

Shared Decision-Making

A workshop to help you make it work

Matt Graham

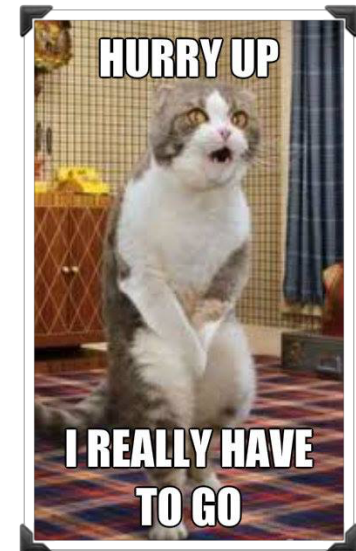
Cam Ross

Bevan Voth

James McCormack



Agenda



8:30-8:55am	Registration
8:55-9:00am	Intro/objectives/CME process - Bevan
9:00-9:30am	Story and E-P-E model - Matt
9:30-10:30am	Getting the evidence - James
10:30-10:40am	Break
10:40-12:00pm	Cases and practice with tools - Cam and James
THE END	

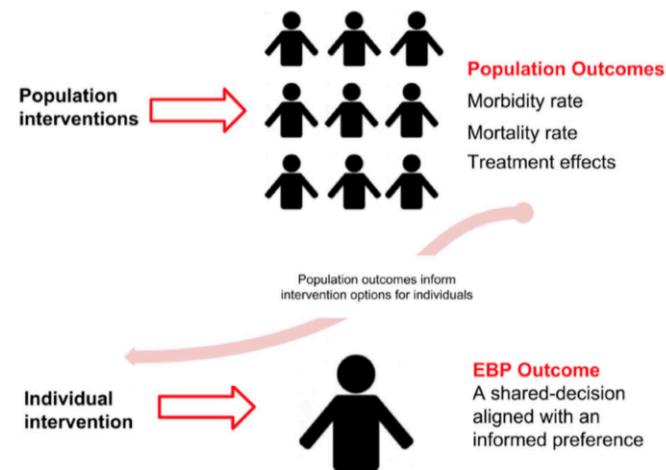


OPEN ACCESS

Shared decision is the only outcome that matters when it comes to evaluating evidence-based practice

James McCormack,¹ Glyn Elwyn²

“in the vast majority of circumstances, the only outcome of relevance for EBP is to measure whether a shared decision was made”



doi:10.1136/ bmjebm-2018-110922

Elicit-Provide-Elicit

Motivational Interviewing

A formula to address ambivalence and resistance.

Guides engagement with shared decision-making.

Elicit-Provide-Elicit

Elicit

Ask permission and/or set the agenda

Explore the patient's prior knowledge

Determine what info is needed or wanted

Provide

Give the information or advice

Elicit

Check back to ensure understanding

Elicit

Ask permission:

“Can we book an appointment just to talk about...?”

“Can I tell you something about...?”

“Can I suggest something that might work...?”

Basically everyone is going to say yes... so why do it?

Acknowledges their choice or their investment.

Buy in...

Elicit

Set the agenda:

“Is there anything else you want to talk about this topic?”

Whole appointment to one issue.

Indicate your preference if multiple topics.

Setting the agenda often implies permission.

Elicit

Gauge knowledge, interest, and needs:

“What do you already know about...?”

“What would you like to know about...?”

“May I share some information with you about...?”

Saves you repeating info they already know.

It's time efficient but also important for rapport.

Note that interest and needs are sometimes obvious.

Provide

Focus on the patient's individual wants or needs.

Note that a patient's current knowledge, even if incorrect or incomplete, is often sufficient.

Give a small chunk of information, then elicit again.

Elicit

“Does that make sense?” or “What do you think of that?”

Cycle through provide-elicited-provide-elicited-provide-elicited...

Could also be a reflection: “You look a bit confused” or
“That’s not what you were expecting me to say.”

Elicit - Provide - Elicit

Elicit

Permission

Existing Knowledge – Needed Knowledge

Interest

Provide

Information (one piece at a time)

Affirmation

Support for autonomy

Elicit

Reactions

Additional questions

Next Steps

Communicating Risk and Benefit

Impediments:

- Fear

- Wrong amount, wrong type or inaccurate information

- Innumeracy

Solutions:

- Reduce the fear exposure

- Clarify and summarize information

- Use accurate information

- Demonstrate risk with everyday examples and/or pictures

Decision Aids

Conclusions.

There is high-quality evidence that decision aids compared to usual care improve people's knowledge regarding options, and reduce their decisional conflict related to feeling uninformed and unclear about their personal values.

There is moderate-quality evidence that decision aids compared to usual care stimulate people to take a more active role in decision making, and improve accurate risk perceptions when probabilities are included in decision aids, compared to not being included.

There is low-quality evidence that decision aids improve congruence between the chosen option and the patient's values

Decision Aids - UPDATE

New for this updated review

“further evidence indicating more informed, values-based choices, and improved patient-practitioner communication”

“there is a variable effect of decision aids on length of consultation”

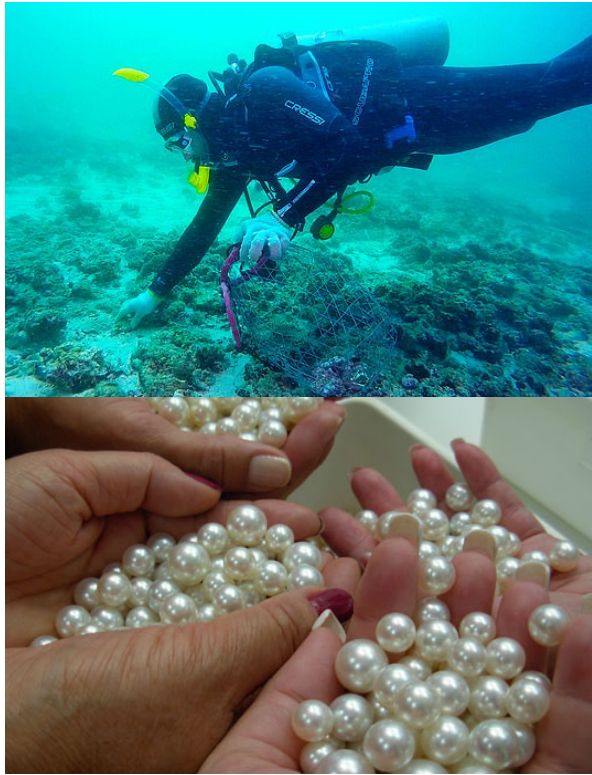
“decision aids have a variable effect on choices”

“they reduce the number of people choosing discretionary surgery and have no apparent adverse effects on health outcomes or satisfaction”

“the effects on adherence with the chosen option, cost-effectiveness, use with lower literacy populations, and level of detail needed in decision aids need further evaluation”

“little is known about the degree of detail that decision aids need in order to have a positive effect on attributes of the choice made, or the decision-making process”

Getting the evidence to do SDM



MEDICATIONS

They can only really do 5 things - and only 2 of these are good

Help with symptoms

Reduce risk of future health issues

Cause side effects

Cost money

Be inconvenient

Progress in evidence-based medicine: a quarter century on

Benjamin Djulbegovic, Gordon H Guyatt

“Few clinicians would ever have the skill - or time - to conduct sophisticated assessment of the evidentiary basis for their practice”

Now - “directing clinicians to processed sources of evidence, and aiding decision making by advancing the science of trustworthy clinical practice guidelines that would be available to clinicians at the point of care delivery”

Lancet 2017;390:415–23

Table 2. Ranking of RFVs to primary care as reported by clinicians and patients

RANK	CONDITION	CLINICIAN REPORTED*		CONDITION	PATIENT REPORTED*	
		RANK SCORE* (MAXIMUM SCORE WAS 20)	NO. OF ANALYSES THAT INCLUDED THE CONDITION (OUT OF 9)		RANK SCORE* (MAXIMUM SCORE WAS 20)	NO. OF ANALYSES THAT INCLUDED THE CONDITION (OUT OF 5)
1	Upper respiratory tract infection, unspecified	16.7	8	Cough	19.0	5
2	Hypertension	16.1	8	Back pain or spinal pain	16.8	5
3	Routine health maintenance	8.7	4	Abdominal, unspecified	16.6	5
4	Arthritis (not back)	8.6	6	Pharyngitis	14.4	5
5	Diabetes	8.4	5	Dermatitis	13.4	5
6	Depression or anxiety	7.7	6	Fever	12.6	5
7	Pneumonia	7.2	6	Headache	12.4	5
8	Acute otitis media	6.8	6	Leg symptoms	9.4	5
9	Back pain or spinal pain	6.7	4	Respiratory, unspecified	8.8	4
10	Dermatitis	6.4	5	Fatigue	8.4	5
11	Cough	5.6	3	Depression or anxiety	8.0	4
12	Urinary tract infection	5.4	5	Arthritis (not back)	6.8	5
13	Tuberculosis	4.4	3	Sinusitis	6.2	3
14	Dyspepsia	4.3	4	Cardiovascular	6.0	4
15	Tonsillitis	4.2	3	Acute otitis media	5.8	4
16	Parasites	4.0	2	Urinary tract infection	5.4	4
17	Asthma	4.0	4	Vertigo or dizziness	5.4	4
18	Abdominal, unspecified	4.0	5	Skin, unspecified	4.8	4

Knowing a synopsis of the best available evidence for the most common conditions is really important - and there is help

Can Fam Phy 2018;64:832-40

Key steps to communicating evidence

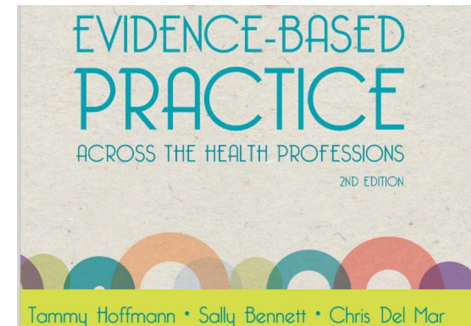
Understand the patient's (and family members') experiences and expectations.

Build partnerships.

Discuss the evidence, including a balanced discussion about uncertainties.

Present recommendations.

Check for understanding and agreement.



Risky Relative Adjectives

HOW

low is low

moderate is moderate

high is high



Evidence-based risk communication

“There is likely no single best method of communicating probabilities to patients but rather several good options with some better suited to certain risk scenarios.”

Ann Intern Med 2014;161:270-80

Recommended approaches

Need a time frame, main endpoints, ask what they know

GENERAL SUGGESTIONS - these are “relative”

use percentages (5%) or natural frequencies (5 out of 100) - BOTH?

use absolute terms

add bar graphs or icon arrays

use incremental risk format with icon arrays in the same array

- **avoid use of NNTs**

if use relative risks add baseline risks

Three “sobering” but very empowering concepts

SYMPTOMS

If a patient seems to be getting a benefit from a medication for symptoms they likely aren't

PREVENTION

If a patient is on a medication for risk reduction (BP, chol, glucose BMD) the benefit they are receiving is likely not large enough for them to make up for the cost, inconvenience and adverse effects

DOSE

If a patient is on a medication they are likely on too high a dose

It's all about figuring out

The Chance of “X”
WITH NO
TREATMENT/TEST
The Chance “X”
WITH
TREATMENT/TEST



Tools For Practice

TOOLS FOR PRACTICE

Total articles found: 233

#233 Drink Up: Increasing Fluid Intake to Prevent Recurrent UTIs

Author(s): Adrienne J Lindblad, Rodger Craig

Publication Date: April 15, 2019

Collection: Tools for Practice

Categories: General, Obstetrics-Gynecology, Urology

Clinical Question: Does increasing water intake prevent recurrent urinary tract infections (UTIs)?

Tags: water, water intake, low fluid, UTI, urinary track, infection, women, female, antibiotics, non-pregnant, premenopausal, cystitis, cranberry juice, vaginal estrogen, oral estrogens, antibiotic prophylaxis, .

 [View Article](#)



Begin Reflective Exercise

(to launch a reflective exercise, you must be logged into GoMainpro)

#232 Muscling out molluscum contagiosum: Which treatments work?

Author(s): Danielle Perry, G. Michael Allan, Nicolas Dugré

Publication Date: April 01, 2019

Collection: Tools for Practice

Categories: Dermatology, General, Infectious Disease

Clinical Question: How effective are commonly used therapies for molluscum contagiosum?

Tags: molluscum contagiosum, lesion, potassium hydroxide, cryotherapy, curettage, cantharidin, imiquimod, virus, immune system, infection, pediatric, immunocompetent, burn, self-limiting

 [View Article](#)



Begin Reflective Exercise

(to launch a reflective exercise, you must be logged into GoMainpro)

#231 Does an ASA a day really keep the doctor away?

Author(s): Paul Fritsch, Michael R Kolber

Publication Date: March 18, 2019

Collection: Tools for Practice

Categories: Cardiology, Gastroenterology, General, Oncology

Clinical Question: Is ASA effective for reducing cardiovascular events in patients without pre-existing cardiovascular disease?

Tags: ASA, cardiovascular, cardiovascular disease, elderly, diabetic, gastrointestinal, cancer, colon, CVD, transfusion, hemodynamic, circulatory system, primary prevention, aspirin, bleeding, bleeds

 [View Article](#)

<https://www.bmj.com/rapid-recommendations>

Dual vs single antiplatelet therapy



The BMJ Practice: [Dual antiplatelet therapy with aspirin and clopidogrel for acute high risk transient ischaemic attack and minor ischaemic stroke](#)

BMJ Research: [Clopidogrel plus aspirin versus aspirin alone for acute minor ischaemic stroke or high risk transient ischaemic attack](#)

Oxygen therapy for acutely ill medical patients



The BMJ Practice: [Oxygen therapy for acutely ill medical patients: a clinical practice guideline](#)

The Lancet research: [Mortality and morbidity in acutely ill adults treated with liberal versus conservative oxygen therapy \(IOTA\): a systematic review and meta-analysis](#)

MAGIcapp: [Expanded version of the results](#)

Prostate cancer screening



The BMJ Practice: [Prostate cancer screening with prostate-specific antigen \(PSA\) test: a clinical practice guideline](#)

The BMJ research: [Prostate cancer screening with prostate-specific antigen \(PSA\) test: a systematic review and meta-analysis.](#)

BMJ Open research: [Values and preferences of men for undergoing prostate-specific antigen screening for prostate cancer: a systematic review](#)

The BMJ editorial: [What should doctors say to men asking for a PSA test?](#)

Ballpark Risks (CVD, fractures etc)

<https://therapeuticseducation.org/tools>

The Absolute CVD Risk/Benefit Calculator

Framingham QRISK®2-2014 ACC/AHA ASCVD

Heart disease + stroke + intermediate classification Heart attack + stroke

Age: 50 years

Gender: Male

Smoker: Yes

Diabetes: Yes

Systolic Blood Pressure: 120 mmHg

Total Cholesterol: 3 mmol/L

HDL Cholesterol: 1.3 mmol/L

Family History of Early CHD: 0%

Relative Benefit: 0%

Risk Time Period: 10 years

97.6% No event

2.4% Total with an event

0.0% Number who benefit from treatment

2.4% Baseline events using baseline factors alone

0.0% Additional events "caused" by risk factors

Switch to "Basic" View

cvdcalculator.com

Stroke Risk (CHA2DS2-VASc)

Age: 65-74

TIA or stroke (at any time in the past)

Prior MI, peripheral artery disease, or aortic plaque

Female

CHA2DS2-VASc SCORE (0-9): 3

Major Bleeding Risk (HAS-BLED*)

Abnormal renal/liver function

Hypertension (SBP > 160 mmHg)

Abnormal liver function

History of major bleeding

HAS-BLED SCORE (0-9): 1

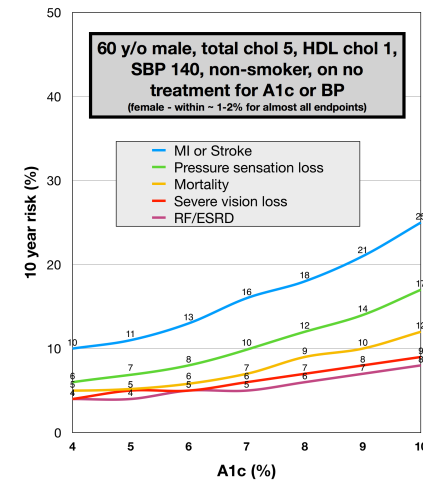
Which therapy options to HIDE?

Aspirin, Aspirin+Clopidogrel, Warfarin, Dabigatran, Rivaroxaban, Apixiban, Edoxaban

PERCENT PER YEAR

Therapy	Annual risk of stroke/thromboembolism	Annual risk of major bleeding (intracranial bleeding, bleeding requiring hospitalization, high increase of >20 g/L, or need for transfusion secondary to bleed)
NO THERAPY	4.3%	0.6%
ASPIRIN	3.4%	1.1%
WARFARIN	1.4%	2.2%
DABIGATRAN 110	1.4%	1.8%
DABIGATRAN 150	0.9%	2.2%
RIVAROXABAN	1.4%	2.2%
APIXABAN	1.1%	1.5%

sparctool.com



<https://sanjaybasu.shinyapps.io/recodesi/>

RISK FACTORS t-score	Zero			One			Two		
	-1.5	-2.5	-3.5	-1.5	-2.5	-3.5	-1.5	-2.5	-3.5
Female									
50	4	5/1	9/4	6	8/2	14/7	8	12/3	21/11
60	7	10/2	16/6	10/1	14/3	23/9	14/1	20/5	32/14
70	9/1	13/3	21/7	12/1	18/4	30/11	16/2	25/6	41/16
80	13/3	18/6	29/14	17/6	26/12	40/24	24/10	35/20	52/37
Male									
50	4	5/2	11/6	5	8/3	16/10	8/1	12/5	24/16
60	6/1	9/3	15/8	8/1	12/4	21/11	12/2	18/6	29/17
70	6/2	10/4	16/8	9/3	14/6	22/13	12/4	19/10	31/20
80	7/3	11/5	16/9	11/5	16/9	23/16	15/9	22/15	32/25

Comparing Treatment Options for Pain: The C-TOP Tool

Neuropathic Pain

Osteoarthritis Pain
Coming Soon

Back Pain
Coming Soon

Medication Options

Amitriptyline
(Elavil®)

Cannabinoids
(Nabiximols, nabilone, medical marijuana)

Duloxetine
(Cymbalta®)

Gabapentin
(Neurontin®)

High-Dose Opioids
(morphine, oxycodone)

Pregabalin
(Lyrica®)

All Treatments
(comparison)

Curious about capsaicin, botox, tramadol, carbamazepine, or venlafaxine for neuropathic pain?
[Click here to learn more.](#)

Meaningful Pain Relief from Amitriptyline

(30% reduction in pain scores)



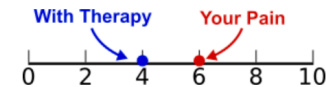
Amitriptyline Benefit	Placebo Benefit	No Benefit
25%	25%	50%

(ranges 13% to 45%)

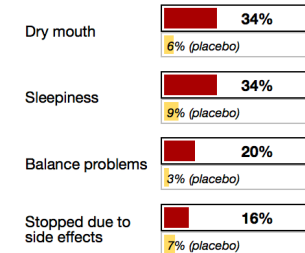
A typical placebo group response seen in pain studies is 25% but this can be adjusted in the [FAQ](#) section.

Meaningful Pain Relief

An example of a 30% reduction in pain scores is a decrease from 6 to 4 on a 10 point pain scale



Amitriptyline Harms



Other Considerations

- Typically taken at bedtime due to sleepiness effects
- Approximate cost (CAD) for 30-day supply (without dispensing fee): **\$1.50 to \$3.50**

<http://pain-calculator.com>

mystudies.org ~300 studies

 **MyStudies**beta


Load studies



Study Results at Your Fingertips

You want to use evidence in your clinical practice from the landmark studies – those studies that change practice. Your patient comes in and asks you about the latest greatest study. How can you quickly and easily get all that information? **Let MyStudies help.**

You are at a presentation and you start to wonder if the presenter is really telling you everything you need to know about a study. Did they just present relative numbers? Did they only present the benefits with no mention of harms? Did they come up with conclusions that don't really match the results? **MyStudies can help.**

 **MyStudies**beta

All

Unread

A-Z

Year

Latest

PMID, Title, Keyword, ...

294 studies

Other Tags

#add-non-ptb-values-later #AEEntered #checked #checkedAE #checkedJS #dowewanthis #Jordanentered #not-checked #not-finished #not-working acarbose ACE-inhibitor ACS acute-MI aldosterone-antagonist aleglitazar alendronate alirocumab aliskiren alogliptin alteplase amiodarone amlodipine amoxicillin angiography anti-platelets antioxidants antipsychotics aorticvalve apixaban ARBs arrhythmias asa aspirin atenolol atrial-fibrillation beta-blocker bloodpressure bococizumab budesonide CABG calcium calcium-channel-blocker Canakinumab candesartan captopril cardiovascular CETPinhibitors chelation chlorthalidone cholesterol clofibrate clopidogrel clopidogrelprasugrel COPD CRP dabigatran dabigatranib daltiparin degludec denosumab diabetes digoxin dronedarone dvt elderly Empagliflozin enalapril enoxaparin ESRD estrogen evacetrapiib evolocumab exercise ezetimibe fibrates folicacid formoterol fractionalflowreserve GlibliiA glargine glaucoma glitazones HDL heart-failure heartfailure heparin homocysteine hormone HRT hydralazine hydrochlorothiazide hypertension ibandronate indacaterol insulin intensive-BP-control intensive-glucose-lowering intensive-lifestyle-intervento ipratropium irbesartan isosorbide-dinitrate kidney-disease laser liraglutide LMWH losartan LRTI mediterranean metformin metoprolol mometasone multivitamin nephropathy neprilysin niacin nitrates

☆ **REDUCE-IT**

Cardiovascular Risk Reduction with Icosapent Ethyl for Hypertriglyceridemia.
The New England journal of medicine, 2019

☆ **CABANA**

Effect of Catheter Ablation vs Antiarrhythmic Drug Therapy on Mortality, Stroke, Bleeding, and Cardiac Arrest Among Patients With Atrial Fibrillation
JAMA, 2019

☆ **AUGUSTUS**

Antithrombotic Therapy after Acute Coronary Syndrome or PCI in Atrial Fibrillation.
The New England journal of medicine, 2019

apixaban aspirin warfarin

☆ **CREDESCENCE**

Canagliflozin and Renal Outcomes in Type 2 Diabetes and Nephropathy
New England journal of medicine, 2019

☆ **VITAL Omega-3**

Marine n-3 Fatty Acids and Prevention of Cardiovascular Disease and Cancer.
The New England journal of medicine, 2018

☆ **ODYSSEY OUTCOMES**

Alirocumab and Cardiovascular Outcomes after Acute Coronary Syndrome.
The New England journal of medicine, 2018

#checked alirocumab PCSK9

☆ **VITAL Vitamin D**

Vitamin D Supplements and Prevention of Cancer and Cardiovascular Disease.
The New England journal of medicine, 2018

☆ **ASCEND**

Effects of Aspirin for Primary Prevention in Persons with Diabetes Mellitus
The New England journal of medicine, 2018

☆ **DECLARE-TIMI 58**

Dapagliflozin and Cardiovascular Outcomes in Type 2 Diabetes.
The New England journal of medicine, 2018

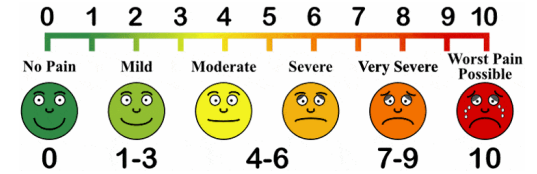
All the large RCTs evaluating the impact of glucose lowering medications on CVD Outcomes

RCTs evaluating the impact of medications on CVD outcomes in T2DM						
YEAR	NAME		MEDICATION	RESULT	OUTCOME CHANGED	ABSOLUTE DIFFERENCE/TIME
1970	UGDP	SU	tolbutamide (Orinase)	NEGATIVE	CVD mortality	↑ 8%/5 years
1971		BG	phenformin (DBI)	NEGATIVE	Mortality	↑ 6%/5-8 years
1976		SU	tolbutamide (Orinase)	NEGATIVE	Fatal MI	↑ 5%/5 years
1982		IN	insulin	NEUTRAL		
1998	UKPDS 33/34	IN,SU	insulin, chlorpropamide, glyburide/glibenclamide, glipizide	NEUTRAL		
1998		IN,SU,BG	metformin, insulin, chlorpropamide, glyburide/glibenclamide, glipizide	NEUTRAL except POSITIVE for metformin	Mortality MI	↓ 7%/11 years ↓ 6%/11 years
2003	STOP-NIDDM	OTH	acarbose (Precose)	POSITIVE	MI	↓ 1.5%/3 years
2005	PROACTIVE	GLIT	pioglitazone (Actos)	POSITIVE	MI	↓ 1.5%/3 years
2007	RECORD	GLIT	rosiglitazone (Avandia)	NEGATIVE	Heart failure	↑ 1%/4 years
2012	ORIGIN	IN	insulin	NEUTRAL		
2013	EXAMINE	DPP4	alogliptin (Nesina)	NEUTRAL		
2014	SAVOR-TIMI 53	DPP4	saxagliptin (Onglyza)	NEGATIVE	Heart failure	↑ 1%/2 years
2014	ALECARDIO	OTH	aleglitazar	NEUTRAL		
2015	ELIXA	GLP	lixisenatide (Adlyxin)	NEUTRAL		
2015	TECOS	DPP4	sitagliptin (Januvia)	NEUTRAL		
2015	EMPA-REG	GLIF	empagliflozin (Jardiance)	POSITIVE	Mortality Heart failure	↓ 2.5%/3 years ↓ 1.5%/3 years
2016	SUSTAIN 6	GLP	semaglutide (Ozempic)	POSITIVE	Combined outcome	↓ 2%/2 years
2016	LEADER	GLP	liraglutide (Victoza)	POSITIVE	Mortality Combined outcome	↓ 1%/4 years ↓ 2.5%/4 years
2017	CANVAS	GLIF	canagliflozin (Invokana)	POSITIVE	Combined outcome Heart failure Amputations	↓ 2%/3.5 years ↓ 1%/3.5 years ↑ 1%/3.5 years
2017	EXSCEL	GLP	exenatide (Byetta)	NEUTRAL		
2017	ACE	OTH	acarbose (Procoese)	NEUTRAL		
2017	Omarigliptin	DPP4	omarigliptin	NEUTRAL		
2018	HARMONY	GLP	albiglutide (Tanzeum)	POSITIVE	Combined outcome	↓ 2%/2 years
2018	CARMELINA	DPP4	linagliptin (Tradjenta)	NEUTRAL		
2018	DECLARE-TIMI 58	GLIF	dapagliflozin (Farxiga)	POSITIVE	Combined outcome (primarily heart failure)	↓ 1%/4 years
2019	REWIND	GLP	dulaglutide (Trulicity)	POSITIVE	Combined outcome Renal outcomes	↓ 1.5%/5.4 years ↓ 2.5%/5.4 years
2019	PIONEER 6	GLP (oral)	semaglutide (Ozempic)	POSITIVE	CVD mortality Mortality	↓ 1%/1.5 years ↓ 1.5%/1.5 years
2019	CREDENCE		canagliflozin (Invokana)	POSITIVE	Combined CVD outcome Combined renal outcome outcomes	↓ 2.5%/2.6 years ↓ 3%/2.6 years



Symptom
Pearls

Symptoms



Scales - VAS, QOL, SGRQ - then what is the MICD

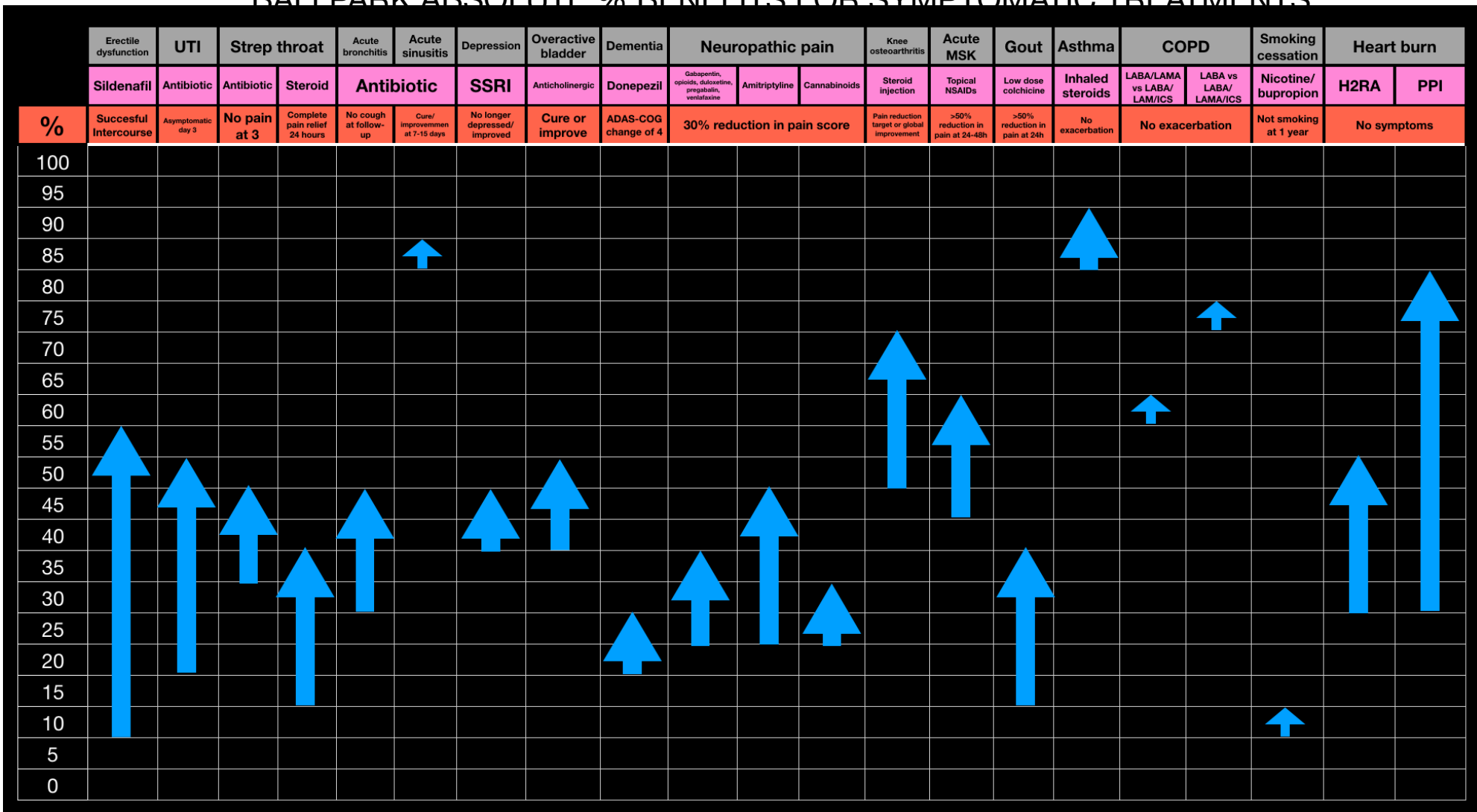
% of people who benefit in the treatment arm - that will be what you see in practice over placebo

% of people who benefit in the placebo arm - subtract that from the treatment to see how many actually benefit from the medication

Head-to-head studies are relatively uncommon

6-8 weeks	No longer depressed
Medication	50%
Placebo	40%
Medication benefit	$50 - 40 = 10\%$
If person responds, the chance it is the medication	$10 / 50 = 20\%$

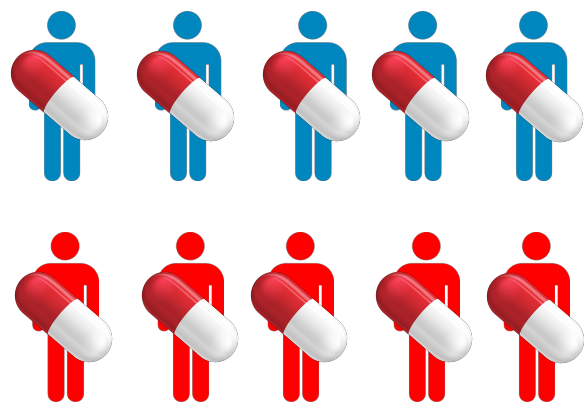
BALL PARK ABSOLUTE % BENEFITS FOR SYMPTOMATIC TREATMENTS





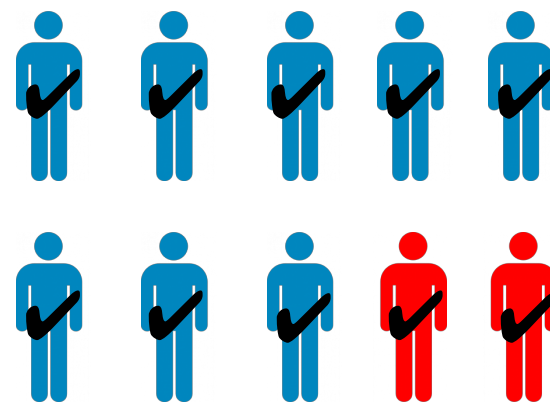
Prevention Pearls

**At most 30% of people will benefit from CVD reduction
but you have to treat all 100%**



60%

OFF



50% of males with
2 or more risk factors
will develop heart disease
over a lifetime

Math 101 - actually grade 5

REMEMBER - X% of Y - “OF” means multiply

WHAT IS THE ABSOLUTE BENEFIT %?

	Relative benefit (%)				
BASELINE RISK (%)	10	15	20	25	30
10					
15					
20					
30					

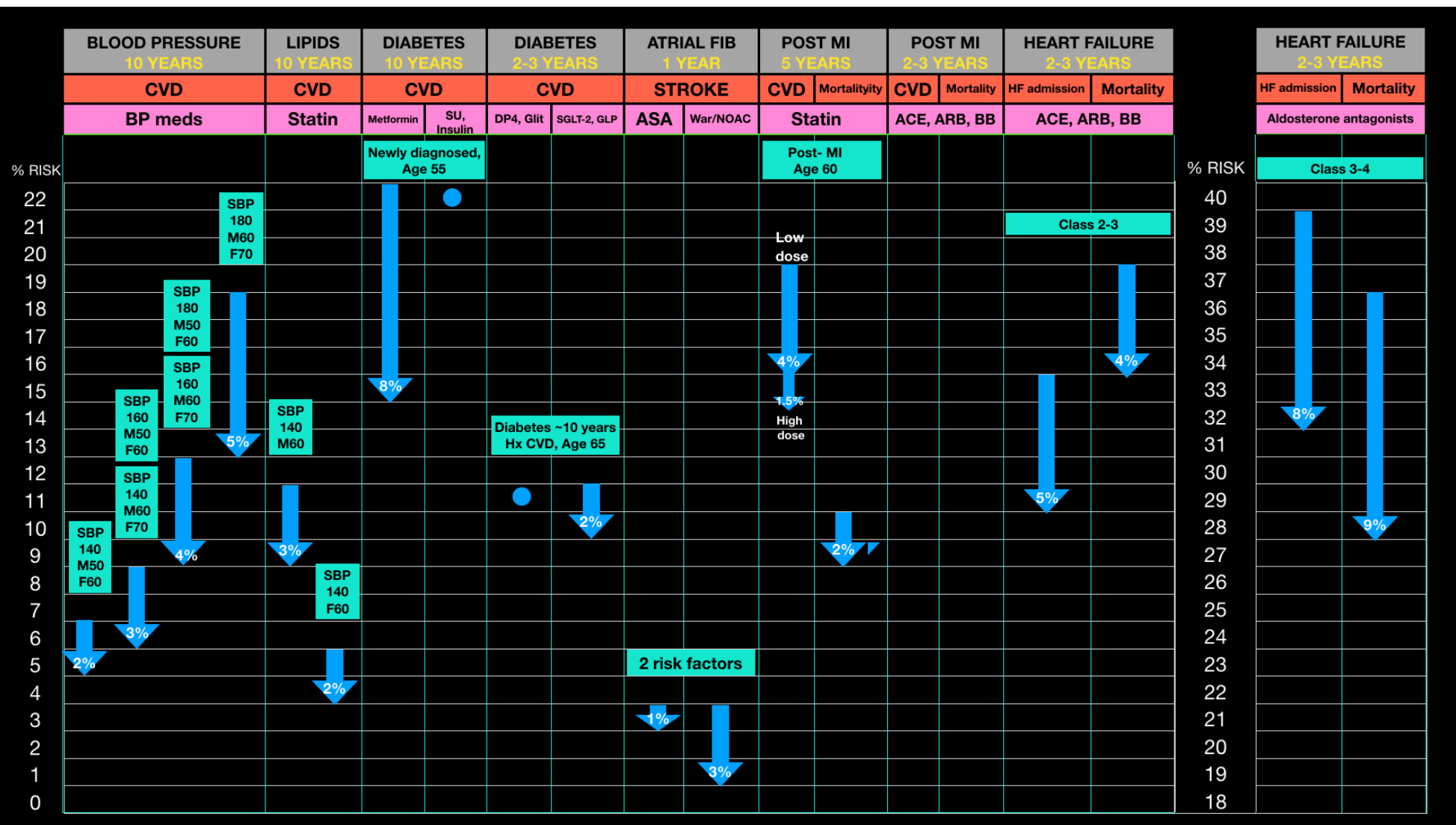
WHAT IS THE NNT?

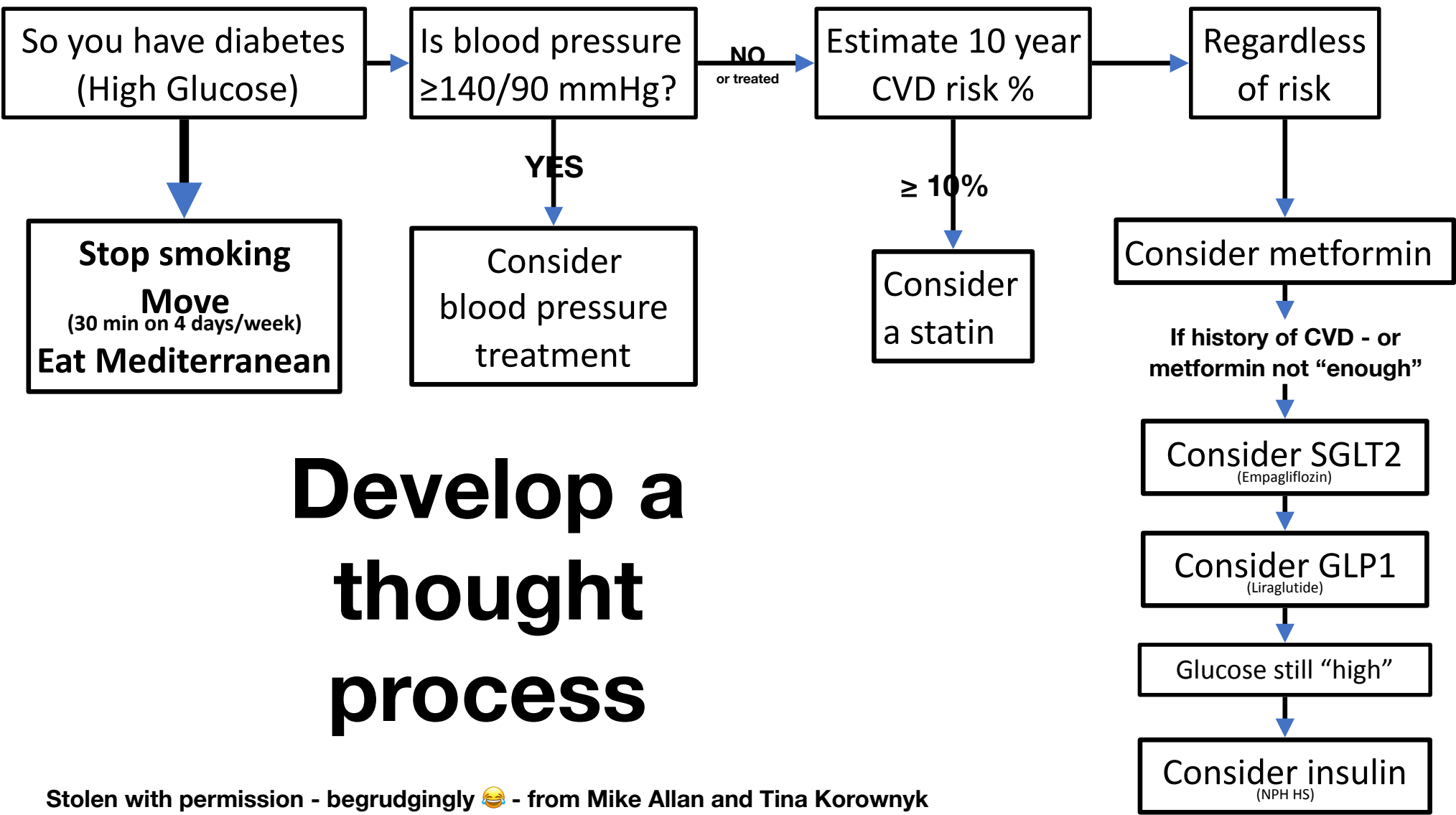
[illegible]

BALLPARK RELATIVE % BENEFITS FOR PREVENTATIVE TREATMENTS

	Lifestyle	Cholesterol	Blood pressure	Glucose	A fib	Heart failure	Osteoporosis	Flu	Zoster	HPV
RRR%	Cardiovascular events				Stroke	Mortality	Fractures	Infection		
100	Stopping smoking (obviously no RCTs)									
95									Zoster Vaccine	HPV Vaccine
90										
85										
80										
75								Flu vaccine		
70										
65					Warfarin/NOACS					
60										
55										
50			Blood pressure diabetes							
45										
40										
35		Statins		Metformin?						
30	Mediterranean		Blood pressure				Bisphos, monoclonal			
25	Physical Activity				Aspirin	ACEI, BB, Aldo antag				
20										
15		PCSK9 Monoclonal antibodies		SGLT2, GLP						
10	Aspirin						Calcium Vitamin D			
5		Ezetimibe								
0		Fibrate, niacin		DPP4, SU, insulin, glitazone						

BALLPARK ABSOLUTE % BENEFITS FOR PREVENTATIVE TREATMENTS





**Develop a
thought
process**

Stolen with permission - begrudgingly 😂 - from Mike Allan and Tina Korownyk

A Reasonable Side Effect List

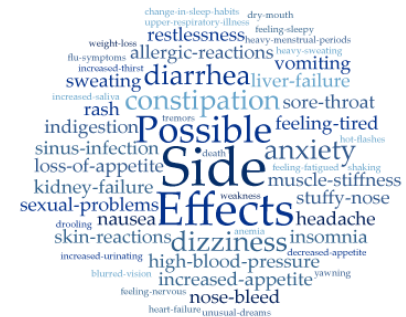
An unsolvable problem?



They are not captured well/completely/understandably in studies - but likely the best we have

Rarely can we figure out rare side effects

Many monographs, books, studies, websites just list a variety of symptoms, often with no numbers, no context, no idea of the duration, severity, frequency, statistical significance?



ORIGINAL ARTICLE

Marine n-3 Fatty Acids and Prevention of Cardiovascular Disease and Cancer

This is a !@#\$\$%
5.3 year study

Table S7. Hazard Ratios (HR) and 95% Confidence Intervals (CI) for Safety and Adverse Events by Randomized Assignment to Omega-3 Fatty Acids (n-3) compared to Placebo

	No. of Events				
Outcome	n-3 (N = 12,933)	Placebo (N = 12,938)	HR	95% CI	P-value
Monitored safety conditions					
Gastrointestinal bleeding	370	374	0.99	0.86-1.14	0.89
Blood in urine	919	874	1.06	0.96-1.16	0.25
Easy bruising	3443	3399	1.02	0.97-1.07	0.48
Frequent nosebleeds	465	491	0.95	0.83-1.07	0.40
Kidney failure or dialysis	85	88	0.97	0.72-1.30	0.82
Other symptoms and side effects					
Stomach upset or pain	4887	4843	1.01	0.97-1.05	0.72
Nausea	3558	3550	1.00	0.96-1.05	0.94
Constipation	5184	5111	1.01	0.97-1.05	0.51
Diarrhea	5599	5580	1.00	0.97-1.04	0.77
Skin rash	3331	3367	0.99	0.94-1.03	0.58
Bad taste in mouth	2240	2245	1.00	0.95-1.06	0.92
Increased burping	2217	2158	1.03	0.97-1.10	0.29

How are these not 100%

Costs



Generic Name	Brand name	Strength	Dosing	90 Day Cost (unless otherwise noted)	Coverage
HYPOGLYCEMIC AGENTS					
Biguanides					
Metformin	Glucophage	500mg	2 BID	\$30	BC / IA covered
Metformin SR	Glumetza SR	1000mg	2 QD	\$255	NC by BC or IA
Sulfonylureas					
Glyburide	Diabeta	5mg	BID	\$25	BC / IA covered
Gliclazide, Gliclazide MR	Diamicon/MR	80mg/30mg MR	BID, 2 QD MR	\$30	BC / IA covered
Meglitinides					
Repaglinide	Gluconorm	1mg	TID	\$35	BC / IA covered
Dipeptidylpeptidase-4 Inhibitors (DPP-4)					
Linagliptin	Trajenta	5mg	QD	\$265	SA req'd for BC and IA
Saxagliptin	Onglyza	5mg	QD	\$295	SA req'd for BC and IA
Sitagliptin	Januvia	100mg	QD	\$310	SA req'd for BC and IA
Sodium Glucose Cotransporter 2 (SGLT2) Inhibitors					
Empagliflozin	Jardiance	10mg	QD	\$270	SA req'd for BC and IA
Canagliflozin	Invokana	100mg	QD	\$280	SA req'd for BC and IA
Glucagon-like Peptide 1 Agonist (GLP-1)					
Liraglutide	Victoza	1.2mg SQ	QD	\$575	NC by BC or IA
Liraglutide	Victoza	1.8mg SQ	QD	\$855	NC by BC or IA
Insulin (Prices may vary between pharmacies, relative differences likely consistent. Max allowable price for 1500 Units of penfill insulin)					
Regular insulin	Novolin Toronto/ Humulin R	100U/mL	As dir	\$60	BC / IA covered
Long-acting insulin	Novolin NPH/Humulin N	100U/mL	As dir	\$65	BC / IA covered
Rapid-acting insulin	Novorapid/Humalog	100U/mL	As dir	\$75	BC / IA covered
Basal insulin (Glargine)	Basaglar	100U/mL	As dir	\$90	BC covered, NC by IA
Basal insulin (Glargine)	Toujeo	300U/mL	As dir	\$110	NC by BC or IA
Basal insulin (Glargine)	Lantus	100U/mL	As dir	\$115	BC / IA covered
Basal insulin (Detemir)	Levemir	100U/mL	As dir	\$130	BC / IA covered
OBESITY					
Orlistat	Xenical	120mg	TID	\$505	NC by BC or IA
Liraglutide	Saxenda	3mg SQ	QD	\$1,165	NC by BC or IA
LEGEND: BC = Alberta Blue Cross, IA = Indian Affairs, NC = Not covered, SA = special authorization, SR = sustained release, OTC = over the counter, SQ = subcutaneous injection, SS=Social Services					

<https://www.acfp.ca/wp-content/uploads/2018/03/ACFPricingDoc2018.pdf>

RESEARCH ARTICLE

Open Access

Can shared decision-making reduce medical malpractice litigation? A systematic review

Marie-Anne Durand^{1,2*}, Benjamin Moulton^{3,4,5}, Elizabeth Cockle², Mala Mann⁶ and Glyn Elwyn^{1,7}

“There is insufficient evidence to determine whether or not shared decision-making and the use of decision support interventions can reduce medical malpractice litigation. Further investigation is required.”

Two or more reasonable treatment or screening options

Shared decision-making model

Defensive medicine model

ADVERSE OUTCOME OCCURS

Choice made does **NOT**
MEET the “standard of care”

Choice made **MEETS** the
“standard of care”

Choice made **MEETS**
the “standard of care”

Choice made does **NOT**
MEET the “standard of care”

Discussion
NOT
documented

Discussion
documented
in notes

Decision
aid used

Discussion
NOT
documented

Discussion
documented
in notes

Decision
aid used

**Plaintiffs lawyer argues risks and
benefits should have been discussed**

Low to
medium
risk

No medico
legal
protection

No medico
legal
protection

Medium
risk

Low
risk

Low to
medium
risk

Low
risk

Low
risk

Defensive model (guidelines/standard of care)

NEVER get to a low litigation risk

Low to
medium
risk

Reducing litigation risk 2 THINGS to DO

Shared decision-making model

1) Use a decision aid

2) Document decision

Low
risk

Case 1

You are a 48 year old woman. You had a meet and greet a few weeks ago and have been recalled to discuss the bloodwork below.

You have no significant medical history and take no medications. You have some old records showing an A1C of 7.5 in 2012 followed by an A1C of 6.0 in 2013.

Your blood pressure today is 130/87

You are 167 cm tall and weighs about 85 kg. Your BMI is 30.

Your A1 c today is 8.9%, total chol 6.39, LDL 4.05. HDL 1.53 - everything else WNL.

Case 2

You are a 58 year old lady. You are coming into review your BMD report.

You first presented to your clinic last month after her mother passed away. Your mother had a hip fracture about 5 years ago and died in a nursing home a few months ago.

You have Celiac disease which is well controlled. You have no other medical history and take no medications. You don't drink and don't smoke. You've never had a fragility fracture.

Your bloodwork so far has been entirely normal.

You are 167 cm tall and weighs 60 kg. Your BMI is 21.

No risk factors.

Region	BMD (g/cm ²)	T- Score	Z- Score	Classification
AP Spine (L2, L3, L4)	1.067	-0.4	0.2	Normal
Femoral Neck (Left)	0.730	-1.5	-0.5	Osteopenia
Total Hip (Left)	0.878	-1.0	-0.6	Normal

Case 3

You are an 80 year old man with longstanding atrial fibrillation. You had a recent ER visit for epistaxis that required packing - the event really bothered you s the ER doctor said it was likely caused by your medications.

You have hypertension, but are otherwise healthy man. You have never had a heart attack, stroke, or diabetes. You are a lifelong non-smoker and non-drinker. You take metoprolol, hydrochlorothiazide, and warfarin.

Your blood pressure today is 140/85.

You are 175 cm tall and weighs 80 kg. His BMI is 26.

Your most recent INR levels have been running occasionally high.

No other medical problems.

You've been living alone for about 2 years now. Your spouse died of a stroke 3 years ago .

Case 4

You are a 32 year old resident presenting to the ER after you accidentally stuck yourself with a 25-gauge needle while attempting to do an I+D of a thigh abscess on a heavily tattooed homeless 44-year-old homeless man 30 min ago in the ER. You accidentally pricked your index finger through a gloved hand. Your finger did not bleed. You wonder if you should receive PEP.

Case 5

You are a 46-year-old female attending your GPs office to discuss screening mammography. Your best friend who is your same age was just diagnosed with breast cancer and she told you to go get a screening mammogram. You have never had a screening mammogram and you have no symptoms such as breast pain or a lump. You have no health problems and are on no medications at the present. You have a maternal aunt that was diagnosed with breast cancer when she was 52.

Case 6

You are a 23-year-old anxious male. You recently have been experiencing some significant stress in your life. You have a constellation of symptoms over the last 6 months. Symptoms include headaches, neck stiffness and pain, some pins and needles in your fingers on the right sides, abdominal pain and cramping as well as intermittent diarrhea. You have been to your GP on numerous occasions. You have been told that on numerous occasions your neurological exam has been normal and your blood work has been normal. You are extremely worried and haven't been able to sleep. You tell your GP you think you should get a CT of your brain, neck and abdomen but are worried about your risk for cancer due to radiation exposure from these scans.

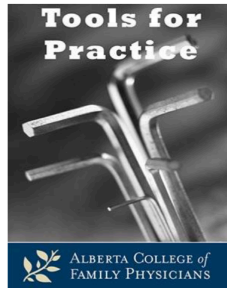
Case 7

You are a 57-year-old male who was recently admitted to hospital with a pneumonia/COPD exacerbation. Your F-call Dr. was kind enough to take you on as a new patient. You have smoked approximately 1 PPD for the last 39 years. Following D/C you had outpatient PFTs preformed. Your FEV1 was 59% predicted post-bronchodilator and your FEV1/FVC ratio was 0.62. You don't think your smoking has seriously impacted your life yet but your wife thinks otherwise. You are having your first FU with your GP since your hospitalization.

Case 8

Should I get the shingles vaccine?

I would like to get the shingles vaccine



Zoster Vaccine – is newer better than the old new?

Nov 19, 2018

Clinical Question: Is there a difference in efficacy between the new, recombinant (Shingrix®) and the live (Zostavax®) zoster vaccines?

ALL NUMBERS ADJUSTED TO 3 YEARS		Herpes zoster (shingles)		Postherpetic neuralgia		Relative benefit
		Adults >50 NNT	Adults >70 NNT	All ages NNT	>70 NNT	
Zostavax live vaccine	1 dose \$180	70	60	360	260	~50-70%
NEW Shingrix recombinant vaccine	2 doses \$250	40	40	422	335	~90-95%

BUT NO HEAD TO HEAD STUDIES