The information is provided as guidance only, allowing you to be more informed in your approach to being a more inclusive coach. No two people are the same, as such, please ensure your first step is always to speak to the person – understand their abilities and goals, and never assume.

There are two types of wheelchairs: powered and manual. This information looks at good coaching practice around coaching manual wheelchair users. The following information may not apply to all wheelchair users but are common characteristics in the impairments listed below.

**Spinal Cord Injury (Paraplegia & Quadriplegia/Tetraplegia)**
A spinal cord injury is damage or trauma to the spinal cord that results in a loss or impaired function causing reduced mobility or sensations. The level of impaired function is dependent on the level of trauma to the spinal cord. Injuries in the thoracic level result in paraplegia which dependant on level can affect abdominal muscle control. Neck injuries (cervical level) usual result in quadriplegia/tetraplegia which dependant on level can affect all of the above and breathing, arms, wrist, fingers and hand function.

Spinal cord injury can be divided into two types of injury. A complete injury results in no function below the level of the injury with both sides of the body being equally affected. An incomplete injury results in some functioning below the primary level of the injury.

**Spina Bifida**
Spina bifida is a series of birth defects that affect the development of the spine and central nervous system which can result in partial or total paralysis of the lower limbs.

**Muscular Dystrophy**
Muscular dystrophy is a group of muscle diseases that weaken the musculoskeletal system and impair locomotion.

**Cerebral Palsy**
Cerebral Palsy is a term that groups motor conditions that cause physical disability within development. Caused by damage to the motor control centres of the brain which results in limits in movement and posture and are often accompanied by disturbance of sensation, depth perception and communication ability.

**Amputee**
Amputation is the removal of a body extremity by trauma, prolonged constricting, or surgery.

**Hemiplegia**
Hemiplegia is total paralysis of the arm, leg, and trunk on the same side of the body.

**Coaching considerations**
- Be aware and minimise risk of common injuries from propelling the wheelchair such as blisters, abrasions and lacerations.
- Check participants’ range of movement; they may, for example, find it difficult to raise their arms above their head.
- There is a common assumption that if a participant is in a wheelchair, they cannot bear weight on their legs. Participants may be able to bear weight, depending on their impairment.
- Participants may tire easily during a session due to a lack of motor skill efficiency.
- Participants may struggle with temperature regulation – both hot and cold. For example, a tetraplegic (quadriplegic) may not be able to perspire and will, therefore, require water to be sprayed on them to avoid overheating.
- Make sure participants take in plenty of fluid during sessions.
- There may be a decrease in a participant’s range of movement due to, for example, a rod in the spine.
- Be aware of hot and cold surfaces, as participants may have lack of sensation in their touch.
- There is the potential for damage such as cuts and bruises below their lesion due to lack of sensation.
• Be aware that some participants may require equipment for bowel and bladder control.

• Participants may have a decreased breathing efficiency due to only their diaphragm supporting their breathing (tetraplegic/quadriplegic).

• If transferring to a different wheelchair or sporting equipment (throwing frame/handcycle), participants should do this independently or with the help of a parent/guardian/personal assistant, or with a trained individual. With higher levels of impairment, a hoist may be required for transfer.

Including Manual Wheelchair Users in Your Coaching Sessions

• Every manual wheelchair user is different; it is recommended you ask the participants before the session. For example, check their range of movement.

• If participants are not using a sports wheelchair, they may not have an anti-tip system fitted to their chair. If this is an option on their chair, ensure it is fitted. If no anti-tip is fitted, reduce the risk of the chair tipping back during an activity (eg by reducing speed and quick turns).

• Apply the STEPS principle (see overleaf).

Strapping

Useful to help improve sitting balance for wheelchair users, particularly spinal cord, foot straps to keep feet on footplate when turning, knee strap to keep central in chair, lap strap to secure hips to be at one with the chair, waist strap to give core balance. Straps can be varied, but for beginners simple Velcro straps work quickly and effectively and provide security and confidence when playing sport. Similarly, taping/strapping for those with upper limb impairments enable rackets to be held securely (eg table tennis/tennis/badminton) and gloves with tactile surface and textured push rims enable those with upper limb impairments to push more effectively.

General Coach Behaviour

• Participants may have a personal assistant providing support; speak directly to the participant rather than communicating through their assistant.

• Be aware of current socially accepted terminology.

• Avoid touching a participants wheelchair as this is part of them.

• Offer to help when it is appropriate.

Sports Venue considerations:

• Accessible parking available.

• Accessible changing rooms and toilets with room for manoeuvring a wheelchair.

• Surfaces with facility should be firm, level and non-slip when wet or dry. Loose surfaces such as gravel and cobbles are not recommended.

• Venue is clutter free with room to freely manoeuvre a wheelchair

• All areas used within a venue need to be easily accessible to a wheelchair. Participants should not have to use extreme diversions when moving around the facility. Venues with extremes of gradient and caber should be avoided.

• If a sports chair is being used then adequate storage space will be needed for the day chair.
Adapting Coaching Sessions for Manual Wheelchair Users

The STEPS principle (Space, Task, Equipment, People and Safety) provides guidance on how to adapt sessions to integrate disabled people. Using this principle, specific considerations/adaptations for manual wheelchair users are given below.

Space
- What is the effect of the size of the play area chosen?
- Can you change the surface so it is suitable for a wheelchair user?
- Is the facility accessible, including access to toilets and changing rooms?
- Decrease targets and distances to make things easier.
- Working in zones enables people of similar ability to be matched.
- Is there room to move around?
- Can you use a tackle-free zone?

Task
- Ensure the demonstrations/communication methods used will enable understanding.
- Adapt rules for the whole group or for individuals.
- Adapt the task for some participants so they can use adapted equipment.
- Adapt a game to use zones, so everyone can play.
- Choose a sport/task that is accessible to all; for example, avoid high jump or run parallel with another accessible activity.
- Recognise rule changes; for example in:
  - tennis, allow two bounces of the ball
  - basketball, allow two touches of wheels before having to bounce or pass the ball
  - table tennis, ensure the other player plays seated.

Equipment
- Size – a larger ball is easier to hit and receive in racket sports.
- Size – a smaller ball is easier to handle in some sports.
- Size – can you make the length of a handle shorter/longer on a racket/bat?
  a. Make the grip size smaller or larger to suit the participant’s needs.
- Size – can you reduce the height of targets (eg a lower badminton net)?
- Is sport-specific specialist equipment available (eg wheelchair football attachment)?
- Does the wheelchair have an anti-tip fitted?

People
- Ensure group dynamics – working in pairs and small groups.
- Vary groups – use mixed-ability groups and similar pairings, and ensure these are not the same for every session.
- Select team roles carefully – to challenge but not to frustrate.
- Let them try – never assume they can’t do it, and work with them on adaptations; what works and what doesn’t?
- As a coach, your position is important for people to hear and see.
- As a coach, develop your demonstration skills to include wheelchair users.

Safety
- Know your individual/group, their ability and potential.
- Know what precautionary action to take (eg medical, behavioural).
- Be aware of further potential heat loss and dehydration with some groups.
- With wheelchair users, be aware of additional space for run-offs and potential hazards (eg nets/walls).

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