

Assistive Mobility Devices: PBL

Douglas W. Martin, MD, FAAFP,
FACOEM, FAADEP

Mark D. Pilley, MD, FAAFP, FAADEP



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Douglas W. Martin, MD, FAAFP, FACOEM, FAADEP

Medical Director, UnityPoint Clinic – Occupational Medicine, Sioux City, Iowa.

Dr. Martin is a graduate of the University of Nebraska Medical Center's College of Medicine in Omaha. He completed his residency in Davenport, Iowa. He also completed a mini-residency in occupational medicine at the University of Cincinnati. The majority of Dr. Martin's practice is related to musculoskeletal-related treatments. He has given numerous lectures on occupational medicine topics, with emphasis on upper-extremity repetitive motion injuries, disability medicine, and medical review officer functions. He is a diplomate of the American Board of Family Medicine, fellow of the American Academy of Family Physicians, fellow of the American College of Occupational and Environmental Medicine, and fellow of the American Academy of Disability Evaluating Physicians.



Mark D. Pilley, MD, FAAFP, FAADEP

Medical Director, Strategic Health Solutions, LLC (SHS).

Dr. Pilley is a graduate of the University of Missouri School of Medicine in Columbia. He completed his family medicine residency at the University of Arkansas for Medical Sciences in Little Rock. Dr. Pilley has provided primary care services for 34 years, including occupational medicine services. He performs independent medical examinations for legal counsel, workers compensation, and Social Security disability services. As medical director for SHS, his responsibilities include providing support and subject matter expertise in performing medical review audits and reports, and monitoring the consistency and accuracy of medical review determinations. He assists in providing medical expertise with regard to benefit integrity matters and in support of Medicaid provider outreach and education.



Learning Objectives

1. Practice applying new knowledge and competencies gained from assistive mobility devices sessions, and receive feedback from expert faculty.
2. Interact collaboratively with peers to solve complex and challenging case-study scenarios.
3. Develop problem-solving skills that promote effective reasoning to manage assistive mobility devices within the context of professional practice.





Case Example #1

- 74 Y/O recovering from hip fracture & is being discharged home
 - Post 8-day hospital inpatient stay
- Also has mild arthritis in both knees
- Able to only walk short distances
- Limited UE strength

FMX

AES Response Question

- What else do you need to know in order to make a reasonable recommendation for the type of mobility assistive device needed?

FMX

Case Example #1

- Home Health Service ordered to assist with mobility & moderate impairment with regard to performing MRADLs
 - Home Bound Status
- Ordering physician requested patient be fitted for a Wheeled Walker with a seat – allows a moment of rest

FMX

AES Discussion Question

- Do you believe that this recommendation is appropriate?
- Why or why not?

FMX

Case Example #2

- A 63 year old female with rheumatoid arthritis asks you about a cane. She is right hand dominant and has significant digital deformity in both hands. The patient reports that she is having increasing difficulty with her knees which are also affected by RA.

FMX

Case Example #2

- She explains that she lives in an apartment by herself with only 2 steps.
- She has tried a standard C cane and feels that she does not have adequate support in weight bearing.

FMX

AES Discussion Question

- What other parameters need to be taken into consideration when determining her needs?

FMX

Case Example #2

- You decide to obtain a physical therapy evaluation and you are told that her ambulatory endurance is about one block. There are some minor balance issues with rapid walking. She has reasonable ROM in both knees. Upper extremity strength is good, but prehension is a problem.

FMX

AES Discussion Question

- What do you believe is the appropriate recommendation and why?

FMX

Case Example #3

- 80 year old Medicare beneficiary
- Recently sustained a CVA
 - Has residual moderate strength of the Right Lower Extremity
 - Has mild weakness of her Right Upper Extremity
 - Able to transfer from bed to chair with minimal assistance
 - S/P Physical Therapy
 - Now able to operate a standard or manual WC - going in a straight path with assistance from the spouse to negotiate the turns in their house
 - The patient has also started using a walker with some success
 - The treating physician felt the patient is best served with a standard wheelchair and a walker, with more physical therapy
 - The physician did not want the patient to become dependent on a PMD
 - Concern was the patient's residual muscle strength could worsen, increasing risk of falls, & Increasing risk of pressure ulcers

FMX

AES Discussion Question

- What is your opinion regarding this patients prognosis in terms of improvement?

FMX

AES Discussion Question

- What is your general viewpoint on these types of patients? Do you tend to be an optimist or a pessimist when it comes to functional recovery?

FMX

AES Discussion Question

- Depending upon your predictive viewpoint regarding this patient, do you think both a walker and wheelchair prescription is appropriate? Why or why not?

FMX

Case Example #3

- Unfortunately, the patient's spouse has now developed dementia and is in a nursing home.

FMX

AES Discussion Question

- Does this change your recommendation?
- If so, how?

FMX

Case Example #4

- 54 Y/O Medicare beneficiary – comprehensive MAE eval
 - Hemiplegia or hemiparesis – late effect of CVA
 - COPD
 - DJD – knees
- Significant limitations – MRADLs
- PMH use of a cane
 - No longer functional
 - No longer safe
- Timed Up & Go Test – 47 Sec
 - >14 Sec indicates increased risk for falling

FMX

Case Example #4

- The F2F assessment and specialty evaluation of the patient's seating and mobility needs concluded that a Pride 600 ES power wheelchair will best meet patient needs
 - The provider felt the patient can operate this PMD safely
 - This PMD provides maneuverability needed to assist the patient with MADLs within their residence

FMX

Case Example #4

- The following support a prescription for the PMD selected:
 - The patient cannot ambulate using a cane or other MAE due to hemiparesis
 - Gait is slow and unsteady, placing the patient at increase risk for falls
 - The patient does not have sufficient UE function and strength to self-propel a manual WC due to hemiparesis
 - The patient is not a candidate for a scooter due to an inability to operate the tiller system due to hemiparesis

FMX

Case Example #4

- The following support a prescription for the PMD selected:
 - A PMD will significantly improve the patient's ability to participate in MRADLs.
 - The patient is willing and capable of using the selected PMD
 - The patient needs a PMD that exceeds the capability of a Group 1 PMD
 - The device will be used continuously throughout the day and on surfaces for which a Group 1 PMD is not designed.

FMX

Case Example #4

- Reason for a F2F Evaluation: New MAE
- Current MAE: standard cane
- Problems with current cane: painful walking, history of falling – including a recent fall
- Ht: 5'8"; Wt: 236#
- Education/Employment: not employed
- Residence: lives in an apartment with spouse

FMX

Case Example #4

- LCMP or Specialty Therapy Assessment
- ADL Status – Modified Independent with most ADLs
 - ADLs – require extra time, ambulation compromises safety & exposes to risk of falling
 - Unable to use a manual WC
 - Bath Safety - Modified Independent-set up – Shower Bench & Grab Bars
 - Hygiene – Modified Independent
 - Dressing – Modified Independent
 - Self-Feeding – Modified Independent

FMX

Case Example #4

- LCMP or Specialty Therapy Assessment
- ADL Status – Modified Independent with most ADLs
 - Instrumental ADL Status – requires assistance with most ADLs except cooking & light duty only
 - Caregiver – Spouse
 - Meal Preparation: Modified Independent – Light Duty Only

FMX

Case Example #4

- LCMP or Specialty Therapy Assessment
- ADL Status – Modified Independent with most ADLs
 - Housecleaning: Modified Independent – Light Duty Only
 - Laundry: Modified Independent – Light Duty Only
 - Transfer Status: Modified Independent with Stand Pivot
 - Weight Shift - Yes

FMX

Case Example #4

LCMP or Specialty Therapy Assessment

- Functional Mobility: ambulation with a cane
 - Timed Up & Go Test = 47 seconds
 - Indicates non-functional walking speed &
 - At Risk for Falls
 - Rated activity as 15 on Borg Perceived Exertion Scale
 - Range – 6-20 with 20 being highest

FMX

Case Example #4

LCMP or Specialty Therapy Assessment

- Community Mobility: limited 2^o compromised ambulation status
- Cognition: intact
- Leisure Interests: enjoys participating in community activities
- Home Accessibility: 1st Floor apartment – Ramp Entrance

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Case Example #4

LCMP or Specialty Therapy Assessment

- Physical Motor Assessment:
 - Rt. UE – 4+/5 - Unimpaired
 - Lt. UE – Trace Shoulder Shrug – Impaired
 - Rt. LE – 4+/5 – Unimpaired, AROM - WNL
 - Lt. LE – 2/5 Hip Flexion, 2/5 Quad, 0 distal LE Strength – PROM – Limited
 - Posture (Sitting & Supine): Sit with lean to Rt.

FMX

Case Example #4

LCMP or Specialty Therapy Assessment

- Goals for a New Seating & Mobility Device
 - Independent mobility at home
 - Independent mobility in the community
 - Increase participation in MRADLs

FMX

Case Example #4

Physician Assessment:

- 54 Y/O Lt. Handed patient with COPD & Lt. Hemiparesis 2^o CVAs
- CC: PMD evaluation
- MAE Use on presentation – Standard Cane & Quad Cane
- Frequent Falls, Slow Gait, Lt. Knee Arthritis aggravated with walking
- PMH/SH: MI

FMX

Case Example #4

Physician Assessment:

- Active Problem List:
 - Paralytic Syndrome (Lt. Side)
 - S/P CVA
 - DJD – Lt. Knee
 - COPD

FMX

Case Example #4

Physician Assessment:

- Functional History:
 - Mobility: Non-Functional Ambulation 2^o Falls, Poor Balance, Weakness, Spastic Gait & Pain
 - Self Care: Needs assistance with following ADLs
 - Grooming, toileting, dressing, bathing, and self-feeding
 - Braces: Lt. AFO
 - Assistive Devices: Standard Straight Cane & Quad Cane

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Case Example #4

Social History:

- Patient lives with son in an accessible 1st floor apartment
 - Cannot accommodate a scooter

Pertinent Physical Examination:

- Hemiparetic – Lt side
- Increased tone in Lt Arm & Leg
 - MAS 3-4 in LUE & 1 in LLE
- Impaired arm with trace shoulder shrug
- Gait: functionally slow & hemiparetic
- Unable to use cane for ambulation

Case Example #4

Assessment:

- 54 Y/O in need of MAE – PMD
- Unable to functionally ambulate with conventional MAE
- Cannot propel a manual chair 2^o hemiparesis
- Not able to maneuver scooter within the home

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Case Example #4

7-Element Order

- 1) Beneficiary's name – Medicare Patient #1
- 2) Description – Pride 600 ES PMD
- 3) Date F2F = 07/01/XXXX
- 4) Hemiplegia – Left UE & LE; Late Effect of CVA
 - COPD & DJD - Knee
- 5) Length of need – 99 Years (Lifetime)
- 6) Physician's signature – Electronically Signed by Dr Treating Physician
- 7) Date of physician signature – 07/01/XXXX

FMX

Case Example #4

Supplier Performs Home Assessment:

- Visit conducted by ATP – Date performed
 - Jazzy 600 ES was used
 - 24" wide & 40" long
 - Accessible apartment on 1st floor
 - Accessible directly from main sidewalk
 - Ramped entrance – 33" wide
 - Enters into main living area with open kitchen
 - Bedroom – down hall with 30" wide door
 - Bathroom at end of same hall with 28" wide door

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Case Example #4

Supplier Performs Home Assessment:

- Visit conducted by ATP – Date performed
 - PMD – can enter bathroom & bedroom
 - Allows for transfer to commode & shower
 - Can be driven out in reverse
 - PMD can be maneuvered within the apartment
 - PMD can access common areas of apartment building
 - Apartment fitted with smoke alarms
 - All electrical outlets are 3 pronged & grounded for safe battery charging

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Case Example #4

From the Supplier – Detailed Product Description

Intervention & Specification	Justification
Seat – >18" wide X 20" deep – Captain's seat	Provide needed base support & positioning of pelvis. Achieves distribution of weight bearing surface to reduce pressure and reduce risk of potential skin breakdown.
Lap Belt – Push-button pelvic belt	Provide safety & stability when operating PMD. Provide additional pelvic positioning in conjunction with seat cushion.

FMX

Case Example #4

From the Supplier – Detailed Product Description

Intervention & Specification	Justification
Leg/Foot Support - >Standard foot platform	Provides appropriate foot support.
Arm Support - >Height adjustable flip back armrests. E0973	Provide appropriate arm support & additional trunk stability through weight bearing in the UEs.
Tires/Casters - >Standard option tires & casters with flat free inserts.	Standard options. Flat free inserts are necessary as the patient does not have the physical capability or resources to repair a flat tire & risk being stranded.

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Case Example #4

From the Supplier – Detailed Product Description

Intervention & Specification	Justification
Wheel-Locks/Anti-tippers – Rear anti-tippers.	Provides safety & stability of PMD
Controller – >Programmable proportional joystick. >Swing away joystick mount. E1028	Necessary to operate PMD >Necessary to enable patient to relocate joystick during transfers allowing safe access to armrest for support.
Batteries – >Group 22NF SLA batteries. E2361 >Standard off board charger.	Necessary to power the PMD.

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Thank You

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Contact Information

- Dr. Martin
– douglas.martin@unitypoint.org
- Dr. Pilley
– m.pilley@strategichs.com

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Associated Session

- Assistive Mobility Devices: Review of Ambulatory Aids With Focus on Power Mobility Devices

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