**Background**
- Ischemic stroke: blood flow is impeded due to blocked artery
- Stroke is the 5th leading cause of death and the primary cause of disability and care dependency in adults in the United States
- Patient age and stroke severity, size, and location are strong predictors in prognosis
- Stroke rehab initiated during first 3 months can reduce mortality

**Purpose**
To provide physical therapy management strategies used during an inpatient stay for a patient who experienced an ischemic stroke.

**Case Description**
- 50 y/o male
- Left MCA ischemic stroke
- Received daily physical therapy over 3 weeks in the acute rehabilitation setting
- Prior to admission he was completely independent
- Displayed impaired right upper and lower extremity strength, tone, sensation, motor control, and coordination secondary to right hemiparesis. Aphasia, apraxia, and impaired cognition

**Examination**

<table>
<thead>
<tr>
<th>Tests &amp; Measures</th>
<th>Initial Examination Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIM</strong></td>
<td></td>
</tr>
<tr>
<td>Left</td>
<td>Right</td>
</tr>
<tr>
<td>Proprioception</td>
<td>Unimpaired</td>
</tr>
<tr>
<td>Light Touch</td>
<td>Impaired</td>
</tr>
<tr>
<td>Deep Pressure &amp; Localization</td>
<td>Absent</td>
</tr>
<tr>
<td>Coordination (heel to shin)</td>
<td>Unimpaired</td>
</tr>
<tr>
<td>Gait Analysis</td>
<td>- Late stance: decreased hip extension</td>
</tr>
<tr>
<td></td>
<td>- Swing phase: decreased step length</td>
</tr>
<tr>
<td></td>
<td>- Overall decreased cadence</td>
</tr>
</tbody>
</table>

**Interventions**

- **Strength**
  - LE strengthening with and without Bioness in seated and standing.
  - W/ rail on left LBQC
  - W/ Bioness
  - BWSTT/ Robot assisted
  - Verbal cueing, repetition, endurance.

- **Balance**
  - Weight shifting laterally, A/P
  - Sitting and standing
  - Static and dynamic
  - Visual variations

- **Gait**
  - Move from sit to supine with the head of bed flat at the level of supervision.
  - Move from sit to stand with min (A).
  - Perform a stand-pivot with min (A).
  - Ambulate over level surfaces with min (A) over 75 feet (ft.) w/ LBQC.
  - Negotiate 5 steps with a rail on the left with min(A).
  - Ambulate w/ a manual wheelchair over 250 ft. with mod(I).

- **Functional Training**
  - Transfer training and bed mobility
  - Variety of surfaces
  - Other: stair training, neuromuscular activities/ left LE weight bearing

**Outcomes**

**Short Term Goals (1 week):**
1. Move from sit to supine with the head of bed flat at the level of supervision.
2. Move from sit to stand with min (A).
3. Perform a stand-pivot with min (A).
4. Ambulate over level surfaces with min (A) over 75 feet (ft.) w/ LBQC.
5. Negotiate 5 steps with a rail on the left with min(A).
6. Ambulate w/ a manual wheelchair over 250 ft. with mod (I).

**Long Term Goals (3 weeks):**
1. Ambulate 150 ft. with SPV and a large base quad cane (LBQC) to access home environment.
2. Ascend/descend 16 steps with a rail on the left and min(A) to access bedroom on second floor.

- Patient progressed from an overall FIM level of maximum assist to a level of minimum assist/supervision level for functional mobility and gait.
- Patient also displayed improvements with strength, coordination, activity tolerance, cognition, and endurance.

**Discussion**
Individuals who have experienced a stroke face many variables that will affect recovery. Decreased age can benefit a patient while increased risk factors and severity of stroke can certainly hinder recovery. The use of research supported and patient specific interventions may assist in restoring gait and functional mobility in patients.

**Acknowledgements**
The author acknowledges Michael Fillyaw, MS, PT for assistance with this case report and Laura Medina, DPT with supervision and assistance with treatment.

**References**
- Fillyaw M, MS, PT for assistance with this case report and Laura Medina, DPT with supervision and assistance with treatment.