Short reports

Provision of physiotherapy services at the sixth All Africa Games

Jennifer Jelsma, Heather Dawson, Graham Smith, Cletus Satumba, Dorcas Madzivire

Abstract
The provision of physiotherapy services to guest nations by the host nation, Zimbabwe, at the sixth All Africa Games is examined. There was a high rate of pre-existing injury. Ice, the Cryocuff, and ultrasound were the most frequently used tools, and should be made available to

physiotherapists at all multisport events. It is recommended that collection of epidemiological data be standardised to allow comparison between events.
(Br J Sports Med 1997;31:246–248)

Keywords: physiotherapy; multisport events; Cryocuff; ultrasound

Venue:		Physiotherapist:		ID number:	
Name (optional):		Age:		Sex:	
Country:		Language:			

Sport

Sport type:

☐ Athletics Track☐ Athletics Field☐ Basketball☐ Boxing☐ Cycling

☐ Football☐ Gymnastics☐ Handball☐ Hockey☐ Judo

☐ Martial Arts☐ Netball☐ Swimming/Diving☐ Table Tennis☐ Tennis

☐ Volleyball☐ Weightlifting☐ Rugby

Position/Event:

☐ Forward☐ Midfielder☐ Back☐ Goalkeeper☐ 100–400m

☐ 800–10000m☐ Throwing☐ Jumping☐ Diving☐ Swim: 50–200m

☐ Swim: 200–800m☐ Shoot: smallbore☐ Shoot: claypigeon☐ Gym-rhythmic☐ Gymnastics

☐ Wtlift: < 70kg☐ Wtlift: > 70kg☐ Other

History of injury

Onset of symptoms:

☐ Prior 13th Sept.☐ Compet.-rounds☐ Acute/< 36hrs☐ 06h00–12h00☐ 12h00–18h00

☐ Training☐ Compet.-finals☐ Sub-acute☐ 18h00–24h00☐ 24h00–06h00

☐ Non-sport related☐ Post-compet.☐ Chronic/Overuse

Classification:

Time of day of injury:

Mechanism of injury:

☐ Contact/Person☐ Contact/Tool☐ Cont.surface/Frict.☐ Stretch☐ MVA

☐ Overuse☐ Torsion/Twist☐ Weightlifting☐ Environment☐ Other

☐ No previous inj.☐ Similar inj. < 2wks☐ Similar inj. > 2wks☐ Previous surgery to same site☐ Other injury same limb < 4wks☐ Other injury opp. limb within 4wks☐ Other surgery☐ Other (specify)

Assessment

Region:

☐ L☐ R☐ Dominant☐ Non-dominant

☐ Head☐ Face☐ Neck☐ Spine☐ Trunk

☐ Shoulder☐ Upper arm☐ Elbow☐ Forearm☐ Wrist

☐ Hand☐ Finger☐ Pelvis☐ Groin☐ Hip

☐ Thigh☐ Knee☐ Lower leg☐ Foot☐ Toe

☐ Vital organs☐ Systemic☐ Other

Primary injury structure:

☐ Bone☐ Joint☐ Muscle☐ Ligament☐ Tendon

☐ Nerve☐ Organ☐ Vascular☐ Skin☐ Nails

☐ Ear☐ Eye☐ Other

Department of Rehabilitation, University of Zimbabwe, Box A178, Avondale, Harare, Zimbabwe
J Jelsma
H Dawson
D Madzivire

PhysioTech, Glasgow, Scotland, United Kingdom
G Smith

Zimbabwe National Army
C Satumba

Correspondence to: J Jelsma.

Accepted for publication 12 March 1997

The All Africa Games (AAG) is one of the four largest multisport events held in the world. The sixth AAG was held in Zimbabwe in September 1995 and involved 3188 competitors from fifty countries, participating in 21 sports. Members of the Zimbabwe Physiotherapy Association provided a physiotherapy service free of charge to both local teams and guest athletes under the auspices of the medical section of the Organising Committee, COJA-Z. This report pertains to the provision of physiotherapy services by the host nation to guest athletes from countries that did not have their own physiotherapy service.

Organisation of services

The service was well advertised and accessible, being within the Games Village and available from 0700 to 1900. The majority of cases were self-referred and each athlete who presented for physiotherapy was assessed and the findings and treatment documented. A spreadsheet (fig

1) was developed specifically to record physiotherapy data and was based on the general medical data collection forms used during the 1994 Commonwealth Games and the World Police and Fire Games held in 1995. There was a high degree of compliance with regard to the overall use of the spreadsheet. However, during entry of data for computer analysis it was occasionally necessary to refer to the detailed client assessment record to ensure accuracy of information.

Results and discussion

During the ten-day period of the Games a total of 541 treatments was provided for 258 guest athletes. Athletes from 38 different countries were seen with 66.6% deriving from non-anglophone countries. A decision was taken to limit the use of electrotherapy modalities only to clients with whom adequate communication was possible.

Assessment

Muscles affected (if applicable):

☐ Flexors

☐ Extensors

☐ Abductors

☐ Adductors

☐ Rotators

Main problems on assessment:

☐ Pain

☐ Swelling

☐ Weakness

☐ Reduced ROM

☐ Instability

☐ Skin lesion

☐ Neuro impairment

☐ Sensory loss

☐ Other (specify)

Type of injury:

☐ Strain/Sprain

☐ Rupture

☐ Dislocation

☐ Subluxation

☐ Haemarthr.

☐ Effusion

☐ Fracture

☐ Graze/Abrasion

☐ Haematoma

☐ Circulatory

☐ N. compression

☐ N. rupture

☐ Other

Functional abilities on initial assessment:

☐ NWB

☐ PWB (supported)

☐ FWB

☐ UL-immobilised

☐ UL-strapped

☐ UL-full mvt.

☐ Other (specify)

Physiotherapy

Physiotherapy action:

☐ Ice/Cold

☐ Compression

☐ Elevation

☐ Heat

☐ Ultrasound

☐ TENS

☐ Interferential

☐ Muscle stimulation

☐ Joint mobs.

☐ Massage

☐ Deep frictions

☐ Acupuncture

☐ Soft tissue stretch

☐ Exercise therapy

☐ Strapping

☐ Splinting

☐ Wound care

☐ Crutch walking

☐ Advice

☐ Referral

☐ Other (specify)

Advice:

☐ Rest/No activity

☐ Limit activity

☐ Full activity/can compete

Outcome

TO BE FILLED IN AFTER LAST ATTENDANCE:

Functional abilities on final assessment:

☐ NWB

☐ PWB (supported)

☐ FWB

☐ UL-immobilised

☐ UL-strapped

☐ UL-full mvt.

☐ Other (specify)

Return to sport:

☐ Cannot compete

☐ Can compete

☐ Other (specify)

Mode of disposal:

☐ Referred

☐ Discharged

☐ Defaulted

☐ End of Games

☐ Other

Days from first examination to last attendance:

Number of physiotherapy treatments:

Comments:

Figure 1 Spreadsheet developed to record physiotherapy data obtained at the sixth All Africa Games. NWB = non-weight-bearing; PWB = partial weight-bearing; FWB = full weight-bearing; UL = upper limb; MVA = motor-vehicle accident; TENS = transcutaneous electrical stimulation.

It was noteworthy that 91 (35.3%) of the athletes were carrying the injury at the opening of the AAG. The finding that 63 (24%) of the injuries were in the chronic stage and that overuse was the cause of the injury in 58 cases (22.5%) underscored the ongoing nature of the injuries. A high rate of pre-existing injury is almost universally reported in the literature.¹⁻³ There is an obvious need for physiotherapy involvement during pre-event training and improved screening before participation in international events.

A striking feature of the findings on mechanisms, distributions, and types of injury was the similarity to those published for other major multisport events.^{1,3,4} The structure most commonly injured was muscle (41% of 155 injured structures), followed by joint (21.7%). The lower limb was the most common site of injury (in 50% of all regions injured). As in other studies,^{1,3,5} sprains and strains were the most common cause of injury and accounted for 187 (72.5%) of cases. Pain was the predominant presenting symptom in 250 (96.9%) of the athletes. Other symptoms included swelling (oedema or synovitis) in 50 (19.4%) and reduced range of movement in 47 (18.2%).

There were 745 applications of treatment modalities on the injuries sustained. Ice application remained the mainstay of treatment and was applied to 65.5% of clients. The ice was usually applied through the medium of the Cryocuff which combines cold and compression. This figure is comparable with those reported at the 1995 Junior Olympics¹ (60%) but considerably more than the 32.5% usage of ice reported during the XIIth Commonwealth Games.³ Modified trigger point massage⁶ was frequently combined with other massage tech-

niques. Electrotherapy modalities, which included ultrasound therapy, interferential, laser, and transcutaneous electrical stimulation, represented 20% of the modalities applied, a figure that is lower than that reported by Jull and Cupit³ for the XIIth Commonwealth Games.

Conclusion

Health professionals need to address the high rate of pre-existing injury. Patterns of injury were similar to those previously documented, although most of the athletes were from developing countries where training and medical resources may be less than optimal. As ice, the Cryocuff, and ultrasound were frequently used, it is suggested that this equipment be made available to physiotherapists providing services at multisport events. The spreadsheet developed was simple and reliable to use. It is strongly recommended that the collection of epidemiological data be standardised at multisport events to allow comparison between events.

We thank COJA-Z, the organising committee of the AAG.

- 1 Martin RK, Yesalis CE, Foster D, Albright JP. Sports injuries at the 1985 Junior Olympics: an epidemiological analysis. *Am J Sports Med* 1987;15:603-8.
- 2 Hannay DR, English BK, Usherwood TP, Platts M. The provision and use of medical services during the 1991 World Student Games in Sheffield. *J Public Health Med* 1993;15:229-34.
- 3 Jull GA, Cupit RN. Physiotherapy at the XII Commonwealth Games: organisation and utilisation of services. *Australian Journal of Physiotherapy* 1984;30:3-14.
- 4 Laskowski ER, Najarian MM, Smith AM, Stuart MJ, Friend LJ. Medical coverage for multi-event sports competition: a comprehensive analysis of injuries in the 1994 Star of the North Summer Games. *Mayo Clin Proc* 1995;70:549-55.
- 5 Watson AWA. Incidence and nature of sports injuries in Ireland. *Am J Sports Med* 1993;21:137-43.
- 6 Manheim CJ, Lavett D. *The miofascial release manual*. Thorofare, NJ: Slack Incorporated, 1989.