PEER simplified decision aid: osteoarthritis treatment options in primary care

Adrienne J. Lindblad ACPR PharmD James McCormack PharmD Christina S. Korownyk MD CCFP
Michael R. Kolber MD CCFP MSc Joey Ton PharmD Danielle Perry RN Betsy Thomas BScPharm Samantha Moe PharmD
Scott Garrison MD PhD CCFP Nicholas Dugré PharmD MSc Karenn Chan MD CCFP(COE) G. Michael Allan MD CCFP

This decision aid was developed for clinicians to help them discuss non-operative treatment options with patients living with osteoarthritis-related pain. It is derived from a systematic review of systematic reviews.[1] Effectiveness data are generated from randomized controlled trials comparing active treatment with inert control, often placebo.[1] The evidence focuses on the proportion of patients attaining meaningful reductions in pain, generally defined as a 30% or more reduction in pain, but specific definitions of *clinically meaningful* vary widely across studies.

How was this tool developed?

Icon arrays were developed using risk ratio estimates from meta-analyses for patients attaining clinically meaningful improvement in pain (**page e89**).[1] The control response rate was standardized to 40%, the approximate control response rate averaged for all included studies. The rate ratio for each intervention was applied to the average 40% control rate to attain the estimated benefit for that intervention. Standardized control rates allow easier comparison of estimated benefits from differing interventions. However, it should be noted that the estimates are from inert-controlled trials and not direct comparisons, so differences between products are approximations with some uncertainty.

Publicly (not-for-profit) sponsored studies can find lower effectiveness of interventions than for-profit or industry-sponsored studies do.[2] We indicated when pooled publicly sponsored studies did not find statistically significant benefit over placebo (glucosamine, chondroitin, and viscosupplementation). Adverse events were poorly reported in the systematic reviews included in our systematic review[1] and so are inadequately reported here. Common prescribing resources or other studies should be consulted for further details on potential adverse events.

The decision aid

The decision aid (**Figure 1**)[1,3-6] provides a 1-page summary (2-sided) of estimated effectiveness of treatment options for osteoarthritis pain. The back side of the page includes classification of therapies (by benefits and harms), withdrawals owing to adverse events, typical adverse events, basic prescribing tips, and estimated costs. An interactive version of treatment options can be found at **www.pain-calculator.com**. An easy-to-print version of the tool is also available from **CFPlus**.*

This decision aid is not a guideline, and the evidence was not assessed by an independent guideline committee for clinical application. Information presented here will be combined with similar systematic reviews and tools on other types of pain to inform future guideline development.

Dr Lindblad is a pharmacist and Knowledge Translation and Evidence Coordinator at the Alberta College of Family Physicians and Associate Clinical Professor in the Department of Family Medicine at the University of Alberta in Edmonton. **Dr McCormack** is Professor in the Faculty of Pharmaceutical Sciences at the University of British Columbia in Vancouver. **Dr Korownyk** is a family physician and Associate Professor in the Department of Family Medicine at the University of Alberta. **Dr Kolber** is a family physician and Professor in the Department of Family Medicine at the University of Alberta. **Dr Ton** is a pharmacist and Clinical Evidence Expert for the College of Family Physicians of Canada in Edmonton. **Ms Perry** is a nurse and Clinical Evidence Expert at the Alberta College of Family Physicians. **Ms Thomas** is a pharmacist and Project Manager, Education and Knowledge Translation at the Alberta College of Family Physicians. **Dr Moe** is a pharmacist and Clinical Evidence Expert at the College of Family Physicians of Canada in Mississauga, Ont. **Dr Garrison** is a family physician and Associate Professor in the Department of Family Medicine at the University of Alberta. **Dr Dugré** is a pharmacist at the CIUSSS du Nord-de-l'Ile-de-Montréal and Clinical Associate Professor in the Faculty of Pharmacy at the University of Montreal in Quebec. **Dr Chan** is a care of the elderly physician and Assistant Professor in the Department of Family Medicine at the University of Alberta. **Dr Allan** is a family physician, Director of Programs and Practice Support at the College of Family Physicians of Canada, and Professor in the Department of Family Medicine at the University of Alberta.

Acknowledgment

The tool was reviewed by patients and the Patient Education Committee of the College of Family Physicians of Canada. This tool was funded by Alberta Health through the Primary Health Care Opioid Response Initiative, as well as by the College of Family Physicians of Canada and the Alberta College of Family Physicians.

Competing interests

None declared

References

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This article has been peer reviewed. *Can Fam Physician* 2020;66:191-3

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*An easy-to-print version of the **decision aid** is available at **www.cfp.ca**. Go to the full text of the article online and click on the **CFPlus** tab.

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Figure 1

PEER SIMPLIFIED DECISION AID / OSTEOARTHRITIS

How many people will have their osteoarthritis pain meaningfully improved (~30%) by different treatments?

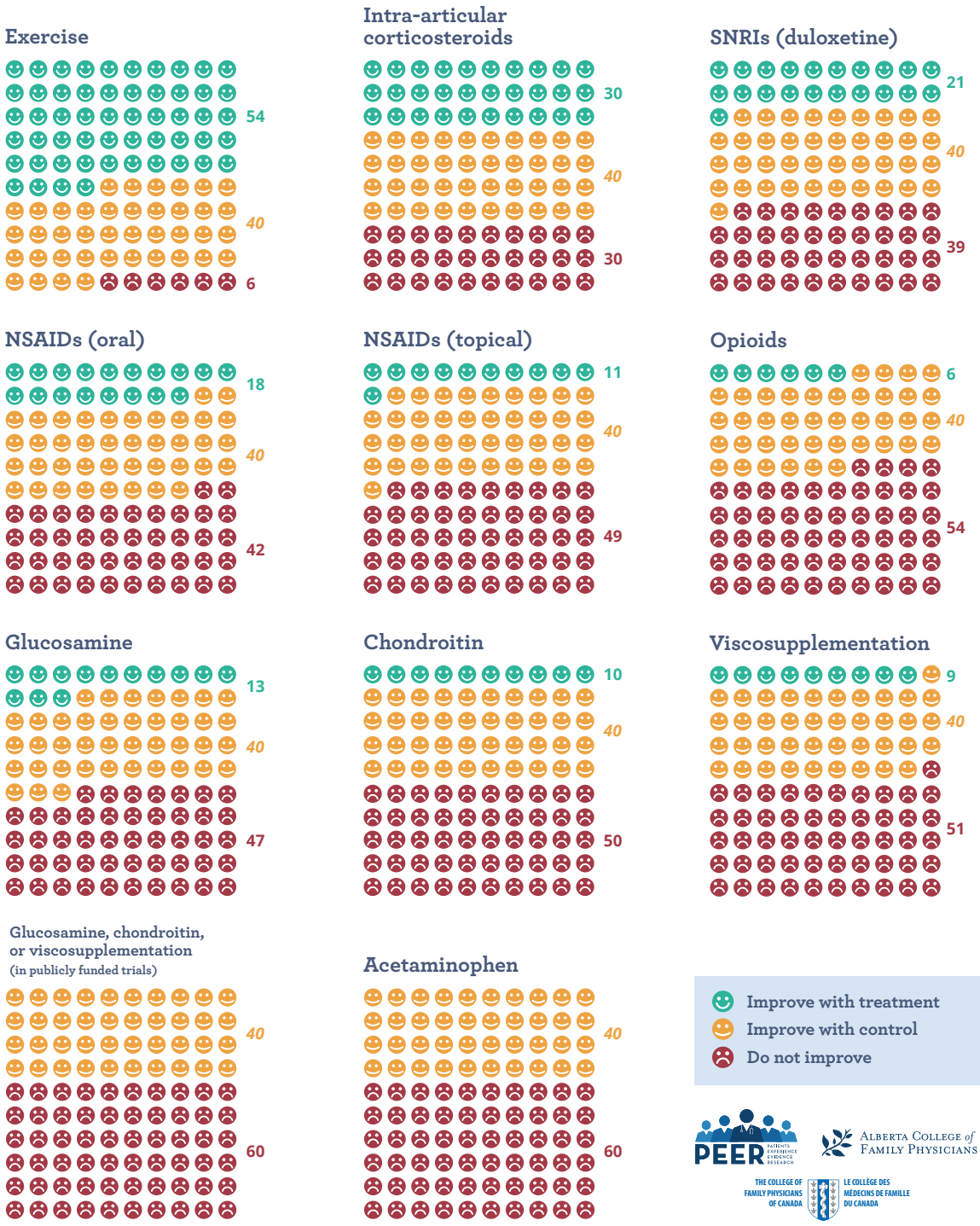

Figure 1 *continued on page 193*

Figure 1 *continued from page 192*

PEER SIMPLIFIED DECISION AID / OSTEOARTHRITIS

Treatment Options for Osteoarthritis Pain

BENEFITS AND HARMS	TREATMENT	WITHDRAWALS DUE TO ADVERSE EVENTS*	POTENTIAL ADVERSE EVENTS	PRESCRIBING COMMENTS	COST
☺ Benefits likely exceed harms	Exercise	Similar to control	Injuries	*Consider pedometers with specific exercise goals.[3] Type of activity is not important.[1]*	$ to $$$$
	Intra-articular Corticosteroids	Similar to placebo	Infection	*Efficacy for knee osteoarthritis peaks between 1-2 weeks. May inject 4 times per year.[4]*	$
	Topical NSAIDs	5% versus 4%	Application site reactions	*Data unavailable to support one formulation or concentration over another.[5]*	$ to $$
☺ Benefits may not exceed harms in some patients	Oral NSAIDs	Similar to placebo	Adverse gastrointestinal, renal and cardiovascular effects	*Consider naproxen or ibuprofen. Diclofenac and COX-2 Inhibitors may increase cardiovascular risk.[6]*	$
	SNRIs (Duloxetine)	12% versus 6%	Headache, drowsiness, gastrointestinal, weight loss	*Most trials studied duloxetine 60mg once daily.*	$$
☹ No benefit	Acetaminophen	Similar to placebo	Abnormal liver function	*Most trials studied acetaminophen 1000mg every 6 hours.*	$
☹ Harms likely exceed benefits	Opioids	21% versus 7%	Dependency, constipation, overdose, cognitive effects, fracture	*Efficacy similar with placebo in trials longer than 12 weeks.*	$$ to $$$
😐 Unclear benefits	Glucosamine	Similar to placebo	Nothing reported	*Efficacy similar to placebo in publicly funded trials.*	$
	Chondroitin		Nothing reported		$
	Viscosupplementation (Hyaluronic acid)	Percentages not reported	Injection site reactions		$$$ to $$$$

Cost approximates dollars per month: $ = <25, $$ = 25-50, $$$ = 50-100, $$$$ = >100

NSAIDs: Non-steroidal anti-inflammatory drugs **SNRI**: Serotonin Norepinephrine Reuptake Inhibitors

Note: Insufficient evidence for rubefacients, platelet-rich plasma, cannabinoids, tricyclic antidepressants, and counselling to provide specific magnitude of effects

* Percentages reported are statistically significant compared to placebo

PEER Patients Experience Evidence Research

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