CV RISK MANAGEMENT EHR WORKSHEETS

For Patients With Very High Risk (VHR) Atherosclerotic Cardiovascular Disease (ASCVD), Who Have Had a Recent Myocardial Infarction (MI)

EHR=Electronic Health Record

IDENTIFY

Use clinical criteria to generate Patient Reports of patients with VHR ASCVD

EVALUATE

Use Reminders or Health Maintenance Reminders to alert providers to consider treatment for patients with VHR ASCVD including a recent MI

ENGAGE

Use Patient Follow-Ups and Primary Care Provider Communications to encourage patients to make appointments and engage in care

AMGEN®

Using the CV Risk Management EHR Worksheets

The CV Risk Management EHR Worksheets are meant to provide health system clinical decision makers with a resource to use as they work to configure their EHR capabilities to help identify VHR ASCVD patients who have had a recent MI and may benefit from additional follow-up care. It outlines the criteria that clinical decision makers need to define to use Patient Reports, set Reminders or Health Maintenance Reminders, and send appropriate Patient Follow-ups and Primary Care Provider (PCP) Communications. **EHR Worksheets may be used separately depending on what EHR capabilities align to your health system priorities.**

The Worksheets can help health systems translate their desired clinical parameters for identifying VHR ASCVD patients into the categories and values needed to find the appropriate patients in the EHR. Once an EHR Worksheet is completed by the appropriate clinical decision maker, it can be shared with the health system's IT personnel for implementation. Then, the health system can reuse or edit the EHR Worksheet where appropriate if the criteria selected results in a patient population that is too broad or too narrow.

The diagnostic and treatment codes included are intended as examples for clinical decision makers to identify patients with VHR ASCVD who have had a recent MI, and who may benefit from follow-up care. ***They are provided for reference purposes only and may not be all inclusive.*** It is always the responsibility of the physician to determine coverage and reimbursement parameters and appropriate coding for a particular patient and/or procedure.

The EHR Worksheets include categories of selection criteria that health systems may consider when seeking to identify, evaluate, and engage with appropriate patients. Health system clinical decision makers may consider the following steps as they utilize the EHR Worksheets or may choose to select one or two of the EHR capabilities first. Below is a potential process for each step:

1. Start by selecting the desired **Inclusion and Exclusion** criteria to define the specific search parameters for finding VHR ASCVD patients.
2. Then, specify the data that will be displayed on the **Patient Report** by selecting outputs for provider evaluation and review. After reviewing the list of patients in the Patient Report generated by their EHR, clinical decision makers may wish to broaden or narrow the categories and values to refine criteria to better align with their preferences.
3. Next, choose the language, display rules, and clinical actions for the **Reminder** that will prompt post-MI care follow-up action by care team members.
4. Then, select the **Patient Follow-Up** criteria to communicate with patients and caregivers about important post-MI care for patients with VHR ASCVD.
5. Finally, select the **PCP Communication** criteria to advise the identified patient's other healthcare providers of the need for further assessment or additional care.

EHR Worksheet for Clinical Decision Makers

These potential inclusion criteria are provided as an example and all categories can be altered to meet health system needs.

POTENTIAL INCLUSION CRITERIA*					
CATEGORY	✓	**VALUES**			
Patient Status		Alive			
Population (select one)		Only my patients		Seen in my department/practice	
		Other			
Encounter Type		Inpatient			
		Outpatient			
		Primary Care			
		Cardiology			
		Lipid Clinic			
Patient Gender		Female		Male	
		Not Specified			
Age (eg, 18 to 65 years)	>		<		
Currently Being Seen as Outpatient of Cardiology or Internal Medicine Practice		Yes		No	
Race		Asian		White	
		African American		Other	
Ethnicity		Hispanic		Non Hispanic	
Diagnosis by Grouper or Problem List Diagnosis					

INCLUSION CRITERIA continued on next page

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EHR Worksheet for Clinical Decision Makers (cont.)

These potential inclusion criteria are provided as an example and all categories can be altered to meet health system needs.

POTENTIAL INCLUSION CRITERIA* (cont.)				
CATEGORY	✓	**VALUES**		
		Description	**Code Set**	**Code Type**
ASCVD Diagnosis/ Clinical Findings		Disorders of lipoprotein metabolism and other lipidemias	E78.0-78.01, E78.2, E78.4-E78.5	ICD-10
		Atherosclerosis and atherosclerotic heart disease	I25.10-125.111, I25.118-I25.19, I25.700-I25.701, I25.708-I25.711, I25.718-I25.721, I25-728-I25.731, I25.738-I25.739, I25.750-I25.751, I25.758-I25.761, I25.768-I25.769, I25.790-I25.791, I25.798-I25.799, I25.810-I25.812	ICD-10
		Ischemic Heart Disease (other)	I20.8-I20.9, I23.7, I24.0, I24.8, I25.2-I25.3, I25.41-I25.42, I25.5-I25.6, I25.82-I25.84, I25.89-I25.9	ICD-10
		ST Elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction	I21.01-I21.4, I22.0-I22.9	ICD-10
		Presence of cardiac and vascular implants and grafts and other postprocedural states	Z95.1, Z95.5, Z98.61	ICD-10
		Occlusion and stenosis of precerebral and cerebral arteries, not resulting in cerebral infarction	I65.01-I65.9, I66.01-I66.9	ICD-10
		Cerebrovascular diseases (other)	I67.2, I67.5, I67.81-I67.82, I67.89-I67.9, I68.0, I68.8	ICD-10
		Cerebral infarction	I63.00-I63.012, I63.019-I63.032, I63.039-I63.09, I63.20-I63.212, I63.219-I63.232, I63.239-I63.312, I63.319-I63.322,I63.339-I63.342, I63.349-I63.39, I63.50-I63.512, I63.519-I63.522, I63.529-I63.532, I63.539-I63.542, I63.549-I63.59, I63.8. I63.9	ICD-10
		Transient cerebral ischemic attack	Z86.73, G45.8-G45.9	ICD-10
		History of transient ischemic attack (TIA) or cerebral infarction without residuals	Z86.73	ICD-10
		Vascular syndromes of brain in cerebrovascular diseases	G46.0-G46.8	ICD-10
		Atherosclerosis	I70.0-I70.92	ICD-10
		Diseases of arteries, arterioles, and capillaries (other)	I73.9	ICD-10
		Peripheral vascular angioplasty	Z95.820-Z8.62	ICD-10
		Other lipid storage disorders	E75.5	ICD-10
		Family history of familial hypercholesterolemia	Z83.42	ICD-10

INCLUSION CRITERIA continued on next page

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EHR Worksheet for Clinical Decision Makers (cont.)

These potential inclusion criteria are provided as an example and all categories can be altered to meet health system needs.

POTENTIAL INCLUSION CRITERIA* (cont.)						
CATEGORY	✓	**VALUES**				
ASCVD Diagnosis/ Clinical Findings		**Description**	**Code Set**			**Code Type**
		Include all Selected Diagnoses from Inclusion Criteria				
VHR ASCVD Risk Factors[1] (These Are Only Inclusion Criteria When 2 or More of These Risk Factors Are Met)		≥ 65 years				
		Current smoker	F17, F17.2–F17.201, F17.203, F17.208–F17.209, F17.21–F17.210, F17.218–F17.219, Z72, Z87.891			ICD-10
		Heterozygous familial hypercholesterolemia	E78.01			ICD-10
		Hx of prior coronary artery bypass surgery or PCI	92920–92921, 92928–92929, Z95.1, Z95.5, Z98.61			CPT/ICD-10
		Diabetes mellitus	E11.0–E11.37, E11.39–E11.69, E11.8–E11.9, E13.0–E13.69, E13.8–13.9			ICD-10
		Chronic kidney disease	N18.3 -N18.4			ICD-10
		Hx of congestive heart failure	I11.0, I13.0, I50.20–I50.23, I50.3–I50.33, I50.9			ICD-10
		Persistently elevated LDL-C (LDL-C ≥ 100 mg/dL) despite maximally tolerated statin and ezetimibe. Based on patient's history of LDL-C test results.				
		LDL-C Lab Value Range Capturing out-of-range LDL-C lab test (eg, >=100 mg/dL)	>		<	Timeframe for capturing (eg, within the past 12 months is [m-12])

INCLUSION CRITERIA continued on next page

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EHR Worksheet for Clinical Decision Makers (cont.)

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POTENTIAL INCLUSION CRITERIA* (cont.)					
CATEGORY	✓	**VALUES**			
Labs to Include		**Description**	**Code Set**		**Code Type**
		Lipid panel			
		Apolipoprotein B	1884-6		
		Apolipoprotein B 100	1871-3		
		Total Cholesterol	2093-3		
		HDL Cholesterol	2085-9		
		LDL Cholesterol	2089-1		
		LDL Calculated	13457-7		
		LDL Calculated Direct Assay	18262-6		
		VLDL Calculated	13458-5		
		Non-HDL Cholesterol	43396-1		
		Lipoprotein a Lp(a)	10835-7		
		Lipoprotein a Lp(a)	43583-4		
		Triglycerides			
		Liver function panel			
		ALP			
		ALT			
		AST			
		Creatine Kinase-CPK			
		Comprehensive Metabolic Panel-CMP			
		Coronary Artery Calcium (CAC) score			
	Timeframe for capturing (eg, within the past 12 months is [m-12])		Lookback period: (starting today)	OR Date Range	

INCLUSION CRITERIA continued on next page

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EHR Worksheet for Clinical Decision Makers (cont.)

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POTENTIAL INCLUSION CRITERIA* (cont.)					
CATEGORY	✓	**VALUES**			
Medications					
	Timeframe for capturing (eg, within the past 6 months is [m-6])	Lookback period: (starting today)		OR Date Range	
Alternative Diagnosis or Procedure					

INCLUSION CRITERIA continued on next page

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EHR Worksheet for Clinical Decision Makers (cont.)

These potential inclusion criteria are provided as an example and all categories can be altered to meet health system needs.

POTENTIAL INCLUSION CRITERIA* (cont.)						
CATEGORY	✓	**VALUES**				
Procedures		**Description**	**Code Set**			**Code Type**
		Percutaneous coronary intervention (PCI)	92920-92944			CPT
		Coronary artery bypass surgery or PCI (CABG)	Z95.1			ICD-10
		Endovascular graft placement	34802, 34825, 34826			CPT
		CABG/PCI	33510-33523, 33533-33536, 92980-92982, 92995			CPT
		Peripheral artery revascularization	34201, 34203, 34808, 34812-34813, 34820, 34825-34826, 34831-34833, 34900, 35102-35103, 35131-35132, 35141-35142, 35151-35152, 35302-35305, 35351, 35355, 35361, 35363, 35371-35372, 35381, 35454, 35456, 35459, 35470, 35473-35474, 35480, 35482-35483, 35485, 35490-35493, 35495, 35521, 35533, 35537-35541, 35546, 35548-35549, 35551, 35556, 35558, 35563, 35565-35566, 35570-35571, 35583, 35585, 35587, 35621, 35623, 35641, 35646-35647, 35651, 35654, 35656, 35661, 35663, 35665-35666, 35671			CPT
		Major amputation	27295, 27590-27592, 27594, 27596, 27598, 27880-27882, 27884, 27886, 27888-27889, 28800, 28805			CPT
		Embolectomy or thrombectomy	34201, 34203			CPT
		Peripheral surgical revascularization	35302-35305, 35351, 35355, 35361, 35363, 35371-35372, 35381, 35480, 35481, 35482, 35483, 35485, 35521, 35537-35540, 35541, 35546, 35548-35549, 35551, 35556, 35558, 35563, 35565-35566, 35570-35571, 35583, 35585, 35587, 35621, 35623, 35641, 35646-35647, 35651, 35654, 35656, 35661, 35663, 35665-35666, 35671, 35875-35876			CPT
		Thrombolysis	37184, 37211, 37213			CPT
		Lower extremity amputation	27590-27592, 27598, 27880-27882, 27888			CPT
		Carotid Endarterectomy	35301			CPT
		Carotid, Vertebral, or Basilar Stenting	37215-37216, 37218			CPT
		Endovascular Stent Placement	34802, 34825, 34826			CPT
	Timeframe for capturing (eg, within the past 12 months is [m-12])		Lookback period: (starting today)		OR Date Range	

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EHR Worksheet for Clinical Decision Makers (cont.)

These potential exclusion criteria are provided as an example and all categories can be altered to meet health system needs.

EXCLUSION CRITERIA*				
CATEGORY	✓	**VALUES**		
Diagnosis/ Clinical Findings		**Description**	**Code Set**	**Code Type**
		Disorders of lipoprotein metabolism and other lipidemias	E78.0-78.01, E78.2, E78.4-E78.5	ICD-10
		Atherosclerosis and atherosclerotic heart disease	I25.10-125.111, I25.118-I25.19, I25.700-I25.701, I25.708-I25.711, I25.718-I25.721, I25.728-I25.731, I25.738-I25.739, I25.750-I25.751	ICD-10
		Ischemic Heart Disease (other)	I20.8-I20.9, I23.7, I24.0, I24.8, I25.2-I25.3, I25.41-I25.42, I25.5-I25.6, I25.82-I25.9	ICD-10
		ST Elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction	I21.01-I21.4, I22.0-I22.9	ICD-10
		Presence of cardiac and vascular implants and grafts and other postprocedural states	Z95.1, Z95.5, Z98.61	ICD-10
		Occlusion and stenosis of precerebral and cerebral arteries, not resulting in cerebral infarction	I65.01-I65.9, I66.01-I66.9	ICD-10
		Cerebrovascular diseases (other)	I67.2, I67.5, I67.81-I67.82, I67.89-I67.9, I68.0, I68.8	ICD-10
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		Transient cerebral ischemic attack	Z86.73, G45.8-G45.9	ICD-10
		History of transient ischemic attack (TIA) or cerebral infarction without residuals	Z86.73	ICD-10
		Vascular syndromes of brain in cerebrovascular diseases	G46.0-G46.8	ICD-10
		Atherosclerosis	I70.0-I70.92	ICD-10
		Diseases of arteries, arterioles, and capillaries (other)	I73.9	ICD-10
		Peripheral vascular angioplasty	Z95.820-Z8.62	ICD-10
		Other lipid storage disorders	E75.5	ICD-10
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EXCLUSION CRITERIA continued on next page

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EHR Worksheet for Clinical Decision Makers (cont.)

These potential exclusion criteria are provided as an example and all categories can be altered to meet health system needs.

EXCLUSION CRITERIA* (cont.)								
CATEGORY	✓	**VALUES**						
Medication Allergies (eg, "statin")								
Coronary Calcium Score		= 0						
Pregnant		Yes		No				
Left Ventricular Assist Device Recipient		Yes		No				
Medications								
	Timeframe for capturing (eg, within the past 6 months is [m-6])		Lookback period: (starting today)			OR Date Range		
Procedures		**Description**				**Code Set**	**Code Type**	
		Percutaneous coronary intervention (PCI)				92920-92944	CPT	
		Coronary artery bypass surgery or PCI (CABG)				Z95.1	ICD-10	
	Timeframe for capturing (eg, within the past 12 months is [m-12])		Lookback period: (starting today)			OR Date Range		

After selecting the inclusion and exclusion criteria for identifying appropriate patients for post-MI care, you can use the forms on the next two pages to gather information to share with your EHR support team when requesting help to generate a Patient Report, create a Reminder, or send Patient Follow-Ups or Primary Care Provider Communications.

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Generating a Patient Report

Clinical decision makers may select the data to be displayed on the Patient Report. After viewing the report, the report output fields can be adjusted to capture a broader or more specific population segment.

REPORT OUTPUT		
CATEGORY	✓	**VALUES**
Patient Demographics		Patient ID (MRN)
		Name
		Date of Birth
		Phone number
		Patient portal access
		Tobacco use
		Primary Care Provider
Diagnosis/ Clinical Findings		All Diagnoses from Inclusion Criteria
		All Procedures from Inclusion Criteria
Payer		Insurance coverage name
Labs		Lab test
		Last documented Lipid Panel
		Lipid panel result

Using the Patient Report to Help Improve Patient Care

Creating Reminders

Clinical decision makers may choose whether to create a Reminder. You can then use this worksheet as a place to write the appropriate message for the Reminder, indicate who will see it, and specify clinical actions to prompt post-MI care by care team members.

***It is highly recommended that you first complete the Inclusion and Exclusion Criteria provided within this guide when creating a Reminder**

REMINDERS					
CATEGORY	**✓**	**VALUES**			
Reminder Name (eg, Lipid-Lowering Therapy)					
Reminder Message **(eg, Recommend next step therapy based on LDL-C value and active medications)**					
Clinical Data to Include		Lab Description		LOINC Code	
		Hospitalizations			
		Date of Hosptialization			
		All Procedures			
		Procedures			
		Procedure Code			
		Date of Most Recent Procedures			
		All Medications			
		Medications			
		Medication Allergies			
		All Diagnoses			
		Diagnosis by Grouper			
		Diagnosis by Problem List			
		Alternative Diagnosis			

REMINDERS continued on next page

*Clinical decisions makers have the option to include links within a Reminder that open specific Order Sets created by the health system.

Using the Patient Report to Help Improve Patient Care (cont.)

Creating Reminders

Clinical decision makers may choose whether to create a Reminder. You can then use this worksheet as a place to write the appropriate message for the Reminder, indicate who will see it, and specify clinical actions to prompt post-MI care by care team members.

REMINDERS		
CATEGORY	✓	**VALUES**
Display Restrictions (eg, Encounter department, provider type)		Care Team Member
		Attending Providers
		Consulting Providers
		Primary Providers
		Liaison Coordinator
		Service Area
		Location
		Specialty
		Other
Link to Guidelines		
Triggers		Opening of Patient Chart
		Documentation of a Problem/Diagnosis
		Selection of an Order
		Signing of an Order
		Upon Results Received
		General Alert Section
		Inpatient Discharge Alert Section
		Other
Frequency of Reminder		Once per Provider
		Provider Type
		Once per Encounter
		Once per Encounter per User
		Multiple Times per Event Within the Encounter
		Per Encounter Event
		At Discharge
		Other

REMINDERS continued on next page

Using the Patient Report to Help Improve Patient Care (cont.)

Creating Reminders

Clinical decision makers may choose whether to create a Reminder. You can then use this worksheet as a place to write the appropriate message for the Reminder, indicate who will see it, and specify clinical actions to prompt post-MI care by care team members.

REMINDERS					
CATEGORY	✓	**VALUES**			
Clinical Actions to Take Based on the Reminder		Order Set Name		#	
		Order Labs			
		Order Medication			
		Order Additional Medication Therapy			
		Refer to Cardiologist			
		Refer to Lipid/Cardiometabolic Clinic			
		Join Cardiac Rehabilitation Program			
		Additional Orderable Items to Include			
Acknowledge Reason(s)		Patient Refused			
		I Will Adjust Medications			
		Medication Changes not Clinically Necessary			
		Defer for Other Reason			

Sending Targeted Patient Follow-Ups

Clinicians may communicate with patients about the importance of follow-up care.

PATIENT FOLLOW-UP CONTENT			
CATEGORY	✓	**VALUES**	
Patients to Exclude		Received previous cardiologist communications	
		Patient refusal	
Methods of Communication		Mail	
		Patient portal	
		Other	
Preferred Language		English	
		Spanish	
		Other	
WHEN TO SEND		**QUALIFIER**	
	Days After	Previous cardiac incident	
	Months After	Patient's last encounter	
MESSAGE TO PATIENTS			
Subject **(eg, Care Follow Up)**			
Message Body **(eg,** **Hi [[Patient Name]]:** **Know your numbers—it's important that your LDL-C is <55 mg/dL to help manage your risk level. Preventive medicine plays an important part in your health and overall well-being. Given the risk factors and your history of cardiovascular events, you may be at an elevated risk for another event. It's important to schedule an appointment for follow-up evaluation and to discuss your heart health with your physician.** **To schedule your appointment, contact your cardiologist or connect via the portal.** **Sincerely,** **[[Organization Name]])**			
Reply Options		Call for appointment	
		Reply to this message to request an appointment	
		Schedule appointment via patient portal	
		Schedule Electrocardiogram (ECG or EKG) or Echocardiogram	
		Do not contact on this topic again	
Attachment Options			

Sending Targeted PCP Communications

Clinicians may communicate with the patient's primary care provider about the need for specific follow-up care.

PCP COMMUNICATION			
CATEGORY	✓	**VALUES**	
Patients to Exclude		No specialist on file	
		Patient refusal	
Methods of Communication		Direct Messaging	
		Internal Messaging	
		Other	
Preferred Language		English	
		Spanish	
		Other	

WHEN TO SEND		QUALIFIER
	Days After	Previous cardiac incident
	Months After	Patients last encounter
Upon Discharge		

MESSAGE TO PCP		
Subject **(eg, Patient LLT change)**		
Message Body **(eg,** **[[PCP Name]]:** **Regarding: [[Patient Name]], [[DOB: DOB]]** **We saw your patient on XX/XX/XXXX and initiated a change in lipid-lowering therapy (LLT). This change was based on your patient's LDL-C levels on recent laboratory tests. For your review, we have attached pertinent information regarding their care at this facility.** **Sincerely,** **[[Facility contact information]])**		
Attachment Options		Procedure notes
		Lab results
		Imaging interpretations
		Discharge summary

Reference: 1. Grundy SM, Stone NJ, Bailey AL, et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of blood cholesterol: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Circulation.* 2019;139:e1082-e1143.

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