

Where and Why I Stand: Children's Perceptions of Standing Wheelchairs



Anne Harris MSc DipCOT
Joanne McConnell DipCOT
Mobility Therapists Whizz-Kidz



Aim and Objectives

To develop guidelines to inform prescription

- Understand how children use standing in their daily lives
- Identify functional benefits
- Perceived benefits of standing wheelchair vs. standing frame



Methodology

Sample:

- Convenient, new users of manual or powered standing chairs

Data Collection:

- Diary of standing at school, evenings, weekends, holidays
- Photographs of significant activities
- Semi-structured interviews

Analysis:

- Common themes regarding use, benefits, difficulties
- Factors inform recommendation for, & prescription of, standing wheelchairs

Subjects

- 7 Boys, 2 girls
- Diagnoses:
 - Muscular dystrophy (4)
 - Cerebral palsy (4)
 - Spinal cord injury (1)
- 3 special schools, 5 mainstream schools, 1 post-school
- Aged 10 to 18; mean 13 years
- 1 manual wheelchair,
- 8 powered wheelchair users
 - 1 Sit to stand
 - 7 lie to stand (1 special controls)
 - 4 drive when standing



Use of Standing Wheelchairs

Style of Use by Children:

- Familiarisation to chair (1)
- Directed standing (2)
- Planned periods during day (3)
- Spontaneous (2)

Length of Time Standing

- 5 – 90 mins per session
- 10 mins to 3 hours in total per day
- Time increased with confidence

Length of Time Standing Pre-wheelchair

- 1-5 times per week
- 30-45 mins per session
- 2 refused to use standing frames



Across Environments

Self-Care Activities

Communicating

- Kissing/cuddles
- Eye to eye

Toilet

- Stand at toilet
- Use bottle

Clothes

- Adjusting trousers
- Looking in mirror at clothes

Body Management

- Control spasms
- Carry out stretches
- Make self comfortable
- Tolerate being in chair/up for longer



Home Activities

Cooking

- Stirring at cooker
- Reaching into cupboards
- Helping parents cook
- Select own food

Leisure

- Playing games consoles
- Watch TV
- Coins in slot machines



School Activities

Planned standing

- Participate in lessons/registration
- Quiet time (?)

Routine standing by all children

- When teachers enter class
- Assembly
- Singing

Spontaneously during activities

- Reach library shelves
- Chatting to friends
- Throwing & catching balls
- Playing at break



Community Activities

Participating

- Taking photographs
- Bowling
- Serving refreshments
- Performing in theatre group
- Singing in church

Use of community facilities

- Reaching shop shelves
- Watch rugby match
- Access cashpoint
- Stand at bar/counters



Psychological Benefits

Wheelchair vs. Standing Frame

- Increased confidence & independence
- Improved motivation
- 'Less black days'
- Improved body image
 - 'Chair functions become a part of how I see myself'
 - 'Feel more alive knowing that people don't have to look down on me'



Practical Benefits

Wheelchair vs. Standing Frame

Manual handling

- Reduced manual handling & number of carers required
- Less equipment

Autonomy

- Independence
- Choice
- Spontaneity

Function

- Increased standing time
- Stand in any environment
- Range of activities increased when able to stand and drive



Equipment Related Disadvantages

Wheelchair vs. Standing Frame

Allowances for Equipment

- Cost of chair, maintenance, regular review
- Bigger/bulkier wheelchairs need adapted vehicle, accommodation

Posture Management

- Knee blocks in place all the time to use standing spontaneously
- Limited choice of seating
- Unable to stand in prone



Discussion

Snapshot

- Need for guidance for new users
- Standing was seen as the activity
- Riser, tilt seen as tools for function
- Prior experience of using standing for practical tasks increased use

Future Work

- Difference between children losing standing skills v those never stood functionally
- Age & diagnosis differences
- Use of functions in combination
- Monitor use over time

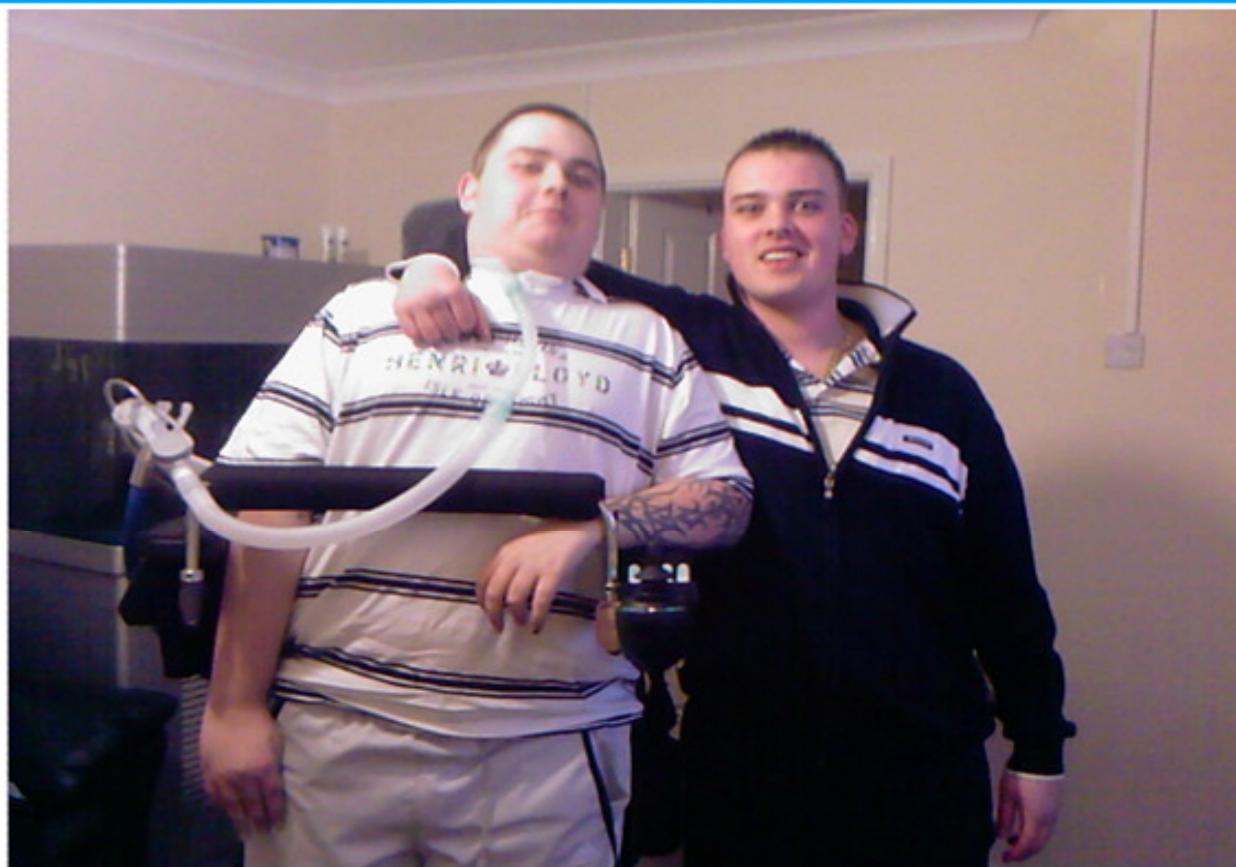


Conclusion

- Increased benefits if standing used for functional activities
- More benefits when used in combination with riser, tilt, recline
- Need to review use of all functions
- Need to follow up over time to gain understanding of how skills develop
- Need to develop practice guidelines



‘To stand is to see life through the
eyes of our peers’
(Lifestand USA 2005)



Thanks you for Listening

Any Questions?



Whizz-kidz
move a life forward