Welcome to the Nutrition Care Process Tutorial. This is Module 5: Nutrition Monitoring and Evaluation- Overview, Terms and Use. This module is based on the eNCPT 2019 edition, available on [www.ncpro.org](http://www.ncpro.org).

### NCP Tutorial: Module 5 Objectives

The objective of module 5 is to understand the purpose and components of Nutrition Monitoring and Evaluation, including:

- Activities of the RDN during the nutrition monitoring & evaluation step
- Critical thinking skills that are useful during the nutrition monitoring & evaluation step
- Sources of data needed for decision making during nutrition monitoring & evaluation

We will also review the domains and classes of Nutrition Monitoring and Evaluation terms that overlap with Nutrition Assessment terms.

### NCP Step 4: Nutrition Monitoring and Evaluation

Nutrition Monitoring and Evaluation is the fourth step in the Nutrition Care Process. The purpose of this step is to determine and measure the amount of progress made for the nutrition intervention and whether the nutrition related goals/expected outcomes are being met.

This allows the RDN to implement purposeful actions intended to positively change or improve a nutrition related problem during future reassessments.

### Activities of the RDN

During Nutrition Monitoring and Evaluation, the RDN...

- Monitors client progress. They confirm client understanding and compliance with the nutrition intervention. For example, the RDN...
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<table>
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<th>Monitoring &amp; Evaluation Terms</th>
<th>Nutrition Monitoring &amp; Evaluation terms are organized into the following domains:</th>
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<td>5</td>
<td>Food/Nutrition-Related History</td>
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<td>Biochemical Data, Medical Tests, and Procedures</td>
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<td>Anthropometric Measurements</td>
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<td>Nutrition-Focused Physical Findings</td>
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These domains contain terms that are indicators, and indicators are markers that can be observed or measured.

Nutrition Monitoring & Evaluation terminology closely mirrors the Nutrition Assessment domains reviewed in Module 2. Both steps utilize the same terminology, except for the Client History domain which belongs only to the Nutrition Assessment step. Client history terms represent data that cannot change through nutrition intervention, so it is not included in the monitoring and evaluation as an indicator of the impact of nutrition care. An example of this, let’s look at client age. RDNs may include age in the nutrition assessment if it pertains to the nutrition diagnosis or intervention.

- Reviews a client’s understanding and adherence to a cardio protective diet.
- Measures outcomes. As an example, they might review the client’s LDL cholesterol level 6 months after an initial encounter. The RDN selects the nutrition care indicator(s) to measure the desired outcomes using NCP terminology.
- Evaluates outcomes. This activity allows the RDN to assess a client’s progress and determine future action in a reassessment visit. For example, the RDN reviews if the client’s LDL Cholesterol value has progressed toward normal range of the reference standard.
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Client History domain indicators may be reassessed for their presence and impact on nutrition care during future visits and reassessments.

| 6 | Nutrition Care Indicators | In nutrition monitoring and evaluation, indicators are terms used to identify the data elements that are evaluated to measure change based on results of a nutrition intervention. Current client data can be compared against standards, recommendations, or goals, such as:

- The nutrition prescription
- Reference standards or comparative standards, such as:
  - National standards for populations such as DRIs, US Dietary Guidelines
  - Guidelines for specific disease conditions
  - Institutional and Regulatory standards

The next slides will review examples of nutrition care indicators and sample criteria to compare client data against.

| 7 | Food / Nutrition Related History (FH) | For the Food/Nutrition Related History (FH) domain, the sample nutrition care indicator on this slide is “Total protein estimated intake in 24 hours”. For this indicator, let’s review an example.

The RDN has a client at the dialysis center is on hemodialysis and does not have diabetes. From the client’s assessment, the RDN knows that the client is consuming 60 - 70 g/protein/day. The RDN compares this against the criteria they have selected. In this example, the criteria is from a recommendation from the Academy of Nutrition and Dietetics 2020 Chronic Kidney Disease (CKD) Macronutrient Evidence-Based Nutrition Practice Guideline. |
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<thead>
<tr>
<th></th>
<th>Domain Description</th>
<th>Example Description</th>
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| 8 | Anthropometric Measurements (AD) | For the Anthropometric Measurements domain, the indicator on this slide is “Head circumference-for-age percentile”.  
In this example, the RDN knows from their 3-year-old client’s assessment that he has a measured length of 46.5 cm and a measured weight of 2.35 kg.  
The criteria the RDN compares this data against for evaluation is a reference standard from the Centers for Disease Control and Prevention, National Center for Health Statistics. The RDN documents that the client is in the 25th percentile for weight. |
| 9 | Biochemical Data, Medical Tests, and Procedures (BD) | In this next example from the Biochemical Data, Medical Tests, and Procedures domain, the NCP term that was selected as a nutrition care indicator is “Cholesterol, LDL”  
In this example, the client has an LDL of 150 mg/dL.  
For evaluating serum low-density lipoprotein (LDL) cholesterol, the reference standard established by the US National Heart Lung and Blood Institute for adults is LDL <100 mg/dL. This is the reference standard that the RDN’s facility has in place as a criteria to compare her client’s LDL lab value against. |
| 10 | Nutrition-Focused Physical Findings (PD) | In the Nutrition-Focused Physical Findings domain, the indicator on the slide is “loss of subcutaneous fat”.  
In the sample client data, the RDN has conducted a Nutrition Focused Physical Exam and has determined that the client has mild orbital and tricep subcutaneous fat loss.  
The RDN evaluates this and other clinical characteristics that support a diagnosis of malnutrition against the eNCPT malnutrition indicator criteria. |
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<th>This criteria is reflective of the malnutrition clinical characteristics (MCC) Academy/ASPEN Adult Malnutrition Consensus Statement. Please note this Consensus Statement recommends a minimum of two clinical characteristics or indicators be present for diagnosis of malnutrition.</th>
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<tr>
<td>11</td>
<td>Assessment, Monitoring and Evaluation Tools (AT)</td>
<td>The last domain in Monitoring and Evaluation is Assessment, Monitoring and Evaluation Tools. The indicator listed is “Subjective global assessment (SGA) rating”. In this example, the RDN has evaluated the client and determined they have an SGA rating of C, severely malnourished. The RDN will continue to monitor this rating against the SGA form at future visits.</td>
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<tr>
<td>12</td>
<td>Nutrition Monitoring and Evaluation Summary</td>
<td>In summary, during Nutrition Monitoring &amp; Evaluation, the RDN monitors and evaluates the clients progress through consistent terms, or indicators, against criteria carefully selected by the RDN. Nutrition Monitoring &amp; Evaluation also sets the stage for reassessment in the next cycle of the nutrition care process.</td>
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<tr>
<td>13</td>
<td>Proceed to Module 6</td>
<td>This concludes module 5, Module 5: Nutrition Monitoring and Evaluation - Overview, Terms and Use. Please proceed to module 6 for a case example that connects all the steps of the nutrition care process.</td>
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