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"IDOCC"
Improved Delivery of Cardiovascular Care through Outreach Facilitation

Data Collection Hand Book for Chart Abstractors (CAs*)*

This manual was developed over several years and is based on previous work by Dr William Hogg and Dr Clare Liddy in collaboration with Sam Ward, Miriam Wiens, Jackie Schultz, and other staff from the C.T. Lamont Primary Health Care Research Centre in Ottawa, Canada. We are happy to share this handbook but ask that you request permission from the corresponding author to reproduce, disseminate, or use in derivative works. The information contained in this manual was developed using the best available evidence at the time and is not intended to be used as a clinical care guideline but rather as a research tool.

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1. Overview

The University of Ottawa has undertaken a research project to increase the uptake of evidence-based practice for the secondary prevention and management of patients with established CVD and cardiovascular risk factors (e.g. hypertension, dyslipidemia, diabetes, chronic kidney disease, smoking and obesity) in primary care practices throughout the Champlain LHIN. This will be accomplished through a LHIN-wide implementation of an *Outreach Facilitation program*, in which skilled health professionals known as facilitators (Practice Change Consultants) serve as an expert resource to primary care practices. The facilitators will provide hands on support to practices and help to implement tools and processes designed to incorporate evidence-based practice into the routine delivery of cardiovascular care. Specifically, they will: a) assist with practice performance assessment, feedback, and consensus building towards goal setting, b) offer clinical, technical, organizational resources and practical advice, and c) provide encouragement to face and overcome the challenges of implementing system change. The initiative will also create the infrastructure to strengthen coordination of services between primary care practice and other health sectors including specialty care and public health.

2. Implementation and Contact

A total of 72-90 practice sites will be recruited to participate in the first phase of this project. A chart abstraction will take place at each practice site. This manual focuses on the procedures for Chart Abstraction.

2.1 Site assignment

The Chart Abstractors (CAs) will be assigned to practice sites shortly after the Ottawa office has confirmed their participation. For each site, the CA will receive a form that provides relevant information about that site, including type of facility, contact information, participating clinicians, best day and time to call if relevant, and other pertinent information (see Appendix A: Chart Abstractor Information Sheet).

2.2 Initial contact

2.2.1 CA is first contact with site

The CA will call the contact person of the practice site and set up the first meeting / schedule for performing the chart abstraction. When the CA first makes contact with the practice site, the following script should be used:

My name is _____. I have been given your name as the contact regarding a study we are performing called "Improved Delivery of Cardiovascular Care through Outreach". It is being conducted by researchers of the University of Ottawa and your practice is one of the participating sites. At your practice, Dr(s) _____ (*list doctor(s))* are participating in the study.

I am calling to schedule my visits to the practice for performing the chart abstraction. I will be reviewing 66 charts, which I expect to take an average of 7 days. On the first day, I will need to meet for approximately 15 minutes to help orient me to your filing system (or EMR system) and outline for you the chart abstraction procedures. What would be the most convenient day for me to begin the chart abstraction?

What type of charting system is your site using, traditional paper or electronic medical records (EMR)? ***(If EMR**, the CA should try to determine with the practice the best way of obtaining a random sample e.g. printing a full list of patients or using the practices own patient ID numbers).*

NOTE:

The CA can also use this first contact as an opportunity to ask for directions to the practice if needed, and inquire as to parking options.

2.2.2. Request for more information

If the contact person asks for more information about the study, use the following script to refresh his/her memory:

The objective of the study is to increase the uptake of evidence-based practice for the secondary prevention and management of patients with established CVD and cardiovascular risk factors in primary care practices throughout the Champlain LHIN.

The information that we will collect from your patients is absolutely confidential. No practice or patient identifier information will be recorded. Chart abstractions for this study do not require patient consent, only the consent of their physician(s).

If more information is required, the CA should offer that a senior member of research team call the practice (give project manager's name / tel # and let them know he/she will contact them directly).

2.3 The first visit

2.3.1 What to bring

The CA should bring the following items to their practice site visits.

- ☑ Chart Abstractor "Chart Abstractor Information Sheet" (Appendix A)
- ☑ The Data Collection Hand Book for Chart Abstractors (this document) for reference.
- ☑ 15 Chart Abstraction Forms to complete the required (potentially one days work if TrialStat fails).
- ☑ A Chart Abstraction Tracking Log (Appendix B) to track chart abstraction of patients selected
- ☑ Envelope / label (for the Tracking Log) with instructions on safekeeping for practice (Appendix C)
- ☑ Pens
- ☑ A tape measure, preferably in inches, to be used in the sampling of charts.
- ☑ A small pocket calculator to be used in the sampling of charts.
- ☑ Small Adhesive note pad (post-it notes to put on files)
- ☑ Thimble for easy leafing through paper notes
- ☑ Name tag (identification of CA and Project) – <u>wear at all times in practices</u>
- ☑ Project Manager business cards (for any additional questions or info. requested)
- ☑ One copy each of the CA Invoice & Expense Sheet (Appendices E & F) (for receiving payment after work completed).
- ☑ List of Acronyms
- ☑ Colored Card (to identify measured position on shelf)
- ☑ Extension cord

2.3.2 What should the CA do upon arrival at the practice site?

On the scheduled day of data collection, the CA will introduce herself/himself to the receptionist and request to speak with the practice site contact person (i.e. office manager or receptionist). The CA will explain to the contact person the procedures that are required with respect to the chart abstraction. The CA will answer any questions that physicians, staff or other health professionals may have about the data collection or the study. (Use the above script if needed). If at any time the CA has questions they can call the coordinator (e.g. clinical questions / sample selection) or project manager (administrative / MD concerns).

This visit meeting should cover an orientation to the practice site set up, filing system / EMR system, confirming schedule/hours of CA visits. The CA may be introduced to a person in charge of the patient charts (if different to the contact person) and may be provided with a password to any computerized system.

2.4 Understanding the charting system

The organizational structure of charting systems varies considerably from one practice site to another practice site. It is important that the CA understands the organization of the patient chart system in the practice site. On the first day the CA should ask for an orientation to the charting system. In general, the CA will encounter one of the following three major types of charting systems:

1) Pure paper based charting system.
2) Pure electronic charting system.
3) Mixed charting system (some valuable information may be in paper charts and other relevant information may be stored electronically, with varying degrees of mixing).

The following questions can be asked to the person who will provide the orientation to the organization of charting system:

- How is your chart filing system organized?
- Can you describe what short form methods you use or abbreviations that may be peculiar to this practice site?
- Are all lab results in the patient file or is there a separate electronic database of lab results?
- Medication List – is this in the chart or on computer (go with most up-to-date)?
- Is there a practice Dietician (ask for name and for an example of their signature so you can identify her notes in the chart)?
- Who should I consult with if I have questions during the chart abstraction?
- Can someone review with me how the charts are organized, cover-to-cover?
- Would you prefer to have someone from the office re-file the charts?
- Where shall I place the charts once I have finished reviewing them?
- How to find the information in the EMR (orientation needed to the EMR system); Is there a 'search' function? Is everyone using it the same way (e.g. recording all vitals on the vitals sheet)? If the practice is paper-based but with some additional info on computer – arrange with the practice best times to access a computer to obtain this information).
- Determine if there are any physicians in the practice site who have **not** consented to participate in the study (patients belonging to these physicians are non-eligible).

3. Chart Abstraction Implementation

In each of the recruited practice sites, the CA will randomly select 66 patient charts and review them as per the instructions below. In most cases, the chart abstraction period is one year from the date that the chart is being abstracted.

3.1 Sampling Strategy

The CA will perform data abstraction on 66 randomly selected patient charts in the practice site. There are different strategies for randomly selecting the number of charts, depending on whether the filing system is paper based, a mixed paper and electronic system or a purely electronic system (EMR). The sample frame is all active patients in the practice. However, it is very important to observe that charts can only be selected for patients of **consenting physicians** who are participating in the study. Those charts selected for non-consenting, non-participating physicians are deemed non-eligible.

3.1.1 Paper Based Charting System.

The Tape Measure Method

In order to randomly select the required number of charts from the rack, the CA first measures the total size of the chart rack in inches. The CA starts at the first shelf unit and measures the top shelf horizontally from left to right. This number of inches is multiplied by the number of full shelves of charts (assuming all shelves are full and of equal length). Any shelves that are not full should be measured individually and added separately to the end total. If there are a number of different types of shelf units, the CA will need to do this for each type and then total the inches of all the different shelf units at the end.

Any separate shelf units of non-consenting physicians, or separate shelves containing charts of specialist clinics run for external family physicians (e.g. walk-ins, OB/GYN, colonoscopies, weight-loss clinics etc), these should not be included in the total.

Once totaled, a calculator is used to divide the total number of inches by the required number of charts. In order to obtain 66 eligible patient charts, the CA should expect to have to select approx. 396 patient charts (to account for those that will be non-eligible as only approx. 1 in 6 will likely be eligible). Therefore, the CA should divide the total number of inches of rack space by 396. This calculation will produce a figure in inches. The CA then measures this distance from the start of the first shelf containing patient charts and pulls that chart. This is then put aside as this is the chart that will be checked for inclusion / abstracted.

The CA should then return to beginning of the next chart on the shelf and repeat the measurement to find the next chart to pull, and so on. If it is seen immediately that the chart pulled is non-eligible (i.e. a child) the CA should replace it, pull the chart immediately to the right of it instead. The CA can pull up to a maximum of three (including the first one) at that measured spot if necessary to search for an eligible chart before moving on to the next measured spot. The CA should always start the new measurement from the front of chart immediately after the original (i.e. first) chart checked for eligibility at that measured spot.

After the batch of charts are pulled, the CA should make sure to make a note of the final measured spot (perhaps with a colored sheet of paper) so they can return here to restart the measurements when selecting the next batch of charts. Note; do not pull a chart out slightly as a way to remember this location as it is highly likely someone will push it back in during your absence! Also, do not pull more than 10 charts at a time.

The CA also needs to keep a running total of all non-eligible charts (including those not pulled as it was noted they were too young). This total number is to be recorded in the space provided on the CA's invoice. This is filled out and sent to the project manager once the practice is completed.

Back at the desk, each chart should be examined to determine if it meets the eligibility criteria (see 3.2 below). Abstractions are then conducted on all eligible charts. On completion, these are returned to the rack (or designated place) and more selected. This process is continued until all 66 charts have been abstracted. If the CA runs out of shelf space before completing all 66, he/she should return to the beginning again, taking with them the 'left over' inches from the last measurement, and thereby ensuring that the same charts are not pulled for a second time!

Note: Example of Tape Measure Method

Dr "X" has a chart rack containing 12 shelves each filled to capacity with patient files. Each shelf is 60 inches long therefore the total shelf space is 720 inches (12 shelves times 60 inches). As the CA needs to pull approx. 396 charts to find 66 eligible ones, this total is divided by 396 to obtain 1.81 inches. The CA should always round down / up to the nearest inch (for 6.5 round down, but for 6.51 round up). In this instance it would be rounded up to 2 inches. Starting on the top shelf, 2 inches is measured from the left side of the shelf and the chart this measurement lands on is pulled and set aside. On returning to the beginning of the next chart on the shelf, another 2 inches is measured and the next chart identified in the same manner. This process is continued until the first batch of charts has been pulled. Before sitting down with the charts, the CA makes a note to herself /himself of where to recommence the measuring from next time.

3.1.2 Paper Based System with Computer Linkage

Many practices in Ontario now use a mixed charting system with at least some patient information (e.g. medication lists) contained on computer. In these situations, the CA should continue to use the "Tape Measure Method" on the chart rack. However, when an eligible chart is pulled, the CA needs to access any additional information on this patient that is contained on the practice's computer.

3.1.3 Electronic Systems with No Paper Charts (e.g. Electronic Medical Records)

In this case, the CA needs to request a training session from the staff at the practice site on using the electronic system. It is a good idea to ask to be signed on as 'view only' so that changes cannot be made accidently! For obtaining the random sample from the electronic list of patients (since there are no paper charts), the CA should liaise with the practice (and Sam if necessary) to determine the best method to be used at each practice site. This may be obtained by printing out the entire list of **active** patients (or copying it into an excel spreadsheet that the CA can then add their comments on), totaling it & dividing this amount by 396 (as with the tape measure method).

It is useful to note that some EMR practices may be able / willing to filter the patient list first e.g. patients 40 and over, or by particular practitioner (if not all MDs in the practice are consenting). Note; if able to filter by age please divide the total number of patients by 264 (1 in 4 charts eligible) instead of 396 (1 in 6 charts eligible) to represent the likelihood of more charts pulled being eligible, thereby ensuring that the entire patient list will have the chance of being represented in the study. The CA should not accept a practices offer to filter the list by CVD patients. The CA should still double-check that any patients chosen from the prepared list for abstraction do actually meet our initial entry criteria.

Note; if a practice is unable to filter, the CA should that MDs names (if more than one and not all are consenting) and patient DOBs are printed on the list so that N/E patients can be easily identified / excluded.

3.2 The Chart Abstraction Process

The CA should check each chart against the eligibility criteria outlined in Section I, page 11:

If the patient is eligible, he/she is assigned a Patient ID number ranging from 1 to 66 in sequential order on the Chart Abstraction Tracking Log. This ID number is then entered into Trialstat, along with the Practice ID # (taken from the practice information sheet), the date of the abstraction and your own Chart Abstractor ID #. No other patient identifying information is requested on the chart abstraction form or tracking log. (Note; if using Trialstat, this will be a different process)

For validation purposes only, we need to be able to locate all charts abstracted a second time. To make this possible, the Chart Abstraction Tracking Log with the 66 names / chart numbers and DOBs of those charts abstracted, must be left in a sealed envelope at the practice. This should be marked ***Confidential*** with the following written on it: "*Chart Abstractor Tracking Log; CT Lamont Research Study (Improved Delivery of Cardiovascular Care).* ***Important:*** *Please do not destroy. Please keep in a safe place until further notice. For any questions contact Project Manager Tel (613) 562-6262 Ext 1458. Thank You."* Instructions should be given to ensure its safekeeping for validation (and beyond), until it is no longer required for the study purposes. Please email the name and contact tel. number of the person the envelope was left with, as well as the location of the envelope back to the project manager when you have finished the practice. Note; this should also be left at the practice overnight as it is confidential information and should never leave the practice with the CA.

If the patient does not meet the inclusion criteria, the CA adjusts the running tally of non-eligible patients found (no need for any patient identifiers) and proceeds to the next chart.

Once an eligible chart is found, the chart abstraction is completed using the Chart Abstraction Form on Trialstat that contains all the variables for the data to be collected. Once this batch of charts has been completed (including recording the eligible ones on the Tracking Log), they are returned to their original place on the rack (or designated place by the practice) and the next batch randomly selected.

The Chart Abstraction Form is divided into three sections. Each section should be completed with careful reference to the CA manual regarding timescales, guiding principles and the pertinent information required. Where relevant, each section has a *NOTE* sub-section with important information / tips on how to code things, where to find them in the chart etc. **Please refer to the manual frequently**.

3.3 Chart Abstraction Time frames

Eligible patient charts are abstracted over a one, or two year timeframe as indicated later in Section III of this manual. When calculating this timeframe, the CA should not include the actual date they are in the practice. Therefore, if the first day that the CA was in the practice was on the 1st of July 2007, their one year timeframe would be from the 1st of July 2006 – 30th June 2007. If any note entries happen to have been entered on the 1st of July 2007, they should be disregarded.

This first date at the practice continues to be used as the abstraction date for all 66 subsequent charts abstracted at that practice (even though in reality, most will actually be performed on later dates). Therefore the one / two year timeframe always remains the same for all patients within that particular practice. Again, it is important to note that on subsequent visits to that practice, any data entry that has occurred on or after this particular date would not be included in the abstraction.

3.4 Confidentiality

Confidentiality of medical records must be observed at all times. Any chart where the person conducting the chart review may know the patient should not be reviewed. No patient identifier should leave the practice premises with the CA between visits (e.g. the patient tracking list or any notes made by the CA needed for clarifying scenarios with their supervisor at a later date). The CA should not share with MDs / practices participating in the study, details of other MDs / Practices also participating as this is confidential information.

4. Validation

4.1 Method

During three different phases within the first year of the study, a randomized sample of practices previously abstracted, will be visited again by a different CA for validation purposes. For each practice selected, a random sample of charts (number ranging from 5-12) from the initial 66 will be provided by the Research Assistant, to the second CA. Once the charts have been assigned to the second CA he/she will then proceed to contact the practice and set up a time to repeat these chart abstractions independently. Of these assigned charts, two will be used to give the CAs personalized feedback on their chart auditing, and thus, these two designated charts can be completed with access to the first CA's chart audit forms and findings. For the remaining charts, the second CA will not have access to the initial findings of the first CA, however, data from both CAs will be compared by the research team back at Ottawa to check for consistency / accuracy. Results are fed back to individual CAs as necessary to provide a basis for improving training instructions, or provide further individual information / training as necessary.

The second CA should schedule their visit as soon as possible. He/she will identify the charts to be repeated using the chart abstraction-tracking log held in a sealed envelope at the practice site (the CA should ensure the practice still has this when scheduling their visit). Note: the second CA should ensure this envelope is re-sealed and returned to the practice for continued safe-keeping on their departure.

In situations where the percentage of inconsistencies between two CAs is deemed statistically unacceptable, the practice will be visited a third time where a CA will aim to repeat as many chart abstractions from the original list as is possible in that one day period.

NOTE: Instructions to the practice re validations are as follows:

The First CA:
CAs doing their initial abstraction visit should mention to their practice contacts that a sample of practices is to be contacted again for validation purposes (so they are not surprised by a call).
It is important to notify them that the validation process may take one or two more short visits.

The Second CA:
After the first visit, the second CA should notify the practice that they will call them in the near future to inform them if the validation process has been completed, or, if they will be visiting a third time.

Chart Abstraction Form: Organization and Data Entry

Section I: Eligibility

There are two steps to determining whether a patient is eligible or not for the study:

1) General Inclusion Criteria must be established first:

Patients are included if they are:

- Aged 40 or older
- A patient of one of the consenting physicians (e.g. a physician who has agreed to participate in the study)
- An 'active' patient of the practice, where 'active' refers to patients **seen** at least once within the past one year and who have an overall record in the practice going back at least two years.
- A regular patient of the practice (not a walk in patient);

Notes on point three above:
- The past one year is calculated by using the date the chart is abstracted and subtracting exactly one year from that date. The actual day of abstraction, and anything beyond, should be ignored completely.
- This one encounter in the past year can be with any provider and includes consults, home visits, hospital visits (if info is documented in the notes) as well as vaccines, bloods, prescription renewals etc. However, as they must be seen, telephone calls or emails are not counted as an eligibility criterion.
- To further clarify patients having "an overall record in the practice going back at least two years":
- *In situations where a (consenting) physician took over a caseload from another physician within the same practice (e.g. if the original physician retired), patients are still eligible if approx. 75% of their patient notes over the past two years are with the new (consenting) physician.*
- *In situations where patients are new to the practice site, but were brought by their (consenting) physician from his/her previous practice and have therefore continued to have been followed by that physician for at least the past two years; these patients are still eligible.*

Patients are excluded if they:

- Are a patient of one of the non-consenting physicians (e.g. a physician who has not agreed to participate in the study);
- Are not an active patient of the practice (e.g. not seen at least once within the past year);
- Have passed away or have transferred out of the practice in the last 2 years;
- Are a new patient to the practice in the last two years;
- Are not a regular patient of the practice (a walk in patient);
- Are seen at the practice for specialized services only (e.g. foot care, weight clinics, OB GYN etc);
- Are known to the CA;
- Are staff of the practice site;
- Are a Quebec patient (or province other than Ontario)

2) High Risk Cardiovascular Disease Inclusion Criteria:

Once the general inclusion criteria has been established, a patient must then be diagnosed with one of the following conditions: Coronary Artery Disease (CAD), CerebroVascular Disease (CVD): Stroke / Transient Ischemic Attack (TIA), Peripheral Vascular Disease, Diabetes Mellitus (DM) or Chronic Kidney Disease. OR have 3 or more of the Risk Factors (Age, smoking, hypertension, low level of HDL) outlined fully below.

To determine the CVD eligibility of a patient, the CA initially completes a "mini abstraction". It is important to spend no more than **5** Minutes per chart for these mini-abstractions. The CA should look for evidence of these diagnoses in the following key places only:

- Problem List (if available)
- CPX (annual physicals) in the past two years
- Specialist consults in the past two years

If the CA happens to notice something elsewhere in the chart that indicates that the patient has CVD, they may use it, however, the goal here is to move through this selection process quickly. If no clear indication of a patient's CVD eligibility is found after 5 minutes, the CA should move on to the next chart.

It is considered to be a diagnosis if the patient is recorded as **ever** having had the chronic disease (it does not have to be mentioned that it is just a current problem). On occasion a CA may find inconsistencies between doctors / specialists as to whether a patient has a certain diagnosis or not. However, if a patient has ever been mentioned as having one of these chronic diseases (even just once, by one doctor) then it should be accepted as a diagnosis. This is provided it is not a clear situation where the provisional diagnosis is later overturned (e.g. "angina" later found to be non-cardiac after further investigations). Note that if a discrepancy is between a physician and a non-Physician, the CA should always take the decision / diagnosis of the Physician.

The CA should ignore ambiguous diagnoses e.g. "likely"; "possible"; "query" etc.

1. Does the patient have any one of the following CVD diagnoses (or is taking Plavix) or 3 risk factors? (see definition criteria in Section I of the manual):

Coronary Artery Disease	❑			
Cerebrovascular Disease	❑			
Peripheral Vascular Disease	❑			
Chronic Kidney Disease	❑			
Diabetes Mellitus	❑			
Patient is on Plavix (Clopidogrel)	❑			
Three or more Risk Factors	❑	1)_____	2)_____	3)_____

Note: Useful Tips for definition purposes

Note: *- If a patient is on Plavix (Clopidogrel) then the patient is automatically considered to have CVD and can be entered into the study. A diagnosis (or diagnoses) must be specified later in the full chart abstraction for the patient to remain in the study.*

Coronary Artery Disease (CAD):

Definition of Coronary Artery Disease includes:
- Coronary Heart Disease (CHD)
- Heart Disease
- Ischemic Heart Disease (IHD)
- Myocardial Infarction (MI)
- Coronary Artery Bypass Graph (CABG)
- Stent or Angioplasty (Coronary arteries as opposed to others)
- Angina or Chest Pain of a cardiac nature
- Coronary Insufficiency
- ASHD

Note: *Congestive Heart Failure (CHF) and Valvular Heart Disease (i.e. those diagnoses that include the aortic, mitral, pulmonary, tricuspid valves) are not included.*

Cerebrovascular Disease:

Definition of Cerebrovascular Disease includes:
- Cerebrovascular Accident (CVA)
- Stroke
- Transient Ischemic Attack (TIA).
- "Mini" or "mild" stroke (even if no permanent damage),
- Ischemic or hemorrhagic stroke
- Brain / cerebral / cerebellar / hemorrhagic ***infarct****,*
- ***Cerebral*** *bleeding / hemorrhage / artery occlusion / thrombosis / embolus,*
- Subarachnoid hemorrhage
- Ruptured intercranial aneurysm
- Intracerebral / Intercranial bleeding or hemorrhage
- Also include those patients with Carotid Artery Disease, or a history of vascular treatment (e.g. carotid endarterectomy), or a positive carotid Doppler ≥60% occlusion, or positive angiogram.

Note: *A patient is not considered as having CVD if they have carotid bruits.*

Peripheral Vascular Disease (PVD):

Definition of PVD includes:
- Peripheral Vascular Occlusive Disease (PVOD)
- Peripheral Artery Disease (PAD)
- Peripheral Atherosclerotic Disease
- Claudication or Intermittent Claudication
- Bypass for arterial insufficiency (Peripheral Vascular Angioplasty or Bypass – including "Fem Pop Bypass")
- Also included in this category are untreated thoracic or abdominal aortic aneurysms (AAA) of 4.5cm or more.

Note: *The definition excludes embolus e.g. post surgery. It also excludes any positive investigations such as Doppler, angio, CT, MRI etc in the absence of a supporting diagnosis. This definition does not include varicose veins.*

Chronic Kidney Disease (CKD):

Definition of CKD includes:

- 2 recordings of eGFR of <60 within the past 2 years: they should be at least three months apart and do not need to be consecutive. ***And / or***

- 2 recorded Microalbuminoria or Albumin to Creatinine ratio (ACR) above the upper limit as defined by the laboratory, within the past 2 years: they should be at least three months apart and do not need to be consecutive. ***And / or***

- A diagnosis of Chronic Kidney Disease or Renal Artery Stenosis, Renal Impairment, Kidney Failure, Kidney Disease, Chronic Renal Failure (CRF) etc.

Note: *An ACR can be a recording anywhere from 0 to the 100's, with the small number being microalbuminaria and the large being ACR.*

Diabetes Mellitus (DM):

Definition of DM includes:

- Diabetes mellitus (including "Early DM")
- Type 1 or 2 diabetes
- Insulin dependent diabetes (IDDM)
- Non-insulin dependent diabetes (NIDDM)
- Adult-onset diabetes (AODM)
- If no diagnosis of Diabetes is seen but the patient is on diabetic meds. Note: Diabetes can be assumed for some meds e.g. Diabeta and Insulin. However some meds such as Metformin can be given for pre-diabetic stages and therefore cannot be assumed. If such a scenario arises and you are uncertain - check the meds individually with the CA supervisor.

Note: *Glucosamine is for arthritis not for diabetes. Diabetes does NOT include IGT (impaired glucose tolerance), any borderline cases of diabetes, Gestational Diabetes or Diabetes Insipidus.*

Evidence of three or more of the following Risk Factors:

- Age (M≥45; F≥55)
- Smoking (see definition of a smoker on page 24)
- Hypertension
- A patient ***diagnosed*** *with dyslipidemia / hyperlipidemia / high triglycerides / hypercholesterolemia / elevated lipids, or patient is on a statin*

OR, *a Low level of HDL cholesterol (Male <1.04mmol/L, Female <1.3mmol/L)* ***seen on a lab report*** *in the past two years.*

Section II: Background Information and Chart Organization

1. Date of Birth: |__|__| |__|__| |__|__||__|__|

D D M M Y Y Y Y

2. Age: ____

3. Sex: ❑ Male ❑ Female

4. First three digits of patients' postal code (e.g. K1N for K1N 9J8)**:** _____

5. What is the patient's OHIP Number? _____

6. Is there a problem / diagnosis list (either as a separate sheet at the front of the patient's records or, on a CPX within the past one year)**?**

❑ **YES** ❑ **NO**

Note:
A Problem List (CPP) can be either:

1) A separate form (usually at front of chart): *used specifically to list problems, or a subsection of a form that has other subsections too e.g. social history, meds etc.: Such a form is accepted as a Problem List if there is mention of one or more of the following:*

- *A surgery, an acute / chronic medical condition*
- *An allergy*
- *Mention of a patients' family history*
- *A line through any of the sections mentioned above or some other way of indicating that these are non- applicable (e.g. No, None, N/A, Ø)*
- *If the word "healthy" appears in relation to Past Medical History (PMHx)*

If this Problem List has none of the above entries on it, code NO (no list). If the only information on the sheet relates to vaccines, social history or preventative maneuvers performed, it is not counted as a Problem List.

2) On a CPX in the past one year: *A CPX may be on a separate form or be part of the MDs' notes. To be a classified as a Problem List, a CPX must first clearly state that it is a CPX (annual physical) either by the MD noting this, the billing code (code A003) or a full systems review / Review of Systems (ROS). Beware – some MDs write these system reviews for ordinary visits too. If in doubt, check with the practice how the MD identifies these. Apart from the problems addressed on the day of the CPX, for the CPX to be classified as a Problem List, there should also be at least a mention of one of the list above (it doesn't matter where on the CPX these are mentioned). Note that for the word "healthy" to be accepted in this type of Problem List it should be stated in the context of the past medical history (as opposed to the problems addressed on the day of the CPX).*

If this CPX has only the issues addressed that day and none of the past medical history outlined above, code NO there is no problem list.

Section III: Cardiovascular Disease Quality of Care Indicators

The quality of care indicators (Dyslipidemia, Diabetes, Hypertension, Chronic Kidney Disease, Cerebrovascular Disease, Coronary Artery Disease, Peripheral Vascular Disease, Smoking, Waist Circumference and ASA use) are abstracted over a one, two or, in some cases, five year timeframe, as outlined below.

To determine if patients have the following 8 diagnoses (Dyslipidemia, Diabetes, Hypertension, Chronic Kidney Disease Cerebrovascular Disease, Coronary Artery Disease and Peripheral Vascular Disease), the CA needs to look back **TWO YEARS** in the chart (including the problem list / diagnosis list if available). It is considered to be a diagnosis if the patient is recorded as **ever** having them, it does not have to be mentioned that it is just a **current** problem.

In cases where something suggests to the CA that the patient may well have a chronic disease, yet no firm diagnosis is written specifically in the past two years, the CA may go back up to **FIVE YEARS** to confirm this diagnosis. If no firm diagnosis is found in this 5 year period, it should be determined that the patient does NOT have that specific disease and the CA moves on to the next question. *Please note that if no evidence is found in the two year period to raise such suspicions, there is no need to go searching back further in the chart. If the CA happens to see the diagnosis in the chart beyond this five-year period it should be accepted, and the CA makes a note to the validator on the abstraction form as to where to find this.

Note: On occasion a CA may find inconsistencies between doctors / specialists as to whether a patient has a certain diagnosis or not. However, if a patient has ever been mentioned as having one of these chronic diseases (even just once, by one doctor) then it should be accepted as a diagnosis. This is provided it is not a clear situation where the provisional diagnosis is later overturned (e.g. “angina” later found to be non-cardiac after further investigations). Note that if the discrepancy is between a physician and a non-Physician, the CA should always take the decision / diagnosis of the Physician.

The CA should ignore ambiguous diagnoses e.g. “possible”; “likely”; “query”.

For the following 2 indicators – Waist Circumference and ASA use, the CA need only look back in the chart over a **ONE-YEAR** period.

For the following 1 indicator – Smoking, the CA must look as far back as necessary in the chart to determine their current smoking status.

The timeframe for most other information collected during the chart abstraction is within the past one year only.

Guiding Principles

Guiding principles are set to help with decision-making when the coding becomes unclear to the abstractor. Refer to them frequently.

- **Up-to-datedness -** We are measuring whether the patient has had the medication/test/referral/advice that they are eligible for. It does not mean that we are measuring only that the family doctor ordered them. It is also considered done if the family doctor or other doctor/specialist/health care provider orders / performs them (unless stated otherwise).

- **Doctor's Intent** - Measuring the doctor's intentions implies giving the doctor the benefit of the doubt. For example, there may be no HBA_1C result/ lab result but notes in the chart may clearly indicate that the doctor recommended/ordered the test. In this circumstance the HBA_1C would be coded as having been done even without the lab result to support it.

  Where a maneuver is being coded as having been done for intent, but no result is available, the CA writes NR (no result) in the space allocated for the result. Note that where the CA is asked for the most recent result, an actual result takes precedence over a more recent 'intent with NR'.

  Another example of intent is where a patient declines to have their waist circ. measured that is recommended by their MD. This would be coded here as having been done. What we are measuring is the doctors' behaviour, not whether the patient followed their advice or not (or other extenuating circumstances that may prevent the test from being received). In the situation where a doctor has recommended performing the test/ordered the medication at a visit during our timeframe, it is coded as having been done.

Notes on Medications

(this applies to all meds throughout the chart abstraction):

- The one-year timeframe should be adhered to at all times. Prescriptions, or repeat prescriptions, just before our time frame should be ignored unless they are recorded in such a way that a FP can see instantly, within our timeframe, what a patient is currently taking (e.g. on a continually updated EMR med summary sheet where a different color is used for meds once they are d/c. Or, in a paper chart, a med form/summary sheet indicating that the prescription given just before our timeframe, continues into our timeframe by drawing a continuing line across. A FP should not have to search back in notes to get this info.

- Meds discontinued or sampled during our timeframe should be accepted.

1. Dyslipidemia

1.1 Has a lipid profile been recommended/discussed/performed within the past one year? (If Yes, please record the **most recent** results. If Yes, but no actual result(s) found, enter NR):

LDL	❑ Yes	Results: _____	Date: ___/___/___	❑ No
TC/HDL ratio	❑ Yes	Results: _____	Date: ___/___/___	❑ No

1.2 Does the patient have a diagnosis of Dyslipidemia? (See Tip Box in CA Manual for definitions)

❑ Yes ❑ No (if No, go to Qu. 2)

1.3 If the patient **DOES** have Dyslipidemia, has a statin, or other lipid lowering medication, been recommended/discussed/prescribed or taken by the patient in the past one year?

Statin	❑ Yes	❑No
Other lipid Medication	❑ Yes	❑No

Note:
- *For a diagnosis of dyslipidemia, please include the following: hyperlipidemia, high cholesterol, high lipids, high triglycerides or hypercholesterolemia OR patient is on a Statin.*
- *Lab results should not be interpreted by the CA – a diagnosis by a doctor must be seen in the notes*
- *TC/HDL ratio is sometimes seen as "ratio & risk"*
- *Note: Fish Oils / Omega 3's etc are not accepted for "Other Lipid Medication"*

2. Diabetes

2.1 Was a *Fasting Glucose assessment recommended/discussed/performed in the past one year? (If Yes, please record the **most recent** result. If Yes, but no actual result found, enter NR)

❑ Yes Result _____ Date: DD/MM/YY: __/__/__ ❑ No

2.2 Does the patient have a diagnosis of Diabetes? (See definitions in Section I of CA Manual)

❑ Yes ❑ No (If No, go to Qu. 3)

If the Patient **DOES** have Diabetes**,** please answer the following four questions:

2.3 Were HBA_1C test(s) recommended/discussed/performed in the past one year? (If Yes, please record the two **most recent** results. If Yes, but no actual result found, enter NR)

❑ Yes Result _____ Date: DD/MM/YY: __/__/__	❑ No
❑ Yes Result _____ Date: DD/MM/YY: __/__/__	❑ No

2.4 Was a Glycemic control medication recommended/discussed/prescribed or taken by the patient in the past one year?

❑ Yes ❑ No

2.5 Does the patient have / has the patient had proteinuria within the past one year?

❑ Yes ❑ No

2.6 Was an Ace Inhibitor recommended/discussed/prescribed or taken by the patient in the past one year?

❑ Yes ❑ No

***Note**:*
- For Qu. 2.1: A Fasting Glucose may also be seen as Fasting Blood Glucose (FBG), Fasting Plasma Glucose (FPG), or Preprandial (before a meal) PG.
****In the absence of a Fasting Glucose, if a Random Glucose (RBS, RBG) was performed and is within normal limits, code Yes to this question and enter the result / date of the Random Glucose instead.***
- Diabetic info may be found in notes, on flow sheets, lab reports, endocrinology reports.
- HBA1C may also be seen as "Hemoglobin A1C".
*- For Qu. 2.5: Proteinuria = an **abnormal** test result as indicated by the different tests below:*
Protein Tests to be included:
- *o Total Protein – if greater than 3 grams/day should be on ACEI*
- *o ACR (including microalbuminoria / microalbumin to creatine ratio) – if greater than 2.0 mg/mmol in male and 2.8 mg/mmol in female should be on ACEI*
- *o 24 Hr urine – if greater than 3 grams per day should be on ACEI*
- *o PCR – if greater than 30mg/mmol should be on ACE*

Protein Tests to be excluded:
- *o R&M – patients are not put on ACE based on an R&M result (i.e. Routine & Micro or chemical U/A)*
- *o Albumin – if this test result is present, so will one of the other protein results above (so use the other)*

Note: If there are two different proteinurea tests done in our one year time frame with conflicting results – please discuss with the CA Supervisor to determine which is the more accurate for determining if an ACE is required, and therefore takes precedence.
Note: often the terms albumin and protein are used interchangeably

3. Hypertension

3.1 Please record up to the three **most recent in-office** blood pressure readings in the past one year. (If no results are available, write NR in the BP space provided.

1. Date (DD/MM/YY): __/__/__	Bp:_____mmHg
2. Date (DD/MM/YY): __/__/__	Bp:_____mmHg
3. Date (DD/MM/YY): __/__/__	Bp:_____mmHg

3.2 Does the patient have a diagnosis of Hypertension? (See Tip Box in CA Manual for definitions)

❑ Yes ❑ No (if No, go to Qu. 4)

3.3 If the patient **DOES** have hypertension, has **any one** of the following medications been recommended/ discussed/prescribed or taken by the patient in the past one year (Beta Blocker, Ace Inhibitor, Angiotensin Receptor Blocker, Diuretic or Calcium Channel Blocker)?

❑ Yes ❑ No

Note:
A patient is considered to be diagnosed with Hypertension if any of the following are found:
- *The diagnosis of "hypertension" (HTN),*
- *The doctor writes "high blood pressure" or "high (↑) bp" appears in the context of a diagnosis, rather than to describe one elevated reading.*
- *Borderline Hypertension (or B/L HTN)*
- *The diagnosis is unambiguously noted (ambiguous notations include those with questions marks, the terms query, possible, probable or probably, monitor etc.)*
- *The term "isolated systolic hypertension" (ISH) is used to describe a BP>160/90. (A reading > 160/90 without "isolated systolic hypertension" noted is not sufficient to accept as a diagnosis).*
- *A high BP reading or a comment regarding BP is accompanied by an indication of targeted treatment. Treatments include reduction of alcohol and salt intake, weight reduction measures (diet, exercise), or prescription for anti-hypertensive agents.*
- *The terms Labile or Reactive HTN are to be coded as hypertension (whether on meds or not)*

A patient is NOT considered to be diagnosed with hypertension if any of the following are found:
- *White coat syndrome / white coat hypertension (WCS or WC HTN)*
- *Gestational hypertension, pulmonary hypertension or portal hypertension.*

- *Qu. 3.1: If multiple blood pressure readings were taken during the same visit by the physician / nurse, please record the lowest blood pressure value. Do not include home blood pressure recordings, or* those *taken elsewhere besides the practice (note that these are sometimes also recorded in the chart).*
- *BP recordings on CPXs / Flow sheets should also be included when looking for the most recent.*

4. Chronic Kidney Disease

4.1 Has an eGFR been recommended/discussed/performed in the past one year? (If Yes, please record the **most recent** result. If Yes, but no actual result found, enter NR)

❑ Yes Result: _____ Date: DD/MM/YY: __/__/__ ❑ No

Note:
If the eGFR test result is recorded as '>120' or '<15' in the chart please record the test result as 120 or 15 without the greater than or less than sign and make a note beside the result, or in the comment box in TrialStat! which says '>120' or '<15'.

4.2 Has an ACR/microalbuminoria been recommended/discussed/performed in the past one year? (If Yes, please record the **most recent** result. If Yes, but no actual result found, enter NR)

❑ Yes Result: _____ Date: DD/MM/YY: __/__/__ ❑ No

4.3 Does the patient have a diagnosis of Chronic Kidney Disease? (See definitions in Section I of CA Manual)

❑ Yes ❑ No

Note:
Microalbumin / Creatinine ratio is more precise than a microalbumin or random microalbumin and should therefore be chosen over the other two in cases where all are available.

5. Cerebrovascular Disease

5.1 Has the patient ever been diagnosed as having had a Stroke / TIA? (See definitions in Section I of CA Manual)

❑ Yes ❑ No (If No, go to Qu. 6)

5.2 If Yes, was a Stroke / TIA newly diagnosed within the past one year?

❑ Yes ❑ No (If No, go to Qu. 6)

If a Stroke / TIA **WAS** newly diagnosed in the previous one year period, please answer the following four questions:

5.3 Has the patient had, or been advised / referred to have, an EKG / ECG in the past one year?

❑ Yes ❑ No

5.4 Has the patient had, or been advised / referred to have, a Carotid Doppler in the past one year?

❑ Yes ❑ No

5.5 Has the patient had, or been advised / referred to have, an Echo Cardiogram in the past one year?

❑ Yes ❑ No

5.6 Has the patient had, or been advised / referred to have, a CT (head) in the past one year?

❑ Yes ❑ No

6. Coronary Artery Disease (CAD)

6.1 Has the patient ever been diagnosed as having Coronary Artery Disease? (See definitions in Section I of CA Manual)

❑ Yes ❑ No (If No, go to Qu. 7)

6.2 IF Yes, was the Coronary Artery Disease, or a new CAD event, newly diagnosed within the past one year?

❑ Yes ❑ No

6.3 If patient **DOES** have Coronary Artery Disease, has **any one** of the following medications been recommended/discussed/prescribed or taken by the patient in the past one year (Beta Blocker, Ace Inhibitor or Angiotensin Receptor Blocker)?

❑ Yes ❑ No

Note:
- In Qu. 6.2; "a new Coronary Artery Disease (CAD) event" refers to MI, stent, angio or CABG. It does not refer to an episode of angina.

7. Peripheral Vascular Disease (PVD)

7.1 Has the patient ever had / been diagnosed as having Peripheral Vascular Disease? (See definitions in Section I of CA Manual)

❑ Yes ❑ No (If NO, go to Qu. 8)

If the patient **DOES** have PVD, please answer the following two questions:

7.2 Was a statin, or other lipid lowering medication, recommended/discussed/prescribed or taken by the patient in the past one year?

❑ Yes ❑ No

7.3 Was an Ace Inhibitor or Angiotensin Receptor Blocker recommended/discussed/prescribed or taken by the patient in the past one year?

❑ Yes ❑ No

8. Smoking

8.1 Is the patient currently a smoker (See Tip Box in Smoking Section for definition). Look back in chart as far as need be to determine smoking status.)?

❑ Yes ❑ No ❑ Not Recorded (If NO, or Not Recorded go to Qu. 9)

If the Patient **IS** identified as a smoker**,** please answer the following four questions:

8.2 When was the most recent smoking status identification noted?

❑ Smoker	Date: DD/MM/YY: __/__/__
❑ Recently quit	Date: DD/MM/YY: __/__/__

8.3 Is there evidence of smoking cessation discussion/advice or provision of information/education in the past one year?

❑ Yes ❑ No

8.4 Is there evidence that the patient has been referred to/discussed/recommended a quit-smoking program in the past one year?

❑ Yes ❑ No

8.5 Was any one of the following (Nicotine Patch, Nicotine Gum, Nicotine inhaler, Bupropion SR or Varenicline (Champix) recommended/discussed/prescribed in the past one year?

❑ Yes ❑ No

Note: *(watch for acronym N/S = non-smoker)*
- *Qu 8.1: Who is a smoker? A patient who has had any tobacco products **at all** in the previous one year are still considered a smoker for the purposes of this study. A patient can be assumed to be a smoker if any NRT / counseling / referral etc have been recommended / discussed / prescribed in the past one year.*
- *If a patients' smoking status has not been documented over the past year, the CA must review as far back as necessary to find the most recent recording of the patients' current smoking status. Smoking includes cigarettes, cigars or pipes for tobacco, chewing tobacco. Smoking status can be determined from the checking of tick sheets, circles or check boxes on forms or from notes such as "1 ppd".*
- *Common places for smoking status are CPP, respirologist/allergy/cardiac consult notes, pre-op reports, antenatal forms, nutritionist assessment and flow sheets, medication lists.*

- *If the pt was determined to be a smoker from notes **over 1yr ago**, the CA should code YES to 8.1, tick **Smoker** in Qu 8.2 (and the date it was noted) and then move on to Question 9. Questions 8.3-8.5 relate to only those pts whose smoker status has been noted within the past year. The CA should write a note in the comments box as reminding us as to why those sub-questions have been missed.*
- *Qu 8.3: Physician notes such as 'not interested in stopping smoking' or 'continues to smoke' within our timeframe can be interpreted as a YES here (i.e. pt's interest in smoking cessation was approached).*
- *Qu 8.4: A quit-smoking program can be external OR in-house (however, a specific program should be mentioned).*
- *Qu 8.5: If the CA is saying YES to this question, they can also automatically say YES to Qu 8.3.*

9. Waist Circumference

9.1 Is there evidence of an **in-office** waist circumference being recorded/recommended in the previous one year? (If Yes, please record the **most recent**).

❑ Yes Result: ____cms Date: DD/MM/YY: __/__/__ ❑ No

9.2 Is there evidence of an **in-office** waist circumference being recorded/recommended in the one year period previous to last year (i.e. the period between >1yr and <2yrs ago)? (If Yes, please record the **most recent).**

❑ Yes Result: ____cms Date: DD/MM/YY: __/__/__ ❑ No

9.3 Is there evidence that the patient has been referred to/recommended a dietician or appropriate Program (e.g. Dr Bernstein, Weight Watchers) in the past one year?

❑ Yes ❑ No

9.4 Was any related pharmacotherapy recommended/discussed/prescribed in the past one year?

❑ Yes ❑ No

Notes:
- Please note that for Qu's 9.1 and 9.2; in the absence of actual recorded values, please enter NR if MD intent was indicated but no result found.
*- Waist circ measurements are only accepted if they have been taken **in-office** (i.e. at the practice)*
- Please enter the waist circumference in cms (1 inch = 2.54 cms)
*- **Question 9.3**:*
***A)** Exercise related info:*
***1.** Accept exercise info **regardless of whether** the Family Physician actually referred / recommended it, or whether the pt was already doing it. **However!** when it comes to accepting notes on exercise that a patient is **already doing,** only accept it **IF some kind of detail is provided.** Detail could be: how often / duration, details of a course/program, goals to be reached etc.*

***2. ONLY** accept exercise info if it is the **Family Physician/Family Practice** noting it OR recommending it, **NOT** if a Consultant does. (we are targeting practice or behaviour change for the FP not a specialist)*

***B).** Specialist Clinics / Programs:*
*When it comes to the **Specialist clinics/programs** (as opposed to exercise-related info!) e.g. WWs, Diabetic Clinics, Diabetic RNs, Food and Fitness Clinics, Dr Bernstein etc that the pt may have visited or been referred to…, we may accept this info from **BOTH** Consultant notes **and** Family Physician notes (as it may have been the FP that actually referred them, or if Specialist did, the FP would not repeat it).*

10. ASA use

10.1 Was ASA recommended/discussed/prescribed in the past one year?

❑ Yes ❑ No

Note:
- Please code Yes if the patient is on Plavix instead of Aspirin
- If it is noted that the patient is allergic to Aspirin, code Yes (for intent).
- Include those where ASA is part of a drug combination (eg Dypyridamole/ASA 5mg/200mg)

COMMENTS SECTIONS:

*These areas can be used for comments e.g. a difficult place to find something, why you coded something the way you did (and that it was agreed by CA supervisor), additional comments you feel necessary to make a note of regarding coding / scenarios… **They will not be seen by the validator.***

APPENDIX A

Chart Abstraction Practice Information Sheet

CA ID #: _____

Practice site Name: _____

Practice site code: _____

Practice site Address:_____

_____

Safety information (if applicable):_____

Type of Patient Charting System: ☐ **Paper** ☐ **EMR** ☐ **Mix of both**

Additional Information about charting system:

_____

_____

Consenting Physicians:

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.
11.	12.

Language spoken at the clinic: _____

Practice Contact Person:_____ **Phone #:**_____

Best time to contact:_____

APPENDIX B

Chart Abstraction Tracking Log

(This list is confidential and should not leave the practice site)

Practice site ID: _____ Practice site name: _____

Chart Abstractor ID: _____ Date of data collection: _____

Validator ID: _____ Date of Validation: _____

Instructions:

1. Non-eligible: The CA should keep a running total of the number of charts deemed non-eligible. This total is to be written on the CA's invoice for that practice. No patient identifiers are required just the total number of charts pulled in order to obtain the final 66.

2. Eligible: Patient IDs are assigned sequentially from 01-66 in the left hand column of the Chart Abstraction Tracking Log. The Patients' name (and Chart Number if used) is written on the middle column. The final column is for validation purposes only.

Patients are eligible if they are:

- Aged 40 or older
- A patient of one of the consenting physicians (e.g. a physician who has agreed to participate in the study).
- An 'active' patient of the practice, where 'active' refers to patients **seen** at least once within the past one year **and** who have an overall record in the practice going back at least two years (*see note box on p11*).
- A regular patient of the practice (not a walk in patient).
- Diagnosed as having at least one of the following conditions: Coronary Artery Disease (CAD), CerebroVascular Disease (CVD): Stroke / Transient Ischemic Attack (TIA), Peripheral Vascular Disease, Diabetes Mellitus (DM) or Chronic Kidney Disease.
  OR have 3 or more of the Risk Factors (Age, smoking, hypertension, low level of HDL).

Patients are excluded if they:

- A patient of one of the non-consenting physicians (e.g. a physician who has not agreed to participate in the study);
- Are not an active patient of the practice (e.g. not seen at least once within the past year);
- Have passed away or have transferred out of the practice in the last 2 years;
- Are a new patient to the practice in the last two years;
- Are not a regular patient of the practice (a walk in patient);
- Are seen at the practice for specialized services only (e.g. foot care, weight clinics, OB GYN etc);
- Are known to the CA;
- Are staff of the practice site;
- Are a Quebec patient (or province other than Ontario)
- Do NOT have one of the above diseases / more than three risk factors.

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APPENDIX C
List of Medications

Aspirin	**B Blockers**	**Lipid-Lowering**
ASA Aspirin Acetylsalicylic acid Aggrenox Asaphen Ecasa Entrophen Novasen Plavix (Clopidogrel) ***NOTE:*** *For Beta Blockers, the meds with the prefixes APO and NOVO may have these prefixes replaced by GEN, RATIO or ALTI. These should all be accepted.*	Apo / Novo-Atenolol (atenolol,) Apo / Novo-Metoprolol Apo-Propranolol (propranolol,) Apo / Novo-Timol (timolol) Betaloc (metoprolol) Blocadren (timolol) Betaxolol (Kerlone) Corgard (nadolol) Coreg (carvedilol) Inderal (propranolol) Inderide (propranolol & HCTZ) Lopressor / HCT (metoprolol) Monitan (acebutolol) Monocor (bisoprolol) Novo-Pindol (pindolol) Sectral (acebutolol) Sotacor (sotalol) Tenormin (atenolol) Tenoretic (atenolol & Chlor.) Timolide (Timolol & HCTZ) Trandate (labetalol) Trasicor (oxprenolol) Visken (pindolol) Zebeta (bisoprolol) Ziac (bisoprolol & HCTZ)	**Statins** Advicor (lovastatin & niacin) Baycol (Cerivastatin) Crestor (rosuvastatin) Lescol (fluvastatin) Lipitor (atorvastatin) Lipobay (Cerivastatin) Mevacor (lovostatin, Altocor) Pravachol (pravastatin) Pravastatin Zocor (simvastatin) **Fibrates:** Bezafibrate (Bezalip) Fenofibrate (Lipidil) Gemfibrozil (Lopid) **Bile Acid / Absorption Inhib:** Colestid (Colestipol) Ezetrol (Ezetimibe) Questran (Cholestyramine) **Niacin:** Crystalline (Nicotinic Acid) Niaspan (Ext. release)
Ace Inhibitors	**Angiotension Receptor Blocker(s)**:	**Calcium Channel Blockers**
Accupril (Quinapril) Accuretic (Quinapril & HCTZ) Aceon (Perindopril) Altace (Ramipril Capoten (Captopril) Capozide (Captopril & HCTZ) Coversyl (Perindopril) Inhibace (Cilazapril) Lisodur (Lisinopril) Lopril (Lisinopril) Lotensin, (Benazepril) Mavik (Trandolapril) Monopril (Fosinopril) Novatec (Lisinopril) Prinivil (Lisinopril) Prinzide (Lisinopril & HCTZ) Ramace (Ramipril) Ramiwin (Ramipril) Renitec (Enalapril), Tritace (Ramipril) Univasc (Moexipril) Vasotec (Enalapril) Vaseretic (Enalapril & HCTZ) Zestoretic (Lisinopril & HCTZ) Zestril (Lisinopril)	Amias Atacand (Candesartan) Atacand Plus Avalide (Irbesartan & HCTZ) Avapro (Irbesartan) Avapro HCT Aprovel Benicar (Olmesartan) Benicar HCT Blopress Cozaar (Losartan) Diovan (Valsartan) Diovan HCT (Valsartan & HCTZ) Hyzaar (Losartan & HCTZ) Karvea Kinzal Micardis (Telmisartan) Micardis HCT Micardis Plus Pritor Ratacand Teveten (Eprosartan) Teveten HCT Verdia (Tasosartan)	Adalat (Nifedipine) Calan (Verapamil) Cardizem (Diltiazem) Cardene (Nicardipine) Cordilox (Verapamil) Isoptin (Verapamil) Istin (Amlodipine) Lexxel (Felodipine & Enalapril) Lotrel (Amlodipin & Benazepril) Nimotop (Nimodipine) Norvasc (Amlodipine) Plendil (Felodipine) Procardia, (Nifedipine) Renedil (Felodipine) Teczem (Diltiazem & Enalapril) Tiazac (Diltiazem) Tildiem (Diltiazem) Securon (Verapamil) Tarka (Verapamil & Trandolapril) Verelan (Verapamil)

Diuretics	**Glycemic Control Meds**	**Smoking Cessation Meds**
Accuretic (contains HCTZ) Aldactazide (Spironolactone & HCTZ) Aldactone (Spironolactone) Aldochlor (Methyldopa & chlorothiazide) Aldoril (Methyldopa & HCTZ) Apresazide (Hydralazine hydrochloride & HCTZ) Bumex (Bumetanide) Chlorthalidone Combipres (Clonidine hydrochloride & chlorthalidone) Dyazide (HCTZ & triamterene) Dyrenium (Triamterene) Edecrin (Ethacrynic acid) HydroDIURIL (Hydrochlorothiazide) HCTZ Hygroton (Chlorthalidone) Lasix (Furosemide) Lozol, Lozide (Indapamide) Midamor (Amiloride HCl) Moduretic (Amiloride HCl & HCTZ) Mykrox (Metolazone) Triazide Zaroxolyn (Metolazon)	Tolbutamide Glyburide (Diabeta, Micronase) Glipizide (Glucotrol, Glynase) Glimepiride (Amaryl, Glucotrol XL) Gliclazide (Diamicron Repaglinide (Prandin, GluoNorm) Nateglinide (Starlix) Metformin (Glucophage (XR), Glumetza) Rosiglitazone (Avandia) Pioglitazone (Actos) Acarbose (Precose, Prandase) Avandamet **Insulins** : Humalog Humulin Lentos Novolin Novorapid Novrapid	Bupropion (Zyban,Wellbutrin,) Nicotine Patch Nicotine Gum Nicotine Inhaler Varenicline (Champix) – new
	Weight Management Meds	
	Diethylpropion (Tenuate, Tenuate Dospan) Orlistat (Xenical) Phentermine (Adipex-P, Fastin, Ionamin) Sibutramine (Meridia, Reductil) Phen-Pro (Phentermine and Prozac) *(**Note:** zoloft, Celexa, Luvox, Trazadone or Effexor can be substituted for the Prozac in this combination)*	

APPENDIX D

French Acronym List

(this is not a comprehensive list, use the
resources below for new acronyms encountered)

Common French medical acronyms and interpretations and English translation:

FRENCH ACRONYM	ENGLISH ACRONYM
BL (bilan lipids)	LP (lipid profile)
HTA (haute tension arterielle)	High BP (high blood pressure)
AVC (accident cerebrovasculaire)	CVA (cerebrovascular accident)
MPOC (maladie pulmonaire obstructive chronique)	COPD (chronic obstructive pulmonary disease)
IDM (infarctus du myocarde)	MI (myocardial infarction)
PAC (pontage aorto-coronaire)	CABG (coronary artery bypass graft surgery)
ICT (ischeme cerebral transitoire)	TIA (transient ischemic attack)
French Acronyms to be watchful for:	
HBP = hypertophique benign prostatisme (NOT high blood pressure)	

Useful Resources for French Medical Abbreviations:

http://www.cegep-chicoutimi.qc.ca/sygnvyto/telech/ref/abreviations.pdf

http://www.sixi.be/Abrev-med-,Abreviations-medicales_a187.html

APPENDIX E

Results of Feedback from Validation 1

Items which are, generally, more difficult to find:

1) Lab Results:

- Watch for lab results that are in the body of notes (as opposed to just on the lab forms). It's easy to miss these. Also watch out for different doctors / specialists recording them as it means they could be in several different places. They are often on flow sheets too.

- Remember that where you are asked for the most recent result (in any question on labs), an actual result takes precedence over a more recent 'intent with NR' (page 17 of the manual). This means that if you have, for example, an HBA1C recently ordered in our timeframe but there is no result back yet, and you have two earlier actual results still within our timeframe, you would take the two earlier results as your two most recent. Obviously, if you only have one other result, then you would also include the one where the result is not back yet and code it Yes for intent / NR.

2) HbA1c results:

- This is easy to make mistakes on when trying to identify the two most recent results - often plenty of dates / results and can be recorded in several different places (specialist reports, MD reports, flow sheets, CPX, DM nurse etc).

3) Waist Circumference:

- This is not seen often so it is easy to miss. Also can be on flowsheets and CPXs, margins of MD notes.
- Please make sure you only record those taken in the family physicians practice (this includes those taken by other practitioners who run clinics within the family physician's office e.g. Dietician).

4) Blood Pressure Measurements:

- This is also easy to miss because it can be found in various places (CPX, flowsheets, physician notes, vitals page etc)

Time Frame issues:

5) Medications:

- When recording medications please make sure that you only record the meds that are mentioned within our timeframe. Also remember to record 'intent' (for refusals, discontinued meds, allergies etc).

6) Question 1.3:

- For question 1.3, which states "if the pt does have dyslipidemia, has a statin etc..... been recommended / discussed / prescribed in past one year"**,** when you say 'Yes' to this question, and then the two other sub-questions come up re: statin and other lipid meds, please note that these two sub-questions still relate to whether the pt was on these meds in the same past one year timeframe.

Other Issues identified

7) Plavix

- Don't forget that it can be accepted as a substitute for ASA in the study in question 10.

8) All Diagnoses

- It's a good idea to refresh your memory from time to time on all the various definitions for the diagnoses in the manual. I've found it's easy to forget those you don't see very often.

9) Check Boxes - Diabetes and HbA1c

- Be careful to check the yes or no boxes as well as entering the HbA1c value (or NR) in the space provided.