CONSIDERATIONS:

1. Peripheral edema can be of two types:
   a. Pitting edema, associated with excessive sodium intake and fluid overload, causing a shift of fluid into the interstitial tissues
   b. Non-pitting edema, associated with lymphedema and other disorders
2. Multiple ways of measuring peripheral edema have been suggested in the literature. Currently, the literature does not agree on the best methods, and no method passes the test for a reliable, valid standardized tool that can be used in clinical practice. Home Health VNA has determined that, for consistency, the measurement of extremities will be used for all pitting and non-pitting edema. The use of digital pressure measurement may be used only as a secondary description of pitting edema. This procedure identifies two methods that clinicians can use to help quantify edema:
   a. Digital pressure scale (used for pitting edema)
   b. Measurements of the extremity (can be used for pitting or non-pitting edema)
3. Measurement involves obtaining circumference measurements of one or more anatomical areas of the foot/lower leg:
   a. Instep: 12.5 centimeters from big toe
   b. Ankle: 10 centimeters from heel
   c. Lower leg: 28 centimeters from heel
   d. Abdominal girth at the level of the umbilicus
4. Digital pressure uses the depth of depression obtained by pressing a finger firmly against a bony prominence for at least 5 seconds. Three anatomical locations are used for this assessment in the lower extremities:
   a. Over the dorsum of each foot
   b. Over the lateral malleolus of the ankle
   c. Over the tibia (shine) bone
5. To ensure consistency of documentation, start with the right extremity-instep, ankle and then calf.

EQUIPMENT:

Measuring tape in centimeters or inches
Permanent marker

PROCEDURE:

1. Adhere to Standard Precautions and explain procedure to patient.
2. Determine if edema is pitting or non-pitting to determine appropriate method.
3. Measurement Method for pitting or non-pitting edema:
   a. If initial visit:
      I. Determine exactly where on each foot/leg each circumference measurement will be taken:
         1. Instep
         2. Ankle
         3. Lower leg
         4. Abdomen
      II. Determine how this location will be communicated to future clinicians:
         1. Ask permission to put marks on the patients foot/leg using a permanent marker. If agreed, make marks as small as possible on inside of leg
         2. Measure in inches where each of the measurements will be done:
            a. Instep: 12.5 centimeters from big toe
            b. Ankle: 10 centimeters from heel
            c. Lower leg: 28 centimeters from heel
            d. Abdomen: at the umbilicus

4. Digital Pressure Method for pitting edema:
   a. Press finger over top of foot, over lateral malleolus, and over tibia bone for at least 5 seconds
   b. If a pit of depression develops, compare to the following chart and record:

Edema Scale (Graded on a scale of 1+ to 4+)

Grade	Physical Characteristics
1+	Slight pitting, no visible change in the shape of the extremity; depth of indentation 0-1/4" (<6 mm); indentation disappears rapidly
2+	No marked change in the shape of the extremity; depth of indentation 1/4 -1/2" (6-12 mm); indentation disappears in 10 to 15 seconds
3+	Noticeably deep pitting, swollen extremity; depth of pitting1/2-1" (1-2.5 cm);indentation lasts 1 to 2 minutes
4+	Very swollen, distorted extremity; depth of pitting > 1" (>2.5 cm); indentation lasts 2 to 5 minutes

c. If subsequent visit:
   i. Identify the appropriate mark or measure the distance for each circumference measurement from landmark:
      1. Place the tape around the extremity at indicated sites and measure
      2. Repeat the process on the other extremity

d. Abbreviations to use in documentation:
   i. RI, LI - right or left instep
   ii. RA, LA - right or left ankle
   iii. RC, LC - right or left calf

AFTER CARE:

1. Document in patient's record:
    a. Method of measurement
    b. Measurements at each site on each foot/leg, abdomen
    c. Associated symptoms (e.g., weight gain, calf pain, loss of appetite, etc.)
    d. Patient education provided with patient response
2. Teach patient/caregiver about measures to address:
    a. Avoid constriction of legs (garters, tight socks)
    b. Elevation to decrease edema
    c. Skin care with lotion to maintain skin integrity
    d. Measures to decrease fluid retention and heart failure, if appropriate
3. Communicate with physician about:
    a. Parameters for edema
    b. Potential need for further medical evaluation or treatment

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Adopted from VNAA; Approved Policy Committee 08/13