

Online Supplementary Material

Feleus A, Bierma-Zeinstra SMA, Bernsen RMD, Miedema HS, Verhaar JAN, Koes BW. Management decisions in non-traumatic complaints of arm, neck and shoulder in general practice. *Ann Fam Med*. 2009;7(5):446-454.

<http://www.annfammed.org/cgi/content/full/7/5/446/DC1>

Supplemental Table 1. Specific Diagnoses Included in Study	
Diagnosis	No.
Cervical hernia	5
Subacromial impingement syndrome (rotator cuff syndrome, tendinosis, bursitis)	220
Frozen shoulder	9
Biceps tendinosis	2
Lateral/medial epicondylitis	93
Bursitis elbow	3
Osteoarthritis of elbow (no rheumatoid arthritis)	2
Cubital tunnel syndrome	2
Peritendinitis/tenosynovitis flexors/extensors forearm	13
de Quervain's syndrome	13
Guyon's tunnel syndrome	5
Radial tunnel syndrome	1
Carpal tunnel syndrome	11
Osteoarthritis of wrist or hand (no rheumatoid arthritis)	14
Free body of wrist or hand	1
Raynaud's phenomenon and peripheral neuropathy in combination with exposure to hand-arm vibration	1
Trigger finger	2
Ganglion	5
Nonspecific diagnoses: all other arm, neck, and shoulder complaints not attributable to trauma or systemic disease	280

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Supplemental Table 2. Univariate Associations With Common Management Options; Results of Univariate Logistic Regression Analyses (Multilevel)

Variables	Watchful Waiting OR (95% CI)	Additional Diagnostic Testing OR (95% CI)	Prescription of Medication OR (95% CI)	Steroid Injection OR (95% CI)	Physical Therapist OR (95% CI)	Medical Specialist OR (95% CI)
Diagnosis						
Epicondylitis	1.3 (0.8-2.0)	0.3 (0.1-0.6)	1.1 (0.8-1.6)	2.2 (0.9-5.4)	0.8 (0.3-1.8)	1.3 (0.5-3.4)
Impingement, biceps tendonitis, frozen shoulder	0.6 (0.4-1.0)	0.5 (0.2-1.2)	1.7 (1.2-2.4)	9.5 (5.3-17.2)	0.5 (0.3-0.8)	2.2 (1.0-4.5)
Other specific diagnosis	1.2 (0.8-1.8)	1.7 (1.2-2.4)	1.0 (0.6-1.6)	4.1 (1.5-11.2)	0.3 (0.2-0.5)	5.1 (2.4-10.6)
Nonspecific diagnosis, ref	1.0	1.0	1.0	1.0	1.0	1.0
Patient and complaint characteristics						
Younger (18-45 y) vs older (46-64 y)	1.2 (0.9-1.6)	0.9 (0.6-1.6)	1.0 (0.8-1.3)	0.6 (0.4-0.8)	1.0 (0.7-1.4)	0.8 (0.4-1.6)
Female vs male	0.7 (0.5-0.9)	1.2 (0.7-2.1)	1.3 (0.9-1.7)	0.7 (0.5-1.0)	1.4 (1.1-1.9)	1.1 (0.5-2.5)
Not having paid work vs being employed	0.8 (0.5-1.2)	1.0 (0.6-1.9)	1.2 (0.8-1.8)	1.4 (0.8-2.4)	0.8 (0.6-1.1)	1.3 (0.5-3.2)
Duration of complaint at consultation: 0-6 wk (ref)	1.0	1.0	1.0	1.0	1.0	1.0
6 wk-6 mo	0.8 (0.6-1.1)	2.1 (0.9-4.7)	0.6 (0.5-0.8)	1.4 (0.8-2.2)	1.4 (0.8-2.8)	4.3 (1.1-16.9)
> 6 mo	0.5 (0.3-0.7)	5.2 (2.6-10.5)	0.9 (0.6-1.2)	1.8 (1.2-2.7)	2.5 (1.4-4.4)	15.9 (5.4-47.0)
High complaint severity in last week (score > 6) vs low ^a	0.5 (0.4-0.8)	1.3 (0.7-2.4)	1.6 (1.1-2.3)	1.7 (1.3-2.4)	1.5 (1.1-2.0)	1.8 (0.7-4.1)
Many functional limitations (DASH score > 35.34) vs few ^b	0.5 (0.4-0.7)	1.4 (0.8-2.4)	1.9 (1.4-2.7)	1.8 (1.3-2.4)	1.5 (1.1-2.0)	2.2 (1.0-4.7)
Poor perceived general health vs good ^c	0.8 (0.5-1.2)	1.9 (0.8-4.3)	1.0 (0.7-1.6)	1.2 (0.6-2.2)	1.7 (1.1-2.6)	2.1 (1.1-4.2)
Musculoskeletal comorbidity vs none	0.8 (0.6-1.0)	1.4 (0.8-2.1)	1.2 (1.0-1.6)	1.3 (0.9-1.7)	1.2 (0.9-1.6)	2.3 (1.0-4.9)
Recurrent complaint vs incident complaint	0.6 (0.5-0.8)	1.7 (1.1-2.8)	0.9 (0.7-1.2)	1.4 (0.9-2.1)	2.0 (1.5-2.7)	1.9 (1.0-3.6)
Multiple-region vs single-region complaint ^d	1.0 (0.7-1.3)	2.3 (1.3-4.0)	0.9 (0.7-1.2)	1.1 (0.8-1.7)	1.4 (1.0-2.0)	1.5 (0.7-3.4)
Low social support (SOS score < 56) vs high ^e	1.0 (0.7-1.5)	1.0 (0.5-1.8)	1.0 (0.6-1.5)	1.0 (0.8-1.4)	1.2 (0.9-1.7)	1.9 (0.6-5.7)

Continued

Supplemental Table 2. Univariate Associations With Common Management Options; Results of Univariate Logistic Regression Analyses (Multilevel), continued

Variables (continued)	Watchful Waiting OR (95% CI)	Additional Diagnostic Testing OR (95% CI)	Prescription of Medication OR (95% CI)	Steroid Injection OR (95% CI)	Physical Therapist OR (95% CI)	Medical Specialist OR (95% CI)
Somatization, 4DSQ ^f						
Low (score 0-10) (ref)	1.0	1.0	1.0	1.0	1.0	1.0
Medium (score 11-20)	0.8 (0.6-1.3)	1.8 (0.9-3.5)	1.0 (0.7-1.5)	0.9 (0.6-1.6)	1.9 (1.3-2.6)	1.9 (0.8-4.4)
High (score 21-32)	0.3 (0.2-0.7)	5.0 (2.2-11.2)	2.9 (1.5-5.6)	2.1 (1.3-3.3)	2.4 (1.2-4.7)	5.8 (2.1-15.7)
Distress, 4DSQ ^f						
Low (score 0-10) (ref)	1.0	1.0	1.0	1.0	1.0	1.0
Medium (score 11-20)	0.7 (0.4-1.2)	1.3 (0.5-3.2)	1.2 (0.7-1.9)	1.2 (0.7-2.2)	1.5 (1.1-2.1)	1.6 (0.7-3.3)
High (score 21-32)	0.5 (0.3-0.9)	2.0 (1.2-3.5)	1.5 (0.9-2.6)	1.6 (0.7-3.4)	2.1 (1.2-3.2)	2.7 (1.1-6.6)
Physician characteristics						
Female vs male	1.2 (0.6-2.3)	0.7 (0.2-1.9)	0.6 (0.3-1.0)	0.4 (0.1-1.6)	1.6 (0.9-2.8)	0.7 (0.2-2.6)
Few years of practice (< 13 y) vs many	0.7 (0.5-1.1)	2.5 (1.4-4.2)	1.2 (0.7-1.9)	1.1 (0.4-3.0)	0.9 (0.8-1.7)	2.2 (1.1-4.2)
Special interest in musculoskeletal complaints vs no	0.7 (0.5-1.2)	1.1 (0.6-2.3)	0.8 (0.5-1.1)	2.5 (0.9-6.6)	1.0 (0.8-1.4)	1.4 (0.6-3.3)
Continuing medical education in musculoskeletal complaints vs not	0.8 (0.5-1.4)	1.0 (0.5-1.8)	0.8 (0.5-1.1)	2.0 (0.8-5.3)	1.0 (0.7-1.4)	1.2 (0.5-2.8)
Group practice vs solo practice	1.2 (0.8-1.9)	0.5 (0.2-1.0)	1.2 (0.8-1.8)	0.6 (0.2-1.5)	1.0 (0.7-1.4)	0.6 (0.3-1.5)
Rural vs urban ^g	0.7 (0.4-1.3)	1.6 (0.9-3.0)	0.8 (0.5-1.3)	1.8 (0.7-4.9)	1.5 (1.0-2.5)	1.0 (0.5-1.9)

CI = confidence interval; DASH = Disability of Arm, Shoulder and Hand questionnaire; 4DSQ = Four-Dimensional Symptom Questionnaire; OR = odds ratio; ref = reference group; SOS = social support scale, a Dutch version of the Social Support Questionnaire.

^a Scored on a range from 1-10 with 10 being the most severe, and 6 is the median.

^b Each item scored on a 5-point Likert scale and summed and transferred to a score ranging from 0 (no disability) to 100 (completely disabled).¹

^c Based on the SF-12 Health Survey. Four answer categories dichotomized as poor (fair or poor) vs good (excellent or very good).²

^d Defined regions are neck-shoulder, including neck; upper part of thoracic spine, shoulder and upper arm; elbow-forearm; and wrist-hand.³

^e Scored on a range from 12 to 60; a higher score indicates more support.⁴

^f Scored on a range from 0 to 32; a higher score indicates more somatization or distress.⁵

^g Urbanization rate⁶: rural = addresses 1,000/km²; urban = addresses > 1,000/km².

References

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