Lec.2. Nutrition Care Process (NCP)

Definition of The Nutrition Care Process

The Nutrition Care Process (NCP) is "a systematic problem- solving method" in which dietetic practitioners use critical-thinking skills to make evidence-based decisions addressing the nutrition-related problems of those they serve, whether it be patients, clients, groups, or communities of any age or health condition (collectively referred to as "patients/clients").

The **Nutrition Care Process (NCP)** is a standardized model developed to assist the RDNs and dietetic technicians, registered (NDTR), in delivering high-quality nutrition care. This process provides the framework for the RDN and NDTR to customize care, taking into account the individual's needs and values, while using the best scientific evidence at the time care decisions must be made.

The Nutrition Care Process is a tool used by nutrition and dietetics professionals to improve the consistency and quality of individualized care for patients, clients, or groups.

Why Nutrition Care Process?

1- To ensure quality of care of individualized patient/client

2- To improve outcomes

3- To describe the services and enhance visibility of the registered dietitian/dietetic technician, registered (RD)

4- To facilitate electronic medical record documentation

5- To facilitate reimbursement for nutritional services

6- Provide structure and terminology for research studies and data collection.

7- Provide a standardized language.

International Dietetics Nutrition Terminology (IDNT)

What is IDNT: is a standardized language for Registered Dietitians & Dietetic Technicians, Registered.

Is Developed to identify unique contribution of RD/DTR within the universal health care record.

It Facilitates clear consistent documentation of care and communication between health care professionals.

Historical Perspective of NCP

In 2003, the Academy of Nutrition and Dietetics developed and adopted the Nutrition Care Process and Model (NCPM), which was described as a "framework for critical thinking and decision making" specific to dietetics practice.

To begin to understand the Nutrition Care Process (NCP) and how to use it in practice, it is important to step back and look at how and why the NCP came about. In a nutshell, the NCP is the dietetic profession's answer to a larger question in health care: How can health outcomes be improved? Improved health outcomes are defined by overall improvement in the cost, quality, and efficiency of health care. For the dietetics profession,

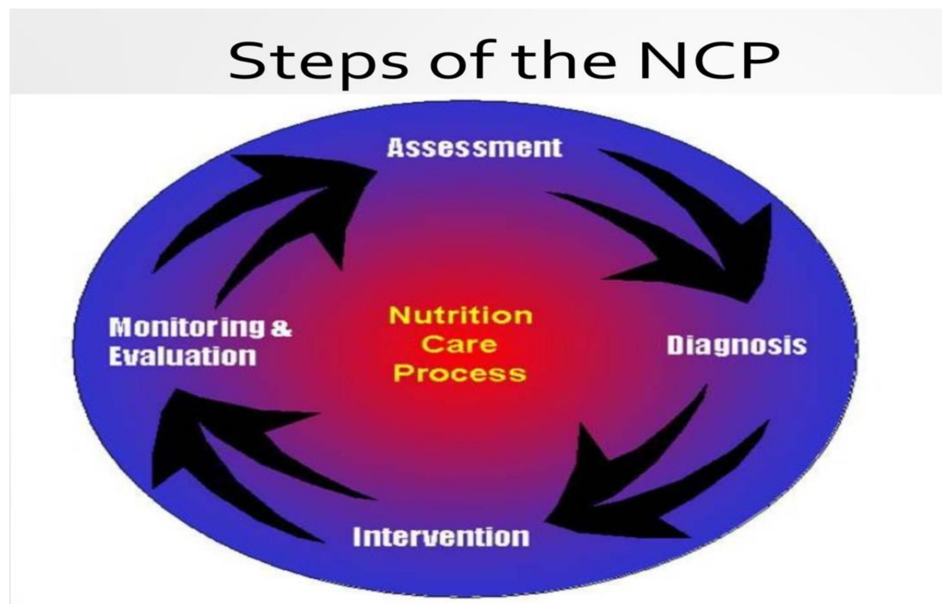
demonstrating the impact of nutrition care as a component of improved health outcomes provides an opportunity to prove the value of what we do.

Health outcomes can be thought of as the product of the care provided along with *how* the care was provided. The vast majority of health care providers want to give their patients the highest quality of care possible. In order to do so, care processes are needed to support high-quality care. For example, if it is thought that high-quality care for patients who have experienced a cardiac event includes echocardiography, then health care systems that do not have access to echocardiography make it difficult, if not impossible, to provide high-quality care. Deficiencies in care are not related to the clinician who wants the patient to have the study; instead, the care process (lack of access to the test) impedes provision of high-quality care.

Description of the NCP Steps

The NCP involves the use of unique yet interdependent that is, distinct but interrelated steps. This includes the completion of a nutrition assessment. Part of completing a nutrition assessment involves four steps. The first step is collecting and documenting information such as nutrition-related history, anthropometric measurements, laboratory data, and clinical history. The second step is defining a nutrition diagnosis. This requires the RDN to evaluate the collected assessment information and name a specific problem that can be resolved through nutritional interventions. The third step requires the RDN to select nutrition interventions that will address the root of the nutrition diagnosis to resolve or control signs and symptoms. The last step

of the NCP is monitoring and evaluation to determine whether the individual has achieved or is making progress toward the predetermined goal.



Nutrition Care Process and Model

The **Nutrition Care Process and Model (NCPM)** is a pictorial conception that shows the steps of the Nutrition Care Process as well as internal and external factors that influence application of the NCP.

The relationship between the RDN and the individual or groups of individuals is at the center of the model, which defines the four steps of the NCP—nutrition assessment, diagnosis, intervention, and monitoring and evaluation. The NCP helps to identify external factors such as skill and ability of the RDN, application of evidence-based practice, application of the code of

ethics, and knowledge of the RDN as some of the external factors influencing the process. This set of factors defines how individuals and groups of individuals receive nutrition information.

The NCPM consists of the four steps of the NCP surrounded by three rings: an inner ring, middle ring and an outer rings. The inner ring describes characteristics that are unique to the dietetics practitioner and the outer ring describes characteristics of the health care system that impact dietetics practice. The patient or client is at the center of the model, reflecting the need for patient- or client-centered care.

It is important to remember that while the RD has little to no control over the concepts in the outer ring, the individual RD has the ability to influence and change concepts in the inner ring.

The model also includes two supporting systems that are *outside* the NCP but that play important roles in providing nutrition care: a screening and referral system and an outcomes management system.

1-Patient-Centered Care

At the very center of the NCP is the relationship between the dietetic pro-fessional and the patient/client, illustrating that the nutrition care provided is to be patient/client-centered. The practitioner should interact with the patient/client in a respectful, empathetic, nonjudgmental, and culturally sensitive manner and demonstrate good listening skills. This will help ensure that the patient/client is actively involved in setting the goals and outcomes

of any intervention and that these are patient-focused, reasonable, achievable, incremental, and measurable.

The past decade has seen a shift in health care from an expectation that providers direct all aspects of care to an atmosphere that encourages patients and their families to be active participants in their care. Patient-centered care requires that all members of the health care team change their focus so that patients have the information they need to be primary decision-makers instead of relying on providers to make decisions for them. Patient-centered care is thought to be associated with improvements in quality of care.

As members of the health care team, RDs must be familiar with the tenets of patient-centered care. The shift to focus on patient needs requires strong communication skills and an ability to move from providing simple diet instructions to working as partners with patients to develop workable lifestyle changes.

2- The Inner Ring

The inner ring in Figure 1.3 lists the four steps of the NCP: nutritional assessment, nutrition diagnosis, nutrition intervention, and nutritional monitoring and evaluation. Nutritional assessment is the initial step in the NCP, and its purpose is to establish a foundation for progress- ing through the remaining three steps.

3- The middle Ring

The strengths and abilities that the practitioner brings to the process are listed in the middle ring: unique dietetics knowledge, skills and competencies, critical-thinking skills, collaboration, communication, evidence-based practice, and a code of ethics. Evidence-based practice involves incorporating the most current available scientific informa- tion in the nutrition-related care provided. Adherence to a professional code of ethics ensures that patients/clients are cared for in a manner conforming to strict social, professional, and moral standards of conduct.

Dietetics practitioners possess a set of knowledge and skills that influence practice. The inner ring of the NCPM attempts to describe these as follows:

- Dietetics knowledge
- Critical thinking skills
- Ability to collaborate with others
- Skills and competency in dietetics practice

Of the four concepts, critical thinking is probably most difficult to define. Health professionals have long struggled with defining critical thinking. Research in nursing describes critical thinking as an organized, purposeful way of thinking that is applied to a situation or problem. A nurse who uses critical thinking skills is open to new pos- sibilities and experiences. There is no reason to think that these definitions would not apply to dietetics practice.

4- The Outer Ring—External Factors

The outer ring lists environmental factors that can impact the patient/client's ability to receive and benefit from the NCP: practice settings, health-care systems, social systems, and economics. For example, the patient/ client's income and health insurance coverage will significantly impact the type and extent of nutrition care that is provided. The patient/client's living arrangements, access to food, and social-support system can impact the ability to adopt and maintain healthful changes in diet, physical activity, etc. These environmental factors can have either a positive or a negative effect on the outcome of the nutrition care provided and must be assessed and considered in providing care.

The United States has one of the most complex health care systems in the world. Dietetics practice may be impacted by social and economic factors that the dietetics professional has little control over. In spite of this lack of control, the registered dietitians (RDs) must be aware of and acknowledge these factors in order to plan nutrition interventions that are realistic for the situation. For example, an RD working in a neonatal intensive care unit follow-up clinic in an economically challenged area must take financial resources into account when recommending discharge infant formulas. In this situation, it would be important to consider which formulas are supplied by the Women, Infants, and Children (WIC) program. While the desired outcomes would be the same regardless of the care setting, the RD considers external factors so that interventions can be flexible and adjusted to meet patient or client needs.

Other factors that impact the ability of individuals and groups to take advantage of the RDN services includes the healthcare system, socio-economics, and the practice setting. The practice setting reveals rules and regulations that guide a practice and include the age and conditions qualifying for services and how the nutrition and dietetics professional apportions his or her time. The health- care system defines the amount of time available for the nutrition and dietetics professional–patient interaction, the kind of services offered, and who provides the services.

Social components reflect the health-related knowledge, values, and the time devoted to improving nutritional health of both individuals and groups. The economic aspect integrates resources assigned to nutrition care, including the value of a food and the nutrition professional's time expressed in the form of salary and reimbursement.

THE NUTRITION CARE PROCESS MODEL

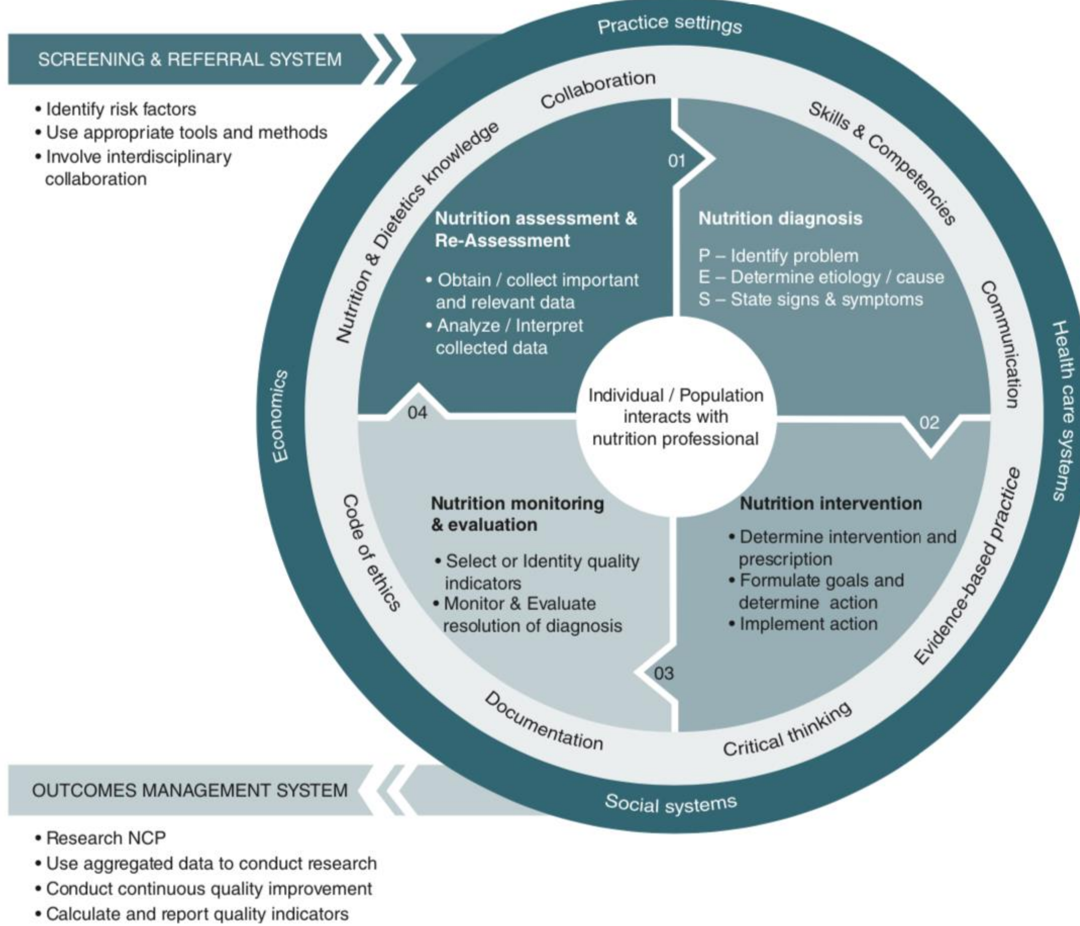


FIGURE 1.3 The nutrition care process and model for nutrition and dietetics professionals

Nutrition Screening

Nutrition risk screening and health outcomes are both closely related to nutrition care but are accomplished in collaboration with other health professionals. Therefore, nutrition risk screening and assessment of health outcomes are seen as contributors to the NCP.

Nutrition screening identifies risk for nutrition problems, while nutrition assessment identifies the problem and determines the severity of the problem. While most nutrition screens focus on identifying risk for malnutrition, it is important to have mechanisms in place to identify risk for other nutrition diagnoses.

The screening and referral process as well as outcomes management complete the components of the NCP. The NCPM offers a consistent structure and framework for nutrition and food professionals to use when providing nutrition care. The model is intended for use with individuals and groups of individuals of all ages with any healthcare condition and in all care settings.

Health screening is defined as the process utilized to identify risk for a health condition in a population of individuals who do not have outward signs of the health condition in question. When a screening test is positive, further testing can be done. For example, health fairs often include capillary cholesterol measurement. Elevated cholesterol acts as a screening test for lipid abnormalities.

Nutrition risk screens are used to identify risk for nutrition diagnoses in individuals who do not appear to have a nutrition problem. Regulatory agencies such as the Joint Commission require that nutrition risk screening be completed shortly after patients are admitted to a health care facility. When nutrition risk screening is done as part of the admission assessment, it is not possible for dietetics practitioners to complete every nutrition screen. Therefore, most facilities utilize nursing staff to complete nutrition risk screening.

NCP Steps:

1- Nutrition Assessment:

"A systematic process of obtaining, verifying, and interpreting data in order to make decisions about the nature and cause of nutrition-related problems."

- **Step 1: Nutrition Assessment:**
- **Food/Nutrition Related History**
- **Anthropometric Measurements**
- **Biological Data, Medical Tests and Procedures**
- **Nutrition-Focused Physical Findings**
- **Client History**
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- **For individuals:**
- **Patient/client through interview**
- **Observation and measurements**
- **Medical records**
- **Referring health care provider**
- **For population groups:**
- **Data from surveys**
- **Administrative data sets**
- **Epidemiological or research studies**

2- Nutrition Diagnosis

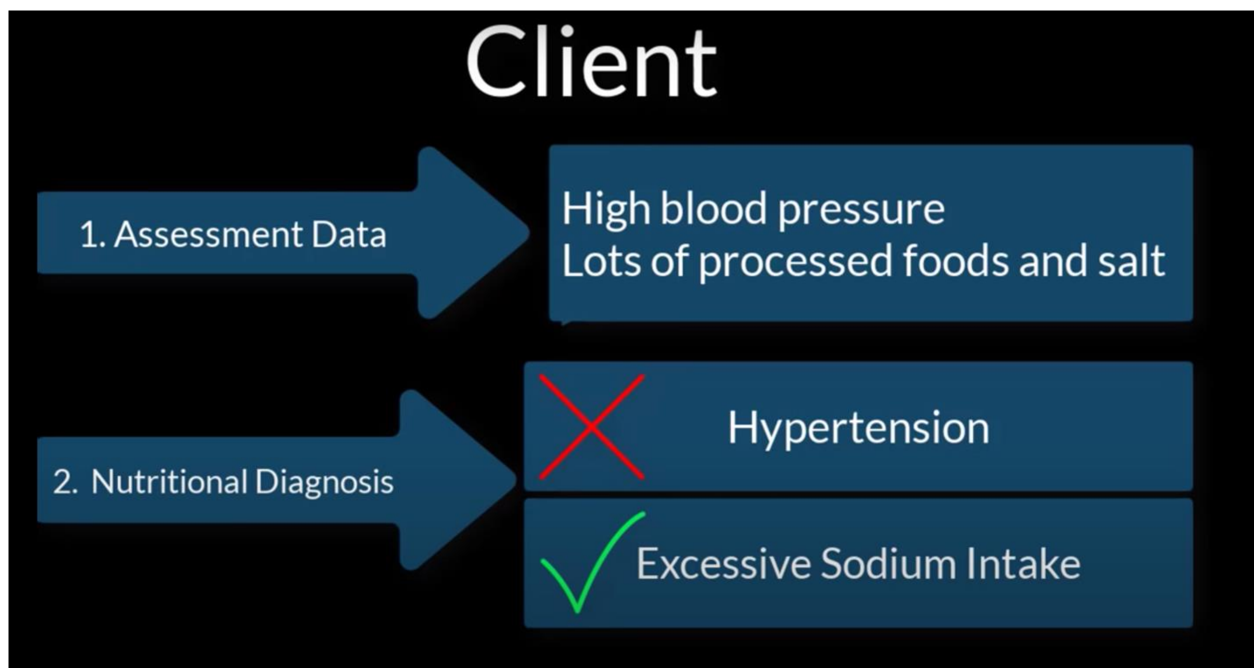
The most controversial component of the Nutrition Care Process (NCP) is the second step, that is, nutrition diagnosis. Why is it so controversial? Traditionally, registered dietitians (RDs) have not considered themselves to be members of a *diagnosing profession*. Many dietetics professionals were trained to focus first and foremost on the nutrition assessment and then the intervention. But the act of diagnosing the process of distinguishing the nature of a disease or problem—has always been a part of the process, but it was never *codified* until the development of the NCP.

The Academy of Nutrition and Dietetics (AND) defines nutrition diagnosis as "the identification and labeling of the specific nutrition problem that dietetics practitioners are responsible for treating independently" . While RDs are trained to assess nutrition status, to develop plans to *do something* for the patient, client, or group (intervention), and to monitor the results of the intervention, most have no formal training in the diagnostic process. It is incorrect to think that *only physicians can diagnose*. Each of the health professions is responsible for diagnosing health conditions that are within the scope of practice for the profession. Therefore, RDs must take responsibility for diagnosing nutrition problems. Taking responsibility for the diagnosis and treatment of nutrition problems ensures that dietetics gains respect of a health care system that values the diagnostic thought process.

Historically, the goal of nutrition assessment was to find a *problem*. Once the problem was identified, RDs took action to solve the problem, but never used the word *diagnosis*. There was clearly a diagnosis involved, but it was usually never specified or codified as such. Why does this matter? Well, if the process moves right from assessing to intervention with- out calling and naming the intermediate process *the nutrition diagnosis*, we lose the chance to demonstrate the full scope and breadth of dietetics practice. Omitting to pointing out the diagnostic phase implies that we can define how we assess nutrition status and what we do for patients and clients, but we cannot describe *why* we do those things.

More importantly perhaps, we cannot really demonstrate the impact of RD-directed interventions if we do not diagnose or clearly indicate that we have diagnosed the nutrition problem that led to the intervention. And, if we focus on or use diagnoses from the domain of another health profession, that is,

cancer, type 2 diabetes mellitus, or failure to thrive, as the driving force behind the work of dietetics and not the diagnoses developed from the domain of the dietetics profession, then we lose important information that answers the question "Why is it vital that the RD provide nutrition care? What was the nutrition problem that necessitated the RD's presence in the care of this patient?"



CHAPTER 4

Nutrition Diagnosis

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Defining a nutrition diagnosis is an important step between nutrition assessment and defining nutri- tion interventions. The purpose of a standardized nutrition diagnosis language is to designate nutrition problems reliably so that they are clear for all professionals.

A **nutrition diagnosis** is used to identify and define a particular nutrition problem that can be solved or whose symptoms can be managed through nutrition interventions by a nutrition and food pro- fessional. A nutrition diagnosis (such as inadequate sodium intake) is different from a medical diagnosis (such as congestive heart failure). Unlike a nutrition diagnosis, a medical diagnosis defines a disease process or pathology such as congestive heart failure. It is not within the scope of nutrition and dietetics pro- fessionals to determine or assign medical diagnoses. The standardized

language improves communication and documentation of nutrition care, and it offers a minimum data set and consistent data foundations for future research. The nutrition diagnosis falls into three domains: intake, clinical, and behavioral or environment.

TABLE 1 .6 shows examples of nutrition diagnostic terminology that fall under each domain. A designation of "no nutrition diagnoses" can be used for individuals whose documented nutrition assess- ment indicate no nutritional problem requiring nutri- tion intervention and treatment.

The outcome of the nutrition-diagnosis step of the NCP is the creation of a diagnosis statement, or **PES statement**, which has three elements: the prob- lem (P), its etiology (E), and its signs and symptoms (S). The elements of the PES statement are joined by the phrases "related to" and "as evidenced by." The data collected and analyzed during the nutrition assessment are used to generate the PES statement.

TABLE 1.6 Nutrition diagnostic terminology

Domain	Problem
Intake	Inadequate energy intake Malnutrition
Clinical	Impaired nutrient utilization Unintended weight loss
Behavioral/ Environmental	Not ready for diet or lifestyle change Limited access to food or water

Data from Academy of Nutrition and Dietetics. *Nutrition Terminology Reference Manual (eNCPT): Dietetics Language for Nutrition Care*. 2016. http://ncpt.webauthor.com/. Accessed December 8, 2016.

Nutrition Diagnosis

- ❖ Critical thinking during this step:

  - ➢ **Problem** – Can the RD/DTR resolve or improve the nutrition diagnosis for this individual/group or population?

  - ➢ **Etiology** – Evaluate what you have used as your etiology to determine if it is the "root cause" or the most specific root cause that the RD/DTR can address with a nutrition intervention.

  - ➢ **Signs & Symptoms** – Will measuring the signs and symptoms indicate if the problem is resolved or improved?

3- NCP-Intervention

The third step of the NCP is determining the most appropriate intervention to resolve the nutrition prob- lem. A **nutrition intervention** is the action taken by the nutrition and dietetics professional to correct or manage a nutrition problem. Its purpose is to target and resolve the diagnosis by eliminating signs and symptoms related to nutrition-related behaviors, environmental conditions, or conditions that affect nutrition and health. Nutrition interventions need to be individualized to meet the specific needs of each person.

The NCP nutrition intervention has two distinct steps: planning and implementation. Planning involves selecting and prioritizing the nutrition diagnosis, collaborating with other caregivers, involving the patient and his or her representative, and reviewing evidence-based practice guidelines. With the patient at the center of the care, the FDN should work toward the expected outcome for the nutrition diagnosis, outline nutrition interventions, identify the frequency of the treatment, and identify the resources needed. The implementation step involves communicating and carrying out the care plan developed for the individual. Plan implementation involves monitoring the plan for acceptance (by the individual) and effectiveness. If the expected outcome for the individual is not being obtained, the interventions must be changed. Most often the nutrition intervention is designed to correct the etiology component of the PES statement.

Four domains are used when creating nutrition interventions: (1) food or nutrient delivery, (2) nutrition education, (3) nutrition counseling, and (4) coordination of care. The food or nutrient delivery domain encompasses provision of meals, snacks, and enteral and parenteral nutrition. Education and counseling tactics can help operationalize food and nutrient delivery efforts and guide individuals to make food choices that promote healthy eating patterns and optimize health. Nutrition education varies by care setting, desired outcome, and whether the person has a chronic or acute disease process. For instance, for home-dwelling individuals, food safety might be the focus of their nutrition education; therefore, counseling goes beyond understanding healthy eating patterns. It requires influencing and coaching individuals to foster lifestyle changes. Coordination of care is an

interprofessional collaboration to identify the individual's needs and identify resources.

4- NCP- Monitoring and Evaluation

Nutrition monitoring and evacuation is the fourth step of the NCP. The purpose of this step is to measure the progress made by the individual in achieving the predetermined outcome. The individual's outcomes that are relevant to the nutrition diagnosis and interventions are monitored and measured. Data sources to aid in this step include self-monitoring information and material collected through records such as forms, spreadsheets, and computer programs. Information from anthropometric measurements, biochemical data, tests, and procedures also help to evaluate prog- ress from current status to desired state. Data from pretests, questionnaires, surveys, and mail or tele- phone follow-up can also be used to measure the level of success of the plan of care.

Outcomes associated with food and nutrient intake, nutrition-related physical signs and symptoms, and nutrition-related patient- and individual-centered outcomes are usually monitored by the nutrition and dietetics professional.

The NCP's nutrition monitoring and evaluation step incorporates three unique and interconnected processes: monitoring process, measuring outcomes, and evaluating outcomes. Monitoring process involves ensuring that the client, patient, or individual under- stands and complies with the plan. This includes determining if the interventions were implemented as

prescribed, providing evidence of how the plan is helping the patient to meet (or not meet) their goals, detecting other positive or negative outcomes, collecting information, identifying causes for absence of progress, and aggregating data that support the lack of progress as well as support conclusions with evidence. Measuring outcomes involves identifying markers that are relevant to the nutrition diagnosis or signs and symptoms, nutrition goals, medical diagnosis and outcomes, and quality-management goals. Evaluating outcomes requires that the nutrition care provider evaluate the change between the outcomes obtained to the individual's status at the beginning of the care process.

References:

1- Nancy Munoz and Melissa Bernstein (2019) Nutrition Assessment: *Clinical and Research Applications …….chapter 1*

2- **Pamela Charney (2016) Nutrition Assessment ….** Chapter 2,3,4,5,6

3- **Robert D. Lee and David C. Nieman (2013) Nutritional Assessment)….chapter 1**