

ADA REPORTS

Position of The American Dietetic Association: The role of registered dietitians in enteral and parenteral nutrition support

POSITION STATEMENT

It is the position of The American Dietetic Association that a registered dietitian (RD) with competency in nutrition support is qualified to assume responsibility for the assessment, planning, implementing, and monitoring of enteral, parenteral, and specialized oral therapies in patient care.

SPECIALIZED NUTRITION SUPPORT

The term "specialized nutrition support" refers to the administration of enteral and parenteral nutrition to patients. It is an example of the application of medical nutrition therapy to improve patient health outcome, improve quality of life, and reduce patient care costs (1). Two terms that are associated with specialized nutrition support are "enteral nutrition" and "parenteral nutrition." Enteral nutrition is defined as the administration of nutrients via the gastrointestinal tract either orally or by tube, catheter, or stoma distal to the oral cavity. Parenteral nutrition is defined as the administration of nutrients intravenously either by means of a large central vein (usually the superior vena cava), or a peripheral vein (usually in the hand or forearm) (2). Registered dietitians with competency in nutrition support have acquired unique skills, through both clinical experience and formal training, to plan, implement, and monitor any combination of enteral and parenteral therapies in appropriately identified patients (3). These registered dietitians frequently hold specialty titles and may also possess certification in nutrition support (4,5).

As enteral and parenteral nutrition practice and technology have evolved over the years, Registered dietitians have expanded their skills to keep pace (6) (Figure). Not surprisingly, the current roles and functions of an RD with competency in nutrition support have also undergone a natural evolution (3,7). Because of increasing emphasis on cost control as opposed to revenue generation in current health care settings, RD leadership in the development of guidelines and standards of practice to ensure cost-effective diagnosis, therapeutic intervention, and monitoring are paramount (4,8).

Health care settings in which registered dietitians function are varied, and include acute care, long-term care, rehabilitative care, and home care. In addition, capitated health care systems have increased the need for RD services in outpatient settings (9). Because optimal nutrition support requires the involvement of a variety of disciplines, the complexity and structure of the interdisciplinary approach, the roles of the practitioners, and the therapy itself are defined according to the health care setting. Registered dietitians, the primary advocates for the role of nutrition in health and disease, are responsible for identifying patients who are not able to consume adequate nutrients orally, and selecting those patients that would benefit from enteral or parenteral nutrition. Registered dietitians should make recommendations for nutrition support and implement them as needed in collaboration with other health care professionals.

- Identifies patients at nutritional risk.
- Performs periodic assessment of patients receiving nutrition support.
- Acts as the advocate for all aspects of nutrition care.
- Participates in the design, implementation, and monitoring of enteral and parenteral nutrition regimens.
- Provides for nutritionally complete transitional feeding.
- Documents nutrition care plans.
- Provides education to patients, families, and health care professionals.
- Translates the nutrition care plan into understandable language.
- Participates in the design, implementation, and monitoring of home enteral and parenteral nutrition regimens.
- Participates in local, regional, national, and international programs.
- Promotes the importance of nutrition and dietetics services to providers and government to enhance reimbursement for these services.
- Documents for proper coding both nutrition services and diagnoses to increase reimbursement.
- Participates in research studies.
- Participates in studies designed to examine clinical outcomes for nutrition services in specific populations.

Current role of the registered dietitian in nutrition support. Adapted from reference 6.

In 1989, role delineation studies for entry-level registered dietitians identified fundamental nutrition support skills as central to dietetics practice (10). More recent surveys of registered dietitians who specialize in nutrition support have indicated that approximately half of respondents possess an advanced degree (4,11). One of these surveys suggested that parenteral nutrition order-writing skills were facilitated, in order of importance, by on-the-job training, continuing education, and undergraduate and graduate preparation (4). On-the-job training and continuing education reflect changes in practice trends and usually precede changes in formal education programs, often providing impetus for these changes (12,13). Mentoring of registered dietitians interested in nutrition support is also vital to the development of skills as well as for successful adaptation to changes in practice trends in an evolving health care system (14).

Certification in nutrition support has been available to registered dietitians (certified nutrition support dietitian) since 1988, for the purpose of setting a standard for basic nutrition support competency (5). Practice competency does not represent expertise or advanced-level practice capabilities. Competency represents knowledge, skills, and professionalism necessary for reliable performance in a practice setting without assistance (15). Registered dietitians certified in nutrition support are not necessarily advanced-level practitioners, but possessors of the skills necessary for safe and effective delivery of nutrition support.

ASSESSMENT

As part of the health care team, the RD performs both initial and follow-up nutrition assessments for patients, including a comprehensive evaluation of medical, nutrition, and medication histories; a nutrition-specific physical examination, and anthropometric measurements as appropriate. The assessment also includes review of data from other disciplines (16). Collectively, these integrated data aid in selecting appropriate nutrition support candidates, determining type of nutrition support and route of delivery, and assessing optimal macro- and micronutrient needs.

In many practice settings, registered dietitians are increasingly involved in performing nutritionally focused physical examinations. This may include activities such as measurement of vital signs; inspection of the oral cavity; palpation and auscultation of the abdomen; and evaluating range of motions of hands, wrists, arms, and shoulders. The RD also conducts evaluations of functional and mental status, measures energy expenditure by indirect calorimetry, and determines body composition by bioelectrical impedance. Expanded assessment skills are particularly important in long-term-care facilities, home care settings, and hospital-based settings where overall downsizing has occurred. Frequently, a site visit is made by only one professional, and in order to effectively care for the patient, this person needs to have a number of basic skills that may not be within the traditional scope of his or her profession's practice (17).

PLANNING AND IMPLEMENTATION

The RD, in collaboration with other nutrition support team members and the primary care team, sets goals for optimal, achievable patient outcomes and develops a nutrition support plan of care to accomplish these goals. The most appropriate, practical, and cost-effective route or combination of routes for delivery of nutrition support is then selected (18,19). The RD is the primary resource for the choice of appropriate oral supplements, enteral formulas, and prescription of parenteral solutions. The RD tailors the feeding modality to accommodate metabolic changes and organ dysfunction, and recommends the most appropriate advancement of nutrition support regimens or transitions from one feeding modality to another.

In some institutions, registered dietitians have clinical privileges to facilitate the nutrition support care process to ensure quality of care (20). Standard TX.4.2 in *The Joint Commission 1996 Accreditation Manual for Hospitals* (21) states that authorized persons should prescribe or order food and nutrition products in a timely manner. Such orders and prescriptions may be administered by medical staff, authorized house staff, or another person who has been granted clinical privileges. It is the responsibility of the RD to know the status of clinical privileges for nonphysician professionals in his or her institution or practice setting (4).

MONITORING

Patient progress is routinely monitored through observation of clinical status, laboratory data, nutrient intake, anthropometric measurements, and tolerance to nutritional therapy. Metabolic, nutritional, and medical status changes are used to adjust or change the quantity, quality, or route of nutrition, ensuring safe, effective, and cost-efficient administration of nutrition support to the patient (19,22).

Patients often receive more than one type of nutrition therapy, particularly in the transitional stages of feeding. It stands to reason then that the successful transition from one type of feeding to another (eg, parenteral to enteral or enteral to oral) is essential to the effectiveness of nutrition support

therapy. A combination of these modalities is used to meet patient nutritional requirements and simultaneously promote gastrointestinal integrity. Use of the gastrointestinal tract (enteral nutrition) as opposed to parenteral nutrition, appears to play a role in maintaining gastrointestinal integrity and may improve patient outcome in critical care populations (23). Registered dietitians are responsible for monitoring nutritional intake, tolerance to feeding, and patient compliance during transitional feeding.

Optimal provision of nutrition support requires an interdisciplinary approach to patient care. Indeed, standard TX.4.1 in *The Joint Commission 1996 Accreditation Manual for Hospitals* (21) states that nutrition intervention is to be developed and revised using an interdisciplinary nutrition plan. During the 1970s and 1980s, nutrition support teams proliferated as the vehicles for this type of practice. Recently, the growth of these teams has leveled off, in part because of the emergence of capitated health care systems (24). In addition, the publication of guidelines and standards has made optimal care more accessible to professionals with less nutrition support experience and expertise than specialists such as those who are members of a formalized team (25). Whatever the practice setting or professional arrangement, registered dietitians need to collaborate with all health care professionals for the purpose of providing optimal care to patients. RD activities involve improving standards of care, which includes developing clinical pathways (26) and applying practice standards and guidelines (18).

ROLES AND RESPONSIBILITIES

Registered dietitians are the patient's advocate for all aspects of nutrition care. The nature of dietetics education and training is integrative, drawing on knowledge from many disciplines involved in patient care. Therefore, a qualified RD anticipates the effect of procedures, treatments, therapies, and psychosocial issues on the patient's nutritional status; integrates enteral and parenteral feeding modalities; and works with the interdisciplinary team to provide optimal nutrition care that is compatible with medical treatment and patient well-being (27).

Registered dietitians are also bound by a code of ethics that "reflect[s] the ethical principles guiding the dietetic profession and outline[s] commitments and obligations of the dietetic practitioner to self, client, society, and the profession" (28, p 996). In addition, "it is the RD's responsibility to provide a combination of emotional support and technical nutrition advice on how to best achieve each patient's goals within legal parameters" (29, p 1592).

Registered dietitians need to participate in the decision-making process of withholding nutrition support and selecting palliative alternatives to more technically complex and potentially risky forms of nutrition support. Palliative care becomes the focus of medical care for the terminally ill. Food and drink hold cultural and symbolic meanings that can maximize patient comfort and emotional support during the last stages of terminal illness. The RD should evaluate each patient individually and reassess frequently to provide the most effective care (29).

Registered dietitians also translate nutrition support plans into familiar, understandable language for patients, and participate in more sophisticated education of the interdisciplinary health care team. When home nutrition support is indicated, training for the patient/family is necessary. Training includes education in formula preparation, operation of equipment, monitoring, prevention and management of complications, and availability of resources (30). The responsibilities of registered dietitians extend into state-of-the-art nutrition sup-

port education to medical, nursing, pharmacy, dietetics, and other health care staff and students. Education may include formal and informal teaching, publication, and routine communication within the context of clinical practice.

Research forms the basis for the advancement of nutrition support (31), and the justification for its use (32). The dynamics of nutrition support are characterized by rapidly expanding knowledge in the physiologic and pharmacologic effects of nutrient substrates and route of delivery. Innovations in technology and equipment are under continuous development. Nutrition support practitioners are also increasingly accountable to demonstrate improved patient outcome from nutrition support intervention (32). Registered dietitians must initiate, conduct, and participate in clinical research in collaboration with an interdisciplinary team of investigators.

CONCLUSION

Nutrition support technology has advanced dramatically in the past 20 years and dietetics practice has kept pace with this specialized area of medical nutrition therapy. Nutrition support teams have provided a model for interdisciplinary care in which registered dietitians are an integral part, often occupying leadership positions on the health care team (33). Registered dietitians with competency in nutrition support are qualified, through their dietetics education and specialized training in nutrition support, to assume responsibility for the selection and management of appropriate candidates for nutrition support. Registered dietitians use the expertise of all disciplines in assessing, planning, implementing, and monitoring patient populations receiving enteral, parenteral, and specialized oral therapies to provide safe and cost-effective care to patients.

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