

Shared Decision Making and Minimally Disruptive Medicine

Ian Hargraves
JP Brito

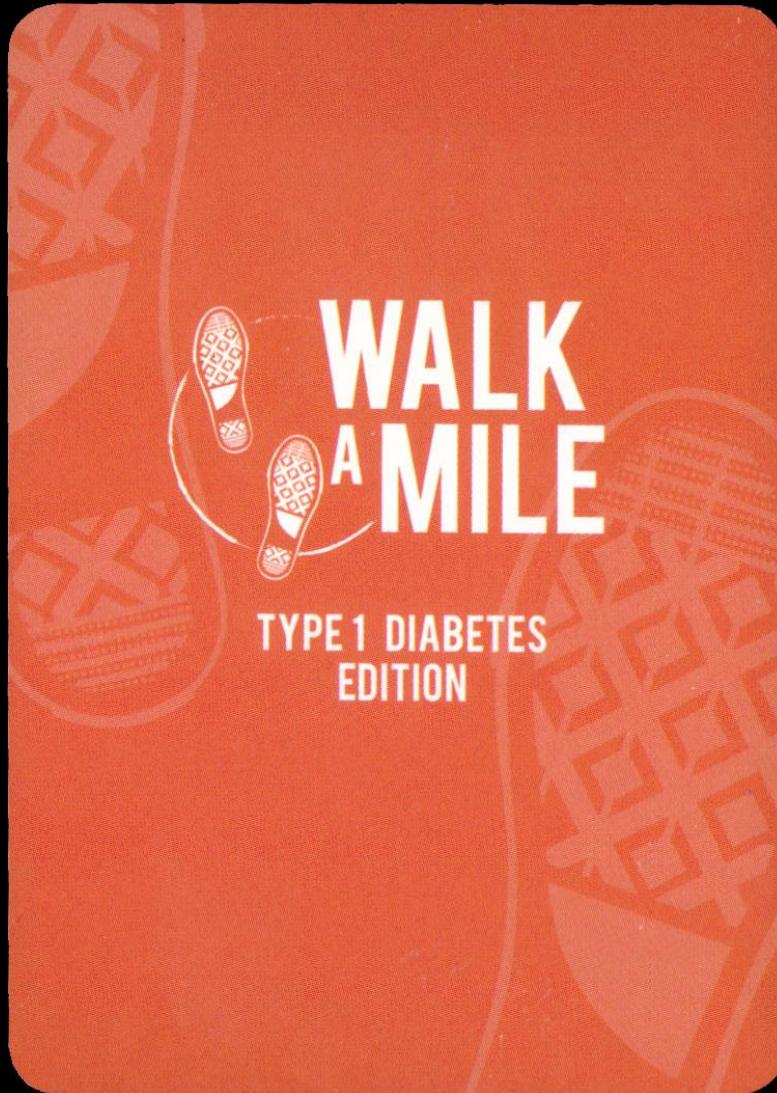
KER UNIT
Center for Clinical and Translational Sciences
Mayo Clinic

Minimally Disruptive Medicine
Effective Care that Fits
Rochester MN, September 29, 2016

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It is bedtime for the kids and you have gathered them for a story. The words on the page get fuzzy and your glucose monitor is alerting you to low blood sugar, but the kids are nestled in your lap. You don't want to scare them.

What do you do?

How do you balance parenting and self-care in this moment?



What's best for me
and my family ?



What's best for me
and my family ?

What's best for me
and my family ?



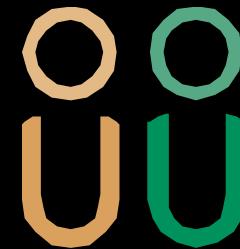
What's best for me
and my family ?



What's best for me



SDM as one means in approaching What's Best for the Patient



How do we approach what's best?





4 Statin Benefit Groups

- Clinical ASCVD*
- LDL-C ≥ 190 mg/dL, Age ≥ 21 years
- Primary prevention – Diabetes: Age 40-75 years, LDL-C 70-189 mg/dL
- Primary prevention - No Diabetes†: $\geq 7.5\%$ ‡ 10-year ASCVD risk, Age 40-75 years, LDL-C 70-189 mg/dL

*Atherosclerotic cardiovascular disease

†Requires risk discussion between clinician and patient before statin initiation

‡Statin therapy may be considered if risk decision is uncertain after use of ASCVD risk calculator



Helping Cardiovascular Professionals
Learn. Advance. Heal.

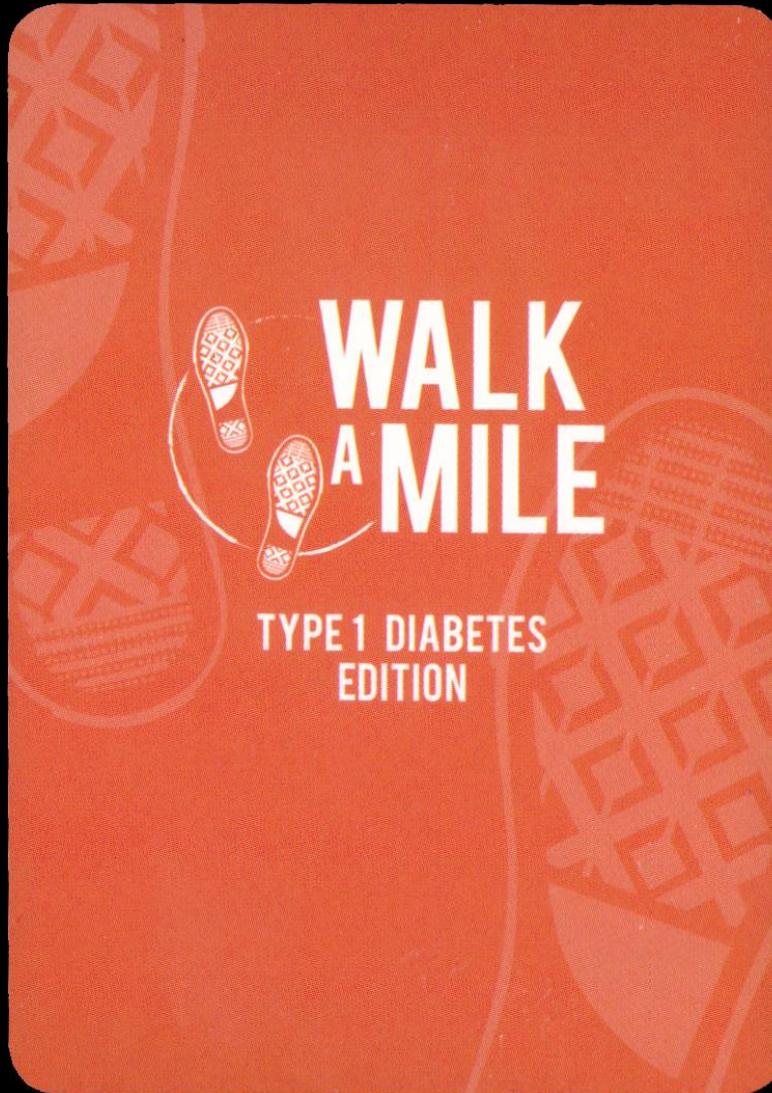


Maria Luisa ≠ People
like
Maria Luisa



Information Choice





It is bedtime for the kids and you have gathered them for a story. The words on the page get fuzzy and your glucose monitor is alerting you to low blood sugar, but the kids are nestled in your lap. You don't want to scare them.

What do you do?

How do you balance parenting and self-care in this moment?

How do we approach what's best?

Talk with the person and find agreement
on what's best for them

Work through the situation to fashion
action makes intellectual, practical, and
emotional sense

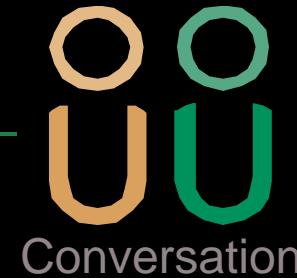
How do we approach what's best?



How do we approach what's best?

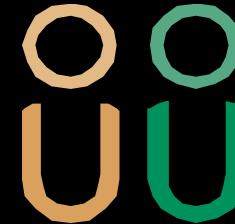


Talk with
the Person



Work through
the Human Situation

Talk with the person



People speaking to
what matters to them

Creating & maintaining
a relationship in which
this is possible

So that two parties with
diverse interests can
agree on next steps



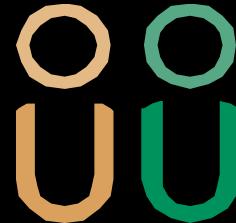
- Two parties coming to an agreement
- To secure agreement the patient is encouraged to speak to what matters to her
 - -Weight Change, Daily Routine
 - -"*I'd rather just pills*"
- Clinician also speaks to what matters to him
 - *"The other thing to consider is that sometimes that can give you low blood sugar so we are going to ask you to monitor a little more often than what you are doing right now but otherwise that would be ok"*

Talk with the person

People speaking to
what matters to them

Creating & maintaining
a relationship in which
this is possible

So that two parties with
diverse interests can
agree on next steps

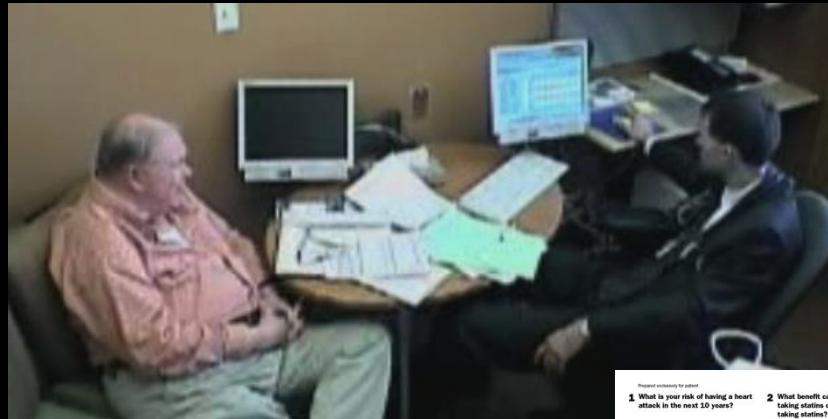


Work through the situation

Developing an
environment for problem
finding and resolution

Together thinking, talking
& feeling through a
troubled situation

To test and demonstrate
that a course of action
makes sense



Prepared exclusively for patient

1 What is your risk of having a heart attack in the next 10 years?

Using information about your risk factors we can calculate your risk of having a heart attack in the next 10 years. This table shows the risk for different groups of people.

In addition to your known cardiovascular risk factors, the following factors are taken into account:

- Age (men > 50, women > 60)
- Smoking
- Family history of heart attack
- High blood pressure
- High cholesterol
- Diabetes
- Obesity
- Low physical activity
- Low fruit and vegetable intake
- Low alcohol intake
- High waist circumference
- Low HDL cholesterol
- High triglycerides
- Low fibrinogen
- Low C-reactive protein

WHAT DOES THIS ESTIMATE MEAN?

For example, a 45-year-old man with a 10% risk of having a heart attack in the next 10 years, and who does not smoke, has a 10% chance of having a heart attack in the next 10 years.

It is important that you and your health care provider know what this risk means for you.

There is a small chance that you will have a heart attack in the next 10 years, but the chance is much smaller if you make changes to your lifestyle.

It is important to know your risk of having a heart attack in the next 10 years, because this will help you:

- Decide if you need to take statins to prevent a heart attack
- Decide if you need to take aspirin to prevent a heart attack
- Decide if you need to take other medicines to prevent a heart attack
- Decide if you need to change your diet and exercise more to prevent a heart attack

2 What benefits can you expect from taking statins compared to not taking statins?

NO STATIN

Without statins, you have a 10% chance of having a heart attack in the next 10 years. This table shows the risk reduction if you take statins.

For example, if you take statins, you will have a 2% chance of having a heart attack in the next 10 years, and this is a 8% reduction in risk.

YES STATIN

With statins, you have a 2% chance of having a heart attack in the next 10 years. This table shows the risk reduction if you do not take statins.

For example, if you do not take statins, you will have a 10% chance of having a heart attack in the next 10 years, and this is an 8% increase in risk.

3 What downsides can you expect from taking statins compared to not taking statins?

Statins have some side effects for most people, but these are usually minor. Some people experience muscle aches, constipation, and/or diarrhoea. Some people experience more serious side effects, such as liver damage or kidney damage. In most cases, the side effects are minor.

For example, if you take statins, you will have a 2% chance of having a heart attack in the next 10 years, and this is a 8% reduction in risk.

4 What do you want to do now?

- Take a statin to prevent a heart attack
- Not take a statin or stop taking a statin
- Discuss with your primary doctor
- Discuss with your cardiologist
- Discuss with your pharmacist
- What else?

WARNING:
If you decide to take statins, we will not tell you if you would have a heart attack in the next 10 years. We will tell you what to do if you have a heart attack, decide to stop taking statins, or take other medicines to prevent a heart attack, or change your diet and exercise more.

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What is the situation
that demands action?

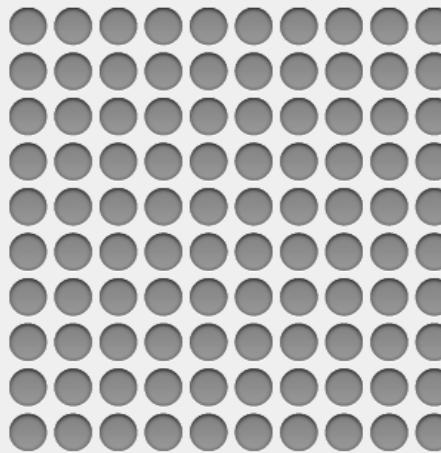
What is the action the
situation demands?

Problem

Hypotheses

Experimental Medium

Conclusion



Treating your Barrett's Esophagus Low-Grade Dysplasia Decision Aid

This tool will help you and your doctor discuss
how to treat your Barrett's Esophagus

Let's get started

Caution: This application is for use
exclusively during the clinical encounter
with your clinician

Credits & Contacts

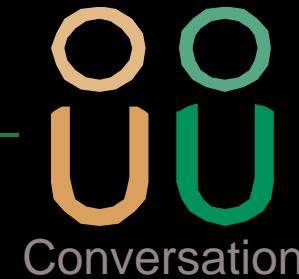
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- Thinking, talking, and feeling through a troubling situation
- Options are hypotheses. Conversation is where they're tested
- What's best is humanly demonstrated
- Care that does justice to the human situation

Talk with
the Person



Work through
the Human Situation

What's best for me
and my family ?

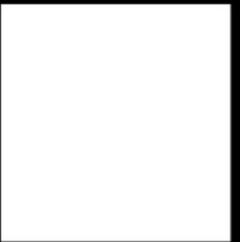


What's best for me
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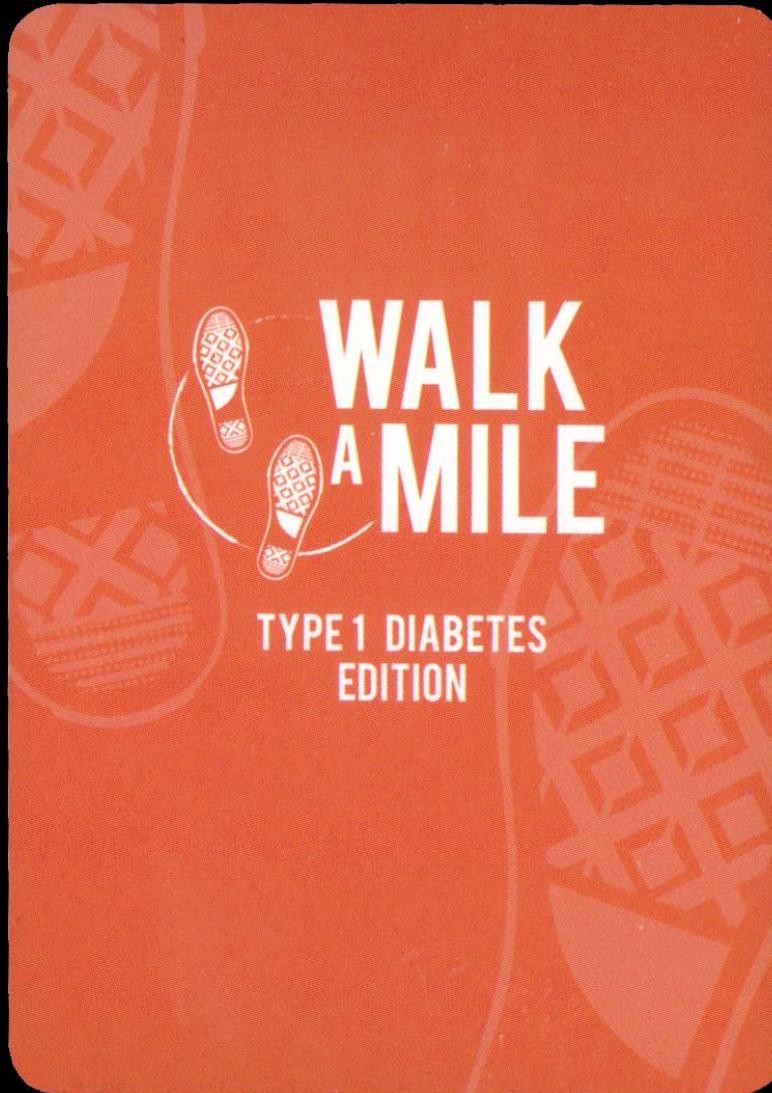
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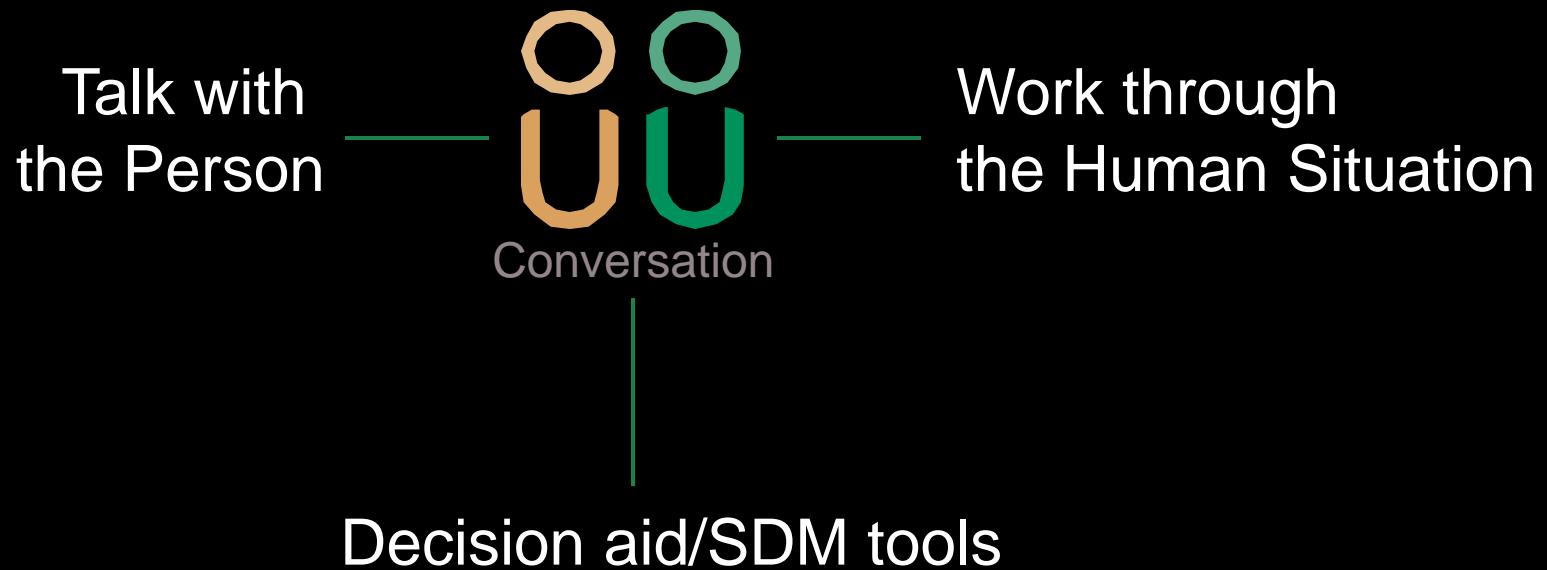
What's best for me



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Statin Choice

Statin/Aspirin Choice Decision Aid

Current Risk

Select Risk Calculator

ACC/AHA ASCVD Framingham Reynolds

Do you have a history of events such as prior heart attack or stroke, acute coronary syndromes, history of angioplasty or stents, etc? No

These figures are used to calculate my risk of having a heart attack in the next 10 years:

Age: 55 Gender: M F

Population Group: White or other

Smoker: No Diabetes: No Treated SBP: No

Conv. Unit SI Unit

Systolic Blood Pressure: 140 mmHg HDL Cholesterol: 40 mg/dL Total Cholesterol: 200 mg/dL

Select Current Intervention

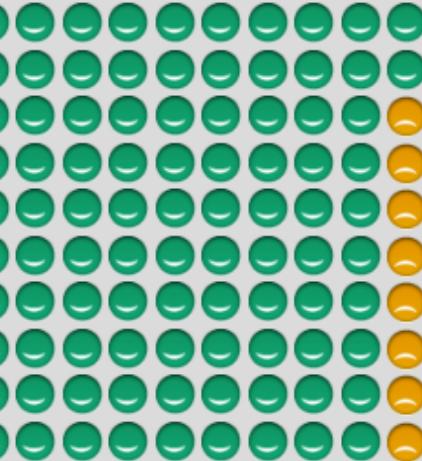
Statin: No Std Dose High Dose

Aspirin: No Low Dose

3. View Issues

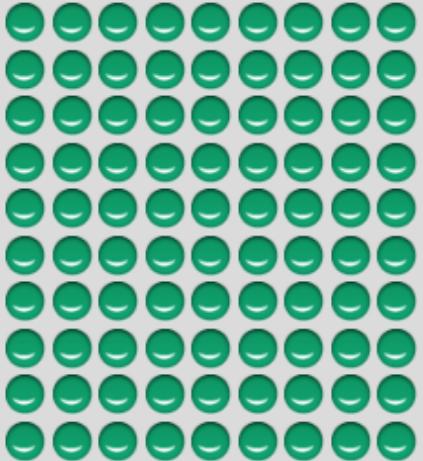
Current Risk of having a heart attack

Risk for 100 people like you who **do not** take medicine for heart problems



Future Risk of having a heart attack

Risk for 100 people like you who do take **standard dose statins**



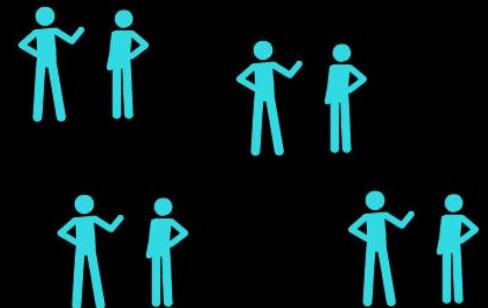
Over 10 years

6 people will have a heart attack

92 people will have no heart attack

2 people will be saved from a heart attack by taking medicine

OBSERVATION ENCOUNTERS



LDL

“Must do” guidelines

QI targets = metabolic goals.

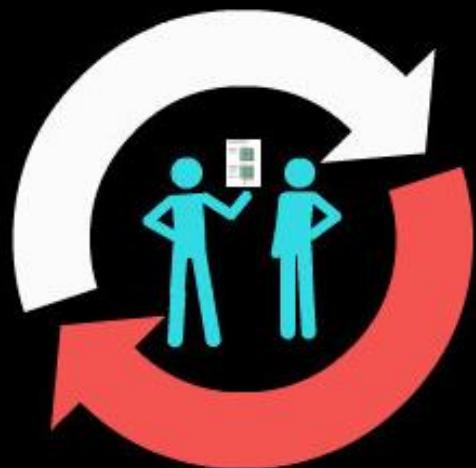
Achieve these goals = technical decisions

Statins

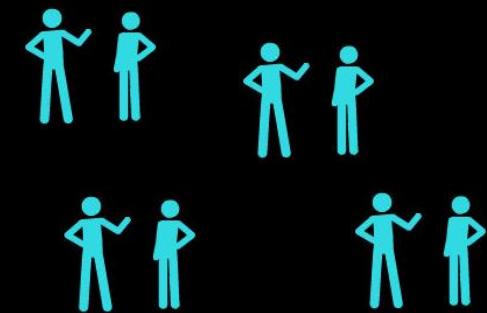
EVIDENCE SYNTHESIS



PROTOTYPING



OBSERVATION ENCOUNTERS



DM2 patients seen in primary care

R

Allocation concealment / blinding to hypothesis / ITT

Usual care

Decision aid

Knowledge
Conversation
Decision
Satisfaction
Choice

3 mo
Adherence



Knowledge
Conversation
Decision
Satisfaction
Choice

3 mo
Adherence



Compared to usual care,
patients using the decision aid were
22 times more likely
to have an accurate sense of their baseline risk and
risk reduction with statins.

70% fewer statin Rx in low risk (<10%) group

3-fold increase in self-reported adherence

Weymiller et al. Arch Intern Med 2007

2015 ACC/AHA Focused Update of Secondary Prevention Performance Measures

Requires SDM (e.g., using Statin Choice decision aid) to improve:

% at-risk patients 18-75 with who were offered moderate- to high-intensity statins.

Drozda JP et al. JACC
2015

Million Hearts Campaign

Multiagency project, led by CMS

Randomized trial of 720 practices

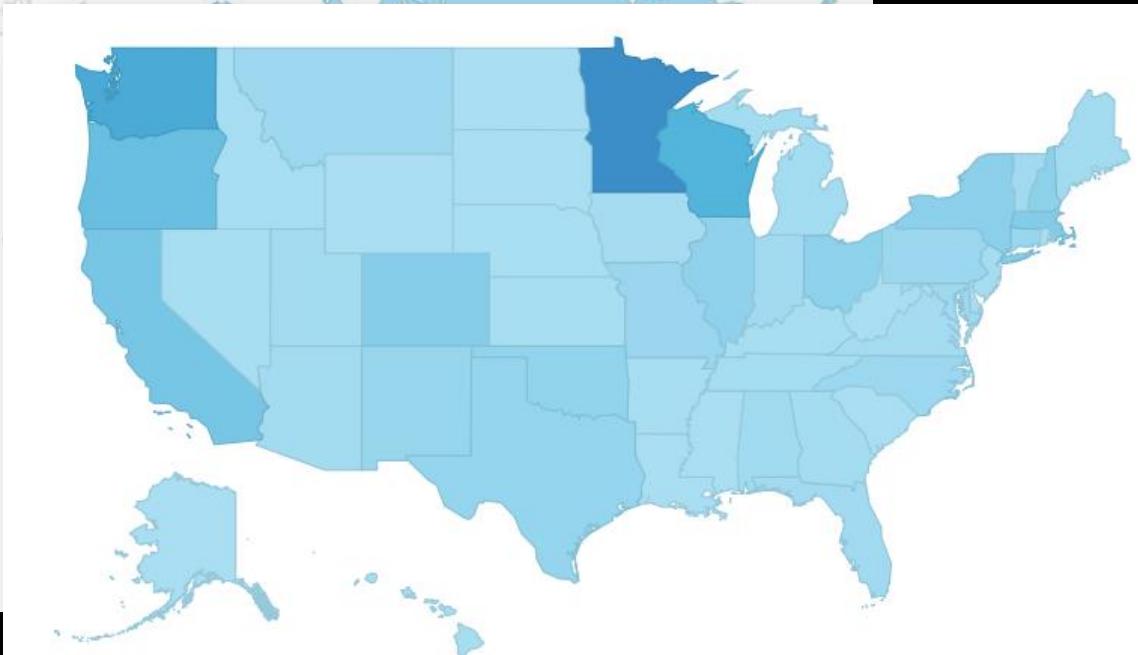
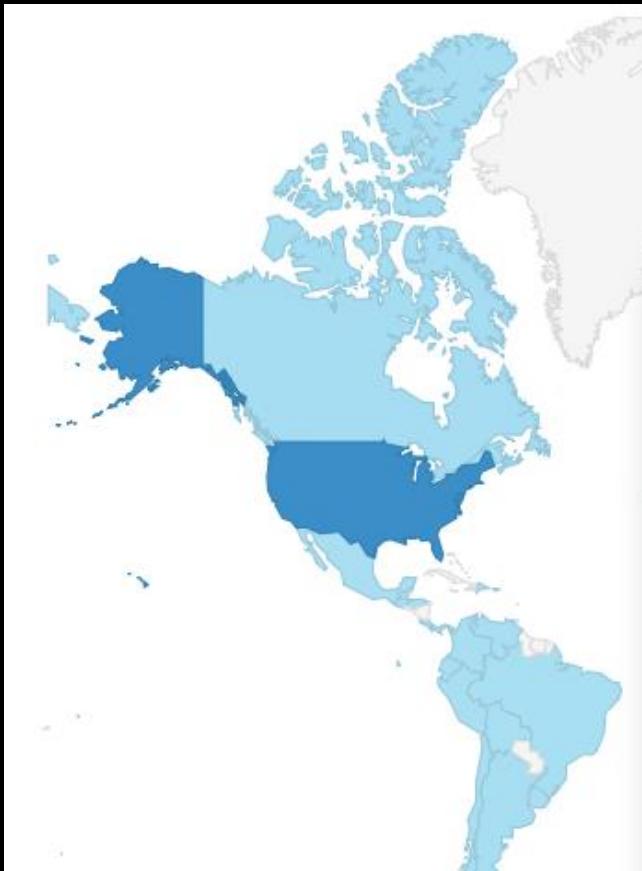
Payment based on magnitude of reduction in practice-wide risk (calculated including Medicare patients with estimated 10y risk >30%)

Must be accomplished using shared decision making (e.g., using an electronic decision aid) and statins.

<http://innovation.cms.gov/initiatives/million-hearts-CVDRRM>

Adoption

12,000/month



Risk communication tools

Statin Choice (primary care)

Chest pain Choice (emergency)

Osteoporosis Choice (primary care)

PCI Choice (cardiology)

AMI Choice (hospital)

Issue cards

DM2 Med Choice

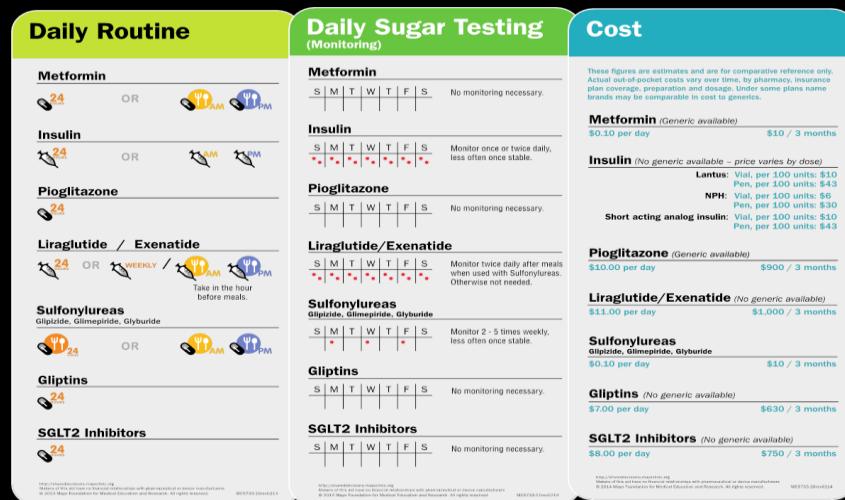
Depression Choice

Issue/Risk

Atrial fibrillation

Thyroid Cancer

Barrett's esophagus



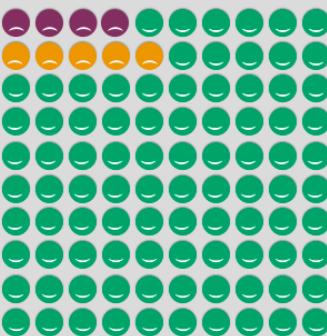


Over the next year

4 people will have a fatal or disabling stroke

Current Risk of Stroke without Anticoagulation

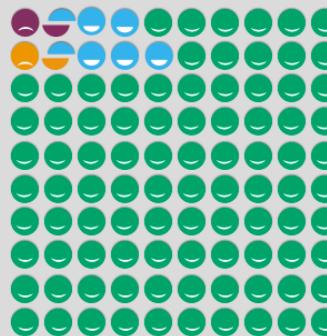
In 100 people like you who **are not** taking an anticoagulant



91 people will have no stroke

Future Risk of Stroke with Anticoagulation

In 100 people like you who **are** taking an anticoagulant



CHA₂DS₂-VASC 4
HAS-BLED 1

Over the next year
fewer than

2 people will have a fatal or disabling stroke

fewer than

2 people will have a non-disabling stroke

97 people will have no stroke

6 people will avoid a stroke by taking anticoagulation



CHA₂DS₂-VASC 4
HAS-BLED 1

Work, Home & Fun Activities

Anticoagulation Routine

Risk of Serious Bleeding

Cost

Diet & Medication Interactions

Cost

The cost to you of each medication will depend on your insurance plan.

The figures below provide a comparison of average costs without insurance.

Warfarin

\$545 per year

Costs include the medication and blood tests.

Direct Anticoagulants

\$2,930 per year

Apixaban

Eliquis

Dabigatran

Pradaxa 110mg, 150mg

Edoxaban

Lixiana

Rivaroxaban

Xarelto

Anticoagulation Routine

Warfarin requires committing to regular blood tests.

There is no testing required with a Direct Anticoagulant.

Warfarin

Once daily Regular blood tests

?

Am I available to do the regular blood tests that Warfarin requires?
Work / travel / family demands?
Transportation?

Direct Anticoagulants

Once daily AM

Once daily AM

Once daily PM

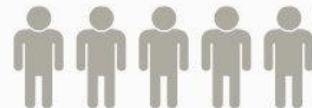
Dabigatran Pradaxa 110mg, 150mg

Edoxaban Lixiana

Rivaroxaban Xarelto

MAYO

Accurate Knowledge



50
%



Estimated risk

correctly
12
%

Received information

Right amount



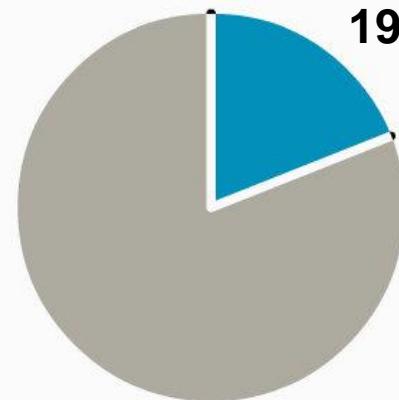
Very clear



Very helpful



Engagement of patients



42
%
Want to receive information in the same manner

Accurate Knowledge

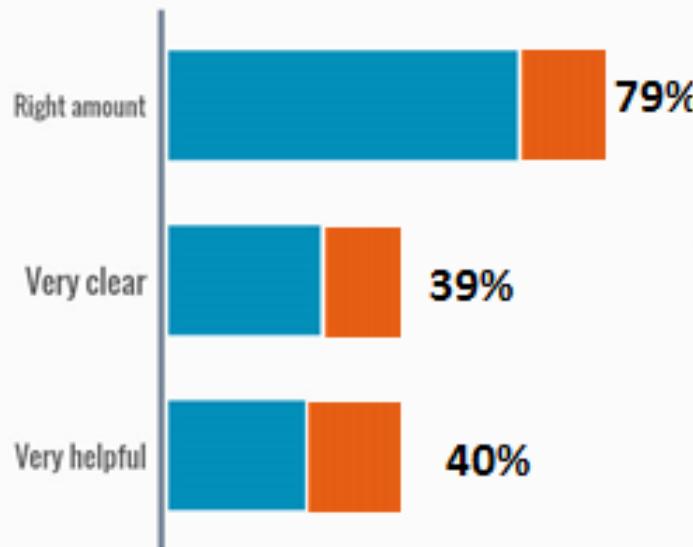


60%

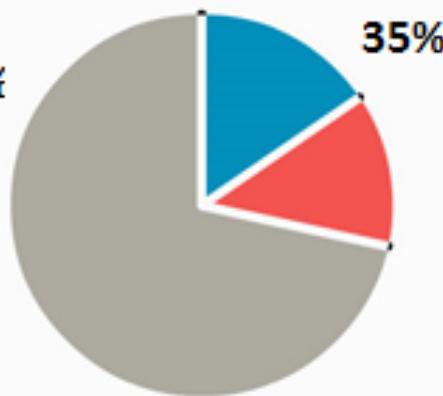


50%

Received information



Engagement of patients



Want to receive information in the same manner

Summary of Mayo experience

Age: 40-92 (avg 65)

Primary care, ED, hospital, specialty care

Adds ~3 minutes to consultation

58% fidelity without training

Effects on SDM are similar in vulnerable populations

Variable effect on clinical outcomes, cost

Wyatt et al. Implement Sci 2014; 9: 26
Coylewright et al CCQO 2014, 7: 360-7

74-90% clinicians want to use tools again



A fourth of clinicians report ever discussing costs with patients

Cost			
These figures are estimates and are for comparative reference only. Actual out-of-pocket costs vary over time, by pharmacy, insurance plan coverage, preparation and dosage. Under some plans name brands may be comparable in cost to generics.			
Metformin (Generic available)			
\$0.10 per day			\$9 / 3 months
Insulin (No generic available – price varies by dose)			
Lantus:	Vial, per 100 units:	\$26	
	Pen, per 100 units:	\$26	
NPH:	Vial, per 100 units:	\$2.50	
	Pen, per 100 units:	\$28	
Short acting	Vial, per 100 units:	\$25	
analog insulin:	Pen, per 100 units:	\$30	
Pioglitazone (Generic available)			
\$0.50 per day			\$42 / 3 months
Liraglutide/Exenatide (No generic available)			
\$20.00 per day			\$1,800 / 3 months

Discussion of cost 3-fold

Cost	
These figures are estimates and are for comparative reference only. Actual out-of-pocket costs vary over time, by pharmacy, insurance plan coverage, preparation and dosage.	
Less \longleftrightarrow More	
SSRIs	<p>Citalopram (Celexa®) –  \$4 / month – Super-stores drug program</p> <p>Escitalopram (Lexapro®) –  \$113 / month – No generic available</p> <p>Fluoxetine (Prozac®) –  \$4 / month – Super-stores drug program</p> <p>Fluvoxamine (Luvox®) –  \$80 / month</p> <p>Paroxetine (Paxil®) –  \$4 / month – Super-stores drug program</p> <p>Sertraline (Zoloft®) –  \$29 / month</p>
SNRIs	<p>Desvenlafaxine (Pristiq®) –  \$147 / month – No generic available</p> <p>Duloxetine –  \$154 / month – No generic available</p>

Discussion of cost 4-fold

1 in 5 patients cost was the most important issue in choosing a medication

Implementing DAs

EMR Link
Web

Mayo Clinic

Current Risk
Select Risk Calculator
ACC/AHA ASCVD Framingham Reynolds

Do you have a history of events such as prior heart attack, or stroke, acute coronary syndromes, history of angioplasty or stents, etc? No

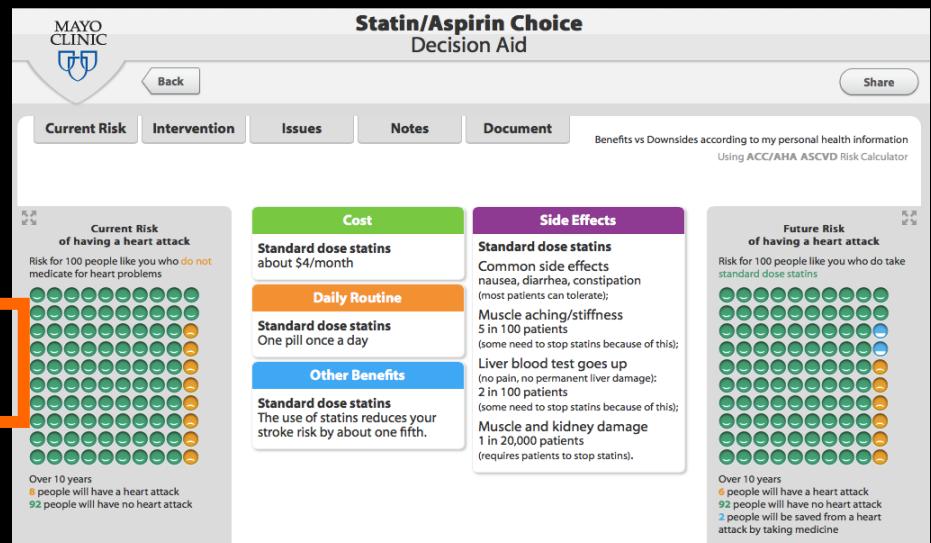
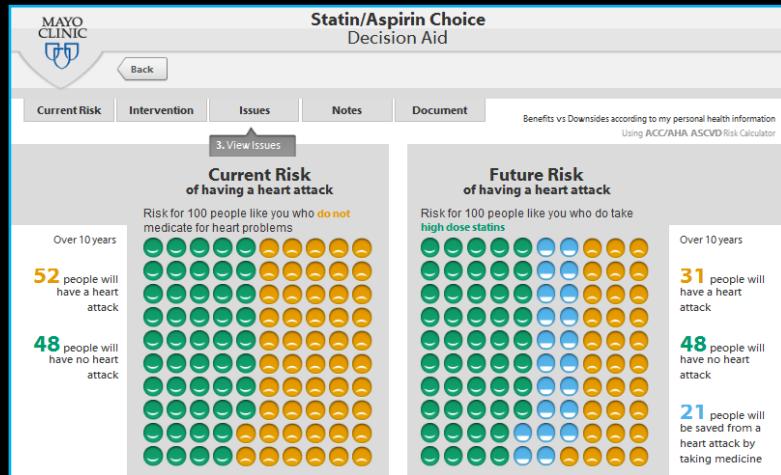
These figures are used to calculate my risk of having a heart attack in the next 10 years:

Age: 70
Gender: M F
Population Group: White or other
Smoker: Yes No
Diabetes: Yes No
Treated SBP: Yes No

Conv. Unit SI Unit

Systolic Blood Pressure: 140 mmHg
HDL Cholesterol: 40 mg/dL
Total Cholesterol: 200 mg/dL

Select Current Intervention
 Statins (No) Std Dose High Dose
 Aspirin (No) Low Dose



EMR Documentation

- I have used a decision aid to share decision making with the patient about interventions to reduce the risk of coronary events. We estimated the patient's 10-year of atherosclerotic events at 8% and discussed how this risk could be reduced with the use of statins to 6%. After considering the patient's unique circumstances and the pros and cons of the alternatives, we have decided to...

For clinicians

- Evidence based information
- Risk calculators
- Graphic representation of benefit and harms
- Help prioritize a situation (chronic pts): which is the most emerging problem?
- Facilitate identification of patient's values and preferences
- Get to know your patients better



Music instrument won't
play/create music itself just as a
decision aid by its own won't
create a bond or care for
patients.

Wonderful music without any instruments.



