Appendix III

Examination Content Outline

I. Assessment of Diabetes and Prediabetes (60)

A. Assess Learning/Self-Care Behaviors (20)
1. Goals and learning needs
2. Learning readiness (attitudes, developmental level, perceived learning needs, etc.)
3. Learning style (audio, visual, observational, psychomotor, etc.)
4. Barriers to learning (concrete vs. abstract thinking, literacy and numeracy levels, language, cultural values, religious beliefs, health beliefs, psycho-social and economic issues, family dynamics, etc.)
5. Physical capabilities/limitations (visual acuity, hearing, functional ability, etc.)
6. Readiness to change behavior (confidence in ability to change, value of change, etc.)

B. Assess Medical/Health/Psychosocial and Economic Status (20)
1. Diabetes-specific health history (duration, symptoms, complications, adherence to standards of care, treatment, etc.)
2. General health history (family history, allergies, medical history, nutrition history, etc.)
3. Previous and current medication regimen (medication dosage, prescription and nonprescription drugs, herbals, alternative remedies, adverse reactions, etc.)
4. Treatment fears and myths (hypoglycemia, hyperglycemia, needles, weight gain, etc.)
5. Family/Caregiver dynamics and social supports
6. Substance use (alcohol, tobacco, caffeine, etc.)
7. Developmental transitions and mental health status (age, life stages, coping ability, adjustment to diagnosis, etc.)
8. Specific barriers to diabetes self-care regimen (cognitive ability, language, cultural, spiritual, psychosocial, physical, economic, etc.)
9. Diabetes-specific physical assessment (injection and blood glucose monitoring sites, blood pressure, weight, height, body mass index, lower extremities, acanthosis nigricans, etc.)
10. Laboratory and patient collected data trends (blood glucose, A1C, lipid profile, renal/liver function, etc.)

C. Assess Current Knowledge and Self-Management Skills (20)
1. Diabetes (e.g., pathophysiology)
2. Eating patterns (food and beverage preferences, portion sizes, timing of meals and snacks, eating environment, disordered eating, etc.)
3. Exercise/Physical activity history and/or level
4. Monitoring techniques and equipment (blood glucose, ketones, blood pressure, weight, foot examination, etc.)
5. Record keeping activities (blood glucose, food, activity, etc.)
6. Medication use (oral and injectable medications, administration technique, delivery systems, timing and dosage, adherence, etc.)
7. Use of health care resources (health care professionals, insurance, etc.)

II. Interventions for Diabetes and Prediabetes (89)

A. Collaborate with Patient/Family/Caregiver/Healthcare Team to Develop: (16)
1. Individualized diabetes education plan based on assessment (learning objectives, sequence of information, selection of content, communication, etc.)
2. Instructional methods (discussion, demonstration, role playing, simulation, technology-based platforms, etc.)
3. Behavioral goals (S.M.A.R.T. goals, AADE-7, etc.)

B. Teach/Counsel Regarding Principles of Care (50)
1. General topics
   a) Classifications and diagnosis (ADA Clinical Practice Recommendations, AACE, etc.)
   b) Modifiable risk factors (lifestyle behaviors, etc.)
   c) Pathophysiology (auto-immunity, MODY, insulin resistance, fuel metabolism, secondary diabetes, etc.)
   d) Effects and interactions of physical activity, food, medication, and stress
   e) Treatment options (choices, availability, cost, risk/benefit, etc.)
   f) Goals of treatment (blood glucose, A1C, blood pressure, lipids, quality of life, prevention of complications, etc.)
   g) Purpose of laboratory tests (A1C, lipids, kidney and liver function tests, etc.)
   h) Evidence-based diabetes research
2. Living with diabetes and prediabetes
   a) Psychosocial adaptation (new diagnosis, complications, coping skills, etc.)
   b) Psychosocial problems (depression, eating disorders, divorce, etc.)
   c) Role/Responsibilities of care (patient, family members, team, shared responsibility, etc.)
   d) Decision making/Behavior change skills
   e) Safety (sharps disposal, medical ID, driving, etc.)
   f) Hygiene (dental/skin/feet, etc.)
   g) Social/Financial issues (employment, insurance, disability, discrimination, etc.)
3. Metabolic monitoring
   a) Glucose (testing sites, meter selection, sensor, etc.)
   b) A1C
   c) Blood pressure
   d) Regimen and record keeping (blood glucose logs, food records, etc.)
   e) Lipids/Cholesterol
   f) Liver/Renal monitoring (liver function studies, microalbuminuria, serum creatinine, etc.)
   g) Ketones
4. Nutrition principles and guidelines
   a) ADA and Academy of Nutrition and Dietetics nutrition recommendations (meal planning, macro/micronutrients, etc.)
   b) Carbohydrates (food source, sugar substitutes, fiber, carbohydrate counting, etc.)
   c) Fats (total, saturated, monounsaturated, etc.)
   d) Protein (renal disease, wound care, etc.)
   e) Food and medication integration (medication timing, meal timing, etc.)
   f) Food label interpretation (nutrition facts, ingredients, health claims, etc.)

g) Alcohol (amount, precautions)
h) Weight management (adult and childhood obesity, failure to thrive, etc.)
i) Special considerations (food allergies, gastroparesis, celiac disease, bariatric surgery, etc.)

5. Physical activity
   a) ADA and American College of Sports Medicine recommendations
   b) Benefits, barriers, and precautions (e.g., post exercise delayed onset hypoglycemia)
   c) Exercise/Activity plan (aerobic, resistance training, etc.)
   d) Adjustment of monitoring, food, and/or medication
6. Pharmacologic management
   a) ADA/European Association for the Study of Diabetes (EASD), AACE guidelines
   b) Medications (insulin, oral and injectable medications, administration, side effects, etc.)
   c) Delivery systems (pump therapy, devices, etc.)
   d) Medication adjustment
   e) Interactions (drug-drug, drug-food, etc.)
   f) Non-prescription preparations
7. Acute complications: causes, prevention and treatment
   a) Hypoglycemia
   b) Hyperglycemia
   c) Diabetic ketoacidosis (DKA)
   d) Hyperosmolar hyperglycemic state (HHS)
8. Chronic complications and comorbidities: causes, prevention and treatment
   a) ADA Clinical Practice screening recommendations
   b) Eye disease (retinopathy, cataracts, glaucoma, etc.)
   c) Sexual dysfunction
   d) Neuropathy (autonomic, peripheral, etc.)
   e) Nephropathy
   f) Vascular disease (cerebral, cardiovascular, peripheral, etc.)
   g) Lower extremity problems (foot ulcers, Charcot foot, etc.)
   h) Dermatological (wounds, yeast infection, ulcers, etc.)
   i) Dental and gum disease
   j) Co-morbidities (hypertension, depression, cognitive dysfunction, thyroid disease, celiac disease, obesity, sleep apnea, polycystic ovarian syndrome, etc.)
9. Other management issues
   a) Honeymoon period, dawn phenomenon, Somogyi effect
   b) Hypoglycemia unawareness
   c) Sick days
   d) Physical capabilities/Limitations (visual acuity, hearing, functional ability, etc.)
   e) Surgery and special procedures
   f) Travel and disaster preparedness
   g) Transition populations (pediatric, geriatric, care settings, etc.)
   h) Pre-conception planning, pregnancy, post-partum, and gestational diabetes
   i) Changes in usual schedules (shift, religious, cultural, etc.)
   j) Assistive and adaptive devices (talking meter, magnifier, etc.)
   k) Substance use (tobacco, marijuana, illicit drugs, etc.)
   l) Pump/Device malfunctions
   m) Disparities (economic, access, sex, ethnicity, geographic, mental capabilities, etc.)

C. Evaluate, Revise and Document (17)
   1. Weight, blood glucose, food intake, medication regimen, physical activity plan
   2. Patient self-reports and/or device downloaded reports
   3. Evaluate effectiveness of teaching in the following:
      a) Achievement of objectives
      b) Progress towards behavioral goals
      c) Self-management skills
      d) Psychosocial adaptation
   4. Ongoing plans for achieving and evaluating objectives and behavioral goals

D. Referral and Follow-Up (6)
   1. Issues requiring referral to other (health care) professionals
      a) Additional diabetes education
      b) Medical nutrition therapy
      c) Exercise prescription
      d) Mental health
      e) Medical care (foot care, dilated eye exam, pre-conception counseling, etc.)
      f) Financial and social services
      g) Risk reduction (smoking cessation, obesity, preventative services, etc.)
      h) Medication consult
      i) Discharge planning, home care, community resources (visual, hearing, language, etc.)
   2. Communication between diabetes educator and provider
   3. Diabetes Self-Management Support (DSMS) (pharmaceutical industry, community resources, and/or health plan coaches/ case managers, etc.)

III. Disease Management (26)

A. Education and Program Standards (8)
   1. Translate National Standards for Diabetes Self-Management Education and Support (NSDSMES)
      a) Perform needs assessment (target population, etc.)
      b) Develop curriculum (identify program goals, content outline, lesson plan, teaching materials, etc.)
      c) Choose teaching methods and materials for target populations
      d) Evaluate program outcomes (number of people served, provider satisfaction, patient satisfaction, effectiveness of diabetes education materials, etc.)
      e) Assess patient outcomes (behavior changes, A1C, lipids, weight, quality of life, ER visits, hospitalizations, work absences, etc.)
      f) Perform continuous quality improvement activities
      g) Maintain patient information/demographic database

B. Clinical Practice (16)
   1. Apply inpatient standards (AACE, ADA, Endocrine Society, etc.)
   2. Apply outpatient standards (AACE, ADA, Endocrine Society, etc.)
   3. Target high-risk populations for intervention
   4. Identify health care professionals in need of education

C. Engage in Diabetes Advocacy (community awareness, health fairs, work place, legislative efforts, media, etc.) (2)