Occupational Therapists’ Knowledge and Involvement in Wheelchair Transportation Safety on School Buses

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Objectives
• Understand occupational therapists’ role in addressing wheelchair transportation safety
• Be able to identify the national safety standards for wheelchair transportation on school buses

Background Information
• Addressing community mobility
  – Accessing and riding the school bus (American Occupational Therapy Association, 2010)
• Identifying and prescribing wheelchairs that meet transportation safety standards (American Academy of Pediatrics, 2001)

Wheelchair Transportation Safety Standards
• ANSI-RESNA WC19 Standards
  – Transit Wheelchair Requirements
    • Four clearly marked securement points for tiedown equipment
    • Securement points must have hook symbol and easy to reach (one handed)
  – Wheelchair Transportation Occupant Restraint System
    • Placement of belts
      » Lap
      » Shoulder
      » Rear tiedown straps
      » Front tiedown straps

(Shutrump, Manary, & Buring, 2008; Manary, Ritchie, & Schneider, 2010)

Literature Review
• Poor level of knowledge
  – Individuals seated in wheelchairs and health care professionals (Brinkey, Savoie, Hurvitz & Flannagan, 2009)
• Occupational and physical therapists self-rated as having little or no knowledge or training (Blake, Sherman, Morris & Lapidus, 2006)

Purpose
• To determine occupational therapists’ knowledge and involvement in wheelchair transportation safety on school buses.
Methods and Instruments

- Questionnaire mailed to participants
  - 22 questions (Questions adapted from Brinkey et al., 2009)
  - 500 participants from AOTA Early Intervention & Schools Special Interest Section mailing list
  - Random sampling without replacement

- Data Analysis
  - SPSS Version 19
  - Descriptive statistics
  - Data split by respondents working with individuals in wheelchairs

Participants

- 199 participants included (40% response rate)
  - 69.3% worked with clients in wheelchairs
  - 84% practiced in a school setting
  - 11% practiced in early intervention, inpatient, outpatient, and the NICU
  - Average years of practice: 21.5

Familiarity of Occupational Therapists with WC19 Standards

Occupational Therapists’ Knowledge on Wheelchair Transportation

- Of all respondents, 53.8% had not received education on wheelchair transportation safety
- Of practitioners working with individuals in wheelchairs (N=131), 85.5% had not heard of a transit wheelchair or transit option on a wheelchair

Frequency of Occupational Therapists Addressing Wheelchair Transportation

Frequency of Occupational Therapists Addressing Community Mobility
Who Is Addressing Wheelchair Transportation

- Physical Therapist: 32%
- Assistive Technology Provider: 3%
- School Bus Transportation Staff: 23%
- Teacher: 4%
- Parent: 12%
- School Nurse: 2%
- Medical Supplier: 8%
- Other: 7%
- Not Sure: 8%

N= 187

Discussion

• Results support previous findings (Brinkey et al., 2009; Blake et al., 2006)
• Findings are concerning given occupational therapists’ role
• Recent development of WC19 Standards
• Need for increased education and awareness of wheelchair transportation safety standards

Limitations

• Self-report vs. assessment of knowledge
• Responses difficult to interpret
  • i.e. “Other” and “N/A”
  • Multiple responses

Future Research

• Explore factors limiting occupational therapists’ involvement and knowledge of wheelchair transportation
• Determine the importance occupational therapists place on addressing wheelchair transportation safety on school buses
• Determine if occupational therapy programs are educating students on wheelchair transportation standards

Clinical Application

• Education for caregivers, transportation personnel, and other clinicians (Manary & Schneider, 2011)
  – Resources (see next slide)
  – Promote involvement
    • Proper positioning of postural belts
    • Velcro cushion to wheelchair
    • Inquire about driver training
    • IEP
• Consumer expectations (RESNA Restatement 2012) (Buning, Bertocci, Schneider, Karg, Brown, & Johnson, 2012)
  – Knowledgeable rehabilitation professionals
  – Benefit for third-party payers
• School Bus Transportation for Students Seated in Wheelchairs workshop (Buning & Karg, 2011)

Clinical Resources

• List of WC19 compliant products
  – www.tercwts.org
• AOTA Website
  – Search “Youth Transportation” to find AOTA information page
• RideSafe brochure
  – www.travelsafer.org
3/19/2014

Questions?

References
