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CASE STUDIES

Support for teachers - implementation of the eNurcing platform in training



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A. HOSPITAL MODULE

I. INTRODUCTION

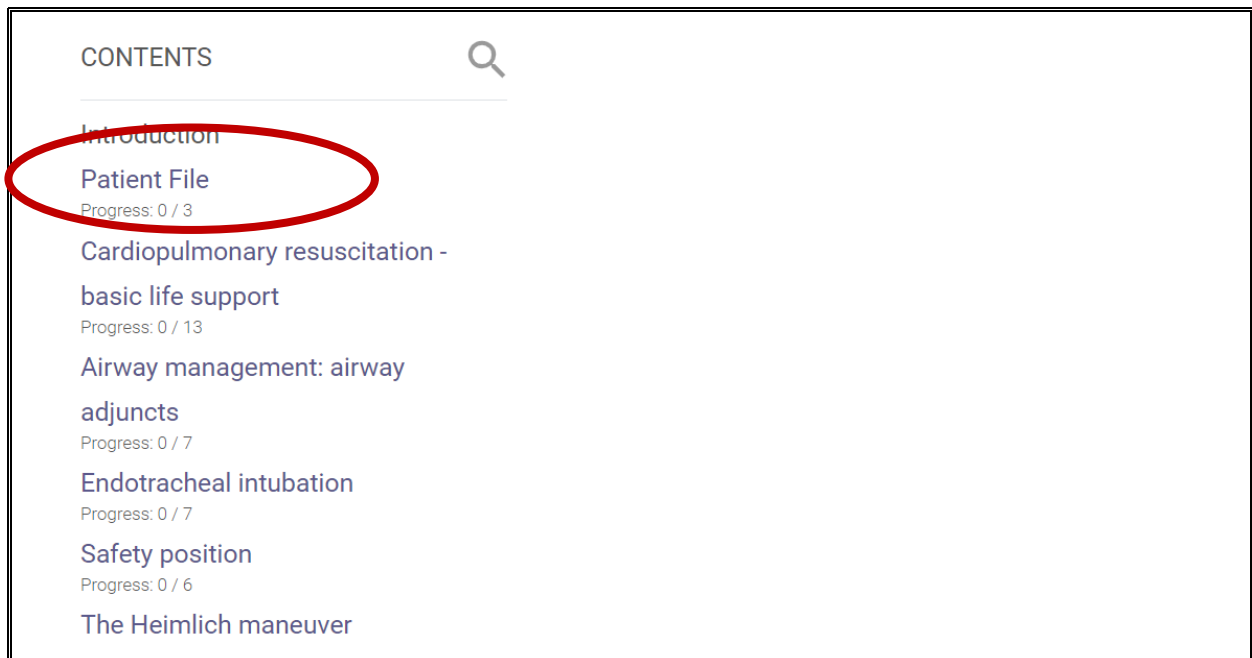
The eNurcing platform, <https://lab.enurcing.eu> is structured in two modules, HOSPITAL and SENIOR CENTER.

The HOSPITAL module has 15 study topics and the SENIOR CENTER has 10 study topics.

Each topic is structured as follows:

- an introductory part, with information focused on the practical aspects of the topic to be studied
- case studies – practical studies, tasks for students to solve
- tests – short tests with questions from the study topic
- laboratories – tasks for students to solve.

Patients' files will be completed in the laboratories. Templates for downloading, completing and uploading to the platform can be found in the **PATIENT FILE** submodule.



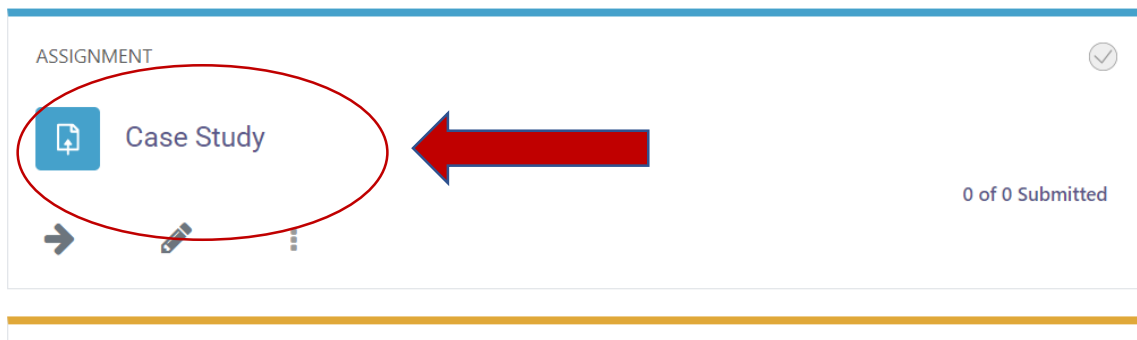
The HOSPITAL themes are:

1. Practical applications: cardiopulmonary resuscitation - basic life support

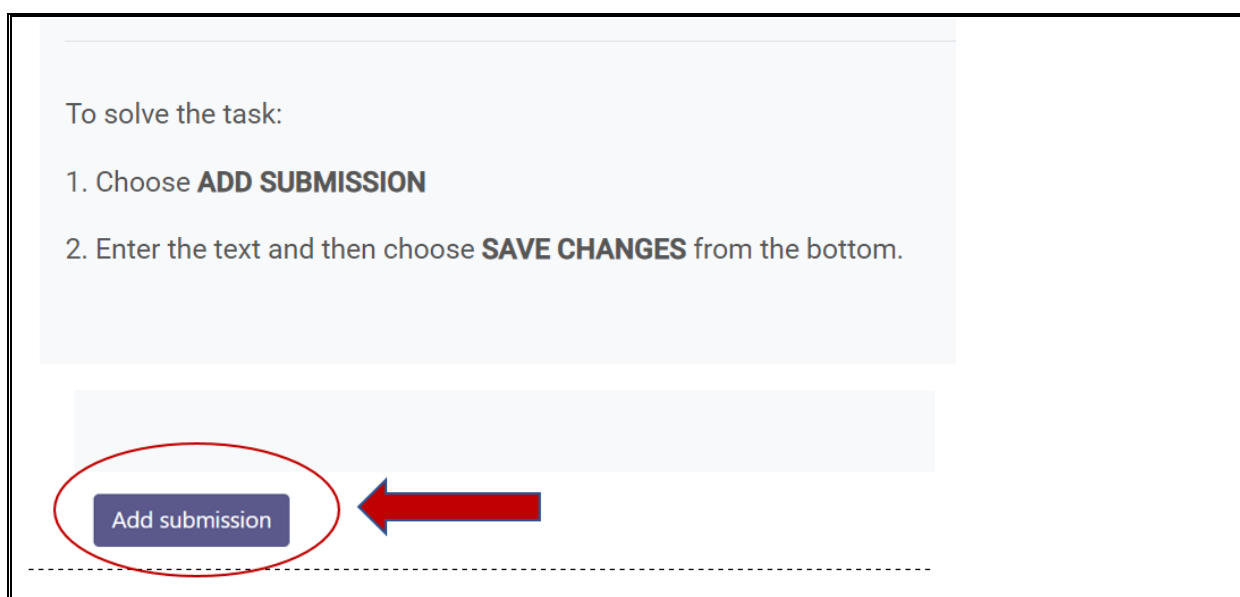
2. Airway management: airway adjuncts;
3. Endotracheal intubation
4. Safety position
5. The Heimlich maneuver
6. Administration of emergency medication
7. Infusions
8. Non-invasive monitoring of vital parameters.
9. Invasive therapeutic monitoring
10. Emergency airway management.
11. Oxygen therapy: indications, methods, flow rate, benefits, complications
12. Insertion of probes and catheters for monitoring
13. Aspiration of secretions - indications, contraindications, methods, probes, technique, etc.
14. Emergency treatment of open trauma.
15. Hemostasis in the emergency.

To see the case studies, from each theme, students will go through 3 steps:

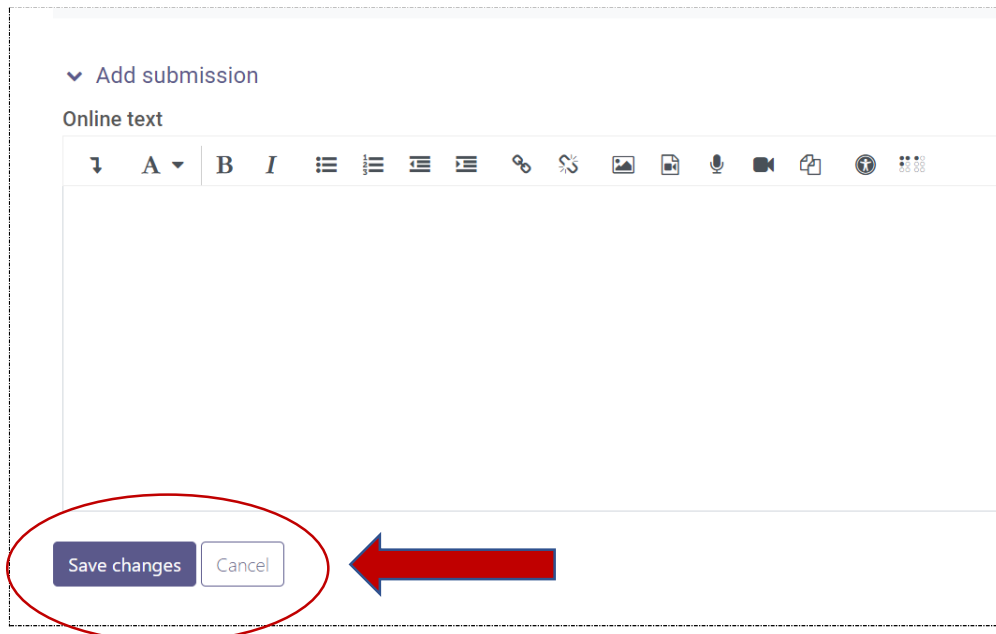
1. Choose the **Case Study** button



2. Choose the **Add submission** button (see figure below).



3. Enter the text in the text box and save, choose **Save change**.



II. Case Study no. 5. The Heimlich maneuver

You notice that a 72-year-old patient, admitted for further diagnostic investigations, who also has masticatory problems due to dentures that need to be replaced, begins to have after episodes of coughing, inability to speak and to breathe.

Requirements

1. Choose the option you consider suitable for emergency intervention:
 - a. Quickly assess the patient's condition, including consciousness, determine the degree of airway obstruction – moderate or severe.
 - b. Notify the doctor on duty, assess the patient's condition and wait for his instructions.
 - c. The patient with moderate airway obstruction should be encouraged to cough effectively, the cough generating high and sustained pressures in the airways, which favors the expulsion of the foreign body.
 - d. For the conscious patient with severe airway obstruction, encouraging effective coughing is not sufficient; apply 5 interscapulovertebral blows, then the Heimlich maneuver, repeated 5 times.

- e. If the victim becomes unconscious, resuscitation maneuvers begin, through chest compressions. He will be placed in the supine position, 112/ doctor on call, release of the airways: hyperextension of the head, lifting of the mandible, cleaning of the oral cavity, assessment of breathing and performing 2 insufflations following the lifting of the chest. If the chest does not rise, reposition the head (hyperextension) and attempt breaths again. If they are not effective this time either, apply the Heimlich maneuver for the unconscious patient a maximum of 5 times.

2. Describe the technique of performing the Heimlich maneuver.

Desirable answers are:

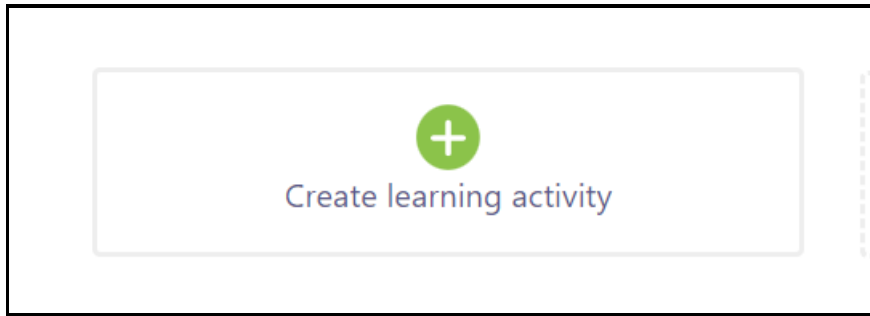
1. a, c, d, e
2. If breathing is not possible, grab the victim/patient as in the image above (with one leg positioned between the victim's legs), then grasp the drowning person in the following way: immediately below the sternum, one hand must be held tightly (fist), and the other should come on top of it (pressing suddenly and hard from bottom to top). When the epigastrium is compressed, we must somehow rotate the fist inwards at the same time. If after 1-2 minutes the victim does not recover, we quickly call 112 or notify the doctor on duty (in the hospital) and continue the maneuver until the arrival of the medical personnel specialized in emergencies.

REMARKS:

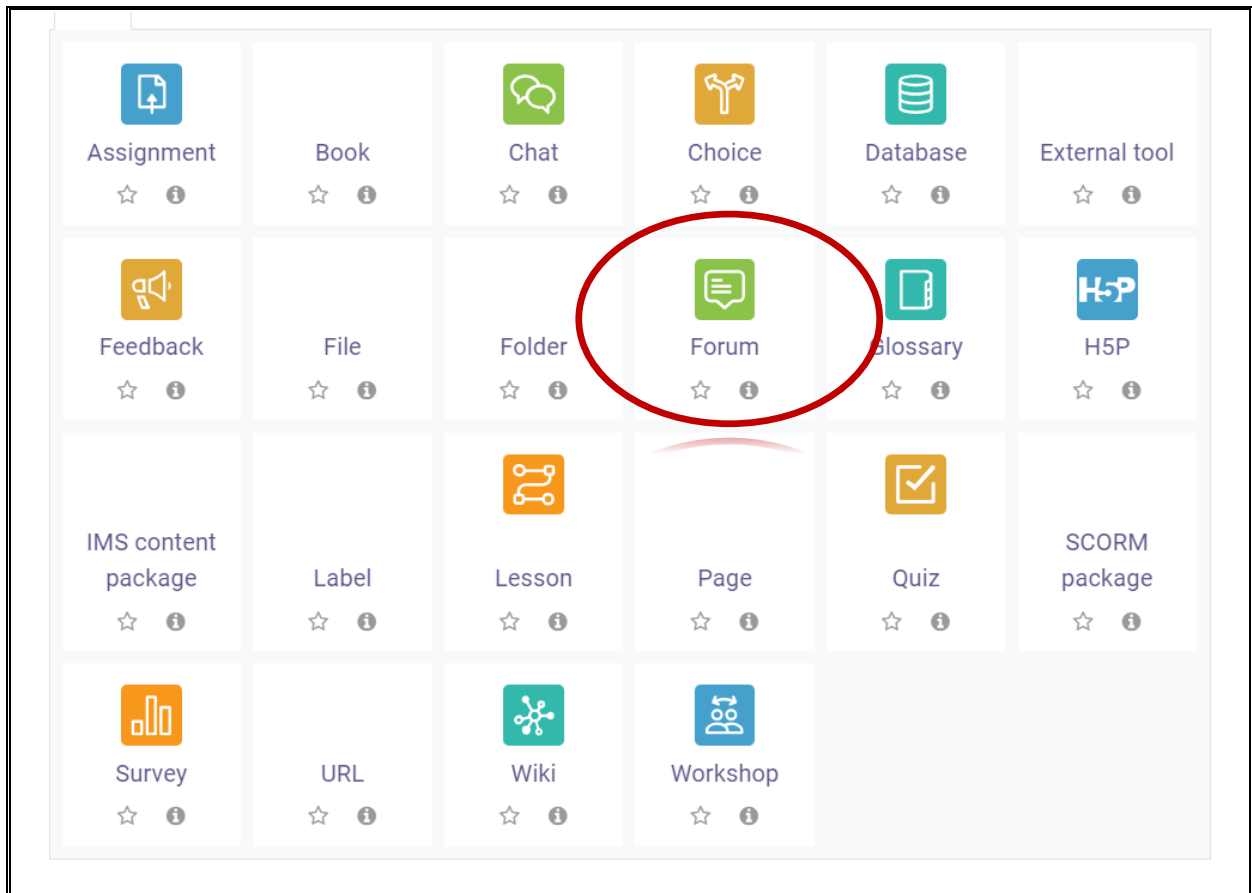
- The importance of knowing this maneuver can be discussed in the group
- Aspects from the material presented in the first part of the study topic can be discussed, with additional questions
- New topics can be posted in the forum, related to the topic of discussion, for example:
 - Have you had situations in practice when the execution of the maneuver was necessary?
 - Would it be useful for all people to know the maneuver?

To post a discussion topic in the forum, follow the following steps:

1. For the study topic, at the end of the activities, select the Create learning activity option (see image below)



2. Choose **Forum**



3. Enter the name, topic and choose **Save** from the bottom

Adding a new Forum to Manevra Heimlich

Forum name * Required

Description

Display description on course page ?

Forum type ?

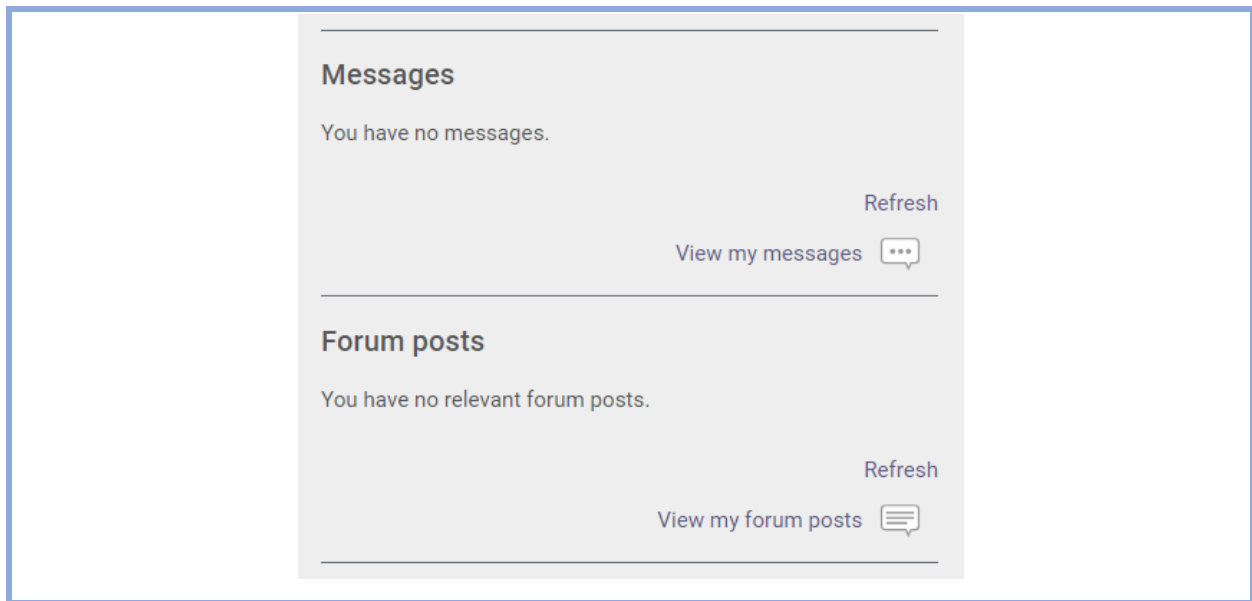
Standard forum for general use

Send content change notification ?

Save and return to course Save and display Cancel

IMPORTANT:

On the teacher's profile, at the bottom, the discussions and posts on the forum are displayed (see bottom image).



III. Case studies no. 10. Emergency airway management

An unconscious patient is brought to the emergency room, probably the victim of a trauma of unknown causes, judging by the appearance of the clothing.

Requirements:

Specify the steps you follow in providing medical aid.

Example of solving the task

1. Recognition of airway obstruction.
 - In the unconscious patient, breathing is evaluated after releasing the airway using the formula: "Look, Listen, Feel" meaning:
 - o look at the expansion of the chest,
 - o listen to breathing sounds,
 - o I feel the air flow of breathing.
 - I find that the patient is unconscious, the chest does not move, there are no respiratory sounds, I do not feel the air flow of the breath, so we are dealing with complete obstruction of the airways.
2. I will start interventions specific to basic airway management:
 - Hyperextension of the head and lifting of the mandible with a palm on the forehead and two fingers lifting the mandible, there being no suspicion of cervical spine injury.
 - Removal of oropharyngeal foreign bodies with Magill forceps or probe aspiration.
 - Oxygen will always be administered in parallel with airway management maneuvers. While on call, the amount, rate and method of administration will be determined by the emergency physician.

3. The patient will be constantly monitored and, depending on the evolution of his health condition - improvement or worsening due to the appearance of complications, the doctor will decide the direction of the therapeutic conduct.

IV. Case Study no. 13. Aspiration of secretions - indications, contraindications, methods, probes, technique

A patient with stage III malignant broncho-pulmonary tumor is recommended pleural drainage.

Requirements:

1. Specify the materials needed to perform the technique.
2. In what position should the patient be placed?

POSSIBLE SOLUTION

1. The necessary materials are:

For local anesthesia:

- 20 and 50 ml syringes;
- needles for subcutaneous injections;
- intramuscular needles;
- ampoules of xylin 2%;
- a local anesthetic cream.

For asepsis:

- betadine solution;
- sterile compresses;
- razor;
- sterile field for the table;
- sterile field troné;
- renal tray;
- waste bin;
- container for needles;
- sterile gloves;
- sterile protective equipment, including a sterile mask.

To apply drainage:

- scalpel;

- pleural drain (2, 10, 16, 18, 20, 22 G) according to the prescription;
- needles and sutures;
- adapted connection between the suction and drain system;
- suction device;
- two bottles with sterile water of 500 ml, allowing the adjustment of the negative pressure;
- the vacuum device and the air tube.

For dressing:

- sterile compresses;
- romplast;

For surveillance:

- cardiac monitor;
- T.A. measuring device;
- pulse oximeter for measuring oxygen saturation.

2. Depending on the patient's condition, the doctor may recommend one of the following positions:

- in supine position, head slightly raised, forearm on the drainage side placed under the head;
- sitting on the edge of the bed, calves hanging, back bent, forearms resting on a table in front;
- lying on the side, arm raised, head on the pillow.

REMARKS:

Learners can complete the patient's record. For this, the steps are followed:

1. Download the card from the platform, from PATIENT CARD MODELS (see image below)
2. Choose the patient's file
3. Complete the patient's file

Home / Courses / HSP

Home / Courses / HSP

HOSPITAL

CONTENTS

- Introduction
- Patient File** (Progress: 0 / 3)
- Cardiopulmonary resuscitation - basic life support (Progress: 0 / 13)
- Airway management: airway adjuncts (Progress: 0 / 7)
- Endotracheal intubation (Progress: 0 / 7)
- Safety position (Progress: 0 / 6)
- The Heimlich maneuver (Progress: 0 / 9)
- Administration of emergency medication (Progress: 0 / 13)
- Infusions (Progress: 0 / 10)
- Non-invasive monitoring of vital parameters (Progress: 0 / 19)
- Invasive therapeutic monitoring

Patient File

→ 👁 ✕ 🗨

Use this area to describe what this topic is about - with text, images, audio & video.

Edit section

DOC ✓	DOC ✓	DOC ✓
PATIENT CARE PLAN	BEDSORE RISK ASSESSMENT ...	FALL RISK ASSESSMENT ...
📄	📄	📄

4. For the case study, upload the completed patient file as an attachment (see image below).

File submissions

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▶ 📁 Files

📁

You can drag and drop files here to add them.

Accepted file types:

Document files .doc .docx .epub .gdoc .odt .oth .ott .pdf .rtf

Save changes Cancel

V. Case studies no. 15. Emergency hemostasis

Patient A.F., aged 54, is urgently admitted to the Medical Department with the diagnosis of Upper Digestive Hemorrhage.

Requirements:

1. Formulate the nursing diagnosis
2. Establish emergency care goals

Plan necessary own and delegated role interventions

Assess the patient's condition after applying the planned interventions.

Example of solving the task

1. Nursing diagnosis

P: Risk of complications: hydro-electrolytic, hemodynamic imbalances, hemorrhagic shock, exitus

E: HDS

2. Objectives of emergency care

The patient should be protected from complications

B. CENTER MODULE

I. Introduction

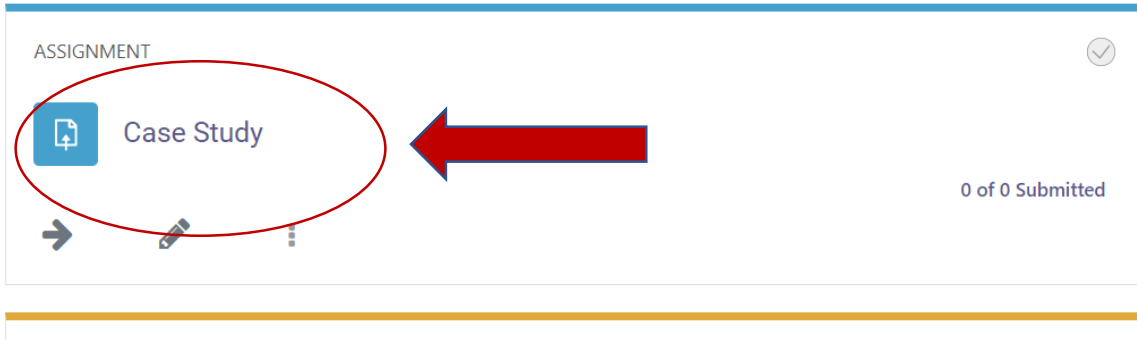
The CENTER module is structured in 10 study topics, as follows:

1. Cardiovascular diseases
2. Psychic and neurological disorders in aging
3. Aspects of geriatric digestive pathology
4. Diabetes mellitus
5. Obesity
6. Dehydration
7. Geriatric blood pathology
8. Gerodermatological pathology
9. Urinary geriatric pathology
10. Aspects of geropathology of the locomotor system.

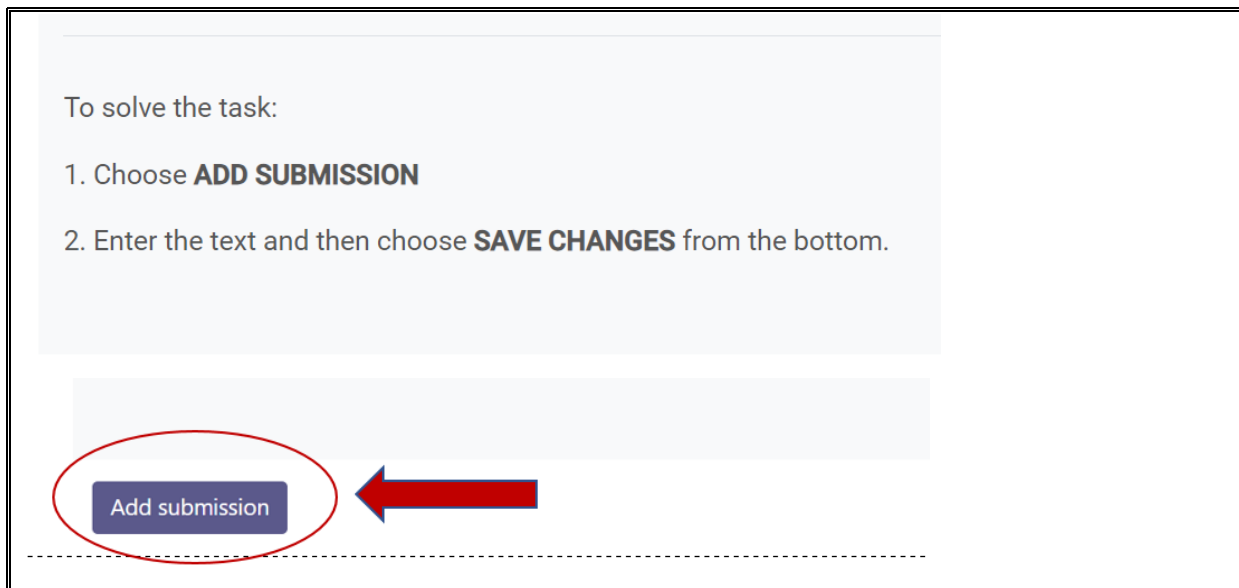
The screenshot shows the 'SENIOR CENTER' module interface. On the left is a 'CONTENTS' sidebar with a search icon and a list of topics with progress indicators: Introduction (0/4), Patient Records (0/4), HEART AND VASCULAR DISEASES (0/10), PHYSICAL AND NERVOUS DISORDERS OF AGING (0/9), ASPECTS OF THE AGE PATHOLOGY OF DIGESTION (0/11), DIABETES (0/10), OBESITY (0/7), DEHYDRATION (0/8), AGE PATHOLOGY OF THE BLOOD (0/7), AGE SKIN PATHOLOGY (0/7), and URINE-RELATED AGE PATHOLOGY (0/7). The main content area is titled 'Introduction' and contains the following text: 'The CENTER module is structured in 10 study topics. Each topic is structured as follows: - has an **introductory part**, with information focused on the practical aspects of the subject to be studied - **case studies** – practical studies, tasks for students to solve - **tests** - short tests with questions from the study topic - **laboratories** - tasks for students to solve. *Patients' files* will be completed in the laboratories. Templates for downloading, completing and uploading to the platform can be found in the **PATIENT FILE** submodule.' Below this text is an 'Edit section' button with a document icon. At the bottom, there is a 'FORUM' section with an 'Announcements' button.

To see the case studies, from each theme, students will go through 3 steps:

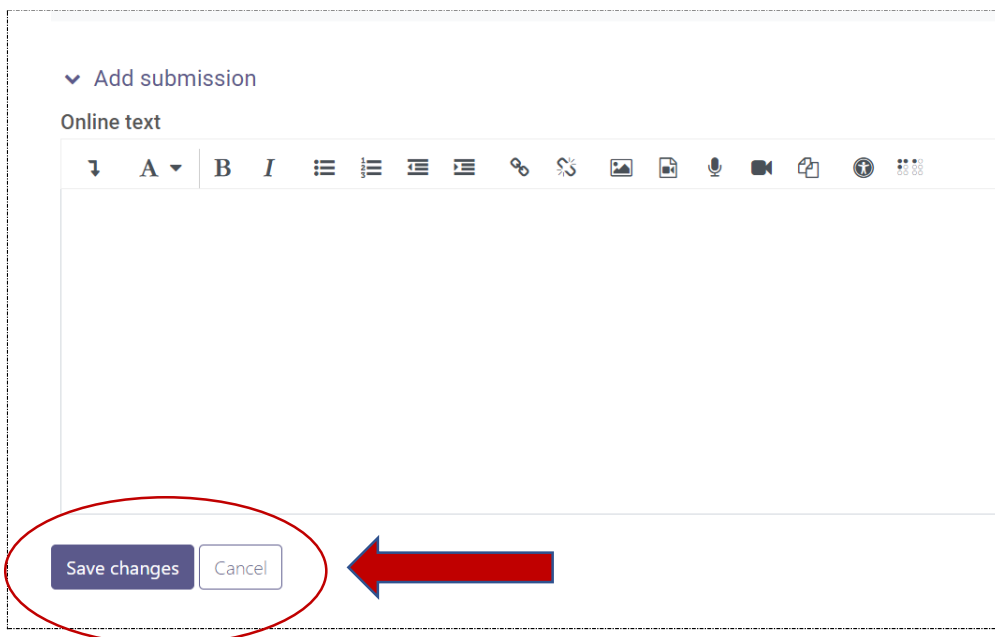
1. Choose the Case Study button



2. Choose the Add submission button (see figure below).



3. Enter the text in the text box and save, choose **Save change**.



II. Case study no. 1. Cardiovascular diseases

John is a 70 year-old retired business man who has had a pretty busy life in the past 35 years, a period in which he has set up his own business from scratch and has made it successful on the national and international market. Succession in the leadership of his company has not been smooth since, even if he has a son willing to help and undertake the company, he felt it difficult to pass on responsibility to his educated, intelligent yet inexperienced child. He has had a history of panic attacks, tachycardia, other cardiac symptoms, high blood pressure, nervous breakdowns, having worked for 12-14 hours per day for decades, having had unhealthy eating and sleeping habits and patterns.

Requirements:

Take the blood pressure and pulse rate of the patient and elaborate the treatment plan for the patient.

SOLUTION

Old Patient with Cardiovascular Diseases - **Treatment Plan:**

Assessment: Conduct a thorough assessment of the patient's cardiovascular condition, including their medical history, current medications, and any recent diagnostic tests.

Treatment Plan:

- Collaborate closely with the patient's cardiologist to develop and implement a tailored treatment plan.

Medication management:

- Ensure that the patient is taking prescribed medications correctly and regularly.

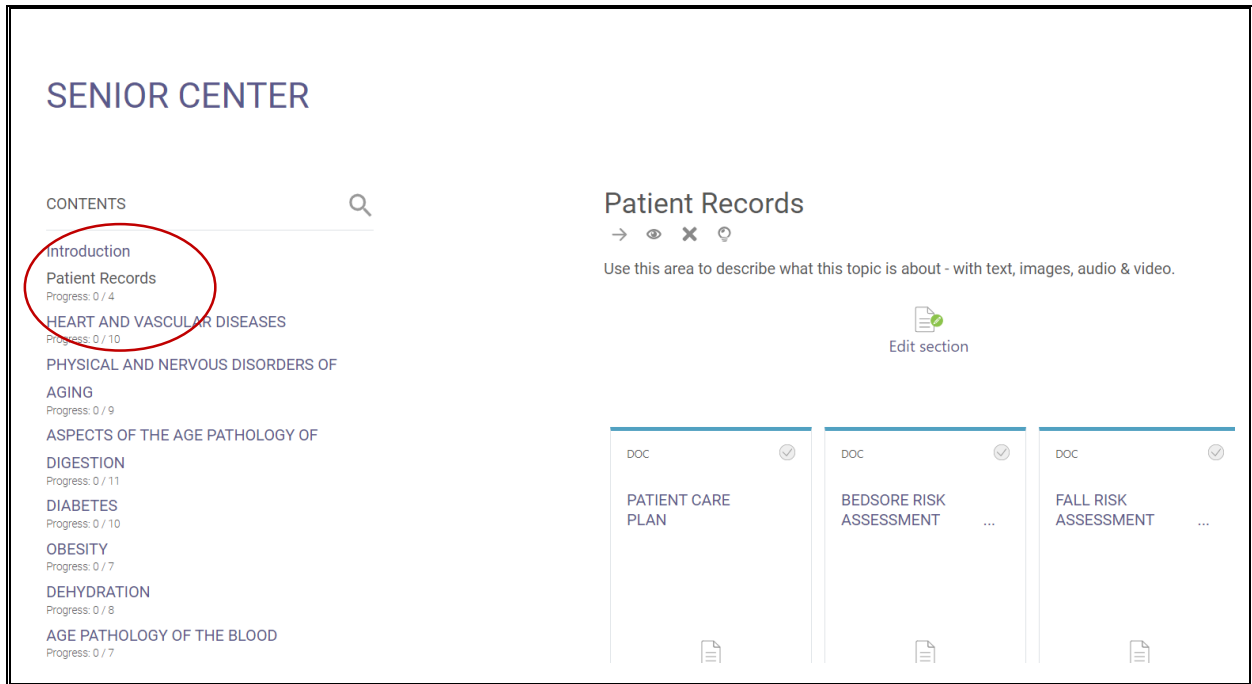
Lifestyle modifications:

- Encourage heart-healthy behaviors, such as a low-sodium diet, smoking cessation, and stress management.
- Monitor vital signs, including blood pressure and heart rate, regularly.
- Consider referral to cardiac rehabilitation programs if appropriate.

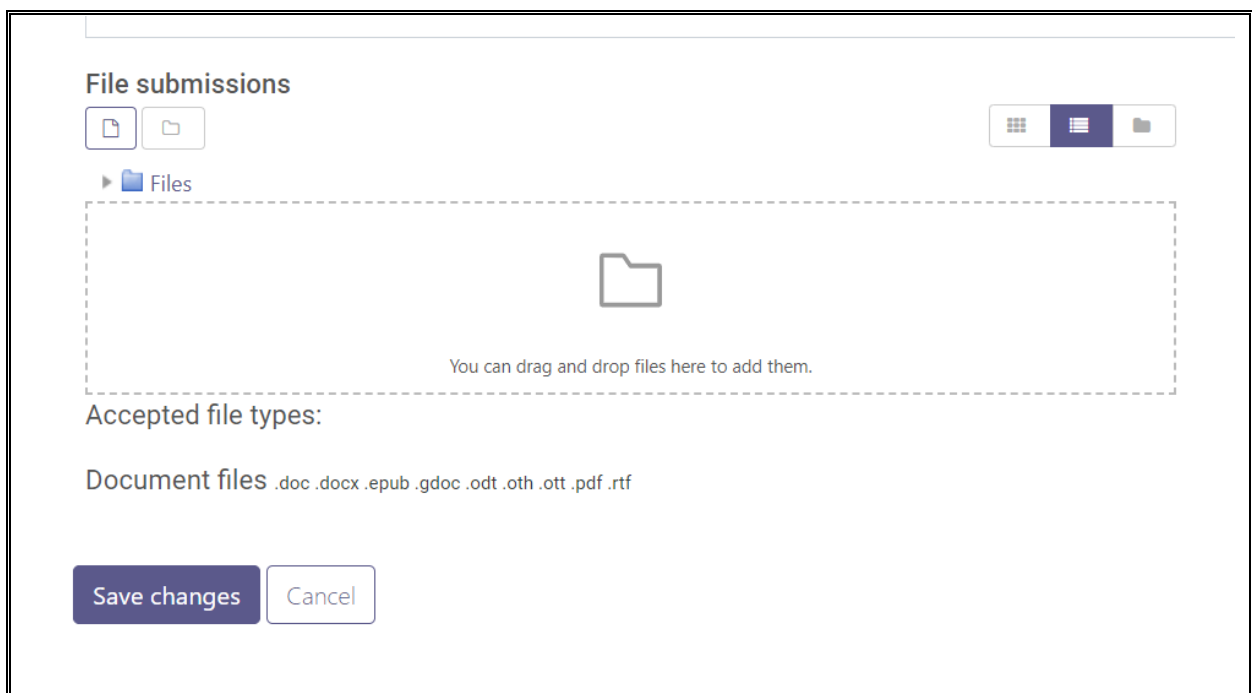
REMARKS:

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2. Choose the patient's file
3. Complete the patient's file



4. For the case study, upload the completed patient file as an attachment (see image below).



III. Case study no. 4. Diabetes

Tibor is a retired engineer who has been working both in management and development positions in an international company, having extensive workload, long working hours, excessive responsibility and unexpected challenges for most of his active life. Stress and unhealthy life style have caused high blood pressure, serious gain in body weight, which all ended in adult diabetes in his '50s. He has been struggling with its symptoms and effects for the last 20 years.

Requirements:

Elaborate a healthy diet plan for the patient.

SOLUTION:

Old Patient with Diabetes - Diet Plan:

Assessment:Begin by conducting a comprehensive assessment of the patient's diabetes, including their current blood sugar levels, medication regimen, and any complications.

Dietary Recommendations:

- Consult with a registered dietitian to create a personalized meal plan that takes into account the patient's dietary preferences and cultural considerations.
- Emphasize a balanced diet that includes a variety of whole grains, lean proteins, fruits, vegetables, and healthy fats.
- Limit the intake of refined sugars, processed foods, and saturated fats.
- Monitor carbohydrate intake and encourage the patient to spread their meals throughout the day.
- Educate the patient on carbohydrate counting and portion control.
- Promote regular blood sugar monitoring and provide guidance on interpreting results.
- Ensure the patient stays hydrated and limits sugary beverages.

Exercise Recommendations:

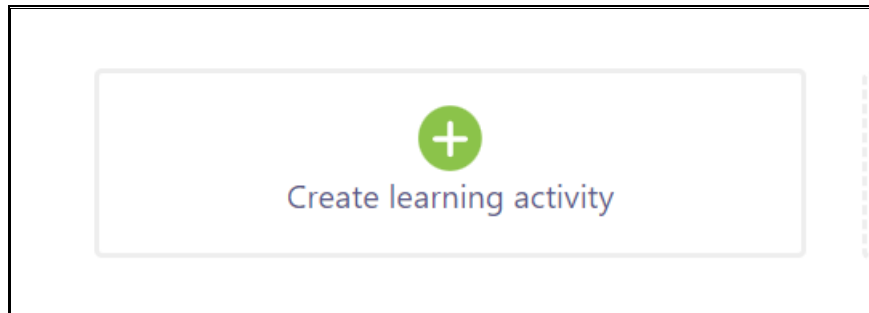
- Encourage regular physical activity based on the patient's capabilities. This may include walking, swimming, or chair exercises.
- Recommend at least 150 minutes of moderate-intensity aerobic activity per week, along with strength training exercises twice a week.
- Emphasize the importance of blood sugar monitoring before and after exercise.

Medication Management:

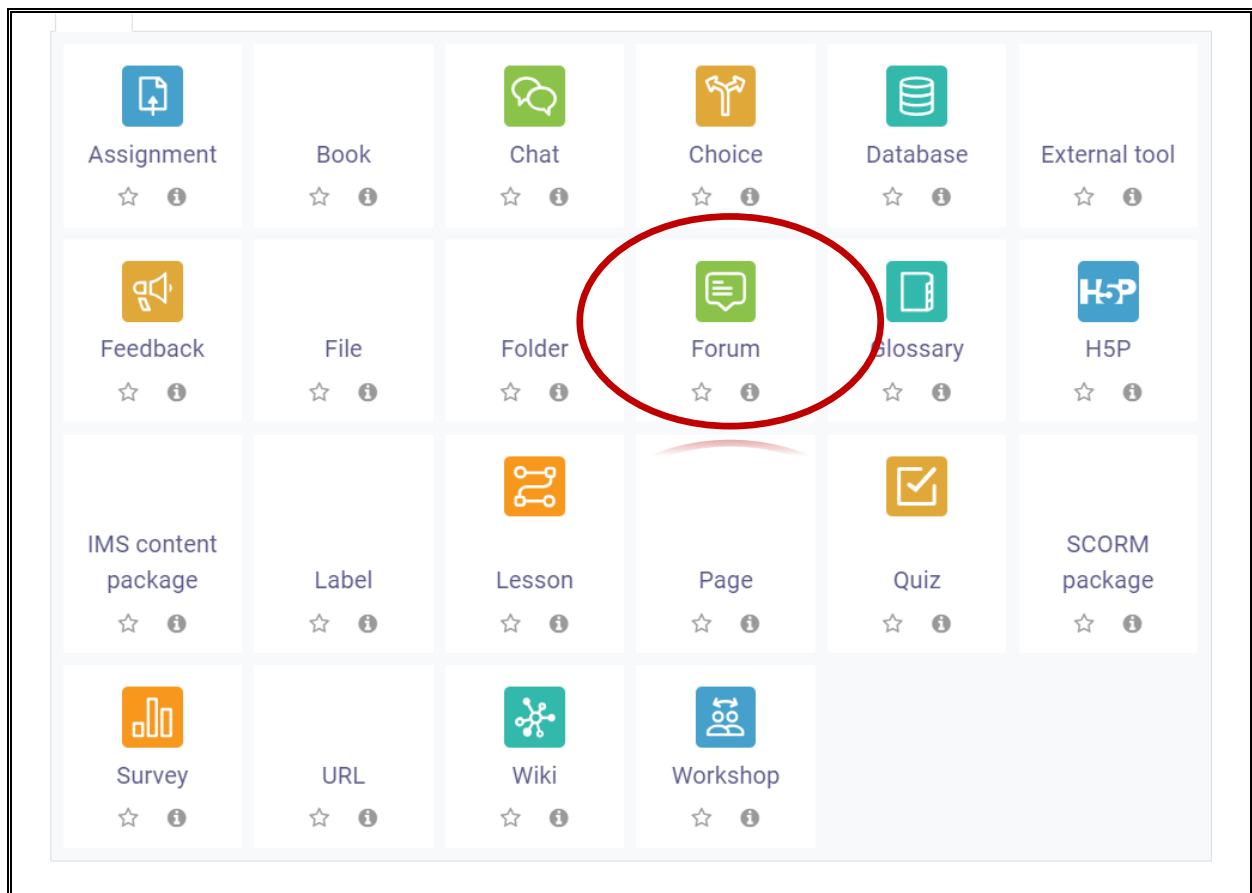
- Coordinate with the patient's healthcare provider to ensure their medication regimen is appropriate and adjusted as needed.
- Educate the patient on the proper administration and timing of medications.

To post a discussion topic in the forum, follow the following steps:

1. For the study topic, at the end of the activities, select the Create learning activity option (see image below)



2. Choose **Forum**



3. Enter the name, topic and choose **Save** from the bottom

Adding a new Forum to Manevra Heimlich

Forum name * Required

Description

Display description on course page ?

Forum type ?

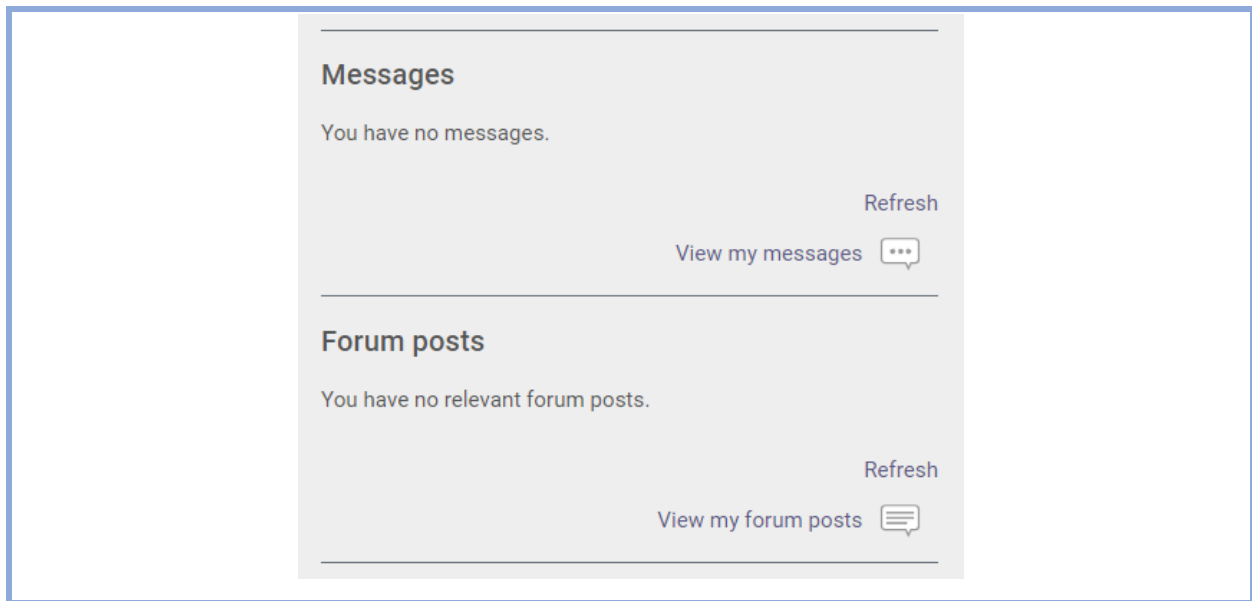
Standard forum for general use

Send content change notification ?

Save and return to course Save and display Cancel

IMPORTANT:

On the teacher's profile, at the bottom, the discussions and posts on the forum are displayed (see bottom image).



IV. Case study no. 5. Obesity

John and Mary are an elderly couple who have had indoors office jobs all their lives. Because of lack of physical exercises, excessive nutrition and serious nervous pressure caused by the job related stress and challenges, they have become overweight, making it even more difficult for them to move and do some exercise. With the excess gain in weight they started having the typical symptoms and health problems that accompany obesity: high blood pressure, cardiac conditions, diabetes, rheumatological problems, pains in the joints and different parts of the body, etc.

Requirements:

Elaborate a dietary and physical exercise plan for the patient.

SOLUTION

Old Patients with Obesity - Diet and Physical Exercise Plan:

Assessment: Assess the patient's current weight, BMI, and any related health conditions, such as hypertension or joint problems.

Dietary Recommendations:

- Collaborate with a registered dietitian to create a customized meal plan that promotes gradual, sustainable weight loss.
- Emphasize portion control, balanced nutrition, and calorie deficit.
- Encourage the consumption of whole foods, fruits, vegetables, and lean proteins.

- Educate the patient about mindful eating and the importance of avoiding emotional eating.
- Regularly monitor and review progress, making necessary adjustments to the diet plan.

Exercise Recommendations:

- Design an exercise plan that accommodates the patient's physical abilities and limitations.
- Promote regular physical activity, aiming for at least 150 minutes of moderate-intensity aerobic exercise per week.
- Include strength training exercises to help preserve muscle mass.
- Monitor progress and adjust the exercise plan accordingly.

Behavioral Support:

- Provide psychological support to address emotional eating and food cravings.
- Encourage the patient to maintain a food diary to track eating habits and identify areas for improvement.
- Celebrate achievements and provide motivation and encouragement.

Remember to involve the patient's healthcare provider, dietitian, and other relevant specialists in the development and ongoing monitoring of these treatment plans. Regular follow-up and adjustments are essential to ensure the plans remain effective and safe for the elderly patients.