PURPOSE:
To assess range of motion in major joints used in function and self-care management.

CONSIDERATIONS:
1. Patients with cognitive deficits may be unable to follow movement commands in order to participate in joint range of motion testing.
2. Caution should be used with joint range of motion testing in the presence of skin breakdown, suspected or actual fracture location, significant diagnoses (such as osteoporosis, decreased platelets, anti-coagulation therapies and more), postural restrictions, joint restrictions and when reported pain prior to assessment or pain upon range of motion movement indicates patient discomfort.
3. May be performed as component of functional assessment and activities of daily living (ADL) assessment; to avoid fatigue, range of motion testing may be completed with rest and pacing.
4. Special consideration should be used when assessing head, neck and spine joints.
5. Each joint has a maximal range of motion or the amount of movement in any specific direction and the clinician should exercise caution not to move a joint beyond normal or pain free range tolerated by the patient.
6. Range of motion can be assessed using any of the following three approaches:
   a. Active Range of Motion – patient moves joint independently.
   b. Active-Assisted Range of Motion – patient moves joint but requires assistance to complete the joint range (assistance can range from minimal to significant amount).
   c. Passive Range of Motion - patient is unable to move joint at all and requires complete assistance of another person for joint to move.

EQUIPMENT:
Firm surface such as bed or chair with back

PROCEDURE:
1. Adhere to Standard Precautions.
2. Explain range of motion assessment to patient.
3. Provide for privacy, if appropriate.
4. If the patient is in a hospital bed, raise the bed to waist height or comfortable working position for clinician. If the patient is in a hospital bed or wheelchair, ensure that the wheels are locked. If the patient is in a non-hospital bed, clinician should ensure safe personal body mechanics. Range of motion assessment is limited when assessment takes place in a position that restricts full joint motion (i.e. patient seated while limit most hip motion).
5. Clinician asks patient to move joint being assessed actively, describing what movement is desired and if possible, demonstrating movement first. If the patient cannot actively move the joint, the clinician should assess if active assisted range of motion is possible. If not, the clinician can perform passive range of motion.
6. Joint motions that can be assessed bilaterally may aid in efficiency of the assessment (i.e. flex both hands so fingers are in fist and then straighten fingers completely).
7. Clinician should compare joint movement ability and quality side to side.
8. Key joint motions to assess:
   a. Shoulder - flexion/extension, rotation, abduction/adduction.
   b. Elbow - flexion/extension, rotation.
   c. Wrist - flexion/extension, medial/lateral.
   d. Hand/fingers - flexion/extension, abduction/adduction.
   e. Hip - flexion/extension, rotation, abduction/adduction.
   g. Ankle/toes - flexion/extension, rotation.
   h. Trunk - anterior, posterior, lateral rotation.
   i. Head/neck - flexion/extension, rotation, side bending.
   j. Trunk - flexion/extension, rotation, side bending.
9. Clinician should observe quality of movement and:
   a. Speed.
   b. Stiffness.
   c. Joint swelling.
   d. Coordination.
   e. Alignment.
10. Joint motion can be assessed starting proximally and moving distally with extremities such as shoulder to hand and hip to foot. Limitations noted proximally involve the larger muscle groups and distal motions involve smaller muscle groups.

AFTER CARE:
1. Document in patient’s record:
   a. Joint motions assessed.
   b. Assessment method used.
   c. Patient's response to assessment
   d. Follow-up recommendations based on range of motion assessment findings.

REFERENCES: