REDEFINING RISK DISCUSSIONS: EXPLAINING ASCVD RISK SCORES FOR PRIMARY PREVENTION

The 10-year ASCVD risk estimator is used to guide decision-making for many preventive interventions, including lipid and blood pressure management. Integration of this tool into clinical decision making has become second nature for clinicians. However, communicating the risks of a future ASCVD-related event and treatment options so that it is meaningful to patients is more complex and far from routine. Optimizing approaches so that patients understand prognosis and can participate in risk-based treatment decisions is critical for successful treatment. We present an example case to help illustrate the challenges and opportunities:

*Patient is a **52-year old African American woman** with a past medical history of hypertension and rheumatoid arthritis. She is a past smoker, quit 10 years ago. Her mother had a stroke at age 62 years.*

Meds: hydrochlorothiazide 25 mg daily, methotrexate 7.5 mg weekly, folic acid 1 mg daily

BP: 138/85 mmHg, BMI 30.2 kg/m^2

Lipids: total chol 236 mg/dL, HDL-C 44 mg/dL, LDL-C 142 mg/dL, TG 250 mg/dL

Glucose: 110 mg/dL

Other labs WNL

Lifestyle: Diet is high in carbohydrates and saturated fats; no regular exercise; however, she states she walks her dog once a day for 3-4 blocks

10-year ASCVD risk: 8.0% (intermediate risk)

Key Challenges

- Although the patient is at the low end of intermediate risk, she has both elevation in LDL-C and triglycerides (mixed dyslipidemia) and risk enhancing factors: premature family history of stroke, rheumatoid arthritis, and metabolic syndrome.

- Need to convey that she falls within the risk range for starting statin therapy and the presence of risk enhancing factors further increases her risk.

- BP is not optimally controlled, and if she is adherent to current medication, we should discuss adding another medication.

- Lifestyle strategies can also improve risk reduction

- Patient conveys that she prefers not to take cholesterol medication; others have told her about muscle pain with statins.
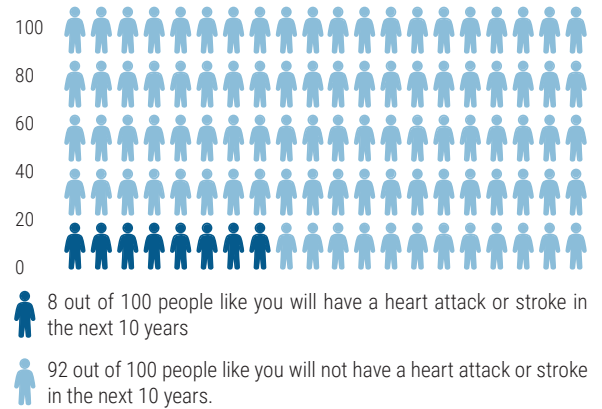
MAKING RISK MEANINGFUL

How can the care team enhance discussions about risk to help patients understand and feel part of the process and that they can do something to reduce risk?

- Clinician-patient risk discussion is critical, and should include an easy-to-understand explanation of the patient's estimated 10-year ASCVD risk (8.0% for our patient), the role of risk-enhancing factors, benefit vs risk for lifestyle changes and medications, concerns about cost or other worries, as well as patient concerns and preferences.
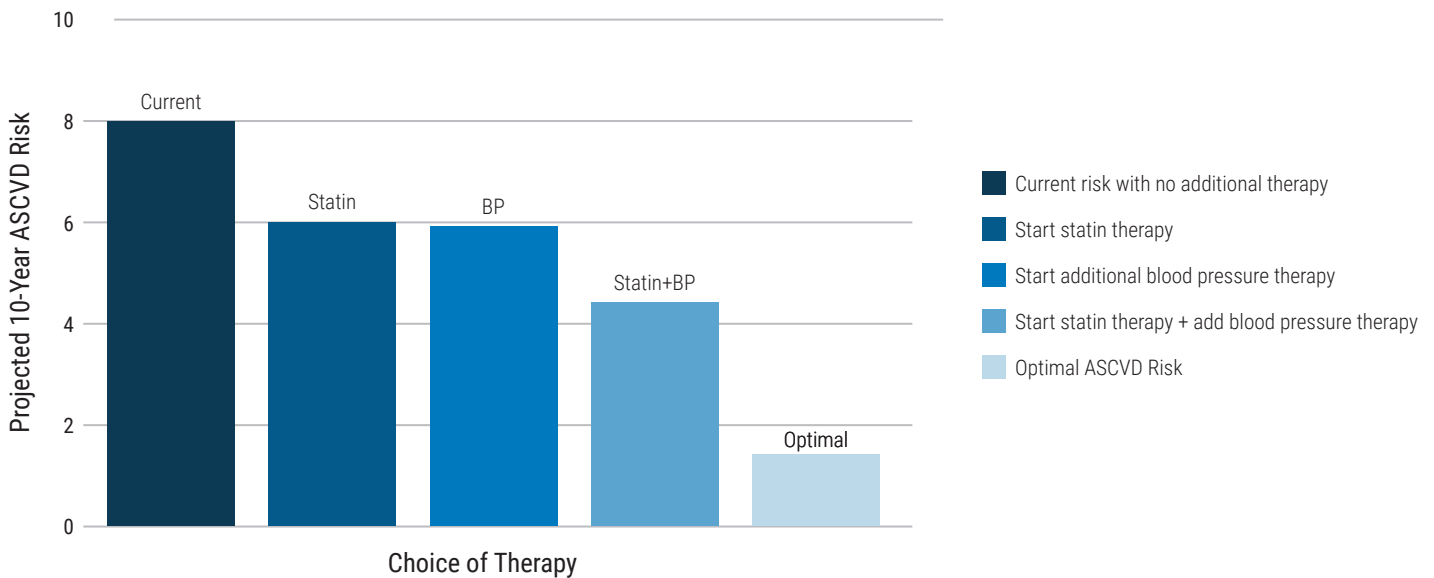
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- Communicate risk in a way patient can understand:
  - "If there were 100 people who looked exactly like you – same age, a woman, same risk factors – we can estimate that in the next 10 years, 8 of them will have a heart attack or a stroke. However, the remaining 92 people will not have a heart attack or a stroke."
  - "Based on the 10-year risk estimator, you have an 8% chance (that's 8 out of 100 people similar to you) of having a heart attack or a stroke in the next 10 years. That means that you also have a 92 percent chance of not having a heart attack or a stroke."

- 10-year risk of 8.0% places the patient at the low end of intermediate risk (intermediate risk ranges from 7.5% to less than 20%). At this level of risk, statin therapy is recommended in addition to lifestyle changes to help lower risk.

- Risk will likely be reduced with better blood pressure treatment and treatment with a statin.

- Projected 10-year ASCVD risk with additional BP drug to improve BP control: 5.9%; adding a statin alone 6.0%; BP medication plus statin 4.4%. Be sure to use the same way of presenting risk to your patients. For example, if you stated that she had an 8 percent chance without any further treatment, then tell her that her chances lower to 5.9 percent if she takes an additional BP drug. A visual representation would help even more.

VISUAL REPRESENTATION OF ASCVD RISK SCORE

8 out of 100 people like you will have a heart attack or stroke in the next 10 years

92 out of 100 people like you will not have a heart attack or stroke in the next 10 years.

RISK REDUCTION BY THERAPY

Projected 10-Year ASCVD Risk

Current
Statin
BP
Statin+BP
Optimal

Choice of Therapy

- Current risk with no additional therapy
- Start statin therapy
- Start additional blood pressure therapy
- Start statin therapy + add blood pressure therapy
- Optimal ASCVD Risk

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- Communicate that patient's risk is likely higher than what is estimated by the risk calculator because of the presence of risk enhancing factors, such as family history, rheumatoid arthritis, metabolic syndrome.

- Lifestyle therapies (heart-healthy diet and regular exercise) will reduce overall risk and improve risk factors.

- Recommendation is lifestyle plus moderate-intensity statin (e.g., atorvastatin 20 mg daily)

- Obtain baseline blood tests to know CK (muscle enzyme level), metabolic panel to know kidney and liver function tests, TSH (thyroid screening test), and vitamin D level. Patient is concerned about muscle side effects with statins. Elevated TSH and low vitamin D will increase a person's chance of having muscle side effects.

- Discuss safety profile of statins as well as risks, differences in statins, etc. Assess baseline muscle symptoms (prior to statin use) and convey to patient that if she has an increase or change in muscle symptoms, you and the nursing staff are available to discuss and address these symptoms. Explain that statin-associated muscle symptoms typically affect larger muscles on both sides of the body (thighs, upper arms/shoulders, buttocks). *Note that telling patients the numeric chances of each side effect, including the 5 percent chance of the muscle ache side effect, will make it less likely that they overestimate them.*[1]

- If patient remains uncertain about statin therapy, may offer a CT heart scan to measure coronary artery calcium: If calcification is present in the coronary arteries, ASCVD is present, and statin therapy is indicated.

- Ask your patient what matters to them and learn preferences. Recognize that there is an emotional component to risk discussions. Find out what motivates the patient and if there are reasons they may not follow through with treatment recommendations.

Core Essentials for Effective Risk Communications for Primary Prevention Patient at Intermediate Risk with Risk Enhancing Factors

- Create a trusting relationship that fosters a successful clinician-patient risk discussion. This includes active listening to the patient.

- The risk discussion starts with 10-year risk estimation and is personalized by discussing risk-enhancing factors that are present.

- Recommendation includes <u>both</u> lifestyle and statin therapies.

- Patient's concerns about medication must be addressed through baseline blood tests, assessment of predisposing factors for side effects, assurance of clinician availability for patient concerns.

- If patient remains uncertain about starting a statin, offer CT heart scan for determination of coronary artery calcium.

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[1] See Figure 2 of Peters, E., Hart, S., Tusler, M., & Fraenkel, L. (2014). Numbers matter to informed patient choices: The effects of age and numeracy. *Medical Decision Making, 34(4)*, 430-442.