World of Optimal Therapy

"Choice is a gift from the patient to the doctor, not the other way around"

BMJ 2000;320:874

Loss Of The Individual

"This kind of utilitarian medicine that treats every individual as identical can easily erode the stature and autonomy of patients"

What this involves

Listening and not interrupting

Eliciting facts and experiences without selective bias

The sharing of knowledge

Ultimately a joint process of decision-making

"a physician should order a test only if he or she plans to change therapy as a result"

Susan Ott, MD
Professor
Department of Medicine
University of Washington

Quality of life comparisons

	QOL utilities
Mild stroke	0.7
Angina	0.64
Diabetic neuropathy	0.66

Comprehensive diabetes care	0.64

Diabetes Care 2007;30:2478-83

Knowing the evidence = Empowerment

Memorise how to do things - difficult and doesn't require you to think

Have an awareness of the evidence - much easier AND requires you to think

Know what isn't known

Patient choice - not wrong or right thing

Approach to prevention is very different than it is to symptom control

Knowing the evidence leads to a far more satisfying practice

Top 10 reasons for MD visits

RISK REDUCTION
Cholesterol problems
High blood pressure
Diabetes

SKIN DISORDERS
Cysts, acne and dermatitis

PAIN CONTROL
Joint disorders, including osteoarthritis
Back problems
Headaches and migraines

PSYCH/NEURO
Anxiety, bipolar disorder and depression
Chronic neurologic disorders

INFECTIOUS DISEASES
Upper respiratory conditions

Describing Benefits

The chance of "X"

WITH NO TREATMENT

The chance of "X"

WITH TREATMENT

Numbers

	Major coronary events (%)	
	Primary	Secondary
Placebo	5	15
Statin	4	11
RRR	20	25
ARR	1	4
NNT	100	25

Baseline risk
RRR, ARR, NNT
Difference between groups

Penicillin for sore throat

NNT for sore throat at 3 days ~ 6
Symptoms are shortened by ~ 16 hours
NNH for rash or diarrhoea ~10
~1/40,000 severe allergic reaction

CD000023

Antibiotics for otitis media

NNT for pain at 24 hours ~ ∞? 20?
NNT for pain at 2-3+4-7 days ~ 20
NNT for tympanic membrane perforation ~ 33
NNH for rash/diarrhoea/skinrash ~15
Delayed ABX no difference

CD000219

Flu Shot

~ 70-90% effective - using antibodies as the diagnosis
~ 60% effective if use culture endpoints
~ 85% effective - nasal spray in children 6 months to 6 years old

Every year 1-10% adults get the flu

~ 5% - therefore reduced to 1% - less if unmatched

5-20% per year in children

~10% - therefore reduced to 2%

5% down to 2% (1%) in adults

10% down to 4% (2%) in children

Heartburn

Indication	Outcome	Placebo/no treatment (%)	H2RA (%)	PPI (%)	NNT (PPI vs placebo)
GERD-like symptoms (CD002095)	Heartburn remission	25-40	55	70*	2-3
NSAID ulcer prevention (CD002296)	Clinical ulcers over 6-12 months	0.5-2	No studies	No studies	-
	Endoscopic ulcers at 12 weeks or longer	35	15 high dose H2RA	15	5

*high dose provides approximately a 5% absolute increase in benefit

Pain

The best non-narcotic acute pain killer - dental pain, headache etc

NSAID plus acetaminophen 1000 mg

Naproxen 250 mg/Ibuprofen 400 mg

FULL glass of water - lie on right side

Neuropathic pain

post herpetic neuralgia/diabetic neuropathy

Gabapentin

Moderate improvement 43% (G) vs 26% (P) - NNT~6

Substantial improvement 31% (G) vs 17% (P) - NNT~7

dizziness, sedation, confusion, ataxia, peripheral edema - NNH ~8

CD007938

A test of benefit/harm can be made after 1-2 days at a low dose (100-900 mg/day)

Benefit is unlikely to increase with higher doses or longer treatment

Erectile dysfunction

"Successful" attempts in the sildenafil group ≈ 70%

"Patients" who "responded" in the placebo group ≈ 20%

7/10 "patients" will "respond" each time to sildenafil

2 of these 7 "responded" not because of the drug - NNB of 2

10% headache, 15% flushing, 10% dyspepsia <1% stopped drug due to side effects

N Engl J Med 1998;338:1397-404

Depression

Patients who respond in the SSRI group ≈ 60%

40% in primary care? Am J Psychiatry 2009; 166:599–607

Patients who respond in the placebo group ≈ 45%

6/10 patients will respond to an antidepressant

4-5 of these 6 improved not because of the drug - NNT of 6-7

CD007954

Accutane/Epuris

10, 20 and 40 mg capsules

Therapeutic Choices - 0.5-2 mg/kg/day for 12-16 weeks
60 kg = 30 to 120 mg/day
"Low dose" was considered 0.5 mg/kg/day and there was a cumulative dose of 120-150 mg/kg

Start with 10 mg a day and continue until all lesions are gone and then continue for 2-4 months at 5 mg/day or 10 mg every other day

Australasian J of Dermatol 2013;54:157–62
Indian J Dermatol Venereol Leprol 2010;76:7-13

ORIGINAL ARTICLE

Isotretinoin 5 mg daily for low-grade adult acne vulgaris – a placebo-controlled, randomized double-blind study

Journal of the European Academy of Dermatology and Venereology 2013

Beware of "qualitative quantification"

Qualitative descriptor	EU assigned frequency	Mean frequency estimated by participants (n=200)
Very common	>10%	65% (24·2)
Common	1–10%	45% (22·3)
Uncommon	0·1–1%	18% (13·3)
Rare	0·01–0·1%	8% (7·5)
Very rare	<0·01%	4% (6·7)

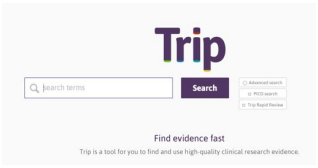
Values are mean (SD).

Lancet 2002;359:853–54

Google

LOVE THEM!
They are my BFF

Google scholar

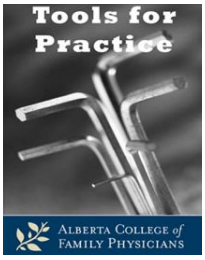


Trip Database - a clinical search tool designed to allow health professionals to rapidly identify the highest quality clinical evidence for clinical practice

Cochrane Library - full-text access, regularly updated systematic reviews by the Cochrane Collaboration. Includes completed systematic reviews and review protocols in development.

Pubmed-Medline - broadly covers biomedical literature. The indexing data for Medline comes from the US National Library of Medicine.
OvidSP-Embase - indexes biomedical literature, with strengths in pharmaceutical information and the European and Japanese literature

Tools for Practice



Sponsored by: Alberta College of Family Physicians
http://www.acfp.ca/tfp_original.php
Every two weeks: <350 words Evidence-based review of a focused clinical question
Selected articles in: Canadian Family Physician and on PubMed

How to Critically Appraise an RCT in 10 minutes - free iBook

FREE

Outcomes Are Not Created EQUAL Surrogate Markers

Ask yourself: Can a patient feel the outcome?

If No - it is a surrogate marker

2009 Canadian Cardiovascular Society/Canadian guidelines for the diagnosis and treatment of dyslipidemia and prevention of cardiovascular disease in the adult – 2009 recommendations

TARGETS OF THERAPY

Risk level	Primary target: LDL-C	Class, level
High CAD, PVD, atherosclerosis Most patients with diabetes FRS ≥20% RRS ≥20%	<2 mmol/L or ≥50% ↓ LDL-C apoB <0.80 g/L	Class I, level A
Moderate FRS 10% to 19% LDL-C >3.5 mmol/L TC/HDL-C >5.0 hs-CRP >2 mg/L in men >50 years and women >60 years of age Family history and hs-CRP modulate risk	<2 mmol/L* or ≥50% ↓ LDL-C apoB <0.80 g/L	Class IIa, level A
Low FRS <10%	≥50% ↓ LDL-C	Class IIa, level A

Level A = recommendation based on evidence from multiple randomized trials or meta-analyses

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults

"The Expert Panel was unable to find RCT evidence to support titrating cholesterol-lowering drug therapy to achieve target LDL–C or non-HDL-C levels, as recommended by ATP III"

Overdiagnosis/overtreatment =

the diagnosis/treatment of a condition which a person fully informed by the best available evidence would not want.

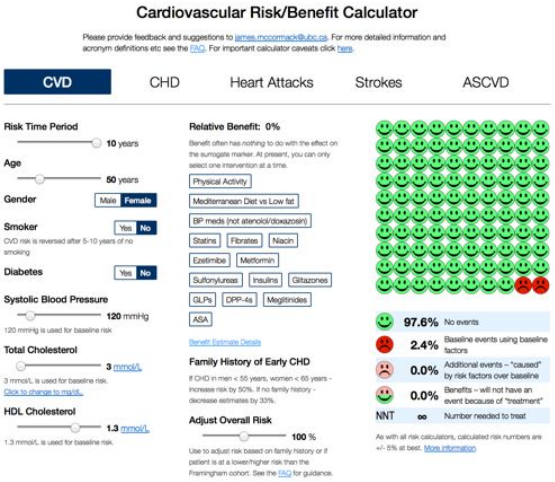
Real "Targets"

FOR RISK REDUCTION

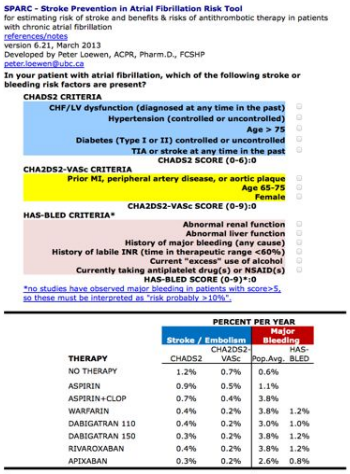
Patient has had the benefits and risks of therapy explained to them and they have made a shared-decision

FOR SYMPTOM CONTROL

Patient has received the least expensive therapy at the lowest dose that effectively controls their symptoms



http://cvdcalculator.com



http://www.sparctool.com

Watchful Waiting

Many patients want advice and reassurance

Repeat blood pressures, cholesterols, glucose, bone densities

"Watchful waiting" - for BPH/prostate related symptoms

Alpha blockers change symptoms

irritative (frequency, nocturia, burning, urgency, or urge incontinence) or obstructive(hesitancy, weak stream, dribbling, incomplete voiding, or retention)

by 3 point on a 35 point scale - considered slightly improved

Upper respiratory tract infections

Scandinavian Prostate Cancer Group Study Number 4 (SPCG-4)

	Radical prostatectomy	Watchful waiting	Control group
Death at 18 years <65	40	66	N/A
Androgen deprevation <65	44	73	N/A
Death at 18 years >65	70	72	N/A
Androgen deprevation >65	41	63	N/A
Distress from erectile dysfunction	48	36	37
Urinary leakage once a day or more	41	11	3
Regular use of protective aid	54	25	8
Nocturia	49	63	42

N Engl J Med 2014;370:932-42

Lancet Oncol 2011; 12: 891–99


BMJ

EDITORIALS

BMJ 2012;344:d7955 doi: 10.1136/bmj.d7955 (Published 2 February 2012)

A prescription for improving antibiotic prescribing in primary care

Comprehensive education programmes can reduce antibiotic prescriptions, but the impact on clinical outcomes is unclear

James McCormack *professor*[1], G Michael Allan *associate professor*[2]

[1]Faculty of Pharmaceutical Sciences, University of British Columbia, BC, Vancouver, Canada V6T1Z3; [2]Department of Family Medicine, University of Alberta, AB, Edmonton, Canada

"Most community acquired infections still respond to the same antibiotics that have been used for decades and many guidelines still support their use"

Delayed prescriptions

Delayed prescriptions for sore throats and otitis media reduces the use of antibiotics far more than education about inappropriate antibiotic use

Upper respiratory tract infections

93% down to 32% - 14% still get them if you don't initially prescribe an antibiotic

Urinary tract infections

97% down to 77%

Minimally Disruptive Medicine

Establish burden of therapy

Encourage coordination in clinical practice

Acknowledge comorbidity in clinical evidence

Prioritize from the patient perspective

Guidelines and the Law

"As per the Canadian Medical Association Handbook on Clinical Practice Guidelines, guidelines should NOT be used as a legal resource in malpractice cases as "their more general nature renders them insensitive to the particular circumstances of the individual cases."


CMAJ

EDITORIAL

CMAJ • JANUARY 6, 2009 • 180(1) FRANÇAIS À LA PAGE SUIVANTE

Medical errors, apologies and apology laws

Effect of apology on liability

2 (1) An apology made by or on behalf of a person in connection with any matter

(a) does not constitute an express or implied admission of fault or liability by the person in connection with that matter,

(b) does not constitute a confirmation of a cause of action in relation to that matter for the purposes of section 5 of the *Limitation Act*,

matter, and

(2) Despite any other enactment, evidence of an apology made by or on behalf of a person in connection with any matter is not admissible in any

"Despite any other enactment, evidence of an apology made by or on behalf of a person in connection with any matter is not admissible in any court as evidence of the fault or liability of the person in connection with that matter"


CJD

Canadian Journal of Diabetes

A Publication of the Professional Sections of the Canadian Diabetes Association

Une publication des sections professionnelles de l'Association canadienne du diabète

CONTENTS: April 2013 • Volume 37 • Supplement 1

We Are All Individuals

Every patient is an "n of 1" study
Every treatment is an experiment

The Elderly

Consider that renal and liver function are 50% at best
Symptoms key!!!
Life expectancy
- Statins
- Aspirin
- Warfarin

Heart failure
Inhalers for COPD

CMAJ **ANALYSIS**

Is bigger better? An argument for very low starting doses

James P. McCormack PharmD, G. Michael Allan MD, Adil S. Virani PharmD

CMAJ, January 11, 2011

A sample of RCT Evidence

6.25 mg hydrochlorothiazide	first marketed at 50 to 200 mg daily
6.25 mg captopril	25 mg PO TID is still a commonly recommended initial starting dose for hypertension
25 mg sildenafil (Viagra)	effective dose for erectile dysfunction
25 mg sumatriptan (Imitrex)	works as well as100 mg
5 mg daily fluoxetine (Prozac)	similar effects to those seen at 20 mg and 40 mg daily
0.25 mg ezetimibe (Ezetrol)	1/40th of the recommended initial starting dose provides 50% of the LDL lowering effect
15 mg elemental iron daily	as effective for anemia in the elderly as 50 mg and 150 mg with a lower incidence of side effects
150 mg daily bupropion (Zyban) 0.5 mg BID varenicline (Champix)	produces the same rate of smoking cessation at one year as 300 mg daily (1.0 mg BID)
10 mg atorvastatin	produces 2/3 of the effect on cholesterol as that seen with an 80 mg (8-fold increase) dose
200 mg ibuprofen (Motrin)	as effective as 400 mg for migraine headache
25 mg ranitidine (Zantac)	as effective as 125 mg for heartburn relief
1.8 mg colchicine	as effective as 4.8mg for acute gout with less adverse events

Doxepin (Sinequan)

Depression - start 25-50 mg - optimal 75mg -150mg up to 300mg

Doxepin in the Treatment of Primary Insomnia:
A Placebo-Controlled, Double-Blind,
Polysomnographic Study

J Clin Psychiatry
2001;62:453-63

"The results support the effectiveness of low doses
(25-50 mg) of doxepin to improve sleep"

INSOMNIA

Sleep 2007; 30: 1555–61

Efficacy and Safety of Three Different Doses of Doxepin in Adults With Primary Insomnia

All three doses worked better than placebo
AND
NO side effects over placebo

A recommended low dose was still 25-50 times TOO HIGH