



## **PSIA-AASI National Adaptive Academy Extended Session**

**January 6-8, 2021**

### **Clinic Reminders**

#### **Clinic Topic: Exploration of Snowboard Fundamentals Relative to Adaptive Equipment and Diagnoses – Christina Bruno**

1. Create and “adaptive hypothesis” of your rider. What board performances are best suited to the rider’s profile? What tactical adjustments or trade-offs are appropriate to create a successful outcome?
2. Tools like the Kahuna stick tend to shift the CM towards the tail of the board, impacting longitudinal pressure. The Kahuna stick allows the rider to tilt the board in small increments and creates differential friction, creating a pivot point for the board to move around.
3. Tools like the Hula Hoop, Ski Pal, and Sno-Wing can allow the CM to shift and pressure across longitudinal, lateral, and vertical axis more easily with the assistance of an instructor. These tools allow the instructor to help put the student more easily on either edge, tilting the board. These tools will create a different turn shape in the snow, more of an S turn, shaped more by pivot than twist because the movements are coming from higher up in the body with the addition of equipment and instructor assistance.
4. The Rider Bar impacts the fundamentals a variety of ways depending on if it is used independently, steered by an instructor, or used as a supportive device in “ghost riding.” The handlebars allow the rider or instructor to easily twist the board, then tilt the board to engage edges. The additional support added by the Rider Bar can allow a student to pressure in each axis more easily (depending on their diagnoses).
5. Outriggers can be used in a variety of ways and configurations such as single, double, lead hand, rear hand, or fixed in a binding. The outrigger adds and extension to the arms that can create a pivot point for the board to move around and may make lower body movements easier that may impact twist, tilt, and pressure.
6. When working with above the knee amputees, the location of their prosthetic on either the front or the rear leg will impact the fundamentals. There is not a right or wrong position, rather understand what areas you may need to adjust or focus on to get the same outcome. Lead leg prostheses may require more use of the hip to steer and lower spine, rear leg prostheses may need to focus on keeping weight centered over the board to not wash out turns, etc.
7. Good Snowboarding is Good Snowboarding

Said simply, the board will interact with the snow, and the body will make movements to make those movements successful, and keeping in mind three simple rules:

- 1) A body will be affected by conditions relevant to your rider's profile.
- 2) A body's range of motion can be enhanced (or limited) by the equipment,
- 3) The combination of 1) and 2) will create a movement framework that will influence the success of that rider.

## THE SNOWBOARD FUNDAMENTALS

BOARD PERFORMANCE	FUNDAMENTAL RELATIONSHIPS
Pressure (longitudinal)	Control the relationship of the center of mass to the base of support to direct pressure along the length of the board.
Pressure (lateral)	Control the relationship of the center of mass to the base of support to direct pressure along the width of the board.
Pressure (vertical)	Regulate the magnitude of pressure created through board/surface interaction.
Tilt	Control the board's tilt through a combination of inclination and angulation.
Pivot	Control the board's pivot through flexion/extension and rotation of the body.
Twist	Control torsional flex of the board using flexion/extension and rotation of the body.