[00:00:02.650] - Speaker 1
Harmony SHR is a bilateral upper extremity robotic rehabilitation system. Harmony SHR may assist in the treatment and assessment of upper body movement impairments, including neurological injury, neuromuscular disease or disorder, musculoskeletal disease post procedure musculoskeletal rehabilitation and upper limb prosthetic or transplant rehabilitation. The entire harmony SHR system is fully contained in one unit and operated by a pendant attached to the device. It weighs approximately 150 pounds and sits on three lockable casters for easy transportation through doorways, on and off elevators, and room to room. Once powered on, the therapist will size the patient to Harmony by taking four measurements, forearm length, upper arm length, shoulder breadth, and shoulder height.

[00:00:53.590] - Speaker 1
The therapist will enter those measurements into harmony's pendant, and the device will size accordingly. If adjustments need to be made. There are buttons on each side of the segments for fine tuning the sizing. Each patient is assigned a unique id so that for each returning session, the robot sizes automatically without a need to remeasure. There are four points of patient attachment, one at each of the upper arms and one at each of the lower arms.

[00:01:19.060] - Speaker 1
The attachments, made of naugahyde, and velcro, are strapped onto the patient. After the patient is transferred onto the seat, each of the attachments clip into the device using the square receptacles on the robot's arms. Once the patient has comfortably donned the device, the therapist can choose between three operating modes to begin the session. In predefined exercise mode, Harmony passively moves the patient through preprogrammed arm motions. The therapist can adjust the number of repetitions per minute, the level of assistance the robot is giving to help the patient reach the endpoints of the range and the amount of weight support provided for each arm.

[00:01:58.430] - Speaker 1
Active freeform mode allows the patient to move freely within the device after the therapist has set the optimal level of weight support for each arm. This mode could be applied in interventions focused on activities of daily living, such as eating, drinking, and grooming. Harmony's shoulder design mimics the glenohumeral joint and includes a scapular component to help facilitate scapular humeral rhythm when exercising, allowing for approximately 85% of the shoulder's natural range of motion. For patients with movement restrictions due to pain or injury, the therapist can set ROM limitations. Therapy with bilateral sync enables mirror image movement by recording and replicating the healthy arm motion onto the impaired side in real time.

[00:02:44.180] - Speaker 1
When treating a patient suffering from upper extremity deficits, incorporating bilateral movement has been shown to improve neuroplasticity, leading to better functional recovery and therapeutic outcomes. Once the therapy session has ended, the therapist simply unclips the patient.