Case Study Answers: Module 9 – Manual Wheelchair

Instructions: Download the case study on Paolo and then answer the questions below.

Paolo did not regain any functional lower limbs activities for functional transfer at the end of his inpatient rehabilitation.

1. **List the functional task that Paolo performs in his wheelchair. How would these tasks influence on the selection of the wheelchair frame style and seat frame configuration?**
   - transfers from wheelchair to bed, commode and car
     - *seat to floor height*
     - *ability to more forward for transfer with seat rake*
   - independent in his personal ADL
     - *sufficient wheelchair stability to perform ADL tasks*
   - prepare a basic meal
     - *front frame angle and seat to floor height to access kitchen*
   - intermittent catheterisations
     - *able to move pelvic forward and open hip angle with seat rake and seat depth*
   - wheelchair skill for active wheelchair mobility
     - *rigid frame tends to have a higher performance for active user*
2. **What are the social and environmental factors that will influence on the options of accessories of his wheelchair?**
   - large block with a long, moderately sloped, concrete driveway
     - *maximise propulsion efficiency through the provision of light weight wheelchair, axle position adjustment and seating components that enhance postural stability*
   - use a taxi and wheelchair accessible bus
     - *assess for headrest and tie down points*
   - go to the pub with his mates
     - *consider wheelchair manoeuvrability in tight environment – taper front frame and front frame angle*
   - "tinkering" with motorbikes
     - *consider puncture-proof tyres*
3. **What can Paola do about his pain if it reoccurs?**
   - review by seating or spinal clinicians for wheelchair setup and wheelchair propulsion pattern
   - reduce the wheelchair overall weight. Eg, minimise the weight of the under chair bag, use high pressure pneumatic tyres instead of solid
   - reduce roll resistance by using medium size castors
   - ensure the rear wheels and castors are in good alignment

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- consider ergonomic push rims to reduce forearm and wrist pain. eg, natural fit hand rims