| Project InitiationThis Section must be Completed Prior to Project Dataset(s) Creation | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Project Title:** | Description of, and Healthcare Resource Utilization associated with Atherosclerotic Cardiovascular Disease (ASCVD) in Ontario, Canada | | | | |
| **Project TRIM number:** | P2018 0970 092 000 | | | | |
| **Research Program:** | DAS | | | | |
| **Site:** | ICES Central | | | | |
| **Project Objectives:** | *Insert Project Objectives as listed in the approved ICES Project PIA* | | | | |
| The primary objective is to describe the incidence, prevalence, patient characteristics  (including comorbidities and LDL-C), and health resource utilization and costs of patients with ASCVD in Ontario, Canada.  The secondary objectives are:   * To describe the time from first ASCVD event to second event, and subsequent event(s), and/or mortality, if applicable * To describe the type of second and/or subsequent event(s) relative to the type of primary event. * For index events, to describe LDL-C values prior to events, at the time of events and within 1-year after events. * For subsequent events, to describe LDL-C values within 1-year prior to or at the time of the subsequent event.   **Subgroup Analysis:**  The subgroup analysis will examine ASCVD patients over 65 years of age, with a prescription for a lipid-lowering treatment and available LDL-C test results; this sub-analysis will describe LDL-C goal attainment, treatment patterns and subsequent CV event rates. The statin treatment will be grouped by low, moderate, or high-intensity statins, with or without adjunctive treatment with ezetimibe. The following analyses will be conducted for this objective:  (1) Describe treatment patterns between those meeting their LDL-C goal and those not meeting their LDL-C goal  (2) Describe CV event rates between those meeting their LDL-C goal and those not meeting their LDL-C goal | | | | |
| **ICES Project PIA Initial Approval Date:** | *The ICES Employee or agent who is responsible for creating the Project Dataset(s) is responsible for ensuring there is an approved ICES Project PIA and verifying the date of approval prior to creating the Project Dataset(s)* | | | | |
| 2017-JUN-14 | | | | |
| **Principal Investigator (PI):** | Raina Rogoza  Tel: (905) 285-3138  [rrogoza@amgen.com](mailto:rrogoza@amgen.com)  Ponda Motsepe-Ditshego  Tel: (905) 285-3002  [pondam@amgen.com](mailto:pondam@amgen.com) | | | | |
| **Check the applicable box if the PI is an ICES Student/Trainee** | ICES Student  ICES Fellow  ICES Post-Doctoral Trainee  Visiting Scholar | | | | |
| **Responsible ICES Scientist:** | *Name the Responsible ICES Scientist if the PI is not a Full Status ICES Scientist* | | | | |
| Refik Saskin  [refik.saskin@ices.on.ca](mailto:refik.saskin@ices.on.ca) | | | | |
| **Project Team Member(s) Responsible for Project Dataset Creation and/or Statistical Analysis and date joined (list all):** | *All person(s) (ICES Analyst, Appointed Analyst, Analytic Epidemiologist, PI, and/or Student) responsible for creating the Project Dataset(s) and/or statistical analysis on the Research Analytics Environment (RAE) and the date they joined the project must be recorded* | | | | |
| Analytic Epidemiologist: Ryan Ng  [ryan.ng@ices.on.ca](mailto:ryan.ng@ices.on.ca)  Analyst: Eliane Kim  [Eliane.kim@ices.on.ca](mailto:Eliane.kim@ices.on.ca) | | | 2017-JUN-12 | |
| **Other ICES Project Team Members and date joined (list all):** | *All other Research Project Team Members (e.g., Research Administrative Assistants, Research Assistants, Project Managers, Epidemiologists) and the date they joined the project must be recorded* | | | | |
| Project Manager: Lisa Ishiguro  [lisa.ishiguro@ices.on.ca](mailto:lisa.ishiguro@ices.on.ca) | | | 2017-JUN-12 | |
| **Confirmation that DCP is consistent with Project Objectives:** | *The following individuals must confirm that the ICES Data provided for in this DCP is relevant (e.g., with respect to cohort, timeframe, and variables) and required to achieve the Project Objectives stated in the ICES Project PIA prior to initial Project Dataset creation: 1) PI; 2) Responsible ICES Scientist if the PI is not a Full Status ICES Scientist, or a second ICES Scientist or the Scientific Program Lead if the PI is creating both the DCP and the Project Dataset[s]; 3) ICES Research and Analysis Staff creating the DCP; and 4) ICES Analytic Staff (ICES Employee or agent responsible for creating the Project Dataset[s]). This may be delegated either verbally or via e-mail.* | | | | |
| ***Principal Investigator*** | |  | | yyyy-mon-dd |
| ***Responsible ICES Scientist or Second ICES Scientist/Lead*** | |  | yyyy-mon-dd | |
| ***ICES Research and Analysis Staff Creating the DCP*** | |  | yyyy-mon-dd | |
| ***ICES Analytic Staff*** | |  | yyyy-mon-dd | |
| **Designated ICES Research and Analysis Staff accountable for Project Documentation:** | *The person named (ICES staff) is accountable for ensuring that the approved ICES Project PIA, ICES Project PIA Amendments, and DCP are saved on the T Drive, ensuring ICES Project PIA Amendments are submitted as required, ensuring DCP Amendments are documented, and sharing the final DCP with the PI/Responsible ICES Scientist at project completion* | | | | |
| Ryan Ng | | | | |
| **DCP Creation Date and Author:** | *Date DCP was finalized prior to Project Dataset(s) creation* | *Name of person who created the DCP* | | | |
| ***Date*** | ***Name*** | | | |
| yyyy-mon-dd | Ryan Ng | | | |

| ICES DataThis Section must be Completed Prior to Project Dataset(s) Creation | |
| --- | --- |
| *The ICES Employee or agent who is responsible for creating the Project Dataset(s) must ensure that this list includes only data listed in the ICES Project PIA*  *Changes to this list after initial ICES Project PIA approval require an ICES Project PIA Amendment* | *Mandatory for all datasets that are available by individual year* |
| ***General Use Datasets – Health Services*** | ***Years (where applicable)*** |
| CCRS | 2003 to 2018 |
| CIHI DAD | 2003 to 2018 |
| CIHI SDS | 2003 to 2018 |
| HCDMOH | 2003 to 2018 |
| NACRS | 2003 to 2018 |
| NRS | 2003 to 2018 |
| ODB | 2003 to 2018 |
| OHIP | 2003 to 2018 |
| OMHRS | 2003 to 2018 |
| ***General Use Datasets – Care Providers*** |  |
| See list |  |
| See list |  |
| ***General Use Datasets – Population*** |  |
| RPDB | 2003 to 2018 |
| POP | 2005 to 2018 |
| ***General Use Datasets – Coding/Geography*** |  |
| See list |  |
| See list |  |
| ***General Use Datasets – Facilities*** |  |
| See list |  |
| ***General Use Datasets – Other*** |  |
| HYPER | 2003 to 2018 |
| ODD | 2003 to 2018 |
| OMID | 2003 to 2018 |
| See list |  |
| ***Controlled Use Datasets*** |  |
| See list |  |
| See list |  |
| ***Other Datasets*** |  |
| OLIS | Jan 2007 to Sep 2015 |

| Project Amendments and Reconciliation | | | |
| --- | --- | --- | --- |
| **ICES Project PIA Amendment History (add additional rows as needed):** | *Privacy approval date* | *Person who submitted amendment* | *Note that any changes to the list of ICES Data or Project Objectives require an ICES Project PIA Amendment* |
| ***Date*** | ***Name*** | ***Amendment*** |
| yyyy-mon-dd |  |  |
| **DCP Amendment History (add additional rows as needed):** | *Date DCP amended* | *Person who made the DCP amendment* | *Note that any DCP amendments involving changes to the list of ICES Data or Project Objectives require an ICES Project PIA Amendment* |
| ***Date*** | ***Name*** | ***Amendment*** |
| 2018-Mar-26  2018-May-22  2019-Feb-05  2019-Feb-08  2019-Jun-24  2019-Aug-22  2019-Nov-XX | Eliane Kim  Eliane Kim  Millie Hume  Eliane Kim  Eliane Kim  Eliane Kim  Raina Rogoza | Included hierarchy for defining index event  Changed age categories & updated tables  Updated cohort creation, outcome definition, new tables  Included OLIS data & LDL analysis plan  Updated sub-study inclusion criteria & tables, goal attainment criteria and table 16  Updated table 13 to Table 13a & 13b. Updated table 8 with additional columns. Updated CPH model variables  Added tables (XX) |
| **Date Programs/DCP reconciled** | *The person(s) creating the dataset and/or analyzing the data are responsible for ensuring that the final DCP reflects the final program(s) when the project is completed* | | |
| 2020-JUL-06 | | |

| Project Cohort | | |
| --- | --- | --- |
| **Study Design** | Cohort study  Matched cohort study  Case-control study  Cross-sectional study  Other (specify): | |
| **Index Event / Inclusion Criteria** | Index event is the first **Atherosclerotic Cardiovascular Disease (ASCVD)** event between April 1, 2005 and March 31, 2016 One code in any database is sufficient to identify the event. ASCVD is defined as:   * Peripheral arterial disease (PAD) (*DAD, OHIP , NACRS* databases*)*; * Acute myocardial infarction (MI) (*DAD, NACRS* ); * Transient ischemic attack (TIA) (*DAD, NACRS,*); * Ischemic stroke (*DAD, NACRS*); * Unstable angina pectoris (*DAD, NACRS,*); * Aortic aneurysm (*DAD, NACRS*); * Percutaneous coronary intervention (PCI) (*DAD, SDS*) * Coronary artery bypass graft surgery (CABG) (*DAD, SDS*) * Carotid endarterectomy / stent (*DAD, SDS*); * Peripheral artery bypass surgery (*DAD, SDS*); * Peripheral artery angioplasty / stenting (*DAD, SDS*); and * Peripheral artery endarterectomy (*DAD, SDS*)   See **Appendix 1** for ICD-9, ICD-10, CCI and OHIP billing fee codes used to identify ASCVD.  Events identified via DAD must be a the most responsible diagnosis (*dxtype = ‘M’*) or admitting diagnosis (*dxtype = ‘1’*).  \*Note: If more than 1 event occurs during the same day/record, use hierarchy (see appendix 1a and page 6) to assign the index event.  \***Note**: Identify the number/percentage of events based on dxtype=M and 1.  \***Note**: For billing codes, accompanying *feesuff* isA.  \***Note**: Do not use OMID to define MI, but use OMID to see if there are large differences in the MI numbers. Will decide what to do if there are large discrepancies.  \***Note**:OHIP billing codes and CCI codes can be used to define some ASCVD event (e.g. PAD). For these events, if the billing code falls within 7 days of hospital admission and discharge, then consider the codes being used for the same procedure. Use the CCI code as the ASCVD event date. | |
| **Estimated Size of Cohort**  **(if known)** | Unknown. | |
| **Exclusions (in order)** | *Step* | Description |
| 1 | Invalid IKN. |
| 2 | Event date after date of death. |
| 3 | Age < 18 years or age > 105 years. |
| 4 | Non-Ontario resident. |
| 5 | Missing age or sex. |
| 6 | ASCVD event in previous 2 year prior to the index date (prior to Apr 1, 2005). |

| Project Time Frame Definitions | | |
| --- | --- | --- |
| Look-back Window  Observation Window  (in which to look for outcomes)  **Index Event Date**  Accrual Window  Max Follow-up Date | |
| **Accrual Start/End Dates** | April 1, 2005 to March 31, 2016 |
| **Max Follow-up Date** | March 31, 2018 |
| **When does observation window terminate?** | March 31, 2018 |
| **Lookback Window(s)** | Two years (April 1, 2003) |

| Variable Definitions (add additional rows as needed) | | |
| --- | --- | --- |
| **Main Exposure or Risk Factor** | None. |
| **Primary Outcome Definition(s)** | Occurrence of additional events (see **Appendix 1** for relevant codes):   * Death, all-cause * ASCVD events (use the same definition for ASCVD as described in the **Index Event / Inclusion Criteria** box):   + PAD   + Nonfatal MI   + TIA   + Ischemic stroke   + Unstable angina pectoris   + Aortic aneurysms   + PCI   + CABG   + Carotid endarterectomy / stent   + Peripheral artery bypass surgery   + Peripheral artery angioplasty / stenting   + Peripheral artery endarterectomy   Subsequent events of the same type must be 30 days apart (check in DAD, OHIP, NACRS and/or SDS depending on event type) to avoid double-counting,with the following exception:   * If a patient has an initial MI with code I21, and a subsequent MI shortly after with code I22 (ICD-10 code for a subsequent MI within 4 weeks), then this will be counted as 2 separate events.   Note that the following events are considered related, and will not be counted as additional events if they occur within 30 days of one another:  • **Coronary symptoms, events and coronary procedures:** MI, PCI, CABG, Angina.  • **Neuro-related events and procedures:** Ischemic stroke, TIA, Carotid endarterectomy / stent  • **PAD and PAD revascularization procedures:** PAD, Peripheral artery angioplasty/stenting, Peripheral artery bypass surgery, Peripheral artery endarterectomy  Note that events will be coded **based on the order listed above**, with the first event listed taking precedence. For example if a patient had angina and an MI within 30 days, the primary/index event will be coded as MI. The angina will be excluded as a related event within 30 days, and this would be counted as 1 event.  If 2 events occur within 30 days of each other and they are not “related” events, then both events will be counted. The first event will be the index event, and the second event will be counted as a subsequent event. For example, if a patient has angina and then subsequently has a stroke, within 30 days – this will be counted as 2 events: angina will be the index event, and stroke will be a subsequent event.  If there are 2 codings for the exact same event within 30 days, this will be 1 event (assume the same exact event was billed/coded twice).  Deaths (all-cause mortality) will be considered a subsequent event only (cannot be an index event). If a death occurs within 30 days of an MI, aortic aneurysm or ischemic stroke, this will be considered as related to the event of MI, aortic aneurysm or stroke, and will NOT be counted as a subsequent event. After the 30 days has elapsed, death will be counted as a subsequent event. In addition, death within 30 days of any other event type (e.g. angina, TIA, etc.) will be counted as a subsequent event,  After 30 days has passed, all events are counted again – ie. 30 day clock begins again, until the next event occurs.  \***Note**: There is no maximum time after the first event for subsequent events to occur; for example, if the first ASCVD event is in 2004, the second event can happen at any time up to March 31, 2018.  \***Note**: The 30-day clock is based on the index event of the series, and the 30-day clock does not reset based on related events in the 30 day window.   * For example, a patient has a heart attack (Day 0). The person has an angina code at day 15. The 30-day clock is still based on the heart attack (it does not reset when angina occurs), and so after Day 30, a person is eligible for a subsequent ASCVD event. |
| **Secondary Outcome Definition(s)** | Costs for health resource utilization for these categories:   1. Inpatient hospitalization    * Inpatient hospitalizations    * OMHRS admissions to designated mental health beds 2. Rehabilitation 3. Long-term care 4. Physician services    * OHIP physician billings, including most of the shadow-billings    * OHIP lab claims (feecodes with ‘L’ prefix)    * OHIP non-physician billings    * FHO/FHN capitation 5. Prescription drugs    * Ontario drug benefit    * \***Note**: Calculate only for patients aged 65 years and older 6. Other costs    * Hospital outpatient clinic    * Same day surgery    * NACRS ED visits    * NACRS visits to dialysis clinics    * NACRS visits to cancer clinics    * Complex and Continuing Care    * Home care Services   Costing details:   * Standardize the cost to 2018 dollars, or most recent year if not possible. * Cost period: Calculate costs by fiscal year, and from 1 to 5 years after the event. * Calculate number of patients, mean, standard deviation, quartile 1 and quartile 3. * See **Table 4** for more details on how to calculate cost.   Papers to refer to regarding costs:   * Mittmann N, Seung SJ, Hill MD et al. 2012. Impact of disability status on ischemic stroke costs in Canada in the first year. Can J Neurol Sci 39 (6): 793-800. * Smolderen KG, Bell A, Lei Y et al. 2010. One-year costs associated with cardiovascular disease in Canada: Insights from the REduction of Atherothrombosis for Continued Health (REACH) registry. *Can J Cardiol* 26 (8): 297-305   **Low Density Lipoprotein Cholesterol (LDL-C)**  For index events, LDL-C values will be described (if available) for patients within 1-year prior to events, at the time of events, and within 1 year post-events.  Please note the following:   * For patients with multiple LDL-C measurements prior to events, the value closest to the time of the event will be used. This measurement will be defined as the **Pre-index LDL-C measurement**. * For LDL-C values at the time of the event, the LDL-C value on the date of the event or the first LDL-C during the study period will be used. This measurement will be defined as the **Initial or index LDL-C measurement**. * The follow-up LDL-C will be assessed at least 2 weeks following the the index LDL-C measurement, and include LDL-C measurements within 1-year post-index LDL-C and up to the end of the follow-up period. This measurement will be defined as the Post-index LDL-C measurement.   In addition, LDL-C values will be described as means, medians and ranges, and according to the groupings below, as the absolute number of patients with values in each group, in addition to the proportion or percentage of patients in each group:   * + < 1.8 mmol/L   + 1.8mmol/L to < 2.0mmol/L   + 2.0mmol/L to <2.6mmol/L   + 2.6mmol/L to <3.5mmol/L   + 3.5mmol/L to <5.0mmol/L   + ≥5.0 mmol/L   For patients with subsequent events, the LDL-C values within 1-year prior to the subsequent event and at the time of the subsequent event will be described, using the same methodology as above.  **Subgroup Analysis:**  The subgroup analysis will be conducted among ASCVD patients that are 65 years and older with:   1. Index LDL-C: First LDL-C recorded during study period after ASCVD diagnosis. 2. Follow up LDL-C: Next LDL-C that is >2weeks and not more than 1 year after index LDL-C. 3. Lipid lowering treatment (if multiple prescriptions fall within this timeframe, first one recorded is used): > 2 weeks and not more than 1 year after index LDL-C test. Lipid lowering treatment includes: statins, ezetimibe, niacin, fibrates and acid bile sequestrant   The following outcomes will be reported:   * + - * Number or proportion of patients with ASCVD treated with moderate or high-intensity statin regimens, with or without ezetimibe       * LDL-C goal attainment overall and across treatment regimens. The LDL-C goal will be assessed as LDL-C <2.0mmol/L at follow-up or 50% reduction from index LDL-C.       * ASCVD subsequent event rates or severity i) overall; ii) among statin-treated patients, with or without ezetimibe, who have not met their LDL-C goal, and iii) among statin-treated patients, with or without ezetimibe, who have met their LDL-C goal, and (iii) among non-statin treated patients. The event rates will be calculated per 1000 person years. Numerators and denominators to be provided for event rate tables.   In addition, please note the following:   * LDL-C values at the time of the event will be assessed using the first LDL-C measurement after the index event during the entire study period.This measurement will be defined as the **Initial or Index LDL-C measurement**.   + - * + Treatment modifications will be assessed during >2 weeks after the Initial/Index LDL-C assessment.   The statin treatment will be grouped for low-, moderate-, or high-intensity statins, with or without adjunctive treatment with ezetimibe. For multiple prescriptions, the first statin prescription will be used for this grouping.  The statin treatment will be assessed 30 days, one year, and at the end of follow-up after initial LDL-C index date.   * + - * + Follow-up LDL-C measurements will be assessed beginning 2 weeks after the index LDL-C, and will be assessed within the one-year period following the Initial/Index LDL-C assessment , and stratified by moderate-/high-intensity statin subgroups. The lowest LDL-C value during that time period will be used. * The percentage of patients attaining the LDL-C goal of 2.0 mmol/L or reduction 50% of baseline LDL-C will be identified from the lowest LDL-C test results during the follow-up period from the overall cohort and stratified by moderate and high intensity statin treatment, with or without ezetimibe. * The treatment patterns will be compared between groups of patients who did and did not achieve their LDL-C goal described above.   1. Any treatment will be captured after the index labdate   2. Statin categories will be based on first statin prescription after the index lab (Table 15) * Follow-up for new ASCVD events will be measured after 90 days form the index event   Subsequent ASCVD events, death and their composite measures will be calculated per 1000 person years. |

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| **Baseline Characteristics**  (as of the index date) | Demographic characteristics   * Age   + Mean, SD   + 18 to 34, 35 to 44, 45 to 54, 55-64, 65 to 74, 75 to 84, 85+   + <65, 65+ * Sex   Comorbidities   * Diabetes (*ODD* database) * Hypertension (*HYPER* database) * Hypercholesterolemia (*DAD, OHIP)* (2-year lookback)   + Check index hospitalization for pre-existing hypercholesterolemia (dxtype = 1, 3)   + ICD-9/10 codes     - ICD-10: E78.x, excluding E78.1, E78.71, E78.72, E78.81       * For E78.01 (familial hypercholesterolemia), include within hypercholesterolemia and create a separate flag as well (see **Table 1**)     - ICD-9: 272 (excluding 272.1 and 272.6) * Charlson Comorbidity Index (2-year lookback)   Medications (look back: 2 years)   * DIN list in DCP project folder as (*P0970\_092\_DIN\_list.txt*) * Statins to be categorized based on the following table:  Table: High-, Moderate-, and Low-Intensity Statin Therapy  |  |  |  | | --- | --- | --- | | **Low Intensity** | **Moderate Intensity** | **High Intensity** | | * Simvustatin 10mg * Pravastatin 10-20mg * Lovastatin 10, 20mg * Fluvastatin 20-40mg | * Atorvastatin 10-20mg * Rosuvastatin 5-10mg * Simvastatin 20-40mg * Pravastatin 40-80mg * Lovastatin 40, 60mg * Fluvastatin XL 80mg * Fluvastatin 40mg bid | * Atorvastatin 40-80mg * Rosuvastatin 20-40mg * **Simvastatin 80mg** |  * Ezetimibe * Other lipid lowering therapies: bile acid dequestrants, niacin and fibrate * Collect only for patients aged 65+ years and older |
| **Other Variables** | None. |

| Analysis Plan and Dummy Tables (expand/modify as needed) | | |
| --- | --- | --- |
| **Descriptive Tables (insert or append dummy tables), e.g.:** | | |
| **Table 1. Baseline characteristics, total ASCVD incident cohort and by ASCVD type, 2006 to 2016** | | |
| **Table 1a. Baseline characteristics, by ASCVD incident cohort that had medication data in dataset, and by ASCVD type, FY 2005/06 to 2015/16** | | |
| **Table 1b. Baseline characteristics, by ASCVD incident cohort that did not have medication data in dataset, and by ASCVD type, FY 2005/06 to 2015/16** | | |
| **Table 1c. Baseline characteristics, by ASCVD prevalent cohort (for entire cohort period)** | | |
| **Table 2. ASCVD event rate per 1000person years, in Ontario, 2006 to 2018** | | |
| **Table 2a. Yearly incidence of 1st ASCVD event in Ontario, by year, 2006 to 2016** | | |
| **Table 2a (under 65). Yearly incidence of 1st ASCVD event in Ontario, by year, 2006 to 2016 – for patients under 65 years of age** | | |
| Table 2a (65+). Yearly incidence of 1st ASCVD event in Ontario, by year, 2006 to 2016 – for patients 65+ years of age. | | |
| **Table 2a (age group). Yearly incidence of 1st ASCVD event in Ontario, by year, 2006-2016 – stratified by age group** | | |
| **Table 2b. Yearly incidence of 2nd ASCVD event in Ontario, by year, 2006 to 2018** | | |
| Table 2b (under 65). Yearly incidence of 2nd ASCVD event in Ontario, by year, 2006 to 2018 – for patients under 65 years of age | | |
| Table 2b (65+). Yearly incidence of 2nd ASCVD event in Ontario, by year, 2006 to 2018 – for patients 65+ years of age | | |
| Table 2b (age group). Yearly incidence of 2nd ASCVD event in Ontario, by year, 2006 to 2016 – stratified by age group | | |
| **Table 2c. Yearly incidence of 3+ ASCVD event in Ontario, by year, 2006 to 2018** | | |
| Table 2c (under 65). Yearly incidence of 3+ ASCVD event in Ontario, by year, 2006 to 2018 – for patients under 65 years of age | | |
| Table 2c (65+). Yearly incidence of 3+ ASCVD event in Ontario, by year, 2006 to 2018 – for patients 65+ years of age | | |
| Table 2c (age group). Yearly incidence of 3+ ASCVD event in Ontario, by year, 2006 to 2-16 – stratified by age group | | |
|  | | |
| Table 3a. 10-year prevalence of ASCVD in Ontario, by 10-year time period | | |
| **Table 3b. Prevalence of ASCVD in Ontario, for entire cohort period** | | |
| **Table 3c. 5-year prevalence of ASCVD in Ontario, by 5-year time period** | | |
| **Table 4. Health resources cost of ASCVD patients in Ontario, for incident cohort, by year, 2006 to 2018** | | |
| **Table 4a: Mean annual cost by ASCVD event type from index event by number of comorbidities** | | |
| **Table 4b: Mean annual costs by event type relative to index event** | | |
| **Table 4c: Mean annual costs by event type relative to 2nd event** | | |
| **Table 4c-i: Mean annual costs by event type relative to 2nd event, with death not included as 2nd event** | | |
| **Table 4d: Mean annual costs by event type relative to 3 or more events** | | |
| **Table 4d-i: Mean annual costs by event type relative to 3 or more events, with death not included as 3rd + event** | | |
| **Table 4e: Mean annual costs by event type relative to index event by age** | | |
| **Table 4f: Mean annual costs by event type relative to 2nd event by age** | | |
| **Table 4f-i: Mean annual costs by event type relative to 2nd event by age, with death not included as 2nd event** | | |
| **Table 4g: Health resources cost of ASCVD patients in Ontario, for prevalent cohort entire period, years 2004-2017** | | |
| **Table 4h: Mean overall costs by type of cost, for prevalent cohort entire period** | | |
| **Table 4i: Mean overall costs by age group and by male/female, for prevalent cohort entire period** | | |
| **Table 5. Baseline characteristics of patients, by number of events, 2006 to 2016** | | |
| **Table 6. Percent of subsequent events based on the first event** | | |
| **Table 7: Percent of the second event based on the first event, by event type** | | |
| **Table 8: Events that are excluded based on the 30-day window** | | |
| **Table 9: Time period from between ASCVD events and time to death, 2006 to 2016** | | |
| **Incidence**   * Calculate the crude incidence of ASCVD from 2006 to 2016, by year. The numerator is the number of new cases of ASCVD from April 1 to March 31 of the following year.The denominator is the number of Ontario residents aged 18 years and older from the *POP* database who do not have ASCVD (i.e. subtract the number of prevalent cases from the denominator). See **Table 2**.   **Prevalence**   * Calculate the crude prevalence of ASCVD from 2006 to 2016, by 10-year period, and by entire cohort period. The numerator is the number of cases from April 1 to March 31 of the end of the 10 year period. . The numerator includes new cases for that year (or for that 10-year period or entire cohort period), and existing cases – including those alive and those who died in that year. The denominator is the number of Ontario residents aged 18 years and older from the *POP* database for the relevant time periods. See **Tables 3a-c** for dummy tables.   **Proportion**   * Calculate the proportion of each ASCVD event type as the number of each ASCVD event type divided by the total number of ASCVD events. See **Table 6** for the dummy table.   **Table 2** requires **person years**. Calculate person years based on duration of the year alive (i.e. stop accuring person-time if an individual dies). Persons are eligible for calculating person years if they are:   * In the RPDB. * Alive at the beginning of the year. * Have an Ontario postal code (K,L,M,N,P). * Between 18 and 104 at the start of the year. * Contact date within the last 7 years. | | |
| **Statistical Model(s)** | | |
| **Type of model** | Cumulative incidence function (CIF)   * Death as competing risk * CIF curves   + Overall   + Stratify by age (18 to 34, 35 to 44, 45 to 54, 55 to 64, 65 to 74, 75 to 84, 85+)   + Stratify by number of comorbidities (0, 1, 2, 3)   Cox PH model adapted for competing risk analysis (i.e.Fine-Gray model) | |
| **Primary independent variable** | None. | |
| **Dependent variable** | Time from fist event to second event   * Max follow-up time: March 31, 2018 * Competing risk of death | |
| **Covariates** | * Age (18 to 34, 35 to 44, 45 to 54, 55 to 64, 65 to 74, 75 to 84, 85+) & age as continuous variable * Diabetes (Y/N) * Hypertension (Y/N) * Male (Y/N)   \***Note**: Stratify by index ASCVD event type. | |
| **Sensitivity Analyses** | None. | |
| **Type of model** | N/A. | |
| **Primary independent variable** | N/A. | |
| **Dependent variable** | N/A. | |
| **Covariates** | N/A. | |
|  | |

| Quality Assurance Activities | | | |
| --- | --- | --- | --- |
| **RAE Directory of SAS Programs** | /users/ekim/h/projects/DAS/archive/p0970.092.000 | | |
| **RAE Directory of Final Dataset(s)** | *The* *final analytic dataset for each cohort includes all the data required to create the baseline tables and run all the models. It should include all covariates for all models such as patient risk factors, hospital characteristics, physician characteristics, exposure measures (continuous, categorical) and outcomes. It should include covariates that were considered but didn’t make the final cut. This would permit an analyst to easily re-run the models in the future.* | | |
| /sasroot/projects/DAS/p0970.092.000/level1/ekim | | |
| **RAE README file available:** Yes No | | | |
| **Date results of quality assurance tools for final dataset shared with project team (where applicable):** | | |  |
|  | | **%assign** | N/A |
|  | | **%evolution** | N/A |
|  | | **%dinexplore** | N/A |
|  | | **%track / %exclude** | 2019-MAR-13 |
|  | | **%codebook** | N/A |
| **Additional comments:** | |  | |

## Table 1. Baseline characteristics, total ASCVD incident cohort and by ASCVD type, FY 2005/06 to 2015/16

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Baseline characteristic** | | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterect-omy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterect-omy** | **Total ASCVD cohort** | **P-value** |
| **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** |
| Sex | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Female* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Male* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Age (at time of index event) | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  |  | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *18 to 34 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *35 to 44 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *45 to 54 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *55 to 64 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *65 to 74 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *75 to 84 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *85+ years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Comorbidities | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Hypertension* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Diabetes* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Hypercholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Familial hyper-cholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Charlson Comorbidity index | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| LDL-C at baseline  (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at index  (*first LDL-C after diagnosis during study period)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at baseline only for individuals with an index LDL-C (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
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## Table 1a. Baseline characteristics, by ASCVD cohort that had medication data in dataset, and by ASCVD type, FY 2005/06 to 2015/16

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Baseline characteristic** | | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterect-omy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterect-omy** | **Total ASCVD cohort** | **P-value** |
| **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** |
| Sex | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Female* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Male* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Age (at time of index event) | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  |  | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *18 to 34 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *35 to 44 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *45 to 54 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *55 to 64 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *65 to 74 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *75 to 84 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *85+ years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Comorbidities | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Hypertension* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Diabetes* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Hypercholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Familial hyper-cholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Charlson Comorbidity index | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| LDL-C at baseline  (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at index  (*first LDL-C after diagnosis during study period)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at baseline only for individuals with an index LDL-C (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 1b. Baseline characteristics, by ASCVD cohort that did not have medication data in dataset, and by ASCVD type, FY 2005/06 to 2015/16

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Baseline characteristic** | | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterect-omy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterect-omy** | **Total ASCVD cohort** | **P-value** |
| **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** |
| Sex | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Female* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Male* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Age (at time of index event) | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  |  | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *18 to 34 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *35 to 44 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *45 to 54 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *55 to 64 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *65 to 74 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *75 to 84 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *85+ years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Comorbidities | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Hypertension* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Diabetes* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Hypercholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Familial hyper-cholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Charlson Comorbidity index | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| LDL-C at baseline  (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at index  (*first LDL-C after diagnosis during study period)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at baseline only for individuals with an index LDL-C (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 1c. Baseline characteristics, total ASCVD prevalent cohort and by ASCVD type, FY 2005/06 to 2015/16

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Baseline characteristic** | | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterect-omy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterect-omy** | **Total ASCVD prevalent cohort** | **P-value** |
| **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** | **N=** |
| Sex | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Female* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Male* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Age (at time of index event) | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  |  | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *18 to 34 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *35 to 44 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *45 to 54 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *55 to 64 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *65 to 74 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *75 to 84 years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *85+ years* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Comorbidities | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | *Hypertension* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Diabetes* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Hypercholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | *Familial hyper-cholesterolemia* | n (%) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| Charlson Comorbidity index | | mean +/- SD | … | … | … | … | … | … | … | … | … | … | … | … |  |
|  | | median (Q1-Q3) | … | … | … | … | … | … | … | … | … | … | … | … |  |
| LDL-C at baseline  (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at index  (*first LDL-C after diagnosis during study period)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LDL-C at baseline only for individuals with an index LDL-C (*time of event, or most recent, up to 1 year prior)*  < 1.8 mmol/L  1.8 to < 2mmol/L  2 to 2.6mmol/L  2.6 to <3.5mmol/L  3.5 to <5.0mmol/L  ≥5.0 mmol/L | | mean +/- SD median (Q1-Q3)  N (%)  N (%)  N (%)  N (%)  N (%) |  |  |  |  |  |  |  |  |  |  |  |  |  |
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## Table 2. ASCVD event rate per 1000 person years, in Ontario, FY 2005/06 to 2017/188

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Event Rate (per 1000 Person Years) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2005  2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2a. Yearly incidence of 1st ASCVD event in Ontario, by year, FY 2005/06 to 2015/16

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014  2015  2016 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2a (under 65). Yearly incidence of 1st ASCVD event in Ontario, by year, FY 2005/06 to 2015/16 – for patients under 65 years of age

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014  2015  2016 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2a (65+). Yearly incidence of 1st ASCVD event in Ontario, by year, FY 2005/06 to 2015/16 – for patients 65+ years of age

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014  2015  2016 |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Table 2a (age group). Yearly incidence of 1st ASCVD event in Ontario, by year, FY 2005/06 to 2015/16 – stratified by age group**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** |  | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **Age** | **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy /stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014  2015  2016 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2b. Yearly incidence of 2nd ASCVD event in Ontario, by year, FY 2005/06 to 2017/18

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2b (under 65). Yearly incidence of 2nd ASCVD event in Ontario, by year, FY 2005/06 to 2017/18 – for patients under 65 years of age

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2b (65+). Yearly incidence of 2nd ASCVD event in Ontario, by year, FY 2005/06 to 2017/18 – for patients 65+ years of age

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2b (age group). Yearly incidence of 2nd ASCVD event in Ontario, by year, FY 2005/06 to 2017/18 – stratified by age group

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** |  | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **Age** | **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2c. Yearly incidence of 3+ ASCVD event in Ontario, by year, FY 2005/06 to 2017/18

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Table 2c (under 65). Yearly incidence of 3+ ASCVD event in Ontario, by year, FY 2005/06 to 2017/18 – for patients under 65 years of age**

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2c (65+). Yearly incidence of 3+ ASCVD event in Ontario, by year, FY 2005/06 to 2017/18 – for patients 65+ years of age

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 2c (age group). Yearly incidence of 3+ ASCVD event in Ontario, by year, FY 2005/06 to 2017/18 – stratified by age group

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** |  | **Yearly incidence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | | |
| **Age** | **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** | **Death** |
| 2006 | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017  2018 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 3a. 10-year prevalence of ASCVD in Ontario, by 10-year time period (population prevalence – ie. not limited to our cohort)

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **10-Yearly prevalence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2004-2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2005-2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2006-2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007-2016 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008-2017 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 3b. Prevalence of ASCVD in Ontario, for entire cohort period

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Period prevalence, entire cohort period, 2004-2017 (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2004-2017 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 3c. 5-year prevalence of ASCVD in Ontario, by 5-year time period

\**please include numerator and denominator*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **5-Yearly prevalence (per 1,000 individuals) with 95% CI’s** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2004-2008 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2005-2009 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2006-2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007-2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008-2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009-2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010-2014 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011-2015 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012-2016 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013-2017 |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Table 4. Health resources cost of ASCVD patients, for incident cohort, in Ontario, by year, FY 2005/06 to 2016/17

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Total costs ($) per patient** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 | N  mean (SD) quartile 1 and 3 | … | … | … | … | … | … | … | … | … | … | … | … |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016 | … |  |  |  |  |  |  |  |  |  |  |  |  |

\***Note**: Exclude Prescription drug costs.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Total costs ($) per patient (under 65) – excludes Prescription Drug Costs** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 | N  mean (SD) quartile 1 and 3 | … | … | … | … | … | … | … | … | … | … | … | … |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017 | … |  |  |  |  |  |  |  |  |  |  |  |  |

\***Note**: Exclude Prescription drug costs.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Total costs ($) per patient (65 years and older) – includes Prescription Drug Costs** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 | N  mean (SD)  quartile 1 and 3 | … | … | … | … | … | … | … | … | … | … | … | … |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017 | … |  |  |  |  |  |  |  |  |  |  |  |  |

\***Note**: Include Prescription drug costs.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Total System costs ($)** | | | | | | | | | | | | |
| **All events** | **PAD** | **MI** | **TIA** | **Stroke** | **Angina** | **Aortic Aneurysm** | **PCI** | **CABG** | **Carotid endarterectomy / stent** | **Peripheral artery bypass surgery** | **Peripheral artery angioplasty / stenting** | **Peripheral artery endarterectomy** |
| 2006 | Total | … | … | … | … | … | … | … | … | … | … | … | … |
| 2007 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2015 | … |  |  |  |  |  |  |  |  |  |  |  |  |
| 2016  2017 | … |  |  |  |  |  |  |  |  |  |  |  |  |

\***Note**: This total is for the entire system, not per patient – exclude Prescription drug costs.

## Table 4a. Mean annual cost by ASCVD event type from index event by number of comorbidities

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Number of comorbidities** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | 0  1  2  3 | N  Mean (SD)  Q1 and Q3 | … | … | … | … |
| PAD | 0  1  2  3 | … |  |  |  |  |
| Stroke | 0  1  2  3 | … |  |  |  |  |
| TIA | 0  1  2  3 | … |  |  |  |  |
| Angina | 0  1  2  3 | … |  |  |  |  |
| Aortic Aneurysm | 0  1  2  3 | … |  |  |  |  |
| PCI | 0  1  2  3 | … |  |  |  |  |
| CABG | 0  1  2  3 | … |  |  |  |  |
| Carotid endarterectomy / stent | 0  1  2  3 | … |  |  |  |  |
| Peripheral artery bypass surgery | 0  1  2  3 | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | 0  1  2  3 | … |  |  |  |  |
| Peripheral artery endarterectomy | 0  1  2  3 | … |  |  |  |  |
| All events | 0  1  2  3 | … |  |  |  |  |

\***Note**: Exclude Prescription drug costs.

\***Note**: Number of comorbidities is based on diabetes, hypertension and hypercholesteremia.

## Table 4b. Mean annual costs by event type relative to index event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Type of cost** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | N  Mean (SD)  Q1 and Q3 | … | … | … | … |
| PAD | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Stroke | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| TIA | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Angina | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Aortic Aneurysm | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| PCI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| CABG | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Carotid endarterectomy / stent | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery bypass surgery | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery endarterectomy | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| All events | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |

\***Note**: Total annual costs in this table excludes prescription drug costs. Enter prescription drug costs as a separate line, and only calculate for aged 65 years and older.

## Table 4c. Mean annual costs by event type relative to 2nd event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Type of cost** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | N  Mean (SD)  Q1 and Q3 | … | … | … | … |
| PAD | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Stroke | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| TIA | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Angina | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Aortic Aneurysm | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| PCI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| CABG | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Carotid endarterectomy / stent | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery bypass surgery | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery endarterectomy | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Death | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| All Events | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |

\***Note**: Total annual costs in this table excludes prescription drug costs. Enter prescription drug costs as a separate line, and only calculate for aged 65 years and older.

## Table 4c-i. Mean annual costs by event type relative to 2nd event, with death not included as 2nd event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Type of cost** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | N  Mean (SD)  Median (Q1 and Q3) | … | … | … | … |
| PAD | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Stroke | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| TIA | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Angina | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Aortic Aneurysm | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| PCI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| CABG | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Carotid endarterectomy / stent | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery bypass surgery | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery endarterectomy | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
|  |  |  |  |  |  |  |
| All Events | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |

\***Note**: Total annual costs in this table excludes prescription drug costs. Enter prescription drug costs as a separate line, and only calculate for aged 65 years and older.

## Table 4d. Mean annual costs by event type relative to 3 or more events

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Type of cost** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost \*Prescription Drug costs (65 and older only) | N  Mean (SD)  Q1 and Q3 | … | … | … | … |
| PAD | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Stroke | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| TIA | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Angina | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Aortic Aneurysm | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| PCI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| CABG | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Carotid endarterectomy / stent | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery bypass surgery | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery endarterectomy | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Death | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| All Events | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |

\***Note**: Total annual costs in this table excludes prescription drug costs. Enter prescription drug costs as a separate line, and only calculate for aged 65 years and older.

## Table 4d-i. Mean annual costs by event type relative to 3 or more events, with death not included as a 3rd+ event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Type of cost** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost \*Prescription Drug costs (65 and older only) | N  Mean (SD)  Median (Q1 and Q3) | … | … | … | … |
| PAD | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Stroke | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| TIA | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Angina | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Aortic Aneurysm | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| PCI | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| CABG | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Carotid endarterectomy / stent | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery bypass surgery | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
| Peripheral artery endarterectomy | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |
|  |  |  |  |  |  |  |
| All Events | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | … |  |  |  |  |

\***Note**: Total annual costs in this table excludes prescription drug costs. Enter prescription drug costs as a separate line, and only calculate for aged 65 years and older.

## Table 4e. Mean annual costs by event type relative to index event by age

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Age group** | **Mean patient cost by year since index event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years  All ages | N  Mean (SD)  Q1 and Q3 | … | … | … | … |
| PAD | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Stroke | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| TIA | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Angina | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Aortic Aneurysm | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| PCI | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| CABG | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Carotid endarterectomy / stent | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery bypass surgery | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery endarterectomy | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| All Events | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |

\***Note**: Exclude Prescription drug costs.

## Table 4f. Mean annual costs by event type relative to 2nd event by age

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Age group** | **Mean patient cost by year since 2nd event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years  All ages | N  Mean (SD)  Q1 and Q3 | … | … | … | … |
| PAD | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Stroke | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| TIA | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Angina | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Aortic Aneurysm | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| PCI | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| CABG | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Carotid endarterectomy / stent | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery bypass surgery | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery endarterectomy | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Death | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| All Events | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |

\***Note**: Exclude Prescription drug costs.

## Table 4f-i. Mean annual costs by event type relative to 2nd event by age, with death not included as 2nd event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ASCVD event type** | **Age group** | **Mean patient cost by year since 2nd event ($)** | | | | |
| **1** | **2** | **3** | **4** | **5** |
| MI | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years  All ages | N  Mean (SD)  Median (Q1 and Q3) | … | … | … | … |
| PAD | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Stroke | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| TIA | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Angina | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Aortic Aneurysm | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| PCI | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| CABG | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Carotid endarterectomy / stent | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery bypass surgery | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery angioplasty / stenting | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
| Peripheral artery endarterectomy | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |
|  |  |  |  |  |  |  |
| All Events | 18-34 years  35-44 years  45-64 years  65-74 years  75-84 years  85+ years  All ages | … |  |  |  |  |

\***Note**: Exclude Prescription drug costs.

## Table 4g. Health resources cost of ASCVD patients, for prevalent cohort entire period, in Ontario, (FY 2004/05 to 2016/17)

|  |  |  |
| --- | --- | --- |
|  | **Total costs ($) per patient - who have prescription drug costs** | **Total costs ($) per patient - excluding patients who don’t have drug costs** |
| **Year** | **All Events** | **All Events** |
| 2004/05-2016/17 | N  mean (SD) median (quartile 1 and 3) | N  mean (SD) median (quartile 1 and 3) |
| 2004/05 | … | … |
| 2005/06 | … | … |
| 2006/07 | … | … |
| 2007/08 | … | … |
| 2008/09 | … | … |
| 2009/10 | … | … |
| 2010/11 | … | … |
| 2011/12 | … | … |
| 2012/13 | … | … |
| 2013/14 | … | … |
| 2014/15 | … | … |
| 2015/16 | … | … |
| 2016/17 | … | … |

|  |  |  |
| --- | --- | --- |
|  | **Total costs ($) per patient (under 65) – excludes Prescription Drug Costs** | **Total costs ($) per patient (under 65) – overall (including Prescription Drug Costs)** |
| **Year** | **All Events** | **All Events** |
| 2004/05-2016/17 | N  mean (SD) median (quartile 1 and 3) | N  mean (SD) median (quartile 1 and 3) |
| 2004/05 | … | … |
| 2005/06 | … | … |
| 2006/07 | … | … |
| 2007/08 | … | … |
| 2008/09 | … | … |
| 2009/10 | … | … |
| 2010/11 | … | … |
| 2011/12 | … | … |
| 2012/13 | … | … |
| 2013/14 | … | … |
| 2014/15 | … | … |
| 2015/16 | … | … |
| 2016/17 | … | … |

|  |  |
| --- | --- |
|  | **Total costs ($) per patient (65 years and older) – includes Prescription Drug Costs** |
| **Year** | **All Events** |
| 2004/05-2016/17 | N  mean (SD) median (quartile 1 and 3) |
| 2004/05 | … |
| 2005/06 | … |
| 2006/07 | … |
| 2007/08 | … |
| 2008/09 | … |
| 2009/10 | … |
| 2010/11 | … |
| 2011/12 | … |
| 2012/13 | … |
| 2013/14 | … |
| 2014/15 | … |
| 2015/16 | … |
| 2016/17 | … |

|  |  |  |
| --- | --- | --- |
|  | **Total System Costs ($) – including Prescription drug costs** | **Total System Costs ($) – excluding Prescription drug costs** |
| **Year** | **All Events** | **All Events** |
| 2004/05-2016/17 | N  mean (SD) median (quartile 1 and 3) | N  mean (SD) median (quartile 1 and 3) |
| 2004/05 | … | … |
| 2005/06 | … | … |
| 2006/07 | … | … |
| 2007/08 | … | … |
| 2008/09 | … | … |
| 2009/10 | … | … |
| 2010/11 | … | … |
| 2011/12 | … | … |
| 2012/13 | … | … |
| 2013/14 | … | … |
| 2014/15 | … | … |
| 2015/16 | … | … |
| 2016/17 | … | … |

\***Note**: This total is for the entire system, not per patient – exclude Prescription drug costs.

## Table 4h. Mean overall costs by type of cost, for prevalent cohort entire period

|  |  |  |  |
| --- | --- | --- | --- |
| **ASCVD event type** | **Type of cost** |  |  |
| **All** | **Females** | **Males** |
| All events | Inpatient Hospitalization  Rehabilitation  Long term care  Physician services  Other costs  Total annual cost  \*Prescription Drug costs (65 and older only) | N  Mean (SD)  Median (Q1 and Q3) | N  Mean (SD)  Median (Q1 and Q3) | N  Mean (SD)  Median (Q1 and Q3) |

\***Note**: Total annual costs in this table excludes prescription drug costs. Enter prescription drug costs as a separate line, and only calculate for aged 65 years and older.

## Table 4i. Mean overall costs by age group and by male/female, for prevalent cohort entire period

|  |  |
| --- | --- |
| **ASCVD group** | **Age group** |
| **Overall** | **Males** | **Females** |
| Overall | 18-34 years  35-44 years  45-54 years  55-64 years  65-74 years  75-84 years  85+ years  All ages | N  Mean (SD)  Median (Q1 and Q3) | … | … |

## Table 5. Baseline characteristics of patients, by number of events, FY 2005/06 to 2017/18

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Baseline characteristic** | | **1 event  (*ie. patient has only 1 event – the index event – during the study period*)** | **2 events** | **3+ events** |
| **N=** | **N=** | **N=** |
| Time to event | | -- | mean +/- SD | mean +/- SD |
|  | | -- | median (Q1 to Q3) | median (Q1 to Q3) |
| Sex |  |  |  |  |
|  | *Female* | n (%) | n (%) | n (%) |
|  | *Male* | n (%) | n (%) | n (%) |
| Age |  | mean +/- SD | mean +/- SD | mean +/- SD |
|  |  | median (Q1 to Q3) | median (Q1 to Q3) | median (Q1 to Q3) |
|  | *18 to 34 years* | n (%) | n (%) | n (%) |
|  | *35 to 44 years* | n (%) | n (%) | n (%) |
|  | *45 to 54 years*  *55 to 64 years* | n (%) | n (%) | n (%) |
|  | *65 to 74 years* | n (%) | n (%) | n (%) |
|  | *75 to 84 years* | n (%) | n (%) | n (%) |
|  | *85+ years* | n (%) | n (%) | n (%) |
| ASCVD event type | |  |  |  |
|  | *PAD* | n (%) | n (%) | n (%) |
|  | *MI* | n (%) | n (%) | n (%) |
|  | *Stroke* | n (%) | n (%) | n (%) |
|  |  |  |  |  |
|  | *TIA* | n (%) | n (%) | n (%) |
|  | *Angina* | n (%) | n (%) | n (%) |
|  | *Aortic Aneurysm* | n (%) | n (%) | n (%) |
|  | *PCI* | n (%) | n (%) | n (%) |
|  | *CABG* | n (%) | n (%) | n (%) |
|  | *Carotid endarterectomy/stent* | n (%) | n (%) | n (%) |
|  | *Peripheral artery bypass surgery* | n (%) | n (%) | n (%) |
|  | *Peripheral artery angioplasty/stenting* | n (%) | n (%) | n (%) |
|  | *Peripheral artery endarterectomy* | n (%) | n (%) | n (%) |
|  | *Death (if applicable, if subsequent event)* | -- | n (%) | n (%) |
|  | |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
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|  |  |  |  |  |
| Medications | |  |  |  |
|  | *Statin (high)* | n (%) | n (%) | n (%) |
|  | *Statin (moderate)* | n (%) |  |  |
|  | *Statin (low)* | n (%) | n (%) | n (%) |
|  | *Ezetimibe* | n (%) | n (%) | n (%) |
|  | *Bile acid sequestrant* | n (%) | n (%) | n (%) |
|  | *Niacin* | n (%) | n (%) | n (%) |
|  | *Fibrates* | n (%) | n (%) | n (%) |
| First LDL-C after ASCVD diagnosis during study period) |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## \*Note: the baseline characteristics for the 2nd and 3rd event are calculated using the date of the 1st event. An individual can only be included in each column once (i.e. cannot count an individual twice for a 1st ASCVD event)

## *For medications, please note that 1 prescription is sufficient to count the medication, and if patients have more than 1 Rx in the baseline period, we will use the most recent Rx to classify the patients as Low, Med or High for statins.*

## Table 6. Percent of subsequent events based on the first event

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Event type** | **Proportion of patients who had a 2nd event (of any type)** | **Proportion of patients who had a 3rd event (of any type)** |  |  |
| PAD | n (%) | n (%) |  |  |
| MI | n (%) | n (%) |  |  |
| Stroke | n (%) | n (%) |  |  |
| TIA | n (%) | n (%) |  |  |
| Angina | n (%) | n (%) |  |  |
| Aortic Aneurysm | n (%) | n (%) |  |  |
| PCI | n (%) | n (%) |  |  |
| CABG | n (%) | n (%) |  |  |
| Carotid endarterectomy / stent | n (%) | n (%) |  |  |
| Peripheral artery bypass surgery | n (%) | n (%) |  |  |
| Peripheral artery angioplasty / stenting | n (%) | n (%) |  |  |
| Peripheral artery endarterectomy | n (%) | n (%) |  |  |

## Table 7. Percent of the second event based on the first event, by event type, and percent of the 3rd event based on the first and second event, by event type.

|  |  |  |  |
| --- | --- | --- | --- |
| **1st ASCVD event n (%)** | **2nd ASCVD event n (%)** | | **3rd ASCVD event n(%)** |
| PAD n (%) | PAD  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) ie. *the total number of patients who had a 1st PAD event, then a 2nd PAD event, then a 3rd event of any type* |
| MI  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Stroke  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| TIA  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Angina  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Aortic Aneurysm  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| PCI  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| CABG  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Carotid endarterectomy / stent  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Peripheral artery bypass surgery  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Peripheral artery angioplasty / stenting  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Peripheral artery endarterectomy  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Death  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Total n(%) – *ie. total number of the initial PAD patients who had a 2nd event of any type* | |  |
| MI n (%) | PAD  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| MI  n (%) | | PAD n (%)  MI n (%)  Stroke n (%)  TIA n (%)  Angina n (%)  Aortic Aneurysm n (%)  PCI n (%)  CABG n (%)  Carotid endarterectomy / stent n (%)  Peripheral artery bypass surgery n (%)  Peripheral artery angioplasty / stenting n (%)  Peripheral artery endarterectomy n (%)  Death n(%)  Total n(%) |
| Stroke | n (%) | … |
| TIA | n (%) | … |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death  TOTAL | n (%)  n (%) |  |
| Stroke n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death  TOTAL | n (%)  n (%) |  |
| TIA n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| Angina n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| Aortic Aneurysm n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| PCI  n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| CABG  n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| Carotid endarterectomy / stent  n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| Peripheral artery bypass surgery  n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| Peripheral artery angioplasty / stenting  n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death | n (%) |  |
| Peripheral artery endarterectomy  n (%) | PAD | n (%) |  |
| MI | n (%) |  |
| Stroke | n (%) |  |
| TIA | n (%) |  |
| Angina | n (%) |  |
| Aortic Aneurysm | n (%) |  |
| PCI | n (%) |  |
| CABG | n (%) |  |
| Carotid endarterectomy / stent | n (%) |  |
| Peripheral artery bypass surgery | n (%) |  |
| Peripheral artery angioplasty / stenting | n (%) |  |
| Peripheral artery endarterectomy | n (%) |  |
| Death  TOTAL | n (%)  n (%) |  |

**Table 8a: Events that are excluded based on the 30-day window**

For Events within 30 days of each other that are not being counted (we would like to see what we are excluding here):

|  |  |  |  |
| --- | --- | --- | --- |
| **1st ASCVD event** | | **Events within 30 days that were excluded** | |
| PAD | n (%) | PAD | n (%) |
| Peripheral artery Angioplasty / stenting | n (%) |
| Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) |
| MI | n (%) | Death | n (%) |
| PCI | n (%) |
| Angina | n (%) |
| CABG | n (%) |
| MI | n (%) |
| TIA | n (%) | Carotid endarterectomy / stent | n (%) |
| TIA | n (%) |
| Stroke | n (%) | Stroke | n (%) |
| Carotid endarterectomy / stent | n (%) |
| Death | n (%) |
| TIA | n (%) |
| Angina | n (%) | Angina | n (%) |
| Aortic Aneurysm | n (%) | Aortic Aneurysm | n (%) |
| Death | n (%) |
| PCI | n (%) | PCI | n (%) |
| Angina | n (%) |
| CABG | n (%) |
| CABG | n (%) | Angina | n (%) |
| CABG | n (%) |
| Carotid endarterectomy / stent | n (%) | Carotid endarterectomy / stent | n (%) |
| Peripheral artery bypass surgery | n (%) | Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) |
| Peripheral artery angioplasty / stenting | n (%) | Peripheral artery endarterectomy | n (%) |
| Peripheral artery Angioplasty / stenting | n (%) |
| Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) | Peripheral artery endarterectomy | n (%) |

**Table 8b: Events that are excluded based on the 30-day window from 2nd ASCVD event**

|  |  |  |  |
| --- | --- | --- | --- |
| **2nd ASCVD event** | | **Events within 30 days that were excluded** | |
| PAD | n (%) | PAD | n (%) |
| Peripheral artery Angioplasty / stenting | n (%) |
| Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) |
| MI | n (%) | Death | n (%) |
| PCI | n (%) |
| Angina | n (%) |
| CABG | n (%) |
| MI | n (%) |
| TIA | n (%) | Carotid endarterectomy / stent | n (%) |
| TIA | n (%) |
| Stroke | n (%) | Stroke | n (%) |
| Carotid endarterectomy / stent | n (%) |
| Death | n (%) |
| TIA | n (%) |
| Angina | n (%) | Angina | n (%) |
| Aortic Aneurysm | n (%) | Aortic Aneurysm | n (%) |
| Death | n (%) |
| PCI | n (%) | PCI | n (%) |
| Angina | n (%) |
| CABG | n (%) |
| CABG | n (%) | Angina | n (%) |
| CABG | n (%) |
| Carotid endarterectomy / stent | n (%) | Carotid endarterectomy / stent | n (%) |
| Peripheral artery bypass surgery | n (%) | Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) |
| Peripheral artery angioplasty / stenting | n (%) | Peripheral artery endarterectomy | n (%) |
| Peripheral artery Angioplasty / stenting | n (%) |
| Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) | Peripheral artery endarterectomy | n (%) |

**Table 8c: Events that are excluded based on the 30-day window from 3rd ASCVD event**

|  |  |  |  |
| --- | --- | --- | --- |
| **3rd ASCVD event** | | **Events within 30 days that were excluded** | |
| PAD | n (%) | PAD | n (%) |
| Peripheral artery Angioplasty / stenting | n (%) |
| Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) |
| MI | n (%) | Death | n (%) |
| PCI | n (%) |
| Angina | n (%) |
| CABG | n (%) |
| MI | n (%) |
| TIA | n (%) | Carotid endarterectomy / stent | n (%) |
| TIA | n (%) |
| Stroke | n (%) | Stroke | n (%) |
| Carotid endarterectomy / stent | n (%) |
| Death | n (%) |
| TIA | n (%) |
| Angina | n (%) | Angina | n (%) |
| Aortic Aneurysm | n (%) | Aortic Aneurysm | n (%) |
| Death | n (%) |
| PCI | n (%) | PCI | n (%) |
| Angina | n (%) |
| CABG | n (%) |
| CABG | n (%) | Angina | n (%) |
| CABG | n (%) |
| Carotid endarterectomy / stent | n (%) | Carotid endarterectomy / stent | n (%) |
| Peripheral artery bypass surgery | n (%) | Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) |
| Peripheral artery angioplasty / stenting | n (%) | Peripheral artery endarterectomy | n (%) |
| Peripheral artery Angioplasty / stenting | n (%) |
| Peripheral artery bypass surgery | n (%) |
| Peripheral artery endarterectomy | n (%) | Peripheral artery endarterectomy | n (%) |

**Table 9: Time period from between ASCVD events and time to death, 2006 to 2018**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Index event** | **2nd event from index event** | **3rd event from second event** |  | **Death from last event** | **Death from index event** |
| **All patients**  Number (n)  Time (days) | N  n/a | N  Mean (SD)  Q1 and Q3 | … |  | … | … |
| **Patients with 0 comorbidities**  Number (n)  Time (days) | N  n/a | … |  |  |  |  |
| **Patients with 1 comorbidity**  Number (n)  Time (days) | N  n/a | … |  |  |  |  |
| **Patients with 2 comorbidities**  Number (n)  Time (days) | N  n/a | … |  |  |  |  |
| **Patients with 3+ comorbidities**  Number (n)  Time (days) | N  n/a | … |  |  |  |  |

**Table 10: Pre-Index Event LDL-C values (by group)**

**\*** *the value closest to the time of the event will be used.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **< 1.8 mmol/L** | **1.8 to < 2mmol/L** | **2mmol/L to <2.6mmol/L** | **2.6mmol/L to <3.5mmol/L** | **3.5mmol/L to <5.0 mmol/L** | **≥5.0mmol/L** | **Total (Mean, Median)** |
| **Overall** | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median, Q1, Q3 |
| **Index Event** |  |  |  |  |  |  |  |
| PAD | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median, Q1,Q3 |
| MI |  |  |  |  |  |  |  |
| Stroke |  |  |  |  |  |  |  |
| TIA |  |  |  |  |  |  |  |
| Angina |  |  |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |  |  |
| PCI |  |  |  |  |  |  |  |
| CABG |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |
| Female |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |
| >18 years |  |  |  |  |  |  |  |
| 18-34 years  35-44 years |  |  |  |  |  |  |  |
| 45 to 54 years |  |  |  |  |  |  |  |
| 55 to 64 years |  |  |  |  |  |  |  |
| 65-74 years |  |  |  |  |  |  |  |
| 75-84 years |  |  |  |  |  |  |  |
| 85+ years |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**Table 11: LDL-C values at the time of Index Event (either during initial hospitalization or up to 30 days post)**

**\*** *For LDL-C values at the time of the event, the LDL-C value on the date of the event or up to 30 days after the index event will be assessed. Mean LDL-C will be calculated for patients with repeated LDL-C measuring during this time period. This measurement will be defined as the* ***Initial or index LDL-C measurement***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **< 1.8 mmol/L** | **1.8 to < 2mmol/L** | **2mmol/L to <2.6mmol/L** | **2.6mmol/L to <3.5mmol/L** | **3.5mmol/L to <5.0 mmol/L** | **≥5.0mmol/L** | **Total (Mean, Median)** |
| **Overall** | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median, Q1,Q3 |
| **Index Event** |  |  |  |  |  |  |  |
| PAD | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median, Q1,Q3 |
| MI |  |  |  |  |  |  |  |
| Stroke |  |  |  |  |  |  |  |
| TIA |  |  |  |  |  |  |  |
| Angina |  |  |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |  |  |
| PCI |  |  |  |  |  |  |  |
| CABG |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |
| Female |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |
| >18 years |  |  |  |  |  |  |  |
| 18-34 years |  |  |  |  |  |  |  |
| 45 to 54 years |  |  |  |  |  |  |  |
| 55 to 64 years |  |  |  |  |  |  |  |
| 65-74 years |  |  |  |  |  |  |  |
| 75-84 years |  |  |  |  |  |  |  |
| 85+ years |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**Table 12: LDL-C values post-Index Event ()**

**\*** *The follow-up LDL-C will be assessed following the time period for the index LDL-C measurement (31 days post-index event), and include LDL-C measurements within 1-year post-index event and up to the end of the follow-up period*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **< 1.8 mmol/L** | **1.8 to < 2mmol/L** | **2mmol/L to <2.6mmol/L** | **2.6mmol/L to <3.5mmol/L** | **3.5mmol/L to <5.0 mmol/L** | **≥5.0mmol/L** | **Total** |
| **Overall** | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median (Q1, Q3) |
| **Index Event** |  |  |  |  |  |  |  |
| PAD | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) |  |
| MI |  |  |  |  |  |  |  |
| Stroke |  |  |  |  |  |  |  |
| TIA |  |  |  |  |  |  |  |
| Angina |  |  |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |  |  |
| PCI |  |  |  |  |  |  |  |
| CABG |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |
| Female |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |
| >18 years |  |  |  |  |  |  |  |
| 18-34 years |  |  |  |  |  |  |  |
| 45 to 54 years |  |  |  |  |  |  |  |
| 55 to 64 years |  |  |  |  |  |  |  |
| 65-74 years |  |  |  |  |  |  |  |
| 75-84 years |  |  |  |  |  |  |  |
| 85+ years |  |  |  |  |  |  |  |
| All ages | Mean (SD) | Mean (SD) | Mean (SD) |  | Mean (SD) | Mean (SD) | Mean (SD) |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**Table 13: LDL-C values for Second Event***\*\*use value at the time of the event, if available – if not, use value up to 1 year prior*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **< 1.8 mmol/L** | **1.8 to < 2mmol/L** | **2mmol/L to <2.6mmol/L** | **2.6mmol/L to <3.5mmol/L** | **3.5mmol/L to <5.0 mmol/L** | **≥5.0mmol/L** | **Total** |
| **Overall** | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median (Q1, Q3) |
| **Second Event Type** |  |  |  |  |  |  |  |
| PAD | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median (Q1, Q3) |
| MI |  |  |  |  |  |  |  |
| Stroke |  |  |  |  |  |  |  |
| TIA |  |  |  |  |  |  |  |
| Angina |  |  |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |  |  |
| PCI |  |  |  |  |  |  |  |
| CABG |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |
| Female |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |
| >18 years |  |  |  |  |  |  |  |
| 18-34 years |  |  |  |  |  |  |  |
| 45 to 54 years |  |  |  |  |  |  |  |
| 55 to 64 years |  |  |  |  |  |  |  |
| 65-74 years |  |  |  |  |  |  |  |
| 75-84 years |  |  |  |  |  |  |  |
| 85+ years |  |  |  |  |  |  |  |
| All ages | Mean (SD) | Mean (SD) | …. |  | …. | …. |  |
|  |  |  |  |  |  |  |  |

**Table 14: LDL-C values for Second Event among patients who had an MI as their index event***\*\*use value at the time of the event, if available – if not, use value up to 1 year prior*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **< 1.8 mmol/L** | **1.8 to < 2mmol/L** | **2mmol/L to <2.6mmol/L** | **2.6mmol/L to <3.5mmol/L** | **3.5mmol/L to <5.0 mmol/L** | **≥5.0mmol/L** | **Total** |
| **Overall** | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median (Q1, Q3) |
| **Second Event Type** |  |  |  |  |  |  |  |
| PAD | N (%) | N (%) | N (%) | N (%) | N (%) | N (%) | Mean (SD) Median (Q1, Q3) |
| MI |  |  |  |  |  |  |  |
| Stroke |  |  |  |  |  |  |  |
| TIA |  |  |  |  |  |  |  |
| Angina |  |  |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |  |  |
| PCI |  |  |  |  |  |  |  |
| CABG |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Sex** |  |  |  |  |  |  |  |
| Female |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Age** |  |  |  |  |  |  |  |
| >18 years |  |  |  |  |  |  |  |
| 18-34 years |  |  |  |  |  |  |  |
| 45 to 54 years |  |  |  |  |  |  |  |
| 55 to 64 years |  |  |  |  |  |  |  |
| 65-74 years |  |  |  |  |  |  |  |
| 75-84 years |  |  |  |  |  |  |  |
| 85+ years |  |  |  |  |  |  |  |
| All ages | Mean (SD) | Mean (SD) | …. |  | …. | …. |  |
|  |  |  |  |  |  |  |  |

**Table 15: SubStudy: Index LDL-C values**

Index LDL-C levels (mmol/L) in ASCVD patients with index LDL-C test and treatment anytime during study period.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** | **No Treatment**  **(n= )**  **N (%)a** | **Any Treatment**  **(n= )**  **N (%)** | **Low-Intensity Statin**  **(n= )**  **N (%)** | **Medium-Intensity Statin**  **(n= )**  **N (%)** | **High-Intensity Statin**  **(n= )**  **N (%)** |  |  |
| Age (Decades) |  |  |  |  |  |  |  |
| 65-74 |  |  |  |  |  |  |  |
| 75-84 |  |  |  |  |  |  |  |
| 85+ |  |  |  |  |  |  |  |
| Sex |  |  |  |  |  |  |  |
| Female |  |  |  |  |  |  |  |
| Male |  |  |  |  |  |  |  |
| Index Event |  |  |  |  |  |  |  |
| PAD |  |  |  |  |  |  |  |
| MI |  |  |  |  |  |  |  |
| Stroke |  |  |  |  |  |  |  |
| TIA |  |  |  |  |  |  |  |
| Angina |  |  |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |  |  |
| PCI |  |  |  |  |  |  |  |
| CABG |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

## SubStudy: Follow-up Results (LDL-C Goal Attainment)

The following analyses present the subset of patients with both an index LDL-C measurement and a follow-up LDL-C test, defined as: at least two weeks after and within one year of treatment post-index LDL-C test. These results describe LDL-C goal attainment from index to follow-up LDL-C test

Table 16: Sub-study: Proportions of patients not at LDL-C goal attainment based on patients having an index and follow-up LDL-C test (LDL-C follow-up test after two weeks of index LDL-C and up to one year after index LDL-C) by year

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Patients with LDL-C Index and Follow-up Test**  **(n= )**  **N=, mean+/-SD & median (IQR) for difference in days between index & follow-up lab, mean+/-SD for index and follow-up lab** | **Patients with LDL-C Index and Follow-up test On treatment (n=)**  **mean+/-SD for index and follow-up lab** | **Patients with LDL-C Index and Follow-up Test Not at Goal**  **(n= )**  **mean+/-SD for index and follow-up lab** | **Patients with LDL-C Index and Follow-up Test and low intensity statins**  **(n= )**  **mean+/-SD for index and follow-up lab** | **Patients with LDL-C Index and Follow-up Test and on low intensity statins**  **Not at Goal**  **(n= )**  **mean+/-SD for index and follow-up lab** |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 2010 | **N (%)** |  | **N (%)** | **N (%)** | **N (%)** |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |
| 2014 |  |  |  |  |  |  |  |  |  |
| 2015 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

**Abbreviations:** LDL-C= low-density lipoprotein- cholesterol.

**Note:** LDL-C goal attainment defined as: <2.0 mmol/L at follow-up or >50% reduction in LDL-C; Rate (proportion) of LDL-C goal attainment to be calculated based on total population with initial and follow-up LDL-C tests.

The lowest follow-up LDL-C value during the time period was used (>2 weeks to 1 year post index LDL-C).

Table 17: Sub-study: Proportions of patients not at LDL-C goal (LDL-C follow-up test after two weeks of index LDL-C and up to one year after statin treatment) among ASCVD patients with lipid-lowering treatment

|  | | **Any Statin/Alternative a**  **N=** | | **Low-Intensity b**  **N=** | | **Medium-Intensity b**  **N= 1** | | **High-Intensity b**  **N=** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** | **Total N** | | **Not at Goal**  **N (%)** | **Total N** | **Not at Goal**  **N (%)** | **Total N** | **Not at Goal**  **N (%)** | **Total N** | **Not at Goal**  **N (%)** |
| **Overall** |  | |  |  |  |  |  |  |  |
| Age |  | |  |  |  |  |  |  |  |
| 65-74 |  | |  |  |  |  |  |  |  |
| 75-84 |  | |  |  |  |  |  |  |  |
| 85+ |  | |  |  |  |  |  |  |  |
| Sex |  | |  |  |  |  |  |  |  |
| Female |  | |  |  |  |  |  |  |  |
| Male |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
| Index Event |  | |  |  |  |  |  |  |  |
| PAD |  | |  |  |  |  |  |  |  |
| MI |  | |  |  |  |  |  |  |  |
| Stroke |  | |  |  |  |  |  |  |  |
| TIA |  | |  |  |  |  |  |  |  |
| Angina |  | |  |  |  |  |  |  |  |
| Aortic Aneurysm |  | |  |  |  |  |  |  |  |
| PCI |  | |  |  |  |  |  |  |  |
| CABG |  | |  |  |  |  |  |  |  |
| Carotid endarterectomy / stent |  | |  |  |  |  |  |  |  |
| Peripheral artery bypass surgery |  | |  |  |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  | |  |  |  |  |  |  |  |
| Peripheral artery endarterectomy |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
| CCI |  | |  |  |  |  |  |  |  |
| 0 |  | |  |  |  |  |  |  |  |
| 1-2 |  | |  |  |  |  |  |  |  |
| 3+ |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |
| Initial LDL-C Goal |  | |  |  |  |  |  |  |  |
| At Goal |  | |  |  |  |  |  |  |  |
| Not at Goal |  | |  |  |  |  |  |  |  |
| Received Ezezetimibe e, |  | |  |  |  |  |  |  |  |
| No |  | |  |  |  |  |  |  |  |
| Yes |  | |  |  |  |  |  |  |  |

a Including single statins, combination statins and other alternative medications

b Patients on statin intensities listed in the 2013 ACC/AHA recommendations; this is a subset of those on any statin/alternative treatment.

c Not mutually exclusive.

e Receiving ezetimibe: statins (single and combinations) and alternative treatments (single and combinations) + ezetimibe.

Sub-study: Subsequent ASCVD Event Results

Table 18: Crude incident rates per 1000 person-years of subsequent ASCVD events among ASCVD patients with index LDL-C test

Note: The **Initial or index LDL-C measurement is the first LDL-C measurement after the index ASCVD event during the study period**.

| **Characteristic** | **All patients with LDL-C test**  **(n= )**  **IR (95% CI)** | **Normal LDL-C**  **(n= )**  **IR (95% CI)** | **Elevated LDL-C**  **(n= )**  **IR (95% CI)** | **Without statin**  **(n= )**  **IR (95% CI)** | **With any statin/alternative treatment**  **(n= )**  **IR (95% CI)** |
| --- | --- | --- | --- | --- | --- |
| Overall |  |  |  |  |  |
| Age |  |  |  |  |  |
| 65-74 |  |  |  |  |  |
| 75-84 |  |  |  |  |  |
| 85+ |  |  |  |  |  |
| Sex |  |  |  |  |  |
| Female |  |  |  |  |  |
| Male |  |  |  |  |  |
|  |  |  |  |  |  |
| Index Event |  |  |  |  |  |
| PAD |  |  |  |  |  |
| MI |  |  |  |  |  |
| Stroke |  |  |  |  |  |
| TIA |  |  |  |  |  |
| Angina |  |  |  |  |  |
| Aortic Aneurysm |  |  |  |  |  |
| PCI |  |  |  |  |  |
| CABG |  |  |  |  |  |
| Carotid endarterectomy / stent |  |  |  |  |  |
| Peripheral artery bypass surgery |  |  |  |  |  |
| Peripheral artery angioplasty / stenting |  |  |  |  |  |
| Peripheral artery endarterectomy |  |  |  |  |  |
| CCI |  |  |  |  |  |
| 0 |  |  |  |  |  |
| 1-2 |  |  |  |  |  |
| 3+ |  |  |  |  |  |

**Note:** All rates to be calculated as /1000 person years

Table 19: Sub-study:. Crude incident rates per 1000 person-years of subsequent ASCVD events by year

|  |  |  |
| --- | --- | --- |
| **Index ASCVD Year** | **Rate of subsequent ASCVD event for patients without treatment data**  **(n= )** | **Rate of subsequent ASCVD event for patients moderate to high intensity statin**  **(n= )** |
| 2010 | **N (%)** | **N (%)** |
| 2011 |  |  |
| 2012 |  |  |
| 2013 |  |  |
| 2014 |  |  |
| 2015 |  |  |
|  |  |  |
|  |  |  |

\*Cumulative incidence

## Figure 1.

**Index Event**

1st ASCVD event

**ASCVD Event**

**Time to 2nd event**

* Demographics. gender, age
* Comorbidities: diabetes, hypertension, hypercholesterolemia
* Drug utilization (if available)
* Health care resource utilization
* LDL-C

**ASCVD Event**

**3+ events**

* Number of additional events
* Type of event; PAD, MI, Stroke, Death, TIA, Angina, Aortic Aneurysm, PCI, CABG, Carotid endarterectomy / stent, Peripheral artery bypass surgery, Peripheral artery angioplasty / stenting , Peripheral artery endarterectomy
* Demographics: Age, gender, ethnicity
* LDL-C

% PAD

% MI

% Stroke

% TIA

% Angina

% Aortic Aneurysm

% PCI

% CABG

% Carotid endarterectomy / stent

% Peripheral artery bypass surgery

% Peripheral artery angioplasty / stenting

% Peripheral artery endarterectomy

* Demographics. gender, age
* Comorbidities: diabetes, hypertension, hypercholesterolemia
* Drug utilization (if available)
* Health care resource utilization
* LDL-C

% PAD

% MI

% Stroke

% TIA

% Angina

% Aortic Aneurysm

% PCI

% CABG

% Carotid endarterectomy / stent  
% Peripheral artery bypass surgery

% Peripheral artery angioplasty / stenting

% Peripheral artery endarterectomy

% Death

## Appendix 1. Codes for ASCVD (events of interest), outcomes and comorbidities

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Events of interest** | **ICD9**  **(OHIP [*dxcode* variable])**  **\*\* note will not use decimals during look-up** | **ICD10**  **(DAD [*dx10code1-25*] / NACRS**  **[*dx10code1-10*])** | **CCI code**  **(DAD [*incode1-20*]/ SDS [*incode1-20*])** | **OHIP billing code (OHIP [*feecode*])** |
| Myocardial infarction (MI) – (includes STEMI and NSTEMI) | ~~--~~ | I21, I22 | -- | -- |
| Ischemic Stroke | ~~--~~ | I63 (excluding I63.6), H34.1, H34.2 | -- | -- |
| Peripheral artery disease (PAD) | 440.2, 444.2, 443.9 | I70.2, I73.9, I74.2, I74.3, 174.4 | -- | -- |
| Angina |  | I20 | -- | -- |
| Transient Ischemic Attack (TIA) |  | G45 (excluding G45.4), H34.0x | -- | -- |
| Aortic Aneurysm | ~~--~~ | I71 | -- | -- |
| Percutaneous Coronary Intervention (PCI) | ~~--~~ | -- | 1IJ50, 1IJ54, 1IJ57GQ | Z434, Z448, G298 |
| Coronary Artery Bypass Graft (CABG) |  | -- | 1IJ76 | R742, R743 |
| Carotid  endarterectomy/stent | -- | -- | IJE57, IJE50, IJE87 | N220, R792, E665 |
| Peripheral artery bypass surgery | -- | -- | 1KG76 | R791, R794, R787, R860, R861, E672, R780, R804, R937 |
| Peripheral artery angioplasty/stenting | -- | -- | 1KG50 | R875, J058 |
| Peripheral artery endarterectomy | -- | -- | 1KG57 | R809 |

Appendix 1A: Hierarchy to assign index event if there is more than 1 event on the record/day

1.       Myocardial infarction

2.       Ischemic stroke

3.       Aortic aneurysm

4.       Peripheral artery disease

5.

6.       Transient ischemic attack

7.       Carotid endarterectomy/stent

Percutaneous coronary intervention

8.       Coronary artery bypass graft

9.

Angina

10.   Peripheral artery angioplasty/stenting

11.   Peripheral artery bypass surgery

12.   Peripheral artery endarterectomy