

**CONSIDERATIONS:**

1. This procedure focuses on what the home health clinician needs to know to care for a patient with an insulin pump:
  - a. Programming and management of the insulin pump is beyond the skill of most clinicians, requiring the skills of certified diabetes educators, with advanced certification and training in managing continuous subcutaneous infusion therapy
  - b. Consult with the patient's certified pump trainer for any questions or concerns about the pump
2. Insulin pumps:
  - a. Use only short or rapid acting insulin
  - b. Are programmed for:
    - i. Insulin-to-carbohydrate ratio
    - ii. Basal dose
    - iii. Correction dose
    - iv. Bolus doses
  - c. Require frequent ongoing blood glucose monitoring
3. Indications for pump therapy include:
  - a. Inadequate blood glucose control, which is defined as HbA1c above target (7-7.5%)
  - b. Desire for flexibility in lifestyle
  - c. Marked daily variations in glucose levels, especially frequent severe hypoglycemia
4. Patient/caregiver should keep a written log of blood glucose testing results, and bolus and basal rate adjustments.
5. Homecare nurse responsibilities include:
  - a. Verifying/documenting name of pump trainer or manufacturer rep to contact for further advice.
  - b. Verifying/documenting insulin orders from physician. This includes basal rate, insulin to carbohydrate ratio and insulin sensitivity factor. This also includes orders for back-up insulin in case of pump failure.
  - c. Assessing skin used for injection sites for signs of infection or other problems.
  - e. Monitoring blood glucose log to assure blood glucose is within target parameters.
  - f. Assessing patient or caregivers' confidence in successfully using pump therapy.
  - g. Assessing patient's ability to manage diabetes within target parameters using pump.
  - h. Assessing patient back-up insulin supplies in case of pump failure, either insulin vials/syringes or insulin pen/pen needles.

- c. Any teaching or instructions given to patient/caregiver
    - d. Any communication with the physician and/or pump trainer
2. Notify physician of:
  - a. Persistent hyperglycemia even with correction bolus
  - b. Frequent episodes of hypoglycemia
  - c. Signs of skin infection at insertion sites

**REFERENCE:**

Agency for Healthcare Research and Quality (ANRQ), (2008). *Guideline: Continuous subcutaneous insulin infusion for the treatment of diabetes mellitus*. Retrieved May 24, 2012 from <http://guideline.gov/content.aspx?id=12970>

American Association for Diabetes Educators (AADE), (2009). *Insulin Pump Therapy: Guidelines for Successful Outcomes*. Retrieved May 24, 2012 from [http://www.diabeteseducator.org/export/sites/aaade/\\_resources/pdf/Insulin\\_Pump\\_White\\_Paper.pdf](http://www.diabeteseducator.org/export/sites/aaade/_resources/pdf/Insulin_Pump_White_Paper.pdf)

American Diabetes Association (n.d.) *Insulin Pumps*. Retrieved May 24, 2012 from <http://www.diabetes.org/living-with-diabetes/treatment-and-care/medication/insulin/insulin-pumps.html>

Potti, L.G. & Haines, S.T., (2009). *Continuous subcutaneous insulin infusion therapy: A Primer on Insulin Pumps*. Retrieved May 24, 2012 from [http://www.pharmacytoday.org/pdf/2009/Jan\\_C\\_E\\_exam.pdf](http://www.pharmacytoday.org/pdf/2009/Jan_C_E_exam.pdf)

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**AFTER CARE:**

1. Document in patient record:
  - a. Blood glucose reading and trends
  - b. Patient's/caregiver's confidence in managing pump and diabetes