, and estimates must be interpreted with caution. The superscript "F"

denotes unacceptable sampling variability, and estimates or conclusions based on these data will be unreliable and most likely invalid. The sample was weighted to reflect the number of adults in a household.

- A "module" in RRFSS is generally a self-contained group of questions on a specific public health topic. Generally, modules may be added or taken off the RRFSS every four month period (cycle) of the on-going survey system.
- Confidence intervals (an estimated range of values in which the true parameter likely lies) and coefficient of variation (a measure of the distribution of data points) were calculated using unweighted sample sizes and weighted estimates.
- Confidence intervals represent the 95 per cent confidence limits.
- Trend analyses were performed and statistically significant differences were determined by p-values less than 0.05.
- The survey was only administered in English, using a random digit dialing methodology and represents the behaviours, attitudes, and beliefs of adults in Waterloo Region.
- Responses which include "don't know" and "refused" were generally removed from analysis when they represent less than 5% of the sample.
- Responses which include "not sure", "other", "don't know" and "refused" were excluded from sub-group analyses.
- The "Townships" category for includes Wilmot, Woolwich, Wellesley and North Dumfries.
- The category of "employed full-time" includes those who were employed full-time for wages or who were self-employed. The category of "employed part-time" included those who worked part-time because of family obligations or because they were retired or a student.
- The category of a "couple relationship" included those who were married, living with a partner, or common-law. The category of a "single relationship" included those who were widowed, separated, never married, or divorced.

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