

A systematic review of cost-of-illness studies for chronic pain

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Background

- 19% of Canadians have chronic pain
 - 50% present for at least 10 years
- Prevalence will increase
 - Aging, obesity, diabetes
- Frequent users of healthcare
 - Primary pain condition
 - Related comorbidity: depression, anxiety, sleeplessness
- Incur personal/family costs
- Lost productivity and leisure time

Cost of Illness studies

- Economic burden
- Direct costs
 - Medical (hospital, physician, laboratory, etc)
 - Non-medical (cost of attending appointments, changes to diet, tutoring child, etc)
- Indirect costs
 - Absenteeism, reduced productivity, caregiver costs, mortality

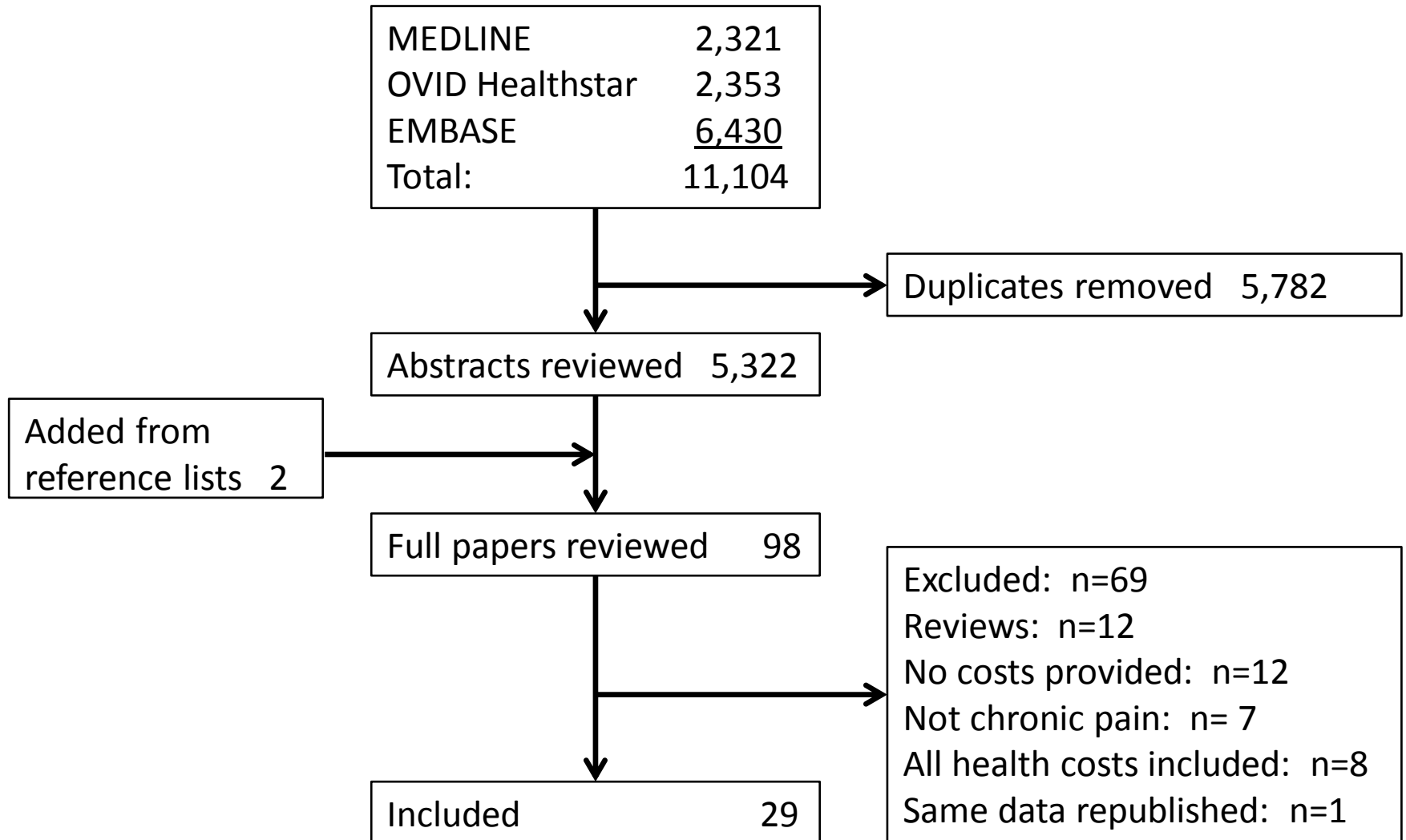
Objective

- Identify cost-of-illness studies for chronic pain
- Summarize data
- Identify issues in methodology

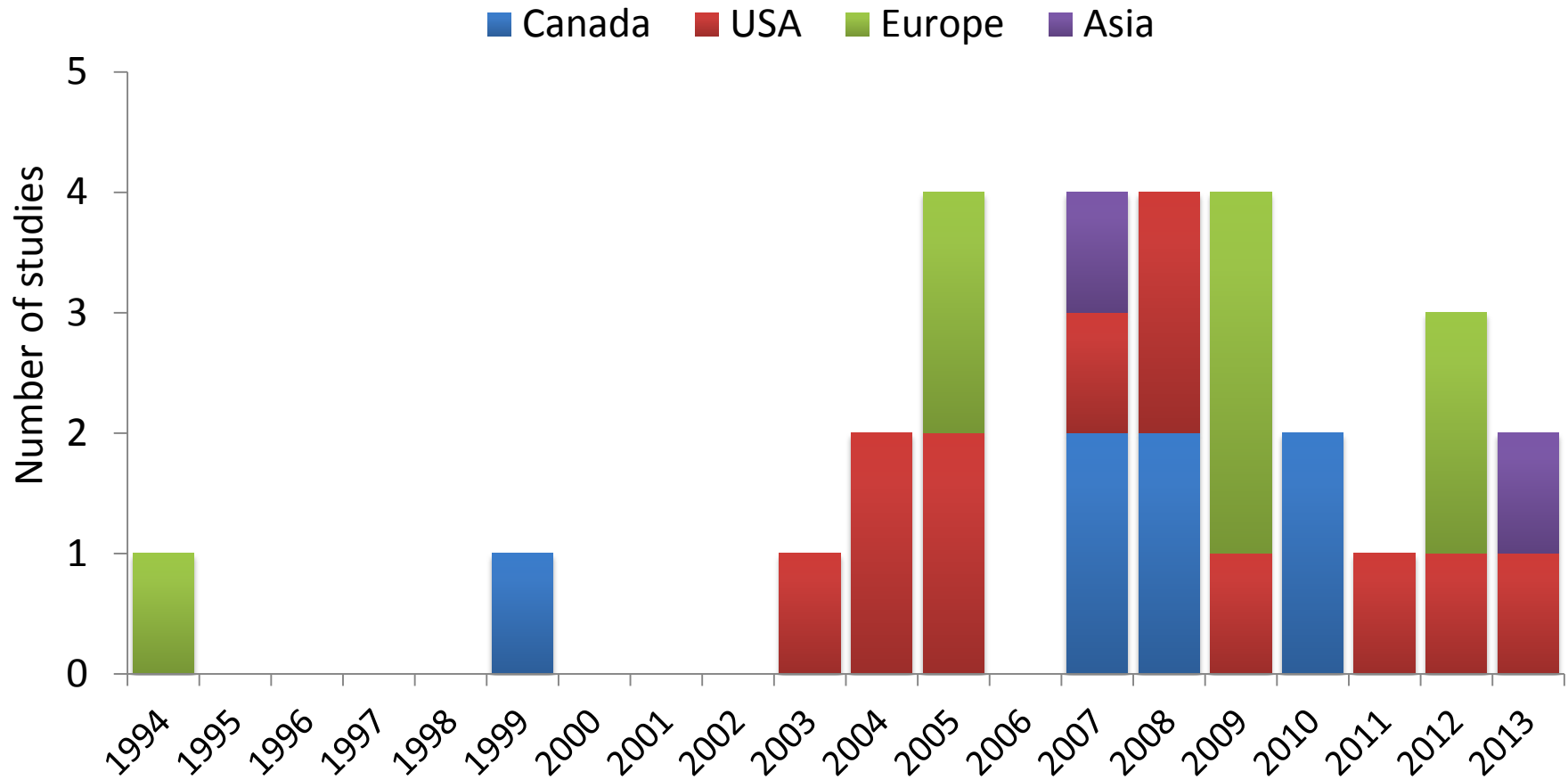
Methods

- MEDLINE, OVID HealthStar and EMBASE inception to May 2013
 - Chronic pain terms
 - Key words: chronic pain, neuropathic pain, fibromyalgia, phantom limb, etc
 - Cost-of-illness terms: Cost and cost analysis
- Inclusion
 - Studies estimating cost of chronic pain at patient level (incremental or total)
- Exclusion
 - Non-English, abstract only
 - Studies focused on back and neck pain, migraine, cancer pain

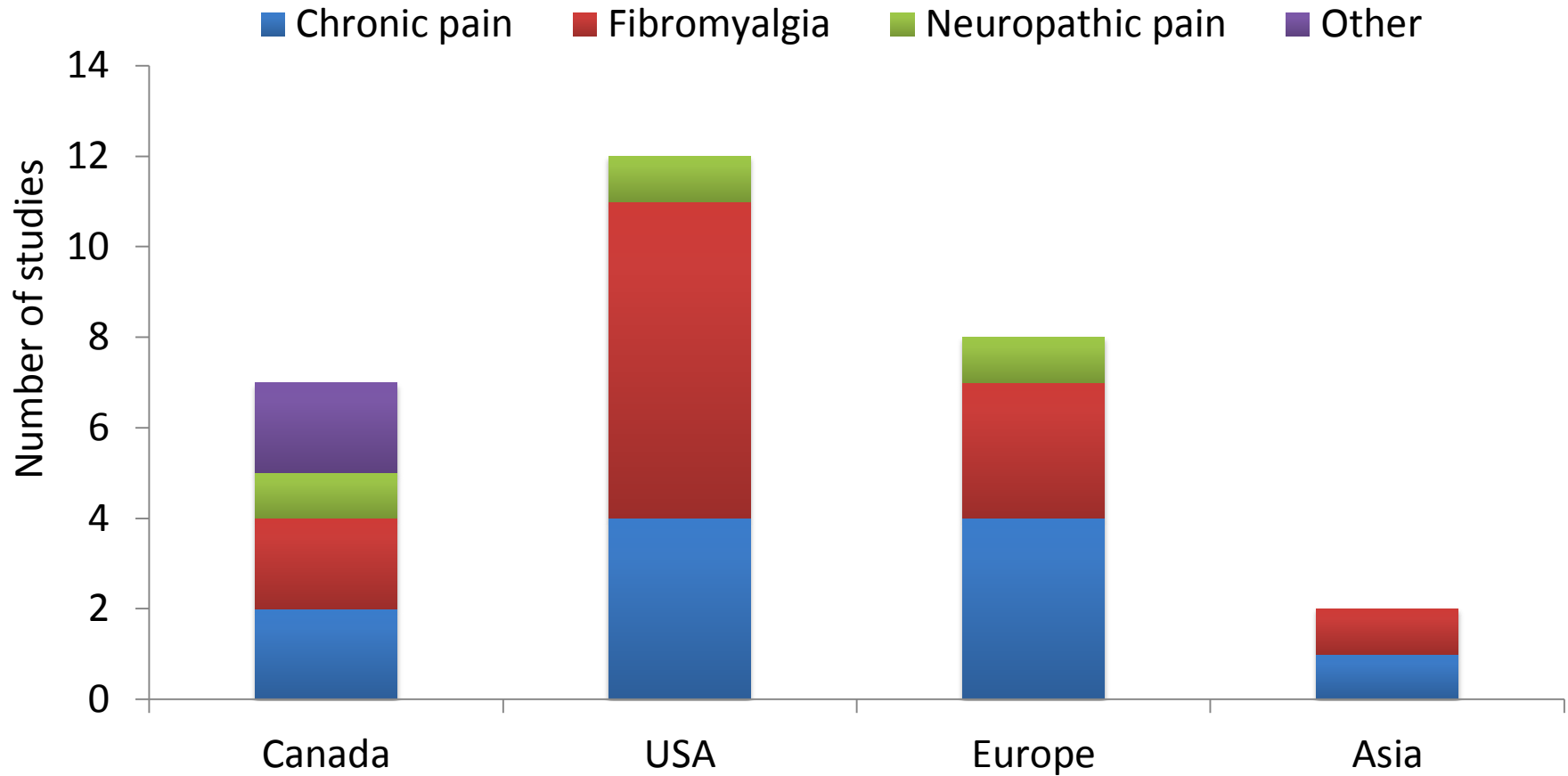
Results



Publication year



Types of chronic pain



Differences in methodology

- Cohort identification Number of studies
 - Administrative database 13
 - At specialty care office/clinic 9
 - At primary care office 3
 - Combined primary/specialty 1
 - Random postal, telephone, survey 4

- Cost identification
 - Administrative database 17
 - Patient interview/questionnaire (retrospective) 11
 - Patient diary (prospective) 2

Canadian cost estimates for pain

Study	Pain	Location	n (pain cohort)	n (control)	Mean Direct medical (annual, 2012)
Guerriere 2010	Chronic pain	7 provinces	370	-	\$2,000*
Phillips 2008	Chronic pain	Alberta	~670	~5,300	\$4,400 (Inc)
Lachaine 2010	Fibromyalgia	Quebec	16,010	16,010	\$1,400 (Inc)
White 1999	Fibromyalgia	Ontario	95	380	\$ 600†(Inc)
McGillion 2008	Angina	Ontario	130	-	\$3,500‡
Lachaine 2007	Neuropathic pain	Quebec	4,912	4,912	\$2,800 (Inc)
Piwko 2007	Multiple Sclerosis	Canada	211	-	\$5,900

Inc = incremental cost.

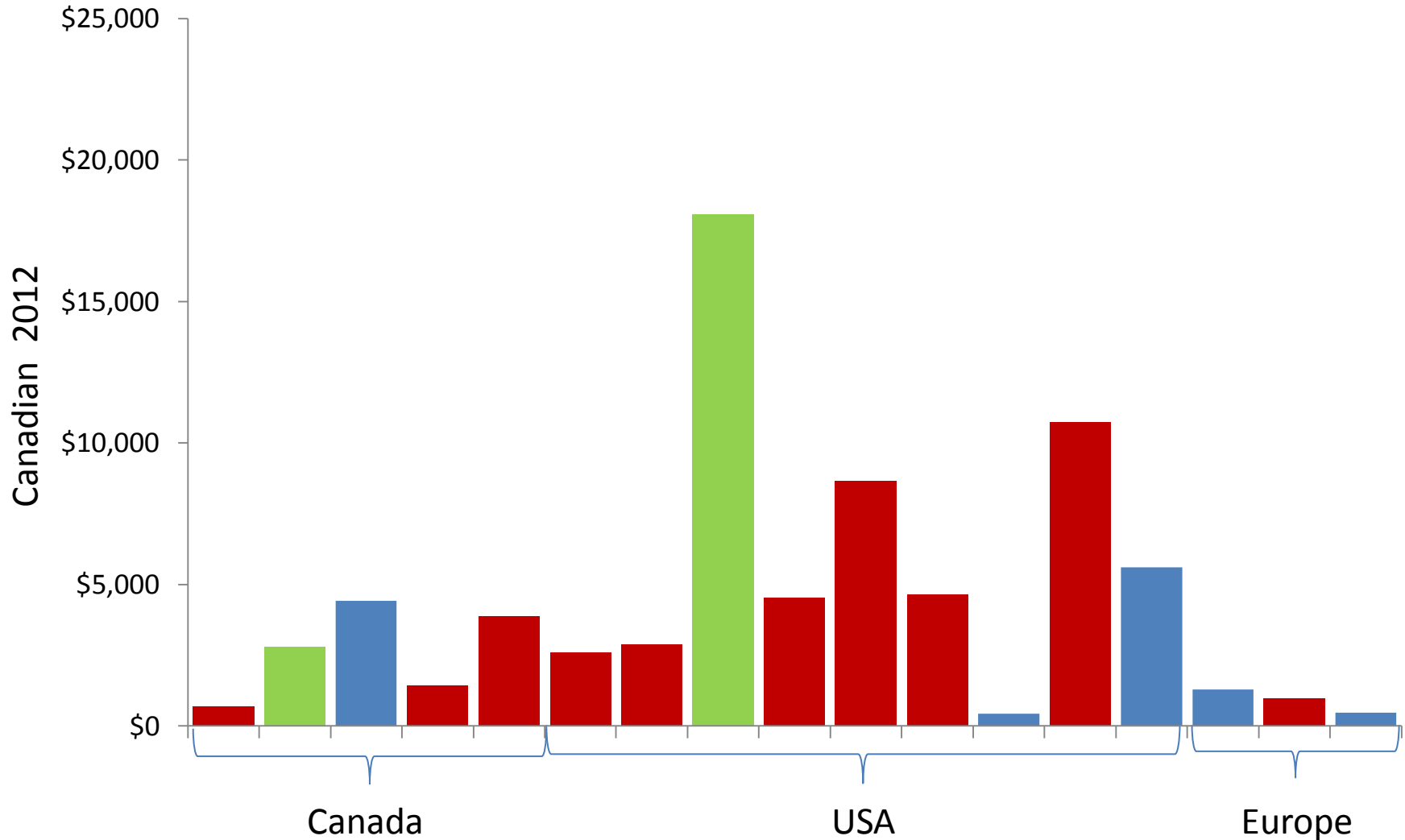
* Total direct and indirect \$19,100.

† OHIP costs only.

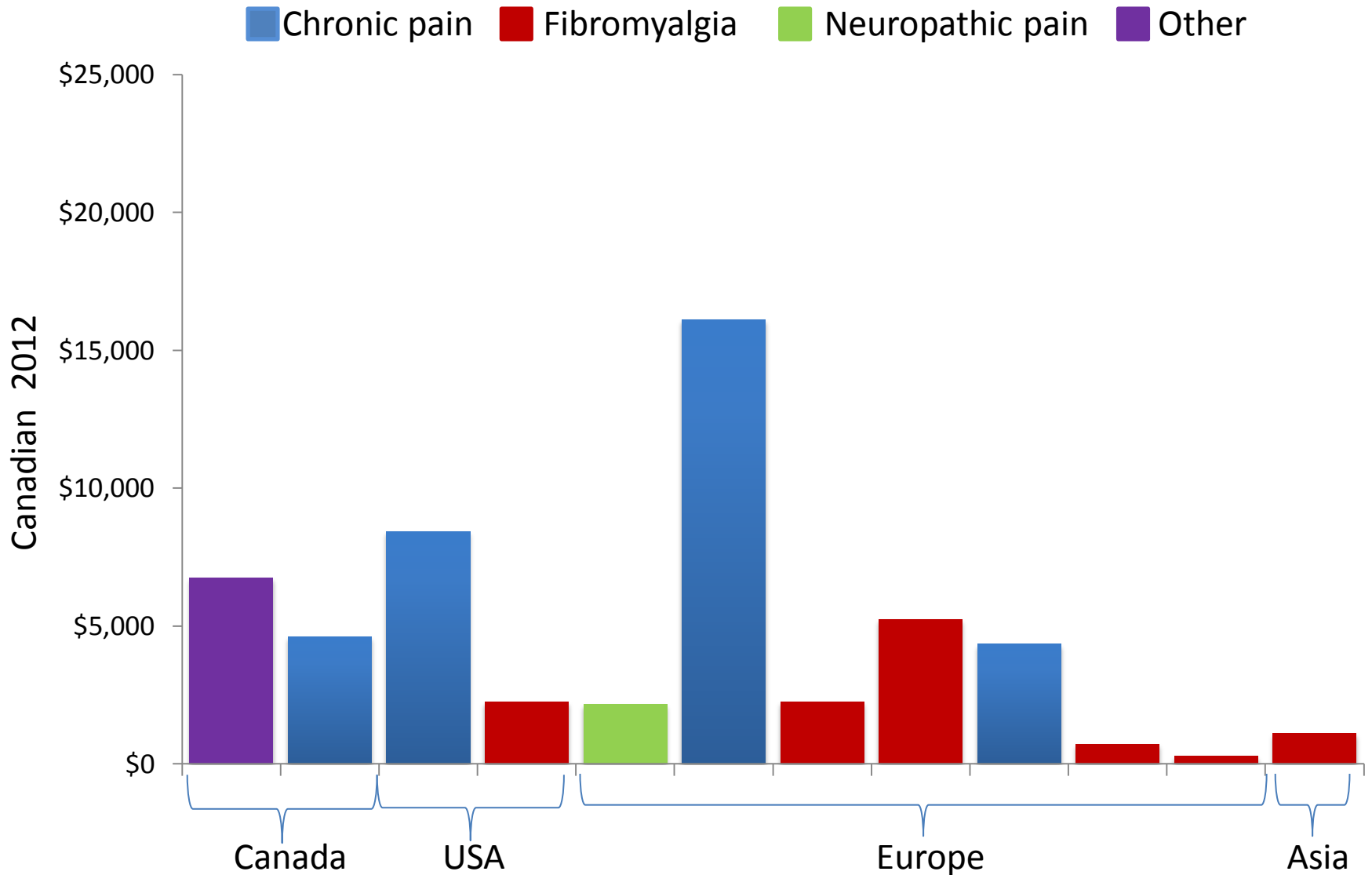
‡ Total direct and indirect \$22,400.

Incremental direct medical costs

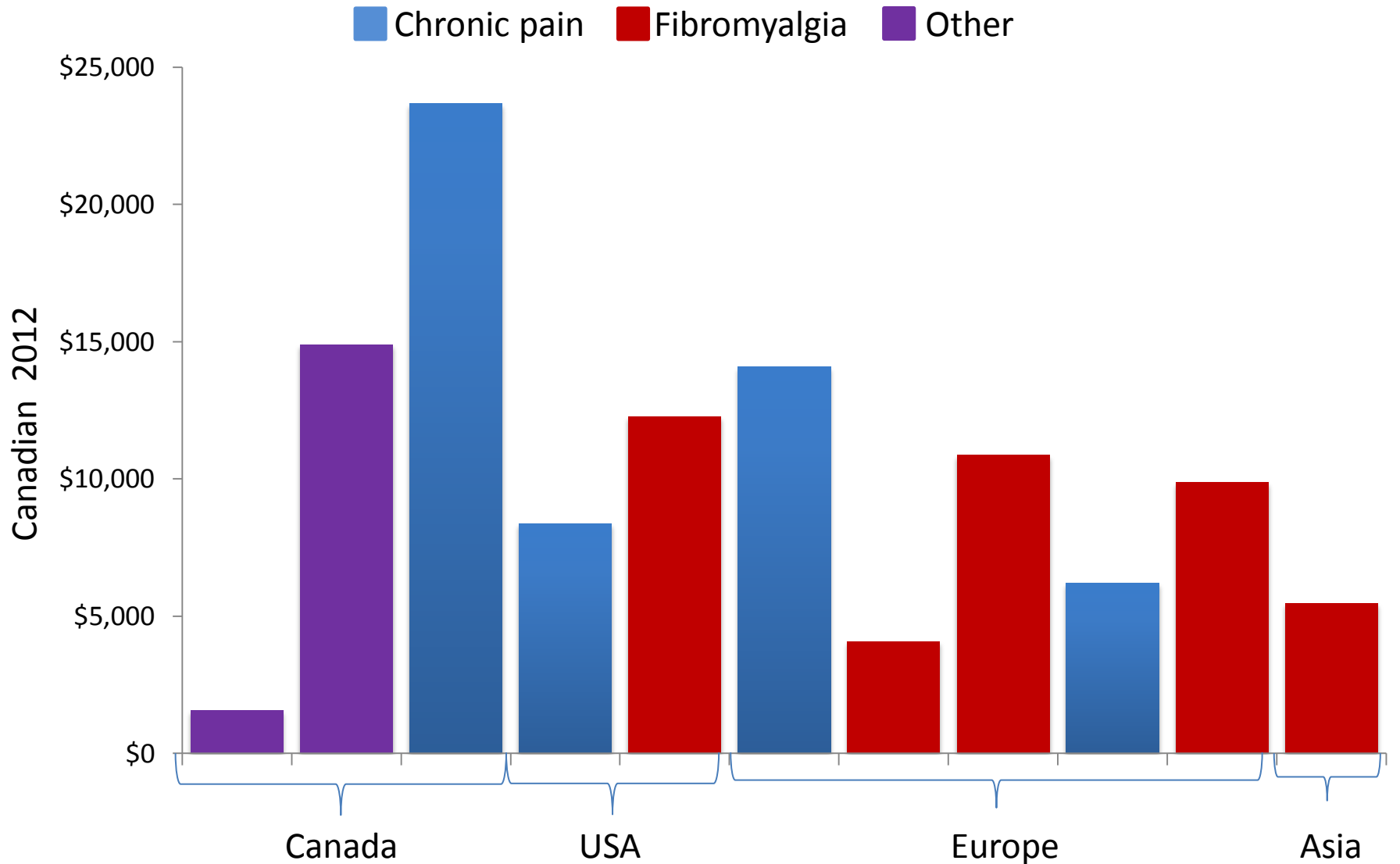
Chronic pain Fibromyalgia Neuropathic pain



Direct medical costs



Indirect costs



Limitations

- Variable methods
- Different pain types
- Jurisdictional differences
- Regional variability in health care practice

Discussion

- First systematic review of chronic pain
- Indirect costs appear to be cost driver
- Inform decision makers
- Data for cost-effectiveness studies
- Caution in applying data among different health care settings

Thank you

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