A pelvic support unit is coupled to a base by a powered vertical force actuator mechanism. A torso support unit, which is affixed to the patient independently of the pelvic support unit, is connected to the base by one or more powered articulations which are actuable around respective axes of motion. Sensors sense the linear and angular displacement of the pelvic support unit and the torso support unit. A control unit is coupled to these sensors and, responsive to signals from them, selectively control the displacement actuator and articulation(s).