

**BRODA<sup>®</sup>**

*CLINICAL BENEFITS  
OF TILT-IN-SPACE  
**RESOURCE GUIDE***

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## TILT-IN-SPACE CLINICAL JUSTIFICATION



*BRODA chairs go beyond corrective positioning to provide improved independence and quality of life. With the industry's most effective combinations of tilt and recline, BRODA chairs are the unrivaled solution for your next clinical application.*

# TILT IN SPACE WHEELCHAIRS: CRITERIA, CLINICAL JUSTIFICATION AND FUNCTIONAL BENEFITS

<b>CRITERIA / BENEFIT</b>	<b>CLINICAL JUSTIFICATION AND FUNCTIONAL BENEFITS</b>
<b>PRESSURE RELIEF</b> Skin Breakdown Decreased Skin Integrity	<ul style="list-style-type: none"> <li>- Facilitates position changes associated with pressure relief for individuals with limited range of motion</li> <li>- Provides a change in position for those who cannot independently shift their weight</li> <li>- Tilting the seating surface allows for repositioning which shifts the weight and pressure away from the critical areas under the pelvis</li> <li>- Proper repositioning improves blood flow, oxygenation and retention of the skin tissue which is vital for maintaining skin integrity</li> </ul>
<b>POSITIONING</b> Decreased Postural Control Decreased Head/Neck Control	<ul style="list-style-type: none"> <li>- Posterior tilt can reduce the effects of gravity on the trunk and upper body, which provides a more functional and proper upright posture</li> <li>- Facilitates more functional use of the upper extremities</li> <li>- Facilitates safe effective positioning of the patient following transfer allowing adjustment of posture from the tilted position</li> <li>- Eliminates *shear displacement (sliding out of position) during position changes</li> <li>- Posterior tilt effectively opens the diaphragm allowing for greater expansion of the lungs resulting in improved oxygenation, blood flow and organ function</li> <li>- Facilitates positioning for comfort, pain management and/or pain relief</li> </ul>
<b>ENDURANCE</b> Function Mobility Related Activities of Daily Living	<ul style="list-style-type: none"> <li>- Proper positioning and weight distribution increases sitting tolerance throughout the course of the day</li> <li>- Positioning the patient in an action ready position improving the patient's ability to socialize and engage in their surroundings</li> <li>- Increase endurance for completion of activities of daily living by placing the patient in an action ready position</li> <li>- Provides proper seating alignment decreasing patient fatigue and postural deviations</li> <li>- Posterior tilt enhances visual orientation, speech, alertness and arousal</li> </ul>
<b>MEDICAL FUNCTIONS</b> Respiratory Digestive Physiological	<ul style="list-style-type: none"> <li>- Obtaining proper posture through the use of tilt allows for improved function of the respiratory system</li> <li>- Posterior tilt facilitates proper digestion and decreases risk of aspiration and other complications of the GI Tract</li> <li>- Improves physiological processes such as *orthostatic hypotension, respiration and bowel and bladder function</li> <li>- Manages symptoms related to *edema (swelling) of the extremities</li> </ul>
<b>CAREGIVER BENEFITS</b>	<ul style="list-style-type: none"> <li>- Aids in completion of activities of daily living; feeding, bathing and toileting needs</li> <li>- Allows for frequent repositioning of individuals throughout the day</li> <li>- Improved seating comfort allows for fewer transfers during the course of the day</li> </ul>

\* Terms and definitions can be found in Appendix pg. 19

# MEDICAL CRITERIA AND JUSTIFICATIONS

## **Feature 1: Pressure reduction Comfort Tension Strapping System**

**Criteria:** *Individuals who present with one or more of the following conditions:*

**A. At risk for skin break down or decreased skin integrity**

**B. History of Decubitus Ulcers and/or other types of pressure wounds**

**Justification for A& B:**

*The Comfort Tension Strapping System prevents the bottoming out effect which occurs with standard wheelchair seating surfaces. Each strap conforms individually to the person's body, thus suspending the weight of the person across multiple points. This distributes the individual's weight more evenly and greatly reduces the amount of pressure being placed on any one area. The even distribution of the patient's weight allows for decreased pressure and improved blood flow allowing for greater retention of tissue health which is vital for maintaining skin integrity. Our Comfort Tension Strapping system also allows for improved air flow which aids in decreasing the buildup of heat and moisture as well as decreasing the development of yeast and bacteria while improving seating comfort.*

**C. Outstanding bony prominence and/or musculoskeletal deformities/conditions**

**Justification for C.**

*Each strap conforms individually to the amount of pressure being applied. Therefore, if a user presents with a \*bony prominence or condition such as having \*kyphosis or \*lordosis, the strap will conform to the pressure point instead of creating a higher pressure which occurs with standard wheelchair seats. For an even greater reduction of pressure, select straps may be removed or repositioned.*

**D. Severe Agitation due to or discomfort with typical wheelchair seating surfaces**

**Justification for D.**

*The Comfort Tension Strapping system provides a superior comfortable and less noxious feel than standard wheelchair seating surfaces. The strapping system disperses weight evenly providing a more comfortable seating surface. The straps are ideally firm enough to provide necessary support to encourage proper pelvic positioning helping to prevent tilting of the pelvis and \*postural deviations.*

**E. Decreased Postural Stability and/or Control**

**F. Decreased Mobility in or Misalignment of Pelvis**

**Justification for E & F.**

*Collectively, the straps provide an optimal cradling effect to a user's pelvis, which assist with midline posture. The straps are ideally firm enough to provide necessary support to encourage proper pelvic positioning helping to prevent tilting of the pelvis and postural deviations. The strapping systems ability to give way and mold to the body greatly decreases the amount of pressure placed on the pelvic region.*

**G. Involuntary and/or uncontrolled potentially harmful movements**

**Justification for G.**

*The Comfort Tension Strapping system is designed with smooth straps to cradle the patient while absorbing the energy produced by the movement of the patients. The straps ability to give way during episodic movements greatly decreases the potential for injuries generally associated with standard seating surfaces.*

# MEDICAL CRITERIA AND JUSTIFICATIONS

## **Feature 2: Adjustable, removable and swing away arm rests**

**Criteria: Individuals who present with one or more of the following conditions:**

### **A. Decreased muscle tone in upper extremity and/or shoulder subluxation or at risk for shoulder subluxation**

#### **Justification for A.**

Adjustable armrest assists with proper height positioning for upper extremities. Providing proper support and positioning of the upper extremities decreases postural deviations. Height adjustable arm rest assist in managing current or potential \*shoulder subluxation by allowing for frequent adjustment and proper positioning of the arm.

### **B. Decreased postural stability/control**

#### **Justification for B.**

Having upper extremities supported assists with proper postural trunk support by promoting a more midline position. Providing proper support and positioning decreases postural deviations and facilitates functional use of the upper extremities. Improved posture aids in improving blood flow, obtaining greater expansion of the \*thoracic diaphragm and improved organ function and capacity.

### **C. Unable to or unsafe to perform stand pivot transfers or uses a slide board for transfers**

#### **Justification for C.**

Swing away and/or removable armrests accommodate the use of patient lifts and facilitates safer transfers by providing better access to the patient. With the chair laid flat and the arm removed a supine transfer can be completed (on the Synthesis). Swing away and/or removable armrests can also aid in completion of bowel and bladder protocols, changing of incontinence products and completion of activities of daily living.

### **D. Decreased ability to reposition upper extremity and/or severe discomfort or agitation with standard arm rests**

#### **Justification for D.**

Height adjustable armrests allow caretakers to adjust an individual's arm throughout various heights, which is necessary for pressure reduction, edema control and/or comfort. Proper positioning of the upper extremities also aids in maintaining a midline posture and improves postural stability. Improved postural stability can aid in decreasing postural deviations such as but not limited to; slumping, sliding, falling forward and lateral lean.

### **E. An upper extremity with a cast, sling or brace**

#### **Justification for E.**

The ability to swing away and/or remove the armrest accommodates casts, slings, braces and other types of devices. Height adjustable armrests provide proper support and allow for frequent repositioning of the upper extremities, aiding in pain management and/or relief, as well as the management of edema and postural support. The armrests can be adjusted to accommodate and support the weight of the cast, sling or brace improving patient comfort, endurance and ability to engage in their surroundings.

# MEDICAL CRITERIA AND JUSTIFICATIONS

## **Feature 3: Height adjustable footrest with Comfort Tension Strapping System**

**Criteria: Individuals who present with one or more of the following conditions:**

### **A. At risk for skin breakdown or decreased skin integrity on the lower extremities**

#### **Justification for A.**

Each strap conforms individually to the person's lower extremity, thus suspending the weight of the person's legs across multiple points. This distributes the individual's leg weight more evenly and greatly reduces the amount of pressure. The Comfort Tension Strapping System prevents localized pressure which occurs with standard wheelchair footrest. Our strapping system also allows for superior air circulation that helps reduce or disperse heat and moisture which is beneficial for aiding in the treatment of and/or prevention of wounds. The solid oversized design of the height adjustable footrest allows for the entire lower extremity to be supported, decreasing the risk of injuries being sustained when the leg falls through the opening of standard leg rests.

### **B. Outstanding bony prominence and/or musculoskeletal deformities/conditions where the lower extremities make contact with the footrest**

#### **Justification for B.**

Each strap conforms individually to the amount of pressure being applied. Therefore, if a user presents with a bony prominence the straps on the footrest will give way or conform to the pressure point instead of creating a higher pressure point which occurs with standard wheelchair leg rests. Also, for an even greater reduction of pressure and to accommodate individualized needs, select straps may be removed or repositioned.

### **C. Involuntary, uncontrolled or violent movements in one or both lower extremities**

#### **Justification for C.**

The Comfort Tension Strapping system is designed with smooth straps to cradle the patient while absorbing the energy produced by the movement of the patients. The straps ability to give way during episodic movements greatly decreases the potential for injuries generally associated with standard leg rests.

### **D. Abnormal muscle tone in one or both lower extremity and/or synergistic movement/pattern with the lower extremity**

#### **Justification for D.**

Individuals with increased muscle tone in the lower extremity are at higher risks for increased pressure, especially peak pressures (i.e. a flexor withdraw movement causes the knee to flex which in turn could cause one's heel to draw up into a leg rest or even calf support.) The overall design of the footrest is ergonomically correct to facilitate proper positioning of lower extremities with low or flaccid tone. The strapping system is a safe solution as it absorbs energy, reduces pressure and is soft and smooth.

### **E. Severe agitation or discomfort with standard leg/footrests**

#### **Justification for E.**

The Comfort Tension Strapping System provides superior comfort and a less noxious feel than standard wheelchair leg rests. With a solid oversized design, our footrest accommodates individuals with flaccid extremities by providing a large solid supportive surface. The straps are ideally firm enough to provide necessary support to the lower extremities without causing discomfort. The strapping system disperses weight evenly providing a comfortable supportive surface.

# MEDICAL CRITERIA AND JUSTIFICATIONS

## **Feature 3: Height adjustable footrest with Comfort Tension Strapping System Cont.**

### **F. Foot drop or at risk for foot drop**

#### **Justification for F.**

*The design of the footrest places ankles in a neutral position (90 degrees) for foot drop control and/or foot drop prevention/treatment. The neutral position and oversized design of our footrest best accommodates individuals with flaccid extremities, as it provides a solid supportive surface that aids in decreasing the risk of injury.*

### **G. Impaired or abnormal lower extremity sensation**

#### **Justification for G.**

*Decreased or absent lower extremity sensation may interfere with the individual's ability to feel excessive pressure caused from typical footrests or the need to reposition the lower extremity. This in turn may contribute to skin breakdown or excessive discomfort and/or agitation. The Comfort Tension Strapping System will disperse the weight of the patient's lower extremities evenly across the leg/footrest for proper support. The leg/footrest can be adjusted easily allowing for the caregiver to properly position and reposition the patient's lower extremities as needed to aid in the treatment of conditions such as edema.*



# MEDICAL CRITERIA AND JUSTIFICATIONS

## **Feature 4: Tilt in Space**

**Criteria: Individuals who present with one or more of the following conditions:**

### **A. Decreased postural control**

#### **Justification for A.**

*Tilting a seating surface in a posterior direction can reduce the effects of gravity on one's trunk/upper body, which facilitates a more functional and proper upright posture. Proper postural control also assists with greater and more functional use of the upper extremities. Posterior tilt effectively opens the diaphragm allowing for greater thoracic expansion resulting in improved oxygenation, blood flow and organ function. The Tilt in Space feature facilitates positioning for comfort, pain management and pain relief.*

### **B. At risk for skin breakdown and/or decreased skin integrity**

#### **Justification for B.**

*Tilt systems maintain a constant seat to back angle allowing patients to be repositioned throughout the day without the risk of \*shear displacement. Tilting the seating surface provides repositioning for those who are unable to independently shift their weight. Posterior tilt of the seating surface shifts the weight and pressure away from critical areas under the pelvis. Proper repositioning improves blood flow, oxygenation and retention of the skin tissue which is vital for maintaining skin integrity. Posterior tilt facilitates position changes associated with pressure relief for individuals with limited range of motion.*

### **C. Musculoskeletal deformities/conditions and other medical conditions which prevent proper positioning when seated in a non-tilting wheelchair (i.e. kyphosis or lordosis)**

#### **Justification for C.**

*Tilt in space chairs are commonly prescribed for individuals with musculoskeletal deformities or conditions. Posterior tilt reduces the effects of gravity on the trunk and upper body helping to eliminate postural deviations. Tilt in Space best accommodates conditions such as but not limited to \*hypertonicity, \*hypotonicity, kyphosis and lordosis. Posterior tilt helps decrease fatigue associated with hypertonicity and improves postural support and stability for individuals with hypotonicity.*

### **D. Decreased head/neck control and/or unable to feed self or be feed safely from a non-tilting wheelchair**

#### **Justification for D.**

*Clinicians use customized positioning to maximize breathing and speaking ability by maintaining vital organ capacity and to reduce the risk of aspiration. Posterior tilt provides stability and improved postural support for those who cannot maintain an upright posture when seated. Tilt can be used to realign posture and enhance function such as feeding, communication and completion of activities of daily living. Postural deviations such as but not limited to; slumping, sliding, falling forward, lateral lean and head drop can be decreased with the use of posterior tilt.*

### **E. Individuals who are at risk for falls or injuries from using a non-tilting wheelchair**

#### **Justification for E.**

*Tilt provides postural stability and support for those who cannot maintain an upright posture when seated. Tilting the seating surface in a posterior direction maximizes the body's weight and gravity, allowing the patient to remain seated, upright and engaged for functional activities. Tilting the patient in a posterior direction provides proper seating alignment, decreasing patient fatigue and postural deviations. With the decrease in postural deviations and improvement of postural support and stability falls can be greatly reduced.*

# MEDICAL CRITERIA AND JUSTIFICATIONS

## **Feature 5: Adjustable Back Recline**

**Criteria:** *Individuals who present with one or more of the following conditions:*

### **A. Individuals with orthostatic hypotension and/or decreased cardiopulmonary function**

#### **Justification for A.**

*Reclining a person assists with the effects of orthostatic hypotension. The recline function can be used as a therapeutic method for gradually increasing an individual's tolerance to become acclimated to sitting in a more upright position. This also assists with improving a person's overall cardiopulmonary status.*

### **B. Individuals at risk for skin breakdown or decreased skin integrity**

#### **Justification for B.**

*Reclining a seating surface decreases the effects of gravity which greatly reduces seating pressures overall. Also, varying the amount of recline throughout the day allows for repositioning which shifts the weight/pressure being placed on a particular area, while improving blood flow and oxygenation of the tissue which is essential for maintaining skin integrity. Proper repositioning improves blood flow, oxygenation and retention of the skin tissue which is vital for maintaining skin integrity.*

### **C. Individuals with decreased postural stability/control**

#### **Justification for C.**

*Reclining a seating surface in a posterior direction can reduce the effects of gravity on one's trunk/upper body, which facilitates a more functional and proper upright posture. Proper postural control also assists with greater and more functional use of the upper extremities. Proper postural control can lead to increased oxygenation, increased blood flow and improved organ function.*

### **D. Individuals who require the recline function to assist with toileting needs**

#### **Justification for D.**

*The recline function allows for the caregiver to better accommodate and assist with toileting needs. The ability for the chair to lay flat (Synthesis and Midline models) will also allow the caregiver to complete many of the patient's activities of daily living from the chair without need for transfer.*

# MEDICAL CRITERIA AND JUSTIFICATIONS

## PEDAL CHAIR MODEL 48 OR PEDAL ROCKER MODEL 48R

*In addition to the criteria and justifications listed above, the features of BRODA Tilt in Space Mobility Chairs may benefit patients with the following criteria;*

### **Feature 6: Low Floor to Seat Height**

**A. Individuals who self-propel and are at risk for falls or injuries when using a non-tilting wheelchair**

#### **Justification for A.**

*BRODA tilt in space mobility wheelchairs are designed to accommodate patients who self-propel and require the benefits of Tilt in Space. With a shortened seat height and front pivot point our mobility chairs provide proper foot to floor placement which enables individuals to be placed in an ergonomically correct position for self-propulsion. Tilting the seating surface in a posterior direction maximizes the bodies weight and gravity, allowing the patient to remain seated, upright and engaged for functional activities. Tilting the patient in a posterior direction provides proper seating alignment, decreasing patient fatigue and postural deviations. With the decrease in postural deviations and improvement of postural support and stability, falls can be greatly reduced.*

### **Feature 7: Caregiver Activated Rocking**

**B. Mild agitation and/or tendency to rock**

#### **Justification for B.**

*The Pedal Rocker provides a caregiver activated gentle rocking motion that helps to calm agitation and create a soothing effect for the patient. The adjustable low seat to floor height allows for a proper foot on floor position, enabling the resident to maintain the freedom of mobility.*

**C. Mild Rigidity**

#### **Justification for C.**

*The rocking motion of the Pedal Rocker helps to absorb rigid movements to enhance the comfort and safety of the resident. Additionally, the rocking tension can be adjusted by the caregiver to accommodate the movement of the resident.*



**PLEASE NOTE: MOBILITY CHAIRS DO NOT OFFER THE RECLINE FEATURE**

## CLINICAL RESOURCE TOOLS



*Regardless of age, patients seated for extended periods deserve to be comfortable. Comfort reduces stress, improves recovery, wellbeing, and is therefore... absolutely essential to one's quality of life. Comfort is the key, and when it comes to providing comfort, there is no substitute for a **BRODA**.*

# ANATOMICAL ASSESSMENT

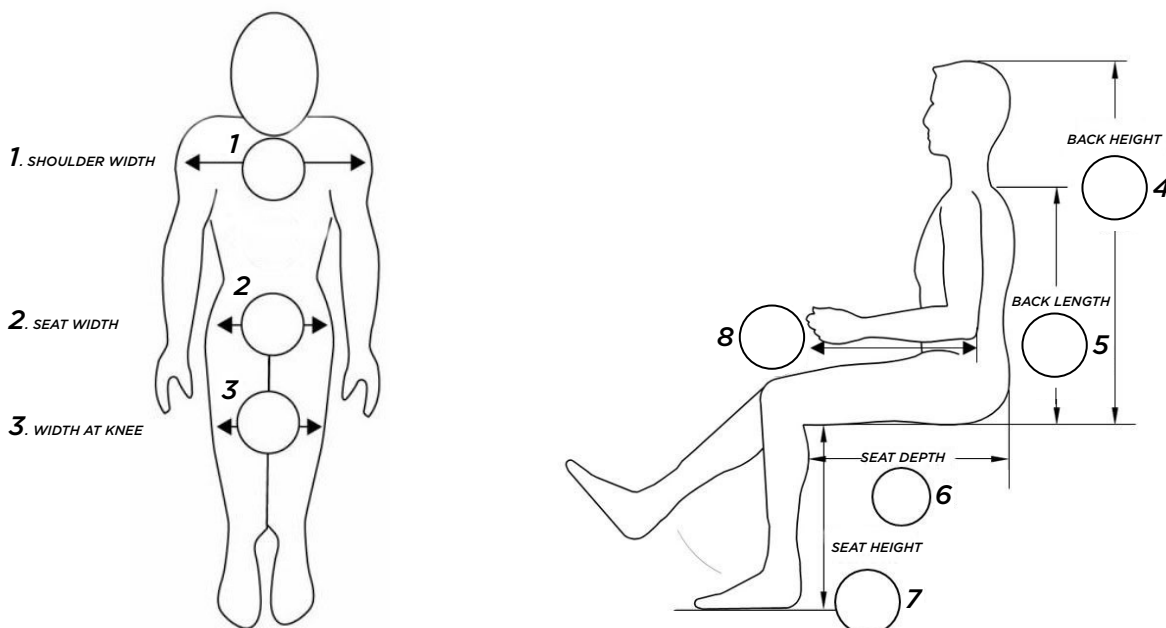
Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

Patient Name: \_\_\_\_\_ Height: \_\_\_\_\_ Weight: \_\_\_\_\_

Please measure the patient at their widest points while sitting in an upright position and add 1"- 2" inches to obtain proper seat width. Please use a soft flexible measuring tape to avoid injuries such as skin tears. This sheet is used for patients weighing up to 350lbs. For patients weighing more than 350lbs, please use our Bariatric Anatomical Assessment.

1. *Shoulder Width* – Measure the patient at the widest point of the shoulders.
2. *Seat Width* – While sitting on a firm surface, measure the width of the hips/thighs at the widest point.  
\* The seat width of a BRODA chair is determined by measuring from the inside of the left armrest to the inside of the right armrest.
3. *Width at knee* - Measure across the widest point of the knees.
4. *Back Height* – Measure from the seating surface to the top of the head.
5. *Back Length* – Measure from the seating surface to the base of the neck.
6. *Seat Depth* – Is measured from the posterior (back) of the buttocks to the popliteal (underside of the knee).
7. *Seat Height* – If the patient utilizes a cushion when in the chair, complete measurements with the cushion in the chair to obtain proper measurements. With feet flat on the floor & knees bent at 90°, measure from the floor to the underside of the knee and add 1"- 2" inches to allow for clearance of the footrest.
8. *Armrest Length*- With the shoulder in a neutral position measure from the 90-degree angle at the elbow to the finger tips.

## CLIENT MEASUREMENTS: (Write Measurements inside of circles)



# ANATOMICAL ASSESSMENT

Patient Name: \_\_\_\_\_ Height: \_\_\_\_\_ Weight: \_\_\_\_\_

To assist in determining the appropriate BRODA chair for your patient, please complete the questions below and provide any additional information you feel can aid us in selecting the appropriate chair.

**Location:**

Please provide width of doorway in inches: \_\_\_\_\_

Types of surfaces: **Carpet** Y or N **Tile** Y or N **Transition Strips** Y or N

**Posture/Function:**

Does the patient have decreased head and/or trunk control? Y or N

Does the patient require a full range of positioning (vertical to flat?) Y or N

**Skin Integrity:**

Does the patient have decreased skin integrity? Y or N

Does the patient have a history of pressure ulcers? Y or N

Does the patient present with boney prominences? Y or N

Does the patient have incontinence issues? Y or N

**Strength/Coordination/Motor Function:**

Is the patient caregiver dependent for ambulation needs? Y or N

Does the patient complete a stand pivot transfer to the chair? Y or N

Does the patient transfer with the use of a lift? Y or N

Can the patient propel themselves with use of their legs in seated position? Y or N

Can the patient propel themselves with use of their arms? Y or N

Please provide an explanation below for all questions answered with Yes, and any conditions that may require special accommodations.

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Assessment Completed by: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

# BARIATRIC ANATOMICAL ASSESSMENT

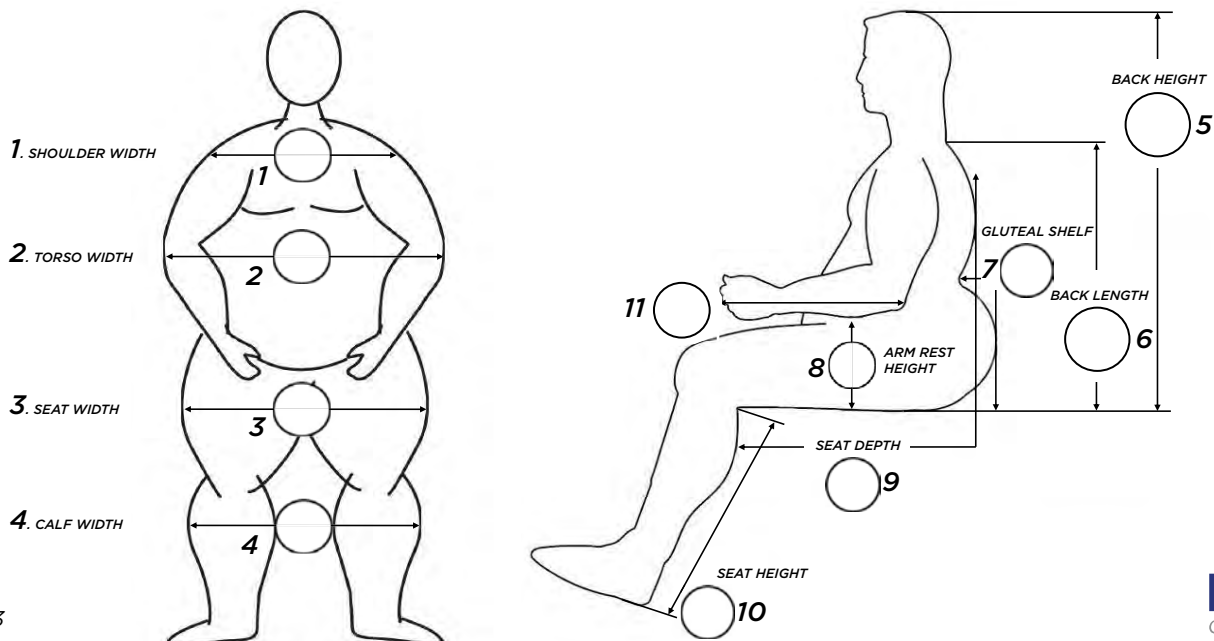
Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

Patient Name: \_\_\_\_\_ Height: \_\_\_\_\_ Weight: \_\_\_\_\_

Please measure the patient at their widest points while sitting in an upright position and add 1"- 2" inches to obtain proper seat width. Please use a soft flexible measuring tape to avoid injuries such as skin tears. This sheet is used for the assessment of bariatric patients weighing 350lbs or more. For non-bariatric patients please use our standard Anatomical Assessment.

1. *Shoulder Width* - Measure the patient at the widest point of the upper arms/shoulders.
2. *Torso Width* - With the patient sitting in an upright position, measure across from lateral elbow to lateral elbow. This measurement will help ensure the proper width for the chair is obtained.
3. *Seat Width* - While sitting on a firm surface, measure the hips/thighs at the widest point.  
\* The seat width of a BRODA chair is determined by measuring from the inside of the left armrest to the inside of the right armrest.
4. *Calf Width* - Measure across the widest point from the knee/calf.
5. *Back Height* - Measure from the seating surface to the top of the head.
6. *Back Length* - Measure from the seating surface to the base of the neck.
7. *Gluteal Shelf* - Is measured from the patients back when seated upright to the extension of the gluteus.
8. *Armrest Height* - With the patient seated, place the shoulder in a neutral position and arm parallel to the floor, measure from the seating surface to the forearm.
9. *Seat Depth* - Is measured from the posterior (back) of the buttocks to the popliteal (underside of the knee.)
10. *Seat Height* - If the patient utilizes a cushion when in the chair, complete measurements with the cushion in the chair to obtain proper measurements. Measure from the base of the heel to the most prominent portion of the posterior (back of) thigh and add 1"- 2" inches to allow for clearance of the footrest.
11. *Armrest Length* - With the shoulder in a neutral position measure from the 90-degree angle (bend) at the elbow to the finger tips.

## CLIENT MEASUREMENTS: (Write Measurements inside of circles)



# BARIATRIC ANATOMICAL ASSESSMENT

Patient Name: \_\_\_\_\_ Height: \_\_\_\_\_ Weight: \_\_\_\_\_

To assist in determining the appropriate BRODA chair for your patient, please complete the questions below and provide any additional information you feel can aid us in selecting the appropriate chair.

**Location:**

Please provide width of doorway in inches: \_\_\_\_\_

Types of surfaces: **Carpet** Y or N **Tile** Y or N **Transition Strips** Y or N

**Posture/Function:**

Does the patient have decreased head and/or trunk control? Y or N

Does the patient require a full range of positioning (vertical to flat?) Y or N

**Skin Integrity:**

Does the patient have decreased skin integrity? Y or N

Does the patient have a history of pressure ulcers? Y or N

Does the patient present with boney prominences? Y or N

Does the patient have incontinence issues? Y or N

**Strength/Coordination/Motor Function:**

Is the patient caregiver dependent for ambulation needs? Y or N

Does the patient complete a stand pivot transfer to the chair? Y or N

Does the patient transfer with the use of a lift? Y or N

Can the patient propel themselves with use of their legs in seated position? Y or N

Can the patient propel themselves with use of their arms? Y or N

Please provide an explanation below for all questions answered with Yes, and any conditions that may require special accommodations.

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Assessment Completed by: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_



# CASE EVALUATION FORM

Date of Evaluation: \_\_\_\_\_ Primary Diagnosis: \_\_\_\_\_

Patient Name: (optional) \_\_\_\_\_ Age: \_\_\_\_\_ Sex: M/F

BRODA chair model and accessories used: \_\_\_\_\_

Residents specific seating conditions and needs: \_\_\_\_\_

**Evaluator: please provide information relative to the evaluation prior to the placement of a BRODA chair**

Cognitive: (Interactive with surroundings) (Non-interactive) Able to make needs known: Y or N

Psychotropic medications used? Y or N Name/Dosage: \_\_\_\_\_

Pain medications used? Y or N Name/Dosage: \_\_\_\_\_

**Functional Abilities, ADL Status in reference to wheelchair use: Prior to the placement of BRODA**

ADL	Independent	Independent with Equipment	Moderate Assist	Dependent	Not Assessed	Comments
Self Care						
Ambulation						
Transfers						
Toileting						

**Skin integrity issues: Prior to the placement of BRODA**

History of Skin Issues: Y or N At risk from prolonged sitting: Y or N Time spent in chair daily: \_\_\_\_\_

Risk factors:  Boney prominences  Immobility  Impaired nutritional or hydration status

Braden Scale score: \_\_\_\_\_ Other: \_\_\_\_\_

Able to perform effective pressure relief: Y or N If yes, method used: \_\_\_\_\_

If no, why? \_\_\_\_\_

**List Interventions and Outcomes observed/noted: Prior to the placement of BRODA**

Intervention	Time Frame	Outcome

# CASE EVALUATION FORM

Please document your observations and findings during the evaluation. You can continue your documentation on the following page as needed.

## Pre BRODA Trial

### Skin Integrity Issues

### Falls History

Location on body	Severity (stage)	size of pressure sore area (Inches)	Change in size and/or stage (+/-)	Number of falls	Frequency of falls (daily, weekly etc)

## During BRODA Trial

Immediate (if applicable)						
Week 1 Date:						
Week 2 Date:						
Week 3 Date:						
Week 4 Date:						

## Pre BRODA Trial

### Positioning/Comfort

### Behaviors

Poor	Average	Above average	Good	Aggressive Unhappy	Agitated	Neutral	Happy

## During BRODA Trial

Immediate (if applicable)							
Week 1 Date:							
Week 2 Date:							
Week 3 Date:							
Week 4 Date:							

Braden Scale score post trial: \_\_\_\_\_

Change in risk factors following placement of BRODA? Please explain: \_\_\_\_\_

Increase in sitting tolerance/time spent in chair with placement of BRODA? Please explain: \_\_\_\_\_

# CASE EVALUATION FORM

## Post Trial

### Functional Abilities:

Were there improvements in the patients ADL status in reference to wheelchair use? Y or N. If Yes, please explain:

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### Medication Use

Was there a change in the psychotropic medications used during the BRODA trial? Y or N

Name/Dosage: \_\_\_\_\_

If Yes, do you believe this change was associated with the use of BRODA? \_\_\_\_\_

Was there a change in pain medications used during trial? Y or N

Name/Dosage: \_\_\_\_\_

If Yes, do you believe this change was associated with the use of BRODA? \_\_\_\_\_

Initial assessment of BRODA chair impact:

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Final assessment of BRODA chair impact:

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Additional comments/requests:

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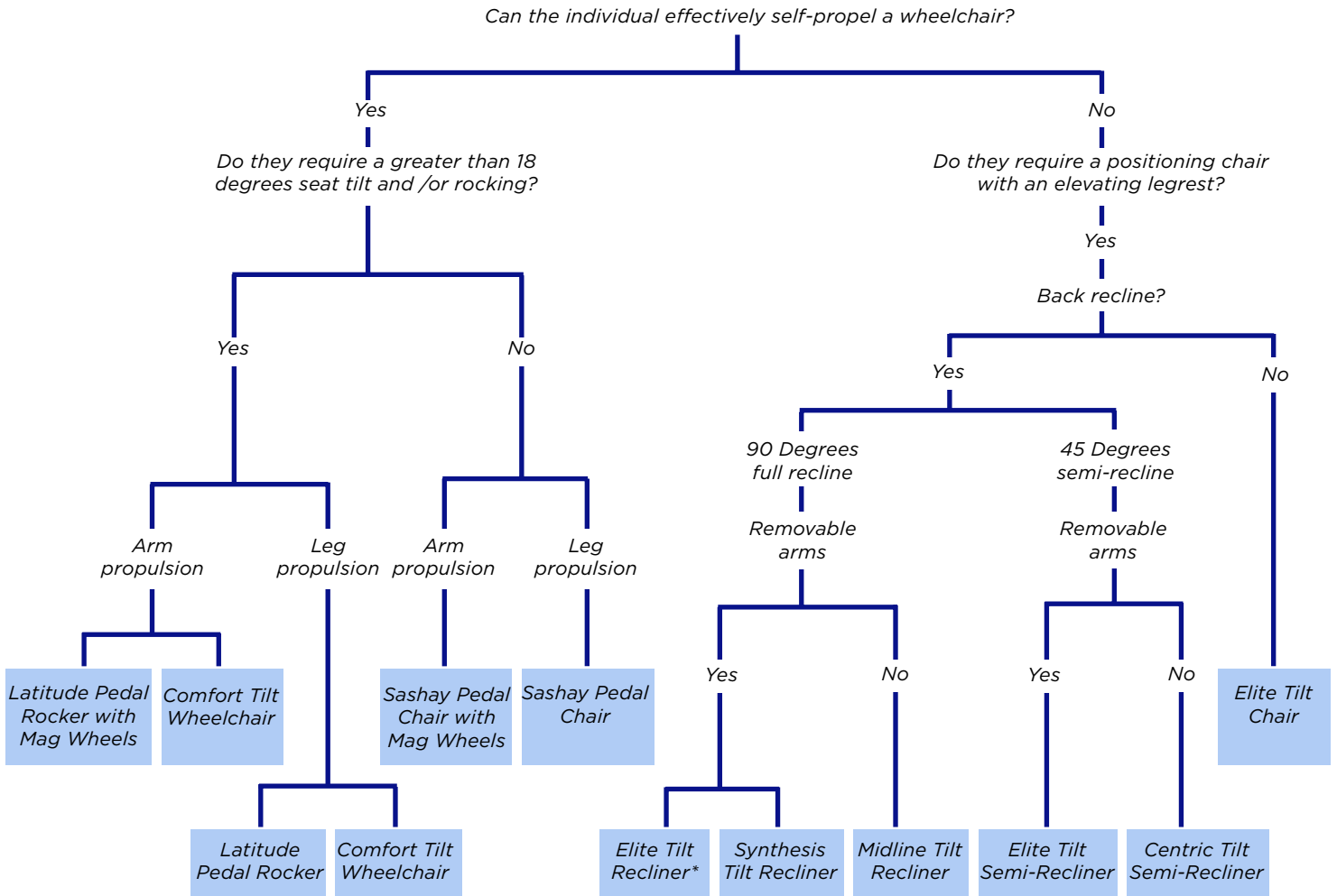
Have you worked with BRODA prior to this evaluation? Y or N

May we use this information on our website and/or our marketing materials? Y or N

Evaluation completed by: \_\_\_\_\_  
Name Title Department

Evaluators signature: \_\_\_\_\_ Date: \_\_\_\_\_

# DETERMINING THE APPROPRIATE BRODA CHAIR MODEL



\* Restrictions apply. Please contact BRODA Customer Service.

# APPENDIX

## MEDICAL JUSTIFICATION TERMS & REFERENCES

### MEDICAL JUSTIFICATION TERMS

**Bony prominence:** Any point on the body where the bone is immediately below the skin surface

**Edema:** A condition characterized by an excess of watery fluid collecting in the cavities or tissues of the body.

**Flaccid tone:** Relaxed, flabby, or without muscle tone .

**Hypertonic:** Exhibiting excessive tone or tension (increased muscle tone)

**Hypertonicity:** An increased tension of the muscles.

Function: the muscle tone is abnormally rigid, hampering proper movement.

**Hypotonic:** Having deficient tone or tension (decreased muscle tone)

**Hypotonicity:** A decreased tension in muscle tone.

Function: A lack of muscle tone inhibits proper movement as the muscle is not developed or is too soft to support the body.

**Kyphosis:** The extreme curvature of the upper back also known as a hunchback.

**Lordosis:** The anterior concavity in the curvature of the lumbar and cervical spine as viewed from the side

**Orthostatic Hypotension (also called postural hypotension):** Is a form of low blood pressure that happens when you change position from lying down to sitting up or sitting up to standing up.

**Postural Control:** Is the act of maintaining, achieving or restoring a state of balance during any posture or activity.

**Postural Deviation:** Any deviation from the ideal or good posture (slumping, lateral lean, head drop etc.)

**Shoulder Subluxation:** Partial dislocation of a joint.

**Thoracic Diaphragm:** Is a sheet of muscle extending across the bottom of the ribcage.

Function: The diaphragm is crucial for breathing and respiration. During inhalation, the diaphragm contracts, thus enlarging the thoracic cavity. This reduces intra-thoracic pressure: in other words, enlarging the cavity creates suction that draws air into the lungs.

**Shear Displacement:** An applied force that tends to cause an opposite but parallel sliding motion of the planes of an object. Such motions cause tissues and blood vessels to move in such a way that blood flow may be interrupted, placing the patient at risk for pressure ulcers. An example of a shearing force is seen when a patient slumps in a chair; the skin around the buttocks is stretched by the movement and interferes with circulation. Shear displacement may occur when the patient slides out of position, while being transferred, positioned and repositioned.

### REFERENCES

1. Dicianno, B., Lieberman, J., Schmeler, M., Schuler, A., Cooper, R., Lange, M., Liu, H., Jan, Y., RESNA Position on the Application of Tilt, Recline and Elevating Legrests for Wheelchairs Literature Update; Current State of Literature, 2015, 1-15.  
[http://www.resna.org/sites/default/files/legacy/resources/positionpapers/RESNA%20PP%20on%20Tilt%20Recline\\_2015.pdf](http://www.resna.org/sites/default/files/legacy/resources/positionpapers/RESNA%20PP%20on%20Tilt%20Recline_2015.pdf)
2. Ding, D., E., Cooper, R.A., Cooper, R., Kelleher, A., Fitzgerald, S.G., Boninger, M. L. Usage of tilt-in-space, recline, and elevation seating functions in natural environment of wheelchair users. *Journal of Rehabilitation and Research Development, Department of Veterans Affairs, Volume 45, Number 7, 2008, 973-984.*
3. Le Postollec, Mike., *Tilt and Recline Chairs, Meeting Needs with Seating Options, Advance Healthcare Network for Occupational Therapy Practitioners; 2016, 1-3.*
4. Sherman, S., OT. Reg., *Dynamic Tilt and Pressure Redistribution, Canadian Clinical Corner, 2012, 1-4.*
5. Watanabe, L., *Time To Tilt! 2010, 1-12.*

#### Medical Justification Terms and Definitions References

1. Mayo Clinic ([mayoclinic.org](http://mayoclinic.org))
2. Mosby's Dictionary of Medicine, Nursing & Health Professions
3. Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition







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