

## DIA - Dialysis

### DIA-AP ANATOMY AND PHYSIOLOGY

**OUTCOME:** The patient/family/caregiver will understand kidney location and function.

**STANDARDS:**

1. Explain that the normal human body has two kidneys located on either side of the spine just slightly below the ribcage. Each kidney weighs about a quarter of a pound and is the size of a fist. The shape is similar to that of a kidney bean.
2. Review the four major functions of the kidneys: elimination of waste products and some medications through an internal blood filtering system, regulation of blood formation and red blood cell production, regulation of blood pressure, and control of the body's chemical and fluid balance, including the activation of vitamin D.
3. Discuss bodily changes as a result of kidney failure and the impact of these changes, e.g., decrease in urine output and elimination of waste, anemia, changes in bone metabolism, cardiac effects, and overall health status.

### DIA-C COMPLICATIONS

**OUTCOME:** The patient/family/caregiver will understand the complications associated with dialysis and with the decision not to have dialysis.

**STANDARDS:**

1. Discuss the common or significant complications associated with end stage renal disease and dialysis treatment. There are many complications and may include:
  - a. Infection. Symptoms should be reported immediately, e.g., fever, pain, redness, discharge from access site.
  - b. Catheter occlusion.
  - c. Cardiovascular risks.
  - d. Disorders of bone metabolism, osteoporosis and hyperparathyroidism.
  - e. Anemia.
  - f. Electrolyte and fluid imbalances.
  - g. Loss of appetite/malnutrition.
  - h. Leg cramps/pain.
  - i. Bleeding.
  - j. Dizziness.
  - k. Other metabolic problems (hyperkalemia, acidosis).

2. Discuss common or significant complications that may be prevented by full participation with the treatment plan, including diet modifications and fluid restrictions.
3. Explain that even with proper dialysis, patients may experience fluid imbalances and that all shortness of breath, chest pain, unusual swelling, dizziness, etc. should prompt immediate medical evaluation.

#### **DIA-CM      CASE MANAGEMENT**

**OUTCOME:** The patient/family/caregiver will understand the importance of integrated case management in achieving optimal physical and behavioral health.

**STANDARDS:**

1. Discuss roles and responsibilities of each member of the care team including the patient, family/caregiver, and providers in the case management plan.
2. Explain the coordination and integration of resources and services in developing and implementing the case management plan.
3. Explain the need to obtain the appropriate releases of information necessary to support integrated case management and to maintain patient privacy and confidentiality. **Refer to AF-CON.**

#### **DIA-DP      DISEASE PROCESS**

**OUTCOME:** The patient/family will understand the causes and progression of end stage renal disease.

**STANDARDS:**

1. Explain that End Stage Renal Disease usually results from long term or prolonged medical conditions such as hypertension or diabetes. It can also be hereditary or the result of acute insult to the kidney, e.g., medications, toxins, injury, infection, or decreased renal perfusion.
2. Discuss signs/symptoms and usual progression of end stage renal disease.
3. Explain that there is no known cure for chronic kidney disease, however dialysis or transplantation are treatment options.

#### **DIA-EQ      EQUIPMENT**

**OUTCOME:** The patient/family/caregiver will understand the purpose, use, and care associated with the patient's prescribed dialysis regimen.

**STANDARDS:**

1. Discuss the indications for and benefits of prescribed medical equipment.

2. Discuss the proper use, storage, care of medical equipment or supplies, and demonstrate proper use and care of medical equipment; participate in return demonstration by patient/family/caregiver as appropriate.
3. Discuss signs of equipment malfunction and proper action in case of malfunction.
4. Emphasize the safe use of equipment, including infection control measures. Explain that equipment tubing is designed for a single use.
5. Discuss proper disposal of associated medical supplies.

#### **DIA-EX      EXERCISE**

**OUTCOME:** The patient/family/caregiver will understand the role of physical activity for patients on dialysis.

#### **STANDARDS:**

1. Discuss medical clearance issues for physical activity.
2. Discuss the benefits of any exercise, such as improvement in well being, stress reduction, sleep, more efficient dialysis, bowel regulation, and self image.
3. Discuss obstacles to a personal exercise plan and solutions to those obstacles. Assist the patient in developing a personal exercise plan.
4. Encourage the patient to increase the intensity and duration of the activity as the patient becomes more fit.
5. Refer to community resources as appropriate.

#### **DIA-FU      FOLLOW-UP**

**OUTCOME:** The patient/family/caregiver will understand the importance of fully participating in the treatment regimen and appropriate follow-up and coordination with all healthcare providers.

#### **STANDARDS:**

1. Discuss the individual's responsibility in the management of end stage renal disease including the responsibility to keep all healthcare providers informed of changes to the treatment plan.
2. Review the treatment plan with the patient/family/caregiver, emphasizing the importance of follow-up care.
3. Discuss the procedure for obtaining follow-up appointments and the procedure for obtaining emergency care appointments.

#### **DIA-HM      HOME MANAGEMENT**

**OUTCOME:** The patient/family/caregiver will understand the home management for a patient on dialysis.

**STANDARDS:**

1. Discuss the home management plan and the methods for implementation of the plan.
2. Explain the importance of following a home management plan, e.g., fewer emergency room visits, fewer hospitalizations, and fewer complications.
3. Explain the use and care of any necessary home medical equipment as appropriate.
4. Discuss hygiene habits that are specially pertinent to catheter care or peritoneal dialysis exchanges.

**DIA-L LITERATURE**

**OUTCOME:** The patient/family/caregiver will receive literature regarding hemodialysis or peritoneal dialysis.

**STANDARDS:**

1. Provide the patient/family/caregiver with literature on dialysis.
2. Discuss the content of the literature.

**DIA-LA LIFESTYLE ADAPTATIONS**

**OUTCOME:** The patient/family/caregiver will understand the lifestyle adaptations necessary for dialysis.

**STANDARDS:**

1. Review the lifestyle aspects/changes that the patient has control over: hygiene, nutrition, physical activity, safety and injury prevention, avoidance of high-risk behaviors, and full participation in the treatment plan.
2. Emphasize that an important component to prevention or treatment of the disease is a healthier, lower risk lifestyle.
3. Review the community resources available to assist the patient in making lifestyle changes. Refer as appropriate.
4. Discuss the time management/transportation issues involved in dialysis, e.g., scheduling, availability of dialysis centers, taking medications/food for the trip.

**DIA-M MEDICATION**

**OUTCOME:** The patient/family/caregiver will understand the use of medications and dialysis.

**STANDARDS:**

1. Describe the name, strength, purpose, dosing directions, and storage of the medication.
2. Discuss the risks, benefits and common or important side effects of the medication and follow up as appropriate.
3. Discuss any significant drug/dialysis, drug/drug, drug/food, and alcohol interactions, as appropriate.
4. Discuss the importance of keeping a list of all current prescriptions and over-the-counter medicines, vitamins, herbs, traditional remedies, and supplements. Encourage the patient to bring this list and pill bottles to appointments for medication reconciliation.
5. Explain that the patient's medication needs may change with dialysis.

**DIA-MNT    MEDICAL NUTRITION THERAPY**

**OUTCOME:** The patient and family will understand the specific nutritional intervention(s) needed for treatment or management of this condition, illness, or injury.

**STANDARDS:**

1. Explain that Medical Nutrition Therapy (MNT) is a systematic nutrition care process provided by a Registered Dietitian (RD) that consists of the following:
  - a. Assessment of the nutrition related condition.
  - b. Identification of the patient's nutritional problem.
  - c. Identification of a specific nutrition intervention therapy plan.
  - d. Evaluation of the patient's nutritional care outcomes.
  - e. Reassessment as needed.
2. Review the basic nutrition recommendations for the treatment plan.
3. Discuss the benefits of nutrition and exercise to health and well-being.
4. Assist the patient/family in developing an appropriate nutrition care plan.
5. Refer to other providers or community resources as needed.

**DIA-N    NUTRITION**

**OUTCOME:** The patient/family will understand the role of nutrition and need for diet modifications as part of the management of dialysis.

**STANDARDS:**

1. Emphasize the importance of full participation in the nutrition plan.

2. Discuss the nutritional modifications for end stage kidney disease as appropriate. Typical dietary restriction may include fluids, protein types, potassium, sodium, and phosphorus.
3. Lack of interest in red meats, fish, poultry, eggs, or other protein foods is common. Work with patient to plan adequate protein and calorie intake.
4. Discuss maximum fluid gain. Teach patient how to manage fluids in foods and free liquids.
5. Discuss current nutritional habits. Assist the patient in identifying unhealthy eating behaviors that could interfere with the nutritional plan. Provide information about dining away from home or home delivered meals.
6. Refer to a Registered Dietitian as appropriate.

## **DIA-PRO PROCEDURES**

**OUTCOME:** The patient/family will understand the proposed dialysis procedure(s).

### **STANDARDS:**

1. Discuss the indications, risks, and benefits for the proposed procedure(s) as well as the alternatives and the risks of non-treatment.
2. Explain the process and what is expected after the procedure.
3. Explain any necessary preparations for the procedure.
4. Discuss pain management as appropriate.
5. Discuss the expected patient/family involvement in the care required following the proposed procedure(s).

## **DIA-TE TESTS**

**OUTCOME:** The patient/family will understand the test(s) to be performed, the potential risks, the expected benefits, and the risks of non-testing.

### **STANDARDS:**

1. Explain test(s) that have been ordered (explain as appropriate):
  - a. method of testing
  - b. necessity, benefits, and risks of test(s) to be performed
  - c. any potential risk of refusal of recommended test(s)
  - d. any advance preparation and instructions required for the test(s)
  - e. how the results will be used for future medical decision-making
  - f. how to obtain the results of the test
2. Explain test results:

- a. meaning of the test results
- b. follow-up tests may be ordered based on the results
- c. how results will impact or effect the treatment plan
- d. recommendations based on the test results

## **DIA-TX      TREATMENT**

**OUTCOME:** The patient/family/caregiver will understand the difference between Hemodialysis and Peritoneal dialysis.

### **STANDARDS:**

1. Explain Hemodialysis (HD) and the treatment plan.
  - a. HD is artificial filtering (hemodialyzer)of blood by a machine to remove waste products and water from the body.
  - b. Before beginning HD, a minor surgical procedure such as arterivenous fistula, graft, cannula, femoral or subclavian catheter is necessary to provide access to the blood.
  - c. The types of HD: Home hemodialysis, Self-Care hemodialysis, and In-center or staff-assisted hemodialysis. The average treatment last 3 to 5 hours 3 times per week depending on the type of HD used.
2. Explain Peritoneal Dialysis (PD) and the treatment plan .
  - a. PD involves the removal of body waste products and water within the peritoneal cavity by using a dialysis solution called a dialysate. The dialysate containing a high-dextrose concentration which is instilled through the peritoneal catheter into the peritoneum, where diffusion carries waste products from the blood through the peritoneal membrane and into the dialysate.
  - b. A catheter is surgically implanted in the abdomen and into the peritoneal cavity and used as the access site for PD.
  - c. The types of PD: Intermittent peritoneal dialysis (IPD), continuous cycling peritoneal dialysis (CCPD), and continuous ambulatory peritoneal dialysis (CAPD). Explain that the average treatment time is dependent on the type of PD used.
3. Emphasize the importance of active participation by the patient/family in the development and adherence to the treatment plan.
4. Explain that various treatments have their own inherent risks, side effects, and expected benefits. Explain the risk/benefit of treatment and non-treatment.
5. Refer to community resources, dialysis units, internet Websites as appropriate.