

**Electronic Health Record-Based Patient Identification and Individualized Mailed Outreach for
Primary Cardiovascular Disease Prevention: a Cluster Randomized Trial**

APPENDIX

SAMPLE MAILING FOR HYPOTHETICAL PATIENT

Dear Mr. Jones,

Our office is testing a way to help patients become more aware of their risk of developing heart disease or stroke and what can be done to lower the risk. The following page contains a report that estimates your risk of developing heart disease or stroke over the next 10 years. This information came from data stored in our electronic health record. Usually these estimates are accurate. However, it is possible that this information is not completely complete or correct.

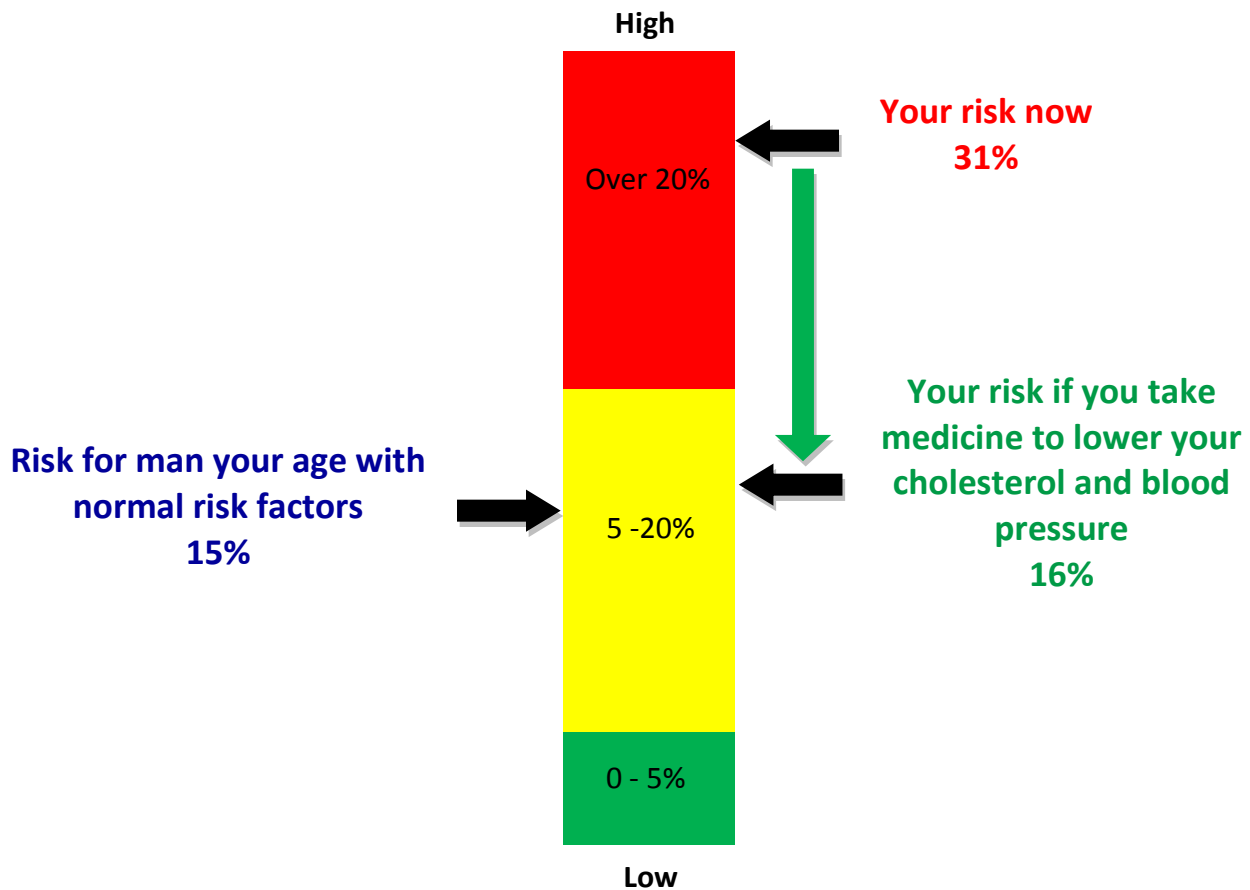
The page after the report provides some additional details about where these numbers come from if you are interested in learning more.

Please speak with me about any questions you have concerning this report at your next office visit, or if you would like to learn more about ways you can reduce your risk, I would be happy to discuss this with you further.

Best regards,

Cecelia Smith, M.D.

Risk of Heart Disease or Stroke During the Next 10 Years



Risk for man your age

For men your age who have normal blood pressure, cholesterol levels and who do not smoke, about 15 out of 100 (15%) will develop heart disease or stroke in the next 10 years.

Your risk is much higher than this

Of 100 men like you, 31 out of 100 (31%) will develop heart disease or stroke in the next 10 years. Even though you are only 67 years old, your risk is about the same as a man with normal risk factors who is 83 years old

There are things you can do to lower your risk

If you take medication to lower your cholesterol and lower your blood pressure by 10 points you could lower your chance of heart disease or stroke during the next 10 years from 31 out of 100 (31%) to about 16 out of 100 (16%).

FREQUENTLY ASKED QUESTIONS

Where did these numbers come from?

For people who do not already have cardiovascular disease, the risk of developing any cardiovascular disease can be estimated using published formulas that come from the large Framingham Heart Study. These estimations may not apply perfectly well to all people. The reference for the publication we are using for these calculations is:

D'Agostino RB, Sr., Vasan RS, Pencina MJ, et al. General cardiovascular risk profile for use in primary care: the Framingham Heart Study. *Circulation* 2008;117:743-53.

Information about your age, blood pressure, cholesterol, and whether or not you smoke comes from parts of your electronic medical record from our office. This information which we recorded automatically may not be completely accurate.

Assumptions we used to make these calculations are:

Your age is: 67

You are male.

Your total cholesterol is about 212.

Your HDL (good) cholesterol is about 38.

Your systolic blood pressure average is about 145.

Your blood pressure was measured when you were not taking medication for high blood pressure.

You are not smoking.

You do not have diagnosis of coronary heart disease, heart attack, heart failure, diabetes, or blockages in the arteries to the legs or brain.

If any of these assumptions are not correct, the risk level might not be correct.

What exactly is included in this risk?

This includes the risk of developing any of the following: death caused by heart disease or stroke, any heart attack, any stroke, chest pain caused by blockages in the arteries to the hearts, the need for a procedure or surgery to open a blocked artery, congestive heart failure, or pain in the legs caused by blockages in the arteries. All of these are important but some are less severe than others (for example a heart attack or stroke that causes death is much more severe than a very small heart attack or stroke).

Why does this risk seem higher than what a doctor told me in the past?

You may have been told in the past that your risk of heart attack was lower than the amount or risk reported here. That is because the number here includes the development of any important cardiovascular disease, not just heart attack. Your estimated risk of having a heart attack or death due to your heart in the next 10 years is 19%.

SAMPLE EMAIL SENT TO PHYSICIANS IN ELECTRONIC HEALTH RECORD

Dear Dr. XX,

Thank you for participating in the Tailored Communication to Reduce Cardiovascular Risk Study. You have been randomly assigned to the intervention group. Please respond to this email indicating if there are patients you do not want us to send a tailored cardiovascular risk message on your behalf.

The following is a list of patients 40-79 years old with LDL cholesterol above goal. Provided is their 10-year Framingham Score (risk of CV death or nonfatal myocardial infarction), their global GV risk score (risk of any CAD, heart failure, stroke, TIA or PAD in the next 10 years) and the modifiable risk targets that will be included in the mailed risk message.

If you have any questions or concerns please feel free to contact Stephen Persell (312) 503-6464, pager 53570 or by Epic email.

Thank you,

Elisha Friesema
Project Coordinator/Care Manager
General Internal Medicine, Northwestern University

Jane Doe 8888888 FRS 8%, Global risk 12%, modifiable targets: LDL cholesterol, hypertension, smoking
Joe Smith 8798788 FRS 15%, Global risk 24%, modifiable targets: LDL cholesterol

Supplemental Table. Characteristics of All 26,577 Patients with Office Visits at the Participating Clinic in 2011^a

Age – mean (sd)	49.9 (17.0)
Gender – n (%)	
Male	10,231 (38.5)
Female	16,341 (61.5)
<i>Unknown</i>	5
Race – n (%)	
White	12,086 (56.8)
Black	5,199 (24.4)
Asian	1,319 (6.2)
Hispanic	1,767 (8.3)
Other	910 (4.3)
<i>Unknown</i>	5,296
Insurance – n (%)	
Private	18,698 (70.4)
Medicare	5,598 (21.1)
Medicaid	621 (2.3)
Other/Uninsured	1,646 (6.2)
<i>Unknown</i>	14

^a Patients with unknown characteristics were not included in the percentages.