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Musculoskeletal injuries

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In 2007–2009, BEACH (Bettering the Evaluation and Care of Health) recorded 979 encounters at which a possible sports related injury was managed in a patient aged 5–24 years. Although there is no way of determining the cause of an injury through BEACH data, we selected musculoskeletal injuries which could be caused by a sporting activity, excluding problems that were said to be work related, and limited the sample by the age of patient.

Sprains/strains and fractures made up almost 90% of all musculoskeletal injuries in patients aged 5–24 years. The most common sprain/strain was an ankle strain (13.7 per 100 encounters), followed by muscle strain and back strain (5.9 and 3.7 respectively). The most common fractures were radial and metacarpal fractures (5.3 and 4.5 respectively). Acute internal damage to the knee made up a further 5% of injuries, and the remaining 5% was made up of dislocation/subluxation, shoulder syndrome (eg. shoulder tendonitis) and tennis elbow (Table 1).

Gender specific rates showed that males aged 5–24 years were managed for a musculoskeletal injury more than twice as often as females from the same age group (5.9 vs. 2.7 per 100 encounters). An age breakdown found that those aged 5–9 years experienced the lowest management rate of musculoskeletal injuries in the group (2.3 per 100 encounters), while those aged 10–14 were managed almost three times more often (6.2 per 100 encounters).

A medication was prescribed/supplied/advised for over-the-counter (OTC) purchase in the management of more than a third of all musculoskeletal injury problems with patients aged 5–24 years (Table 2). Half of these were prescribed and 44% were advised for OTC purchase. The most common medication was paracetamol, followed by ibuprofen, diclofenac and paracetamol/codeine. A clinical treatment (mainly advice/education and counselling) or a procedural treatment was provided for half of all musculoskeletal injury problems. Almost half of the procedural treatments were for repair/fixation-suture/cast (12.6 per 100 problems), and a further 28% for dressings/compression (7.3 per 100 problems). Almost half of all referrals were to a physiotherapist (7.8 per 100

injury problems) followed by those to an orthopaedic surgeon (5.3 per 100 injury problems). An X-ray was ordered for a third of all problems, most commonly of the ankle and wrist (6.0 and 5.3 per 100 problems respectively) (Table 2).

Table 1. Summary of musculoskeletal injuries, patients aged 5–24 years

Musculoskeletal injury	Rate per 100 encounters
Sprain/strain	48.8
Fracture	40.8
Acute internal knee damage	5.0
Dislocation/subluxation	2.9
Shoulder syndrome	2.3
Tennis elbow	1.0

Table 2. Management of musculoskeletal injuries, patients aged 5–24 years

Management type	Rate per 100 problems
Medications	37.3
Paracetamol	9.1
Ibuprofen	6.6
Diclofenac sodium/topical	5.9
Paracetamol/codeine	3.9
Other treatments	51.7
Clinical	25.8
Procedural	25.9
Referrals	17.5
Physiotherapist	7.8
Orthopaedic surgeon	5.3
Imaging	37.5
X-ray	33.2

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