



SAPHA COURSE

Safe patient handling and
mobility education



Co-funded by the
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Finnish Institute of Occupational Health



Co-funded by the Erasmus+ Programme of the European Union



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Course material from Turku University of Applied Sciences 146

Turku University of Applied Sciences
Turku 2022

ISBN: 978-952-216-816-0 (pdf)
ISSN: 1796-9972 (electronic)
<https://urn.fi/URN:ISBN:978-952-216-816-0>

ISBN: 978-952-216-817-7 (printed)
ISSN: 1457-7933 (printed)
Printed by: PunaMusta Oy, Vantaa, 2022

Turku UAS' publications: turkuamk.fi/julkaisut

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Preface

Healthcare workers (e.g. physiotherapists, occupational therapists, nurses, radiographers, nursing aids), owe a duty of care to their patients, colleagues, and themselves not to cause harm. For healthcare workers, handling and transferring patients is a frequent and physically demanding work task. Numerous studies and international studies and statistics provide evidence that high physical work demands are a risk factor for developing musculoskeletal disorders. Among the different types of work tasks, patient handling is the most substantial risk factor for low-back pain in nursing personnel, including healthcare students. Safe patient handling is a core competency for health care workers caring for patients. Nevertheless, they have not been adequately trained in the subject in their education. Possible reasons for this are the lack of understanding the great importance of safe patient handling for the wellbeing of workers and the quality of work, the lack of knowledge on the latest research of patient handling and the lack of available evidence-based teaching materials for nurse educators. Or has too much trust been placed on that students will be learning manual patient handling in practical training? However, at healthcare workplaces it is even more challenging to change the patient handling practices for evidence-based safe ones than in the education. Research shows that the old patient handling practices are physically demanding and commonly do not support the patient's own activity. Educators are in an ideal position to renew the training of health care students in handling, moving, lifting, and transferring patients.

I am delighted that Turku University of Applied Sciences has taken the initiative to establish the RENE project (Renewing Ergonomic Education for Health Care Students in European Higher Education Institutions HEIs). In the project, teachers from six European higher education institutions have been working together to develop an interactive SAPHA course with research-based knowledge about risk factors, safe patient handling principles and innovative teaching methods. Hopefully this extensive material will also help the other health care educators to apply the evidence-based education of safe patient handling. This excellent and versatile material is freely available online. Health care educators may find it challenging to add the SAPHA course to their already full curricula, but the educational institutions have an ethical duty to protect students from well-known occupational risks such as the overload of the musculoskeletal system and injuries associated with manually lifting, transferring, and repositioning patients and assisting them with mobility.

The cooperation has been fruitful, and we gratefully acknowledge the financial support of EU's Erasmus+ programme.

Leena Tamminen-Peter

In Turku, 6th of June 2022

**SAPHA course for
evidence-based
patient handling
education**

SAPHA course for evidence-based patient handling education

The overall purpose of the SAPHA course (Patient handling in a safe and rehabilitating way) is to increase the workplace safety in the health care sector, to improve the utilization of the full rehabilitation potential of the patients assisted in health care units and to decrease the workload of health care workers. The SAPHA contents and design are built on new and innovative pedagogies and the assignments included will increase the students' skills needed in the current and future labour market. The contents are based on open access materials and, the course facilitates the students' and educators' skills in digital competences. The activities and aims of the SAPHA course are based on evidence-based knowledge and on the need to improve the patient handling skills. The SAPHA course can be embedded into diverse learning environments (e.g. Moodle) across the European health care institutions. As a conclusion, the SAPHA course offers materials and pedagogy to tackle skills gaps and mismatches, promotes transparency and recognition of skills, and promotes excellence in teaching of safe patient handling and mobility.

The general aims of the SAPHA course are as follows:

Once the student finalizes the SAPHA course, they can:

- Define the basic principles of ergonomics in health care
- Understand and observe natural movements and recognize the importance of motor learning in patient handling
- Choose and utilize the safe and rehabilitative transfer technique/s and proper assistive device/s according to the patient's functional status
- Identify, evaluate and diminish risk factors in patient handling, both from the patient and professional perspectives
- Communicate in a multiprofessional environment to achieve safe and rehabilitating patient handling situations
- Integrate ethical reasoning in patient handling situations.

This SAPHA Handbook is designed to support the practical implementation of the SAPHA course and is dedicated to the teachers and educators that will implement the programme in different countries and in different health care education programmes. This Handbook provides educational ideas for teachers and educators, and experimental learning for the students. The SAPHA Handbook is offered according to open access principles, which strengthens its dissemination and sustainability.

General aims of the SAPHA Handbook

- to provide the teachers and educators in health care programmes with the rationale behind the SAPHA course design, ergonomic principles, and evidence-based support of the teaching programme
- to provide the opportunity for teachers and educators from different countries to develop new competencies in ergonomic education and health care delivery
- to enable the teachers and educators to effectively deliver the SAPHA course to national and international health care students
- to improve the quality of ergonomic education in the field of patient handling
- to provide a background for international qualification, through a standardized programme underpinning e-learning/b-learning methodology
- to promote the implementation of the SAPHA course as a part of health care curricula
- to work as a sustainability and dissemination tool, about ergonomics education in health care
- to act as a reflection tool regarding the impact of safe patient handling performance on students/future health care professionals.

Target Group

The target groups of this SAPHA Handbook are physiotherapy teachers, occupational therapy teachers, nursing teachers, other health professionals' teachers and educators in health care, with experience and expertise in ergonomic/safe patient handling practice and education. It is expected that the teachers and educators who will implement this SAPHA course are familiarized with the concepts, to warrant the quality of the teaching and learning process.

The relevance of renewing patient handling education

First, we want to offer the grounds for our developmental work and have a glance at the research in the field. Manual patient handling is found to be a substantial risk for health care workers as the statistics show that health care workers are especially prone to musculoskeletal disorders, particularly affecting the spine and shoulder (1, 2). Patient handling is a physically demanding task which can lead to pain, loss of work ability, absenteeism, and early involuntary leave from the labour market (3).

Musculoskeletal disorders represent a significant health challenge for public health. The increase in life expectancy of the EU population and in the average age of the workforce may lead to shortages of health care workers in the future (4). With increased age, the ability to perform physically demanding work — e.g., handling and transferring patients — becomes more challenging due to loss of muscle strength and physical fitness (5). Thus, a triple challenge will be faced in the healthcare sector; an increased care burden, recruitment challenges and an ageing workforce.

The actions for preventing workers' suffering from musculoskeletal disorders and promoting health care workers' health throughout their working life, already from their vocational training phases, are key factors in supporting health care workers' well-being. Focusing on good patient handling skills and on the use of assistive devices are essential for reducing the work physical load (6; 7); thus, these topics are included in the theoretical part of SAPHA. Other strategies for the promotion of well-being at work include improving work satisfaction, leadership practices and wages in the health care sector, and actions for promoting the reputation of the health care sector.

Several studies reveal that outdated and strenuous patient handling procedures are still being taught in some health care educational institutions both in Europe and the US (8–12). This is partly due to a lack of evidence-based knowledge that would be easily accessible both for students and teachers (10; 13).

Updated recommendations on safe patient handling are based on evidence-based knowledge of physical load involved in patient handling techniques and the effectiveness of injury prevention in health care. It refers to the application of human factors in the different patient assisting techniques, in which the working methods are performed safely and utilizing the patient's own potential optimally. It is based on a holistic and multidimensional approach across all patient handling scenarios. The key features of safe patient handling are systematic risk evaluation, patients' functional assessment, consideration of an optimized and safe environment, use of appropriate assistive devices, application of safe assisting methods and optimal working positions and body control of the worker (1; 10). Apart from these key factors, the health care workers must have proper skills to apply evidence-based practices, adapting them to different patients and scenarios, and perception of legal and professional responsibilities of the topic (6–14). The SAPHA course includes all the above-mentioned key features, and the topics are dealt from both the theoretical and practical perspectives.

The challenge of work-related musculoskeletal disorders has been recognized and addressed at the European level by the adoption of different EU directives, strategies, and policies. Already in 1990, the EU introduced a directive to protect workers against the risks involved in handling heavy loads (17). It highlighted the minimum health and safety requirements for manual handling of loads and was implemented in most European countries (18). However, patient handling is more complex than just lifting loads and it requires more detailed guidelines to its implementation in the health care sector. International Consensus on Manual Handling of People in the Healthcare Sector was published in Technical Report ISO/TR 12296 in 2012 as a statement of science in reducing musculoskeletal disorders related to patient handling activities. It sets out a model of risk management to include risk assessment of organizational aspects, adequate equipment, and assistive devices, building and environment design, training and education and an evaluation of the effectiveness (19).

It is essential that a paradigm shift occurs both in working life and in the education of health care workers. There is a need to shift from the traditional mindset of "we have always taught this way" to education and work based on the evidence-based practices. Health care teachers are in an ideal position for changing the paradigm of how health care students are educated about handling, moving, lifting, and transferring patients (20). To support teachers and educators in the health care units to improve their work, national guidelines or suggestions for patient handling education exist in some countries such as Finland (21; 22), the UK (23; 24) and the United States (25; 26).

Some teaching and learning methods have been recognized as best practices, such as interdisciplinary collaboration (27), hands on practice or peer teaching (28). Also, online modules with videos, photos, and asynchronous threaded discussions, as well as hands-on lab modules and case-based competency assessment modules have been identified as effective teaching and learning methods (11). In patient handling courses, active learning can be incorporated using role-play, case scenarios, or video examples that promote clinical decisions about manual or mechanical mobility transfers. Students should be challenged to choose the best option for safe and effective patient mobility training and give them the opportunity to consider both the therapist's and patient's perspective in the decision-making process (9). Simulation learning, utilized in the SAPHA's practical part, is found to be an effective approach to learn practical skills in a simulated real environment where no harm is done to patients (29).

Finally, the students should be able to transfer the learned theoretical knowledge and concepts of safe patient handling methods into real life situations. However, there are barriers to apply them in clinical settings where nursing staff commonly use manual lifting techniques and in units where patient handling devices are not always available (21). To overcome these barriers, there should be training in clinical centres and cooperation with suppliers (10). The developed SAPHA course can be used also in further education of health care workers.

Staff mobility is increasing in Europe and globally and the diversity of education has been detected, which sets challenges to unifying safe patient handling and mobility education (31). Improved ergonomic competencies protect health care workers against the risk of musculoskeletal disorders and improves quality of patient care. It also offers health care professionals better professional self-esteem and work satisfaction, which are core elements to prevent them from overload and exhaustion at work. To deal with this issue, the RENE project created the SAPHA course (5 ECTS), which consists of a theoretical and practical part. We hope this Handbook offers you a great tool to apply the SAPHA course to improve your knowledge and skills in patient handling and through that, a better and safer future in working life in the health care sector.

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Pedagogical background

Pedagogical background

When considering an effective pedagogical approach in teaching Safe Patient Handling, one must consider that Safe Patient Handling requires: a) teaching the scope of the most relevant and contemporary theories and techniques; b) methods and strategies that reflect the complexities of patient handling, adequate opportunities for problem-solving and hands-on experiences coupled with instructor and peer feedback; and c) transfer of learning related to a real context (1–3).

Evidence shows that patient handling is still mainly taught under traditional methods in academic programmes (1). Reasons for that might be weak access to decent assistive devices or that the evidence-based practice has not reached all educators. Teachers' beliefs and attitudes regarding patient handling may also affect teaching (when patient-handling equipment is regarded as too expensive for rehabilitation settings, without therapeutic value for therapy, leading to functional decline, loss of patient independence, or decrease of functional status scores) (1; 4–6). Moreover, some data reveal that qualified staff sometimes discourage the use of equipment, based on the fact that they do not know how to do it or have time to use it. (4; 7). This fact reinforces the importance of raising awareness among educators to a paradigm shift in the way students are taught to handle patients. For that reason, the theoretical and practical contents presented in the RENE SAPHA course were based on a literature review and survey done in the RENE Project. The evidence-based contents in theoretical and practical part were divided in different baskets.

Concerning Safe Patient Handling teaching, several methods have been described in the literature as an alternative to traditional teaching, such as the Hybrid Learning method (3) and the Interprofessional Peer Teaching Model (8). The first one mentioned, aiming to change the traditional pedagogical approach is Hybrid Learning, a blended method of online and hands-on learning (comprising classroom activities, online educational materials and interactive activities). By presenting Safe Patient Handling content in an online format, Hybrid Learning allows students to continually access contents providing repeated self-paced exposure. While revisiting new content, students develop knowledge associations to deepen judgment skills needed for practice, to solve lab problems prior to fieldwork with patients (3). This chance for repeated discovery helps students to learn at their own pace and develop their safety judgment skills during patient handling, alongside with hands-on training.

Another alternative, the Interprofessional Peer Teaching Model is grounded on the Interprofessional Education approach, where health students from different professions learn together at the beginning of and throughout their training. The opportunity for different professional groups to interact early in their professional careers promotes a shared understanding of each other's roles and overlaps when learning about biomechanics, safe patient moving and handling, and may promote a greater awareness of how interprofessional collaboration and teamwork benefits patient care. Additionally, the use of the Peer Teaching approach, where students take part in the teacher's role can also be integrated regarding the outcomes described in the study by McCrorie (8) and recognized as best practices to be followed.

Both approaches underpin the use of active learning strategies, so students become able to engage in learning and transfer the Safe Patient Handling concepts to real situations. The use of role-play, case scenarios, videos, laboratory-based learning/simulation, student's preparation with pre-reading articles; hands-on training/practice; use of checklists and algorithms to support clinical decisions have been used for more than a decade, and have been recognized in Safe Patient Handling curriculum design to help stimulate critical thinking (9; 10; 11; 8)

The same applies to the use of tools that challenges and encourages students to discuss literature related to Safe Patient Handling and Work-Related Musculoskeletal Disorders, and to choose the best option for safe and effective patient handling while considering both the therapist's and patient's perspective in the decision-making process (2; 12).

Accordingly, the RENE SAPHA Course relies on these pedagogical approaches – Evidence-based Hybrid Learning and Interprofessional Peer Teaching Model, including Online Modules, Hands-on Practice Modules and other supporting active learning strategies. This framework for learning and teaching the SAPHA course contents is based on learning as a constructive process: the learners construct knowledge through interacting with other learners and incorporating new information into their pre-existing knowledge. For that reason, it is recommended to complete all the modules (Baskets 1–7) in the suggested order.

The structure of the course entails five theoretical online modules (baskets 1 to 5) with pre-reading tasks based on a literature review, videos, photos, and asynchronous group discussions, independent self-practice, based on case studies and patient case scenarios, as well the use of checklists and algorithms, assignment quizzes, and reflection tasks; and three practical modules (baskets 6, 7 and optional basket) divided in four practical lessons and simulations and a clinical education optional module. The final practical exam comprises peer and self-evaluation tasks.

Ability to self-assess the practice through critical reflection of the performance, feedback to peers/ others, can help students to assess how their values, principles, preferences and approaches influence their practice. Reflective practices involve cognitive processes, a strong critical element, and the opportunity for self-development and emotional involvement, to review and reconstruct ideas with the aim to improve practice (13).

The interprofessional approach assumes that the RENE SAPHA Course represents an international course intended for health students from different disciplines such as nursing, physiotherapy, occupational therapy, radiology, paramedic medicine, among others and should be offered as such.

From our perspective, the adoption of an integrated multidisciplinary programme in this field, at the beginning of the education, ensures that students learn together about patient moving and handling principles and introduces them to interprofessional education helping to redefine patient handling care in an interprofessional context.

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**Theoretical
part of the
SAPHA
course**

Theoretical part of the SAPHA course

The theoretical part of the SAPHA course, which consists of five separate Baskets (1–5) takes about eight weeks to accomplish. The total workload for SAPHA course using 1 ECTS = 27 hours is 3 ECTS for theoretical part.

The Baskets are named 1) Basics of Ergonomics, 2) Function of a Patient 3) Principles of Patient Handling 4) Management Policies and 5) Ethics and Communication. The five Baskets offer a holistic approach to the basis of patient handling, including the fundamental elements of evidence-based patient handling education.

The following chapters which explain the Baskets in detail aim to:

- describe the structure of the course, the applied pedagogic principles and learning strategies used in the SAPHA course
- introduce teachers to the contents and learning materials used in the theoretical part of SAPHA, and guidelines for further development

BASKET 1

Introduction to Ergonomics



Ergonomics, prevention of musculoskeletal diseases, physical loading, evaluation of physical loading



Workload for students is 7 hours.
Workload for teachers is 2 hours.



No prerequisites

INTRODUCTION

This basket introduces the students to the basics of ergonomics and the risks and hazards the work and working environment may cause. Students will learn about the causes and incidences of work-related musculoskeletal disorders and have a glance to prevention issues. The physical loading in care work and the assessment procedures are an important piece of information in this Basket.

AIMS/LEARNING OUTCOMES

- After completing this Basket, students will be able to:
- define the basic principles of ergonomics
 - identify risk factors that contribute to musculoskeletal disorders
 - describe solutions for controlling and reducing workplace risks
 - explain physical load
 - explain assessment of physical load in care work

Teaching/learning strategies

This Basket is done independently and there are automatic corrections to assignments or model answers. The Basket offers students reading materials and they need to find out correct information from websites and reflect their knowledge and attitudes after watching the videos.

Assignments

Assignments for students:

- Assignment 1: students read the materials and complete quizzes about ergonomics.
- Assignment 2: students read the “Physical load in patient handling” document and answer one question.
- Assignment 3: students watch the two videos and complete a reflection assignment.

Tasks for teachers:

All tasks: Automatic feedback for students. Make sure the student has completed the assignments before proceeding to Basket 2.

METHODOLOGIES

EVALUATION

Assignment 1 and 2 evaluation criteria: min. half correct answers.
Assignment 3 evaluation criteria: reflection submitted to platform.

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

Give the students approximately one week time to complete this basket.
Basket 1 can be carried out without teacher involvement but feedback to students is recommended, and the teacher can give either individual feedback or group feedback.

BASKET 2

Function of a Patient



Human movements, motor learning, body awareness, functional status.



Workload for students 9 hours.
Workload for teachers 2 hours.



Basket 1 should be studied before entering Basket 2.

INTRODUCTION

This basket introduces the student to motor learning, natural movement patterns, body awareness and body functioning assessment, which is the base for client-centred, rehabilitative and safe patient handling. First, the student reads the learning material and watches the videos. Following that there are learning activities.

The basket is organized in two main learning topics that should be addressed sequentially:

“Natural movements, body awareness and motor learning” and “How to assess patient’s functional level”.

AIMS/LEARNING OUTCOMES

After completing the Basket, students will be able to:

- understand motor learning processes
- recognize natural movement patterns
- be self-aware and able to perform body awareness exercises
- understand why patient’s functional capacity needs to be assessed before choosing assistive techniques and devices
- know tools to evaluate patient’s functional capacity before assisting him/her to move for optimal participation and resource usage

METHODOLOGIES

Teaching/learning methods

This basket utilizes multiple learning methods, such as reading materials, quizzes, videos, and independent practical exercises on body awareness.

For each topic, students are challenged to reflect on their theoretical and practical knowledge. In addition, students are invited to develop and deepen further knowledge about the principles of patient handling.

Assignments

Assignments for students:

- Assignment 1: students read the materials "Human movement" and "Motor learning in patient handling" and completes a quiz
- Assignment 2: students watch the "Body awareness" video, complete the exercises and participate in discussion
- Assignment 3: students watch the video "Quick functional assessment of the patient" and complete the quiz "Functional status assessment".

Tasks for teacher:

- Assignment 1: automatic corrections. Check that students have completed the quiz.
- Assignment 2: make sure the students participate actively in the discussion.
- Assignment 3: no requirement for teacher supervision.

Make sure the student has completed the assignments before proceeding to Basket 3.

EVALUATION

Assignment 1 evaluation criteria: min. 13 correct answers out of 16.

Assignment 2 evaluation criteria: two new messages and three comments (50–100 words)

Assignment 3 evaluation criteria: there is an automatic model answer to students.

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

Give the students two weeks to complete this basket.

Basket 2 can be carried out with minor teacher involvement. The teacher needs to check that the student opens two new discussions and comments three other discussions in assignment 2. The teacher can give individual or general feedback of the other assignments, if necessary.

If the H5P learning environment cannot be used, the teacher should use the available YouTube video with the same name (the video should be hidden from students in other situations).

BASKET 3

Principles of Patient Handling



Considerations before the transfers, assisting patient transfers, assistive devices



Workload for students: 11h
Workload for teachers: 3-6h



Baskets 1-2 should be studied before entering Basket 3.

INTRODUCTION

This basket introduces the basics biomechanical principles and methods to minimize the load in patient transfer situations. It provides information about assistive equipment and the basic procedure of ergonomic patient transfer.

It is organized in four main learning topics that should be addressed sequentially. The first learning topic is "Key points to consider before the procedure", the second is "How to minimize the load in patient transfers" followed by "Transfers". The last learning topic is "Assistive devices and summary".

AIMS/LEARNING OUTCOMES

This basket aims to challenge the students to reflect on the most appropriate techniques for transferring patients, taking safety and comfort (patient and professional) as the main starting point.

As learning outcomes, it is expected from students to:

- know and understand different strategies / techniques, their aim and purpose when ergonomically assisting patients in transfers
- use different strategies for assisting patients in different settings
- know and understand the basic biomechanical factors and their effects on patient transfers and how they can be used to decrease the load during transfers
- recognize the need and purpose of assistive equipment to facilitate transfers, know what kind of equipment is available in your area and how to use it

METHODOLOGIES

Teaching/learning methods

This basket utilizes multiple learning methods, such as reading materials, quiz, videos, and discussions about patient handling.

For each topic, students are challenged to reflect on their theoretical and practical knowledge. In addition, students are invited to develop and deepen their knowledge about the principles of patient handling.

Assignments

Assignments for students:

- Assignment 1: students write a list about important things to be considered before patient handling
- Assignment 2: students get familiar with the material "Key points to check and consider before transfer" and participate in discussion
- Assignment 3: students read the materials "How to minimize the load", watch the video "Performance of caregiver" and complete a quiz.
- Assignment 4: students watch the video "Natural movements when assisting the patient" and reflect about movement pattern for a patient described in the assignment.
- Assignment 5: students watch the video "Analysing the assistance", answer the given questions and reflect about the topic in the discussion forum. Afterwards the students watch the feedback video.
- Assignment 6: students get familiar with the material "Assistive devices in patient handling", read the scenarios and participate in discussion with the given instructions.

Tasks for teacher:

- Assignment 1: No requirement for teacher supervision.
- Assignment 2: Make sure the students participate actively in the discussion.
- Assignment 3: Automatic corrections. Check that students have completed the quiz.
- Assignment 4: Review the students' reflections.
- Assignment 5: Review the students' reflections.
- Assignment 6: Check the students' participation and review the answers.

EVALUATION

Assignment 1: Writing a pretask (assignment 1.1), Participation in discussion in assignment 1.2 (Corresponding numbers in Moodle SAPHA material)

Assignment 2: Taking the quiz. Right answers are given after submitting the answers

Assignment 3: Submitting the answers in assignments 3.1 and 3.2 and active participation in discussion on assignment 3.3. Model answers are given as a video after submitting the assignment 3.2 (Corresponding numbers in Moodle SAPHA material)

Assignment 4: Reflecting three different scenarios deeply and actively participating in the discussion

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

If the H5P learning environment is not working, the teacher should use the PDF document with the same name (the document should be hidden from students in other situations).

Give the students approximately two weeks' time to complete this basket.

Basket 3 can be carried out with minor teacher involvement. The teacher needs to check that students have actively participated in discussions, and they have completed all assignments before proceeding to the next Basket.

Teacher can give individual or general feedback of the other assignments, if necessary. If possible and needed teacher can participate on discussions.

BASKET 4

Management Policies



Risk assessment and risk assessment tools
Laws and legislation
Management for physical risks in health care work



Workload for students is 12 hours.
Workload for teachers is 2 hours.



Baskets 1–3 should be studied before entering Basket 4.

INTRODUCTION

In this basket, you will find basic information about identifying and assessing the physical risk factors and how to implement risk management in the health care sector, especially during patient handling.

Occupational health and safety are governed by various guidelines and laws. This basket gives you both the practical tools for risk assessment methods and theoretical issues about the legislation issues.

Each country has its own laws, and it is particularly important that students and teachers get familiar with the laws in their own country while working in this area.

This basket contains mixed-method learning material. In addition to the theoretical part, you will learn the prominent issues by the assignments.

AIMS/LEARNING OUTCOMES

After studying this basket, the student knows and understands:

- the physical risk factors and risk assessment tools in care work
- the most adequate laws in safe patient handling
- the contents of risk management process at work
- their role in improving occupational safety and health at work

METHODOLOGIES

Teaching/learning methods

This basket represents and includes different learning methods, such as reading and reflecting about documents in the platform; watching videos, analysis of different scenarios and assignments with the model answers and useful links to additional information needed

Assignments

Assignments for students:

- Assignment 1: Students read and reflect on the two ppt presentations on “Introducing general risk assessment and the risk matrix” and “Introducing risk assessment tools”. Students watch the video “The usage of general risk assessment matrix”. Students watch the video of the assistance situation and answer the quiz focused on risk assessment.
- Assignment 2: Students familiarize themselves with European Safety and Health at work pages, where they can find more information about their own country. Students read the ppt presentation and reflect on laws associated with patient handling. Students read and analyze 5 different scenarios, while applying the accurate law that may be relevant in that situation. Students choose two different scenarios, identify the laws applied in those scenarios and write their answers below.
- Assignment 3: Students read and reflect on the 2 pdf texts. Students answer to 3 open questions (risk assessment protocol; common physical risk factors in care work; principles of management policy for physical risks that are essential to make stable work practices).

Tasks for teachers:

- Assignment 1: no requirement for teacher supervision. Automatic model answer to students.
- Assignment 2: Teacher reads and evaluates the reflection of two chosen scenarios by students.
- Assignment 3: no requirement for teacher supervision. Automatic model answer to students.

Make sure the student has completed all the assignments before proceeding to Basket 5.

EVALUATION

- Assignment 1 evaluation criteria: automatic replies, the scale from 0 to 1.
- Assignment 2 evaluation criteria: automatic replies, the scale from 0 to 1.
- Assignment 3 evaluation criteria: automatic replies, the scale from 0 to 1.

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

The teacher gives the students approximately two weeks to complete this basket. The teacher checks that all the students have completed assignments 1–3. The teacher can give individual or general feedback of the theme and the assignments

BASKET 5

Ethics and Communication



Ethical principles, theories, and decision-making. Communication and guidance. Ethics case scenarios.



Workload for the student is 13 hours.

Workload for the teacher is 3 hours (depending on the number of students).



Baskets 1–4 should be studied before entering Basket 5.

INTRODUCTION

This module introduces the student to ethical reasoning and communication skills. These skills are a prerequisite for a successful interaction and care. This is the basis for successful patient handling, as any procedure will be most beneficial only if these principles are applied. Ethical guidelines help respect the patient's dignity and increased self-determination, while good communication is a key element for activating the patient to their fullest. Skills in these areas will ensure the most benefit to any patient handling.

AIMS/LEARNING OUTCOMES

In the end of this Basket, the student will have knowledge and be able to demonstrate:

ETHICAL REASONING in integration of ethical viewpoints in patient handling: identify ethical challenges encountered and ethical principles involved in a patient handling situation and to demonstrate ethical judgment skills in those situations.

EFFECTIVE COMMUNICATION with other professionals, staff, caregivers, and patients before and during patient handling, using different communication styles and resources to perform safe patient handling.

METHODOLGIES

Teaching/learning methods

This basket consists of case scenarios and pre-reading tasks. Students reflect their thoughts in a discussion forum and complete the Basket with a reflection paper.

- Assignment 1 – Orientation. Students familiarize themselves with pre-reading material and five different case scenarios.
- Assignment 2 – Analysis and discussion. Students choose two of the scenarios, analyze them and discuss with the colleagues considering the suggested 6 Step model. They give a well-justified comments on those two scenarios they have chosen in the discussion forums.
- Assignment 3 – Demonstration and reflection. The student chooses one (different than the other two in Assignment 2) scenario and demonstrates how to solve this issue. The student writes a reflection essay, max. 2 pages about the chosen scenario.

Tasks for teachers:

Assignment 1 – Teacher checks the students have access to the materials.

Assignment 2 – Teacher makes sure that students connect in the discussion forum and give two justified comments on the chosen scenarios.

Assignment 3 – Teacher reads and evaluate the reflection paper each student wrote.

EVALUATION

To complete the basket, the student should have:

- analyzed two scenarios
- commented at least one peer student’s analysis in the discussion forum
- completed the reflection paper

Evaluation criteria: Assessment Criteria for Case Scenario Analysis (pdf)
Assignment 3 – reflection paper passed/failed

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

The teacher checks that all the assignments (analysis of two scenarios and commenting in the discussion forum as well as the reflection paper) have been completed.

The teacher can give individual or general feedback of the assignments, if necessary.

If possible and needed, the teacher can participate in the discussions.

The largest amount of work for teacher is reading and evaluating the reflection essay.

Practical part of the SAPHA course

Introduction

This SAPHA Handbook explains the practical part of the SAPHA course, which consists of four practical lessons, which are in Basket 6. Basket 7 is about Simulations and the last basket is an optional Clinical Practice. The chapter describes the structures of four separate practical sessions, a brief explanation of the simulation structure and an optional task for the student to deepen the practical skills in the clinical practice environment.

The total workload for SAPHA course using 1 ECTS = 27 hours is 2 ECTS for practical part.

BASKET 6

Practical lessons 1-3

Practical lesson 1: Moving upwards in bed. Moving laterally in bed. Turning from supine to side-lying position



Practical lesson 2: Getting up from bed. Sitting from wheelchair to chair / sitting to sitting. From sitting to standing (walking stick; walker; hoist).

Practical lesson 3: Getting up from the floor: natural movement. Getting up from the floor: verbal and manual assistance. Getting up from the floor: hoist. Walking with different assistive devices: walker, walking stick.



For each practical lesson:

Pre-tasks: 2 hours

Teacher-led lessons: 3 hours

Reflection: 15–30 min

Self-directed study groups: 4 hours

1 ECT = 27 hours of student's work



Baskets 1–5 should be studied before starting with practical lessons 1–3 .

INTRODUCTION

In practical lessons 1–3, students will learn how to assist (verbally, manually) patients with different functional capacities, based on the Mobility Gallery. They will also learn when and how to use different equipment and assistive devices.

AIMS/LEARNING OUTCOMES

Technical/Practical skills

To know how to:

- Assess the patient's functional mobility and participation level.
- Assess specific demands of the mobility task and risk assessment.
- Prepare the environment.
- Effectively use the equipment.
- Perform fluent, ergonomic and safe patient transfers.
- Perform safe patient handling, activating the patient.

Non-technical skills / Reasoning and communication skills

To know how to:

- Be aware of the current situation.
- Effectively communicate with others (students in patient's, professional's or caregiver's roles).
- Inform the patient and caregiver.
- Select proper assistive devices.
- Select adequate patient handling methods.
- Use different communication styles and resources to perform safe patient handling.
- Support patient independence and participation.
- Integrate ethical principles in the intervention.

METHODOLOGIES

Teaching/learning strategies

- Independent analysis of movement patterns by students
- Demonstrations by the teacher
- Practical training in small groups
- Reflection on practical lessons

Assignments

Before each lesson:

Independent preparation, going through the video materials.

Tasks in lesson led by the teacher:

Task 1: Going through the transfers covered in this lesson, analyzing their own natural movement patterns in these transfers, describing to partner their movement pattern.

Transfers to go through:

- Practical lesson 1: transfers in bed (moving upwards, laterally, sideways).
- Practical lesson 2: getting up from the bed; transfers that include moving from sitting to sitting (incl. adjusting sitting position, moving to wheelchair), from sitting to standing.
- Practical lesson 3: getting up from the floor, walking with assistive devices.

Task 2: Analyzing the movement pattern in patients with different functional capacity (using the Mobility Gallery and lesson materials, videos).

Task 3: Learning about assistive techniques, both verbal and manual, as well as the assistive equipment available. This will be demonstrated by the teacher.

Task 4: Practicing these techniques in different roles (preferably in groups of 2-3) and with different equipment.

Task 5: Analyzing the transfers.

Short open discussion at the end of each lesson. Writing a reflection on learned materials. Reflection can be done either in class after the lesson or at home.

After each lesson:

Independent work in study groups after the lesson to practice the learned material.

**MATERIALS/
EQUIPMENT/
RESOURCES**

Practical lesson 1:

- Practice rooms
- Teacher
- Mobility Gallery
- Video material for independent study
- Bed sheets, pillows
- Friction mat/socks
- Sliding sheet/gloves

Practical lesson 2:

- Practice rooms
- Teacher
- Mobility Gallery
- Video material for independent study
- Walking stick
- Wheelchair
- Hoist

Practical lesson 3:

- Practice rooms
- Teacher
- Mobility Gallery
- Video material for independent study
- Hoist
- Walker/higher rollator
- Walking stick

EVALUATION

- Evaluation of patient's functional capacity
- Safety, risk assessment and taking environment into account
- Activation of patient's functional capacity and natural movements
- Interaction and communication
- Assistance in patient handling situation
- Use of devices
- Caregivers own working postures and using force

Guide for Teachers:

Before each lesson:

The students will first watch the videos about patient transfers available on the platform. Insist on the importance of paying attention to the biomechanics and natural movement of both the patient and the professional/s, verbal and non-verbal communication (key messages, empathy, etc.).

In lesson, led by the teacher:

During/after each practical lesson taking some key points to ease memorizing the material for students is recommended.

1. Ask the students to perform the transfer covered in the lesson (see: content). Give them time to analyze their own (natural) movement and ask them to describe the movement to a partner.
2. Ask the students to analyze and describe the transfer and movement pattern for patients with different functional capacity. Use Mobility Gallery (recommended to keep as a visual aid either as a printout or projected on board) and the video materials.
3. Demonstrate the transfers to the students; one or more students can act as either the patient or the assistant professional. Try to use similar techniques than the ones shown in the videos but also explain to the students that individual differences are normal, and some variations can be used depending on the characteristics of the patient. In each transfer, try to focus on the main principles behind the transfer (e.g. natural movements, biomechanics). Finally, try to make sure the students have understood how to do the transfer: do you have any doubts? Is everything clear enough?
4. Ask the students to practice the transfers in small groups (2-4 people). Supervise the groups. Give the students access to necessary equipment. Give them 10-15 minutes to practice.
5. Ask the students to briefly reflect and discuss their experience. Repeat the demonstrations and group practice for all the transfers covered in the practical training.

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

6. Ask the students to write a reflection on the lesson. Guiding questions can be used, for example:

- What did you learn?
- What was new for you?
- What was the easiest?
- What was the hardest? How could this be improved?
- What needs to be practiced more?

This can be done either in the classroom after the lesson or at home.

After each lesson:

Give the students the possibility to go after the lesson to work independently and practice on each other.

BASKET 6

Practical lesson 4



Practicing patient transfers in clinical scenarios. Students apply the knowledge about patient handling techniques with patients of different functional level and different patient handling situations in groups. Later in self-directed study groups they will have the other students' situations from each group to practice on their own.



1 ECT = 27 hours student's work

Pre-tasks: 2 hours

Teacher-led lessons: 3 hours

Reflection: 15–30 min

Self-directed study groups: 2 hours



Practical lessons 1–3 should be studied before starting with practical lesson 4 (Basket 6).

INTRODUCTION

Practical lesson 4 includes practice to apply the principles and techniques learned in previous theoretical and practical lessons 1–3. A few from 15 variable case-based scenarios will be chosen by the teacher and given to the students to solve and practice patient handling in small groups (2–4 students).

The case scenarios are found in Moodle (Basket 6 > Practical lessons > practical lesson 4).

The matrix of the case scenarios is as an appendix 1 in the handbook.

AIMS/LEARNING OUTCOMES

Technical / Practical skills:

To know how to

- Assess the patient's functional capacity and participation level
- Assess specific demands of the mobility task and risk assessment
- Prepare the environment
- Planning out the transfer, deciding on the methods and equipment
- Effectively use the chosen equipment
- Perform fluent, ergonomic and safe patient handling
- Activate the patient and maximize their participation during transfer

METHODOLOGIES

Non-technical skills / Reasoning and communication skills:

To know how to:

- Analyse the current situation in the given case scenario
- Implement previous knowledge into practice
- develop communication skills in different roles (student, patient, caregiver).
- Select and use proper assistance aids for each given scenario
- Select and apply adequate patient handling methods
- Support patient independence and maximize participation in transfer (verbal)
- Integrate ethical principles in the intervention

Teaching/learning strategies

Independent work in small groups (2–4 students) based on the clinical task given by the teacher

Presenting the task and their solution to the rest of the class, commenting and justifying chosen technique and devices)

Students apply chosen methods to given scenario and perform the transfer

Open discussion about the transfer, led by the teacher

Assignments

Before the lesson:

Repeat the materials from previous lessons. Go through the reflection from each lesson.

In the lesson, led by the teacher:

Task 1: Dividing the students into groups of 2–4. Each group will get a clinical scenario description from the teacher.

Task 2: Working in small groups to solve the given scenario, including choosing the appropriate methods and devices, practicing communication and technical skills. Estimated time 15–20 min.

Task 3: Presenting the scenario with their solution to the rest of the class. Role play in the small group demonstrating good technical and non-technical skills.

NOTE: If possible, record a video of the solution in task 2. In task 3, use the video instead of role play. This way the students can see themselves from a bystander's point of view and use the opportunity for a more intensive learning experience.

Task 4: Open discussion on the scenario and the groupwork, led by the teacher.

Repeat the tasks with different clinical scenarios provided in the course.

Writing a reflection on the learned materials. Can be done either in class after the lesson or at home.

After the lesson:

Independent work in study groups to practice the learned material on each other. Use the scenarios given in the lesson to practice clinical situations.

**MATERIALS/
EQUIPMENT/
RESOURCES**

Practice rooms
Teacher
All the equipment from previous lessons

EVALUATION

- Evaluation of patient's functional capacity
- Safety, risk assessment and taking environment into account
- Activation of patient's functional capacity and natural movements
- Interaction and communication
- Assistance in patient handling situation
- Use of devices
- Caregivers own working postures and using of force
- Evaluation is given as instant feedback.

**IMPLEMENTATION
AND
INSTRUCTIONS
FOR
TEACHERS**

Guide for Teachers:

Before the lesson:

Ask the students to repeat the materials from previous lessons, including the reflections.

In the lesson:

1. The students will be divided into groups of 2–4. Give each group a description of one clinical scenario. The case scenarios are found in Moodle (Basket 6 > Practical lessons > practical lesson 4). The matrix of the case scenarios can be found as appendix 1 in the handbook. Same cases can be used also in the final evaluation.

The task for the students is to choose appropriate methods and equipment based on the situation. The scenarios may be chosen blindly or assigned by the teacher.

2. Give each group about 10–15 min to work with the task independently. Provide access to the practice room and assistive aids, but let the students choose the equipment they prefer based on the scenario. Teacher could give instant feedback to the current group work plan and guide the students if needed.
3. Each group will present their scenario to the rest of the class. The group needs to demonstrate the transfer using role play. Pay attention at both technical and non-technical skills shown by the students.

NOTE: If possible, ask the students to record a video of the situation and their solution in task 2. In task 3, use the video instead of role play. This way the students can see themselves from a bystander's point of view and use the opportunity for more intensive learning experience.

4. Open discussion on the situation and group work after each presentation. You may use the simulation debriefing discussion guidelines to lead the discussion (found in the simulation scenario template). Repeat the tasks as many times as possible with different situations provided by the course.
5. Finally, ask them to write a reflection on the lesson (about 10–15 min). Guiding questions can be used:
 - What did you learn?
 - What was new for you?
 - What was the easiest?
 - What was the hardest? How could this be improved?
 - What needs to be practiced more?
 - This can be done either in class after the lesson or at home.

After the lesson:

Give the students the possibility to go after the lesson to work independently and practice on each other. Ask them to practice the materials learned in previous lessons and practice the clinical scenarios from lesson 4.

BASKET 7

Simulations



Evaluation of patient's functional capacity, Safety in patient transfer situation, Activation of a patient, Communication, Use of assistive aids and devices, Caregiver's working postures



Pre-tasks: 0.5-1
1.5 hours contact/each scenario
Three hours in total (two scenarios)



Baskets 1-6 should be studied before joining the simulations (Basket 7).

INTRODUCTION

Simulation as a learning method is based on experiential learning. It provides a realistic environment for the purposes of learning and practice. Simulation as a method is effective in bringing to life representative clinical encounters in a safe educational setting where no harm is done to patients.

In the simulation sessions, the student has the possibility to practice both technical skills (for example safe patient handling techniques) and non-technical skills (communication, ethics and teamwork).

After each simulation session, a debriefing discussion will take place. Debriefing as part of simulation-based education provides an opportunity to promote reflection – learning is the integration of experience and reflection, the conscious consideration of the meaning and implication of an action, including the knowledge, skills, and attitudes.

AIMS/LEARNING OUTCOMES

Technical / Practical skills:

To know how to

- Assess the patient's functional mobility and participation level
- Assess specific demands of the mobility task and risk assessment
- Prepare the environment
- Effectively use the equipment
- Perform fluent, ergonomic and safe patient transfer
- Perform safe patient handling, activating the patient

METHODOLOGIES

Non-technical skills / Reasoning and communication skills:

To know how to

- Be aware of the current situation
- Effectively communicate with others (students in patient's professional's or caregiver's roles)
- Inform patient and caregiver about the objectives of the transfer
- Select proper assistive aids
- Select adequate patient handling methods
- Use different communication styles and resources to perform safe patient handling
- Support patient's independence and participation
- Integrate ethical principles in the intervention

Teaching/learning strategies

- Simulated cases, debriefing and brainstorming discussion among peers
- Observation tasks
- Learning takes place at all different stages of the simulation; in orientation and briefing, in the exercise itself and in the learning discussion afterwards (debriefing).

Assignments

Assignments for students:

1. Students review previous course contents (Especially materials in Basket 6) and practice them.
2. The student will join 1-3 simulation sessions.
 - Case Scenario 1 – Wheelchair transfer (Appendix 1)
 - Case Scenario 2 – Walking after hip operation
 - Case Scenario 3 – Bed to Stretcher
3. Students discuss in groups according to the debriefing structure in the scenario template (appendix 2).

Tasks for teachers:

- Ask the students to rehearse the contents in the Basket 6.
- Introduce the learning goals to students.
- Do the role setting for students joining the simulation
- Give the observation tasks for observers (see the Evaluation and learning goals).
- Keep the debriefing discussion after the simulation – according to the debriefing template in the scenario template.

MATERIALS/ EQUIPMENT/ RESOURCES

• Templates for Case Scenario preparation and manuscripts

• Case Scenario 1 – Wheelchair transfer

- must have: bed, wheelchair, sliding board, transfer belt, shoes for the patient
- good to have: other sliding material, friction material
- environment: hospital room (simulated)

• Case Scenario 2 – Walking after hip operation

- must have: bed, walker, transfer belt, shoes for the patient
- environment: hospital room (simulated)

• Case Scenario 3 – Bed to Stretcher

- must have: hospital bed, transfer bed (stretcher), sliding board and sheets
- good to have: air assisted transfer aids, others according to the case scenario
- environment: hospital room (simulated)

• Other equipment in all according to the case scenario: working uniform, patient clothes, patient shoes, patient record

• Resources: Two teachers / simulation session, classrooms / laboratory room and a classroom / Simulation and debriefing rooms

• Cameras and microphones

EVALUATION

• Assessment by peers and the teacher

- Evaluation of patient's functional capacity
- Safety, risk assessment and taking environment into account
- Activation of patient's functional capacity and natural movements
- Interaction and communication
- Assistance in patient handling situation
- Use of devices
- Caregiver's own working postures and using of force

**IMPLEMENTATION
AND
INSTRUCTIONS
FOR TEACHERS**

Steps to run the simulation:

1. Assignment and preparation for the simulation exercise:
Familiarization with pre-material, theory/skill workshop
 - The participants in the simulation prepare for the exercise a couple of days earlier – Preliminary material in Baskets 1–6
2. Orientation phase/Intro: Creating a learning atmosphere, getting acquainted with the training situation: Getting to know the simulation space and tools on site, learning objectives. Review of the theory.
 - The simulation exercise starts with a 10–20-minute orientation phase – Briefing
3. Simulation exercise in a simulator: different roles – in the simulator the actors, the role of the patient. The observers. It is recommended that one teacher stays at the initial room (where the briefing/introduction was undertaken) with the observers and the other goes to the simulator with the students performing the simulation itself.
 - The simulation exercise lasts 15–20 min (with four students in the simulator)
4. Learning discussion (Debriefing): Where did you succeed, what did you learn, etc?
 - The simulation exercise ends with a learning discussion of 30–60 min, depending on the number of participants and the duration of the lesson – Debriefing
5. Ending the exercise

OPTIONAL BASKET

Clinical practice



Practising patient handling with real patients. Offering a theoretical lecture of patient handling to personnel in the clinical placement, as well as offering one practical session guiding others in the workplace.



Workload for the student: 1 ECT. Workload can be modified according to case.



Baskets 1–7 should be studied before clinical practice.

INTRODUCTION

Clinical practice concerns practical training in the clinical field, highlighting the workplace safety and rehabilitation perspective in patient handling.

Students go to clinical practice and apply the learned patient handling methods in real life situations.

AIMS/LEARNING OUTCOMES

Students gain competence in patient handling in real situations and experience in multiprofessional collaboration.

Students gain experience in the clinical field and can:

- assess real patient's functional and autonomy level
- justify chosen assistive devices (if needed) and method of assistance, taking into account the patient's rehabilitation goal
- assess the environment, taking into account what should be altered from security issues point of view
- recognize developmental needs necessary for safe patient handling in the clinical placement
- act as an expert in observing patient transfer situations, discussing safe ways of assistance with other professionals, finding development targets and providing safe guidance

METHODOLOGIES

Teaching/learning methods

Experimental learning

Assignments

Assignments for students:

Planning the educational intervention *Written assignment 1*

Student:

- Observes different patient handling situations and discusses developmental needs in patient handling.
- Practices the situation with a real patient and presents the plan of a patient assistance situation in advance, approves it/discusses with the practice supervisor before the plan is realized. Student writes and explains in detail (how they utilize the full rehabilitation potential of a patient) patient handling situation and returns the written assignment to the platform.

Theoretical and practical lectures *Assignment 2*

Student:

- Prepares the lecture on important issues in safe patient handling, associated with the practical part. One patient handling situation is required / guided to the health care workers.
- Collects feedback from the target group about the lecture and practical part.

CONTEXT

At the clinical practice placement.

According to the student's competence level, the placement can be (e.g):

- Hospital
- Long-term care unit
- Elderly care
- Neurologic (private) clinic
- Home care provider
- Occupational therapy centre

EVALUATION

To complete the basket, the students return the documents to the return boxes in learning platform:

- Written plan of an educational intervention
- Written materials of the lectures (approved before the lecture by the clinical educator)
- Nurse/learner/target group feedback from lecture and practical part

Evaluation criteria:

Assignments Passed - failed

IMPLEMENTATION AND INSTRUCTIONS FOR TEACHERS

Optional Basket 8 Clinical practice is suggested to be situated at the end of the studies (fourth year).

Teacher:

Make sure the student has completed all the assignments (written task, lecture materials, feedback).

- Read and check the written task about a planned patient handling situation and give qualitative feedback for the student.
- Make sure that students' clinical educator has approved the material before the lecture, read over/ check the lecture.
- Check that students have collected the feedback

If possible and needed teachers can participate in planning/reflection discussions.

SAPHA evaluation

SAPHA evaluation

SAPHA EXAM is one option for evaluating students, but lecturers can create their own system according to each institution's regulations and policies.

The aim of this SAPHA EXAM is to evaluate students' skills and knowledge on safe patient handling. It is focused on both theoretical knowledge and practical skills, as well as students' awareness of these competences. The peer feedback and reflection can be done online discussion forum or face-to-face in the classroom.

The exam is carried out in groups of 3 to 4 students. They can work independently after the teacher has assigned the working groups and tasks for each one and set the timelines for different phases of the exam, or they can work in the classroom and be evaluated and supervised continuously by the teacher.

The time needed for the exam:

- Self-directed preparation for examination: 16 hours
- Exam: 4 hours
- Teacher: 6 hours (arrangements, evaluation)

In Moodle, there are several files to assist the teacher with arranging students' working in small groups and to guide the students and teachers, bearing in mind the most essential issues:

- **Instructions for the exam.** The file offers the students instructions on how to make a video, how to share it with other students in Moodle and how to reflect the feedback they have got and their own teamwork.
- **Criteria for the exam.** Students need to know the assessment criteria and consider them when preparing their video as well as when assessing other teams' videos.
 - The teacher adapts the grading into each university's grading system.
 - The teacher decides whether all the students in a group receive the same or different grade. If it is decided to use individual grades, the individual grades depend on the students' input into this task.
- **Self-assessment: Suggest a grade for yourself and assess your teamwork.** A template for students to assess their individual inputs and to inform the teacher is provided. The teacher can use this besides their continuous evaluation when deciding the individual grade for each student.
- **Exam groups, tasks and timetable for the exam.** The teacher must inform the students about which group they belong to and which case they will be working with.
- **Working Forum for the Final Exam**

SAPHA exam description



There are three phases in the exam:

1. Students **prepare a video** based on one case scenario:
 - a) the case descriptions of practical lesson 4 can be used also here.
 - b) the groups who peer review each other's scenarios could have the same, so they would have sufficient knowledge about the patient's functional capacity.
 - The groups could still have different tasks: one group would help the patient to move from bed to wheelchair, and the other from wheelchair back to bed, but the patient is the same.
2. Each group gives **feedback** to the other group's video.
3. Every group **reflects**:
 - a) On the video they have produced, according to the criteria (available in learning platform) and feedback they have received from the other team/group.
 - b) On their own learning process and teamwork (file in learning platform).

Instructions for the teacher:

In the learning platform, there is a link for **Exam groups, tasks and timetable for the exam.**

The teacher needs to:

- Divide the students into working groups.
- Assign the cases for each group. Cases are in SAPHA materials.
- Set deadlines for each phase exam.
- Take care that the students follow the schedule, especially when it is done in Moodle's interactive working forum.
- Supervise and assist the working groups, if needed.
- Decide the relevant assessment tool (e.g., Care Thermometer, Barthel Index) according to the national practices.

Evaluation of students' learning:

According to teacher's decision:

- The group can receive the same grade according to the video they have produced and how they respond to the peer review they get from their study mates. In this case, use the criteria for the video and students' reflection of their teamwork (files are in Moodle)
- Alternatively, each student can receive a different grade, depending on their input for the task. The teacher can take into consideration how the students themselves assess each member's input (file in Moodle) and the continuous evaluation.
- The final decision is made by the teacher.

To enhance the students' awareness of their own competencies, the SAPHA EXAM evaluation is based on students' self-assessment.

- Students assess how much and how effectively each member of the group has worked. They are asked to grade themselves, to gain more insight and awareness about their own skills, knowledge and competences.
- The teacher supervises and gives feedback to students about this process
- The teacher considers the students' assessments and comments and decides the students' grades.

The case scenarios are in Moodle (basket 6 Practical lessons > practical lesson 4) and the matrix of the case scenarios as appendix 1 in the handbook.

Presentation of the consortium

Presentation of the consortium

Turku University of Applied Sciences

Turku University of Applied Sciences, Turku UAS, is a multidisciplinary educational community of around 9,000 students and 700 staff members. It is located in Southwest Finland, but nowadays we operate globally in various development activities. We offer Bachelor's and Master's degree programmes in the faculties of Arts Academy; Technology, Environment and Business and Health and Well-being. All the faculties are multidisciplinary.

The Faculty of Health and Well-being offers degree programmes for approximately 2,300 students under the supervision of almost 200 experts. The faculty responds quickly to employers' education and development needs. Thousands of social and health care professionals develop their competence through the continuing education provided by Turku UAS.

Turku UAS is investing in the pedagogical modernisation of higher education. We develop and implement multidisciplinary innovation pedagogy with a focus on Research, Development and Innovation (RDI), flexible curricula, entrepreneurship and internationality. When students actively participate in applied RDI activities during their studies, it increases their readiness to operate successfully in working life. Turku UAS has successfully managed the overall coordination of hundreds of projects, including several Erasmus+ projects. Turku UAS is also an active partner in many international networks of universities and other training organisations, and it has great possibilities to distribute knowledge and skills gained through projects.

The RENE project was coordinated by the research group New Ways of Promoting Performance, which focuses on well-being at work, ergonomics, and workplace safety issues. Turku UAS has a strong experience in developing and implementing simulations as pedagogical method in health care sector. The RENE project strengthened the simulation pedagogy in physiotherapy education.



Marion Karppi (Physiotherapist, M.Sc. Public Health) is a Senior Lecturer at Turku University of Applied Sciences (Turku UAS), Department of Health and Well-Being. She is the leader of the New Ways of Promoting Performance-research group and a Senior Lecturer in the Degree Programme in Physiotherapy (BA). Her main teaching areas are well-being at work, health promotion and ergonomics. The NWPP research group focuses on co-creating new innovative solutions and operations to enhance the control, knowledge, skills and leadership in new ways of working with working life partners. We develop, research, and seek answers to promote health, well-being at work and work ability. Karppi's research interest focuses on well-being at work, leadership practices and teamwork. She is currently a PhD student at Turku School of Economics. She is a qualified Project Manager by Project Management Foundation Certificate 3.0. She has been a project leader in several national and international projects. She is the Principal Investigator of RENE



Kati Naamanka (Physiotherapist, PhD) is a Senior Lecturer at Turku University of Applied Sciences (Turku UAS), Department of Health and Well-Being. She works as a Senior Lecturer in the Degree Programme in Physiotherapy (BA). Her main teaching areas are musculoskeletal physiotherapy, ergonomics, health promotion and students' clinical practice. Naamanka is a member of the research group of New Ways of Promoting Performance at Turku UAS. Naamanka's research interest is in physiotherapy ethics, and she has completed her doctoral thesis on ethical competence at the University of Turku. She has gained experience of project work previously in the RENE project and in the SimE project (Simulation Pedagogy in Learning Ethics in Practice in Health Care - <https://simethics.eu/>).



Minna Lahti is a Master school student at Turku University of Applied Sciences (Turku UAS), Occupational Physiotherapist, and Instructor of Ergonomic Patient Handling Card ® scheme. She works as an occupational physiotherapist in the Occupational Health Center. Her work consists of health care staff's ergonomic guidance and health promotion work, including guidance the safe patient handling. Safe patient handling and mobility has interested her long time, and she is an Instructor of Ergonomic Patient Handling Card ® scheme since 2013.

Polytechnic Institute of Setúbal

Polytechnic Institute of Setúbal (IPS) is a public Institution of Higher Education seeking to contribute to the development of society, particularly Setúbal region, in association with its social partners. Throughout tertiary training activities, research and services provision, contributes to the creation, development, dissemination and knowledge transfer, as well as science and culture promotion.

IPS comprises five Schools in the areas of Education, Technology, Business & Administration and Health. The institution has two Campi: Setúbal campus allocating four Schools and Barreiro campus allocating one School.

The Health School (ESS), is based on six established values: Humanism, Quality, Innovation, Distinction, Professionalism and Excellence, underpins teachers and students' development. Offers 1st and 2nd cycles (Bologna) degrees and has approximately 808 Students (522 - 1st cycle & 286 - 2nd cycle). It is strongly committed with international partnerships and alliances, with bilateral agreements established with European Higher Education Institutions (namely under Erasmus+ Program), and Brazilian and South American organizations (under Santander Universities Grant Program). Presently, it is involved in several European projects, for instance Erasmus+ Key Action 2 and Horizon 2020.

Within IPS, the Health School Physiotherapy Department is directly involved in the Renewing Ergonomic Education for Health Care Students in European Higher Education Institutions Project - RENE For more information: www.ips.pt | www.ess.ips.pt

The IPS - RENE project team consists of 4 lecturers: Aldina Lucena, Gabriela Colaço, Isabel Bastos de Almeida and Teresa Mimoso



Aldina Lucena PT, MSc, SSc (Hons) Physiotherapist, Specialist in Pediatric Physiotherapy. Assistant Lecturer in the Health School of the Polytechnic Institute of Setubal, Portugal. President of the Pedagogical Council of the Health School. Member of the Scientific Council of the Health School. Education and Experience in Ergonomic Patient Handling. Coordination of the International Leonardo Da Vinci Program LeoCare: Improved training modules and new opportunities for care workers. Participation in international programmes: SOS Fire! – European Training Course for school pupils on fire prevention and first aid through civic engagement and LeoShape – Training Modules for Care Workers (Personal Trainer for People with Mental Health Disorder).



Gabriela Colaço PT, MSc, SSc (Hons) Physiotherapist, Specialist in Pediatric Physiotherapy. Assistant Lecturer in the Health School of the Polytechnic Institute of Setubal, Portugal. Member of the Scientific Council of the Health School. Coordination of the International Project SOS Fire! – European Training Course for school pupils on fire prevention and first aid through civic engagement. Participation in International programmes: Leonardo Da Vinci Program LeoCare – Improved training modules and new opportunities for care workers; LeoShape – Training Modules for Care Workers – Personal Trainer for People with Mental Health Disorder.



Isabel Bastos de Almeida PT, MSc, SSc (Hons) Physiotherapist, Specialist in Musculoskeletal Physiotherapy. Assistant Lecturer in the School of Health of the Polytechnic Institute of Setubal, Portugal. Member of the Scientific Council of the Health School. Member of the Centre for Interdisciplinary Applied Research in Health. Participation in International projects: LeoShape – Training Modules for Care Workers – Personal Trainer for People with Mental Health Disorder.



Teresa Mimoso PT, SSc (Hons), Phd student Physiotherapist, Specialist in Neurological Physiotherapy. Assistant Lecturer in the Health School of the Polytechnic Institute of Setubal, Portugal. Member of the Scientific Council of the Health School. Member of the Pedagogical Council of the Health School. Education and Experience in Ergonomic Patient Handling. Head of Curricular Unit Mobility and Function (Ergonomic Patient Handling) in Physiotherapy Degree.

Oulu University of Applied Sciences (Oulu UAS)

Oulu University of Applied Sciences (Oulu UAS), one of the largest universities of applied sciences in Finland, established in 1996, is a multidisciplinary higher education institution providing education and applied research and development. Oulu UAS serves the needs of the region's working and economic life and culture and maintains the diversity of university of applied sciences education in Northern Finland. We have approximately 9,000 students and 580 staff members. Higher education is based on the requirements of internationalisation, development of working life as well as research, artistic, and educational aspects. Oulu UAS's one strategic focus is renewing the teaching at the university of applied sciences and teacher training. The operations of Oulu UAS promote the capabilities of the higher education community to take on international responsibilities. The goal is to develop and renew operations models in a diversified way together with working life and international partners. Networking nationally and internationally enables future know-how in innovative learning environments.

Read more: <https://www.oamk.fi/en/>



Eija Mämmelä PT, MSc, senior lecturer and head of degree programme in physiotherapy, Physiotherapist in occupational health care, Instructor of Ergonomic Patient Handling Card ® scheme, participated in developing the scheme over more than a decade. Besides leading the physiotherapy curriculum development, she coordinates international study options for physiotherapy, occupational therapy and social service students.



Antti Sillanpää PT, MSc, senior lecturer in physiotherapy, Physiotherapist in occupational health care, Instructor of Ergonomic Patient Handling Card ® scheme has experience in the field of MSD and occupational healthcare. He actively develops the curricula to improve future health care professionals' competencies in the area of well-being, and also works as a teacher in these subjects.

The University of Vic-Central University of Catalonia

The University of Vic-Central University of Catalonia (UVic-UCC) is an independent university under the supervision of the Education Department of Generalitat de Catalunya which was established in 1997. It is an educational institution with a commitment to public service through teaching, research and knowledge transfer in its specialist fields. UVic-UCC aims to drive forward knowledge and innovation for regional development, with an international outlook. Its structure comprises more than 9,200 undergraduate students, 1,200 lecturers and researchers, and 460 professional and administrative service staff members. The study offering includes 43 university degrees, 12 university Master's degrees and 10 doctoral programmes. Research at UVic-UCC is organised through 31 research groups

in the fields of Social Sciences, Health, Arts and Humanities, Sciences and Engineering. The Faculty of Health Sciences and Welfare of UVic - UCC was born 40 years ago. Currently, it offers Bachelor's degree programmes in Nursing, Physiotherapy, Occupational Therapy and Human Nutrition and Dietetics. Besides, the Faculty offers a Master's and a Doctoral Programme in Comprehensive Care and Health Services. We work with a holistic vision of the person and a quality training model, oriented to the research and innovation at the international level to improve the health and quality of life of the population and to battle inequalities in health. The agreement signed with Vic Hospital Consortium (CHV) is the ideal framework for teachers/researchers to lead and ensure excellence in the classroom, laboratory, simulation and clinical practice and generate synergies that foster clinical research and health outcomes, as well as innovation at a time of radical change in health care.

More information: <https://www.uvic.cat/en/the-university-of-vic>

The UVic-UCC RENE project team consists of four lecturers (Javier Jerez Roig, Eduard Minobes Molina, Emilia Chirveches Pérez and Judit Rusiñol Rodríguez) and one technician (Montse Romero Mas).



Javier Jerez Roig (PT, PhD) is the Head of the Research Group on Methodology, Methods, Models and Outcomes of Health and Social Sciences (M3O) and the Research Delegate of the Faculty of Health Sciences and Welfare. He has clinical experience as a physiotherapist in the public and private health system during a period of 12 years. Jerez is a Professor of the Serra Hunter program and has a long-standing experience lecturing patient handling methods thorough more than 20 courses to healthcare staff and physiotherapy students in Geriatric Physiotherapy or similar subjects during the last 15 years. His main research areas are Physical Therapy / Rehabilitation, Gerontology / Geriatric and Public / Health Epidemiology; he has published more than 60 papers and participated in 20 (13 funded) research projects. He also published a book about patient handling and transfers (<https://www.bubok.es/libros/238013/Manual-practico-de-movilizacion-y-traslado-de-enfermos>).



Eduard Minobes Molina (PT, PhD) is the Head of the Basic Health Science Department at the Health Sciences and Welfare Faculty, Vic University – Central University of Catalonia (UVic-UCC). He works as a lecturer in the Physiotherapy degree programme in the Geriatric Physical Therapy subject, which include patient handling methods. PhD in biomedicine, master in Ageing and Health (URV) and BsC in Physiotherapy. Member of the research group M3O and of the Spanish Society of Geriatrics and Gerontology (SEGG). He has experience as physiotherapy in the Sant Joan de Reus University Hospital and in the private health system during a period of eight years. His main research areas are physical therapy, rehabilitation, gerontology and geriatrics, and teaching innovation. He has published seven papers and participated in nine national and European research projects.



Emilia Chirveches Pérez (RN, PhD) is a lecturer in the Department of Applied Health Sciences of the Faculty of Health Sciences and Welfare of the University of Vic - Central University of Catalonia (UVIC_UCC). She teaches Therapeutic Communication, Research Methodology I and Practicum VII in the Nursing Degree. She has a PhD in Nursing Sciences (University of Barcelona, 2014) with the thesis "Repercussions of caring for informal caregivers of surgical patients at home". She has a Master's degree in Leadership and Management of Nursing Services (University of Barcelona, 2011) and Diploma in Nursing (Autonomous University of Barcelona, 1988). She is a member of the M3O research group and of the Spanish Society of Surgical Nursing; instrumentalist nurse at the San José Clinic in Vic. Before joining the UVIC-UCC, she worked as a surgical nurse (1988–2000) and as a research and teaching nurse (2001–2018) at the Consorci Hospitalari de Vic (2001–2018), leading projects in the field of nursing care from a quantitative approach focusing on acute and chronic patient care and the surgical process; also coordinating clinical trials for the pharmaceutical industry. She is currently involved in several national and European research projects.



Judit Rusiñol Rodríguez (OT, PhD) is the Coordinator of the degree programme in Occupational Therapy. She works as a lecturer in the Occupational Therapy degree programme in the of therapeutic resources, activity analysis, gadgets/aids and environmental modifications for people with functional diversity and activities of daily life, which include patient handling methods and use of gadgets/aids for the mobilization of disabled people. She has a PhD in health, well-being and quality of life. She is part of the Research Group on Methodology, Methods, Models and Outcomes of Health and Social Sciences (M3O). She has experience as Occupational Therapy in geriatric clinical care and with citizen participation projects. Her research areas are the study of motivation (volition) to participate in meaningful activities. Her interest include the impact of participation in creative and craft activities, individual or collective, on people's health and well-being.



Montse Romero Mas (PhD) is responsible for international relations in the Faculty of Health Sciences and Welfare at the University of Vic - Central University of Catalonia (UVic-UCC). She gives technical support to the European projects running at the faculty. She has a PhD in the Comprehensive Care and Health Services, Master's degree in Information Society and Knowledge, and BsC in Computing. She is part of the Research Group on Methodology, Methods, Models and Outcomes of Health and Social Sciences (M3O). Her research is within the field of virtual communities of practice. She is currently involved in five projects with European funding.

Lithuanian Sports University (LSU)

Lithuanian Sports University (LSU), starting its tradition from 1934, is the cradle of Lithuanian sports. For the last nearly nine decades the University has been playing and still plays an important role in sports development in general as well as in sports science and sports education. During the last decade, the University actively developed and introduced the real values of sport and health promotion to the general public and politicians and also encouraged the common people for a harmonious and physically active lifestyle. LSU is an important centre of sports science, a fosterer of physical education and sports values and traditions as well as new initiatives of HEPA (Health Enhancing Physical Activity) in Lithuania.

Since its foundation, the institution has trained over 14 000 teachers of physical education, sports coaches, physiotherapists, tourism and sport managers and other qualified specialists. Over the years many distinguished scholars, world-known coaches, prominent sports and public figures have graduated from the University. The University is the only Institution in Lithuania training coaches in different kinds of sports. LSU is a tertiary level University – it offers undergraduate, graduate and doctoral studies, and all study programmes are accredited by international experts.

The research projects are performed in different areas of social and biomedical sciences, such as muscle and movement control, rehabilitation, public health, physical activity and social empowerment of the disabled.

LSU actively participates in various international associations and networks and is a member of different sports organizations. For many years, LSU is a member of the ENSSEE, ICSSPE, FIEP, EAS, ECSS, EAIE, INSHS, ASPHER, AESIEP networks, and actively participates in the work of ENPHE and the boards of Europe Active networks.

The main strategic aim is to concentrate all resources for the development of high-quality research production and innovations, to develop research production which would serve Lithuanian and global public welfare, and foster health promotion through sport and physical activity.

The LSU maintains strong partnership with leading European Sports Universities and faculties.



Anelė Gedmantaitė, physiotherapist, 8 years' experience in rehabilitation, aqua therapy, physiotherapy and massage with children and adolescents. Teacher in Neurorehabilitation, Aqua therapy, Paediatric physiotherapy at Lithuanian Sports University. Participated in different exchange programmes for example in Finland, the United Kingdom, Lithuania. Currently a 4th year PhD student in the Molecular Biology and Rehabilitation study programme at Lithuanian Sports University.



Vilma Dudonienė, assoc. prof. and Director of the Bachelor study programme in Physiotherapy at Lithuanian Sports University (<https://www.lsu.lt/en>), teacher of Differential Diagnosis, Obstetric, Gynaecological and Paediatric Physiotherapy, Aqua therapy, Ergonomics; ENPHE board member between 2013–2017, and since 2021; Editor-in-Chief of the journal Reabilitacijos mokslai: slauga, kineziterapija, ergoterapija (Eng. Rehabilitation Sciences: Nursing, Physiotherapy, Occupational Therapy, <https://journals.lsu.lt>).

University of Tartu

The University of Tartu (UT) was founded in 1632. UT offers 195 research-based graduate and postgraduate degree programmes and deals with both fundamental and applied research. 13,400 students (incl. ca 1,000 foreign students) study in four faculties (Arts and Humanities, Medicine, Science and Technology, Social Sciences). UT Library contains 4.1 million items. The University of Tartu (UT) belongs to the top 2% of the world's best universities, ranking 314th in the QS World University Rankings 2017 and within the 301–350 range in the Times Higher Education (THE) World University Rankings 2017. UT is placed 3rd in the QS University Rankings: Emerging Europe and Central Asia (QS EECA University Rankings 2018). UT accounts for more than a half of all the doctoral degrees conferred (120 in 2016), research publications, and national R&D financing in Estonia.

According to ESI (Essential Science Indicators), UT belongs to the top 1% of the world's most-cited universities and research institutions in nine research areas: Clinical Medicine, Plant and Animal Sciences, Chemistry, Social Sciences, Environmental Science and Ecology, Molecular Biology and Genetics, Biology and Biochemistry, Neuroscience and Behavioural Science, Psychiatry and Psychology.

A total of 42 UT researchers belong to the top 1% of the most-cited scientists in the world. As Estonia's national university, UT places great importance on international co-operation and partnerships with reputable research universities all over the world. Institutional co-operation with 80 partner universities in 31 countries extends from the Baltic Sea area to North America, East Asia and Australia. As a member of several high-level research university networks such as the European

University Association (EUA), the Coimbra Group, The Guild of research-intensive universities, and an associate member of the League of European Research Universities (LERU), UT actively participates in the formulation of European science policy. According to the Estonian Research Information System, scholars associated with the University of Tartu publish more than 2,500 research publications annually (2,676 in 2016), close to 2,000 of which are classified as high-level publications (1,909 in 2016).



Margot Bergmann (MSc) is working as a physiotherapy assistant at the University of Tartu, teaching neurological physiotherapy. She has a long experience of working with neurological patients in the rehabilitation centre where patients are referred to as soon as they are stable and ready for therapy. Her main interest is patients with spinal cord injury. She has good knowledge about the safe patient handling techniques.



Maarika Asi is the youngest member of RENE project. Maarika finished her BA studies in physiotherapy, at the University of Tartu in 2018. She is currently working as a physical therapist in local general hospital, Põlva.



Kristiina Lokko is working as a physiotherapist and a Scroth therapist in Põlva hospital. The hospital is one of the clinical placements for physiotherapy students in Tartu University, and Kristiina works with practice coordination and supervision in the hospital.

Ergosolutions BC Ltd



Dr. Leena Tamminen-Peter has long-standing experience in developing patient handling and mobility topics in RDI projects. She consults international corporations on a regular basis to develop guidelines, e.g., ISO Technical Report entitled “Ergonomics - Manual handling of people in the healthcare sector,” (ISO/TR 12296: 2012). She supports organisations to implement safe handling policies, guiding students in their theses and improves the training of ergonomics in social and healthcare education; also regularly disseminating research findings nationally and internationally. In this project, Dr Tamminen-Peter has participated especially in risk assessment and legislation topics. She has also acted as senior advisor, bringing her experience from earlier works.

The Finnish Institute of Occupational Health

The Finnish Institute of Occupational Health (FIOH) researches, develops and specialises in well-being at work. It promotes occupational health and safety and the well-being of workers. It is an independent institution under public law, working under the administrative sector of the Ministry of Social Affairs and Health. It has five regional offices, and its headquarters are in Helsinki. The number of personnel is about 500.

The Finnish Institute of Occupational Health (FIOH) is an expert of well-being at work involved in research, services and influencing. Our goal is to make Finnish work life the best in the world. The Finnish Institute of Occupational Health studies the relationship between work and health. We provide services and information based on the latest research on working life to workplaces, decision-makers and occupational health care.



Erja Sormunen, PhD, MSc, Occupational Physiotherapist, Professional teacher, Educator and project manager of Finnish Ergonomic Patient Handling Card® training scheme. She has experience of multidisciplinary research and development projects focusing on work ability promotion; multidisciplinary co-operation in occupational health services, workplaces and rehabilitation service providers; and ergonomics trainings especially in the health care sector, both in working life and in educational institutions.

Alma Mater Europaea

Alma Mater Europaea (AMEU) is an independent higher education institution that specialises in the provision of career-focused education in career-deficient fields of study. Our study programmes are relevant, up-to-date, interdisciplinary and interactive. The mission of AMEU is to implement top-quality pedagogical and scientific research programmes in various fields, and to serve the community as a university centre, promoting the development, spread and use of knowledge in the field of various sciences. AMEU's vision is to become an international education centre, a centre of excellence in education and research, which will use its strategic and applied research to creatively solve economic, technological, health and socio-political, ecological and climate and intercultural issues of Central Europe, primarily the Danube Region and the Balkans. AMEU ECM was founded by the European Academy of Sciences and Arts that connects over 2000 scientists and artists, including 33 Nobel Prize winners. One of the largest and the most representative study centres that has been operating under the patronage of the European Academy of Sciences and Arts Salzburg is Alma Mater Europaea - ECM in Maribor. All Alma Mater Europaea undergraduate and graduate programmes are fully accredited by NAKVIS, the Slovenian Quality Assurance Agency for Higher Education. Currently, it offers Bachelors in Nursing, Physiotherapy, Web and Information Technologies, Management, Dance-coreography, Social Gerontology and others. Besides, the Faculty offers a Graduate Master's Programmes in Health sciences, Management, Dance, European Business Studies, Social Gerontology etc., and also Doctorate programs in Physiotherapy, Project management, Humanities, Strategic Communication Management, Archival Sciences, Social Gerontology.

More information: <https://www.almamater.si/>

The AMEU ECM RENE project team consists of three higher education teachers (Tine Kovačič, Tatjana Horvat, Mladen Herc) and one ICT technician (Marko Bencak).



Tine Kovačič, PhD, MSc is the Head of the PhD study programme in physiotherapy and Head of the Master's programme in health sciences at AMEU ECM. He worked as a head of medicine and rehabilitation department almost 20 years, providing contemporary neuro-developmental treatment to children and adults with intellectual and developmental disabilities (IDD), providing sport physiotherapy to athletes with IDD in Special Olympics (SO). He serves as a clinical director of the Healthy athletes programme Fun Fitness – PT programme for Special Olympics Slovenia and as a clinical advisor for Fun Fitness in the Europe-Eurasia region. He is an Associate

Professor for the undergraduate PT, MSc and PhD Physiotherapy programmes at AMEU ECM. Currently he is the president of Slovenian Association of Physiotherapists. Throughout his career as a PT clinician and educator, he has taken part in lectures at many conferences worldwide and has published a significant number of research articles. He has clinical experience as a neurological physiotherapist in the public health system during a period of 20 years. He has a long-standing experience lecturing neurological patient handling methods through several courses to healthcare staff and physiotherapy students in Neurological Physiotherapy or similar subjects during the last 20 years.



Tatjana Horvat, MSc, is physiotherapy lecturer at Alma Mater Europaea – European center, Maribor. She has more than 30 years of extensive clinical experience in both public health (University Medical Center Maribor; neurosurgical department) and private neurophysiotherapeutic practice, including handling of neurological patients. She lectured ergonomics for nurses at the Faculty of Health Science (University of Ljubljana) and has been involved in the ergonomic analysis of the workplace of UKC Maribor employees. She has a long-standing experience lecturing neurological patient and other patient handling methods through several courses to physiotherapy students at AMEU ECM.



Mladen Herc, MSc is the Head of department of Physiotherapy (BSc) at Alma Mater Europaea – Europiski center, Maribor. He has more than 30 years of work experience in the public health and in the last ca. 12 years in the education of physiotherapists.



Marko Bencak is an ICT technician and participates in the ICT support in several AMEU ECM study programmes from the first to the third Bologna cycle.

Technical considerations

Technical considerations

The SAPHA course has been implemented as a Moodle course.

Moodle is a versatile, open-source online learning environment. It is suitable for both contact teaching and distance learning. With Moodle's tools, the teacher can create a course area where, for example, learning tasks are collected and feedback is given, activating online discussions are organized, exams are held, and the students' learning process is guided and monitored.

Moodle is used worldwide. It has more than 300 million users. For several years, Moodle has been selected as one of the most popular e-learning platforms. To access Moodle, you will need an internet connection. Moodle works on any device with a modern web browser, but there is also an app available for mobile devices.

In addition to the study material, the course consists of different types of Moodle assignments, as well as assignments using the H5P add-on.

H5P is a plugin for existing publishing systems that enables the system to create interactive content like Interactive Videos, Presentations, Games, Quizzes and more. H5P allows you to create rich interactive content easily and quickly on a web page. H5P is available as a paid service or can be downloaded for free to your own Moodle installation.

To use H5P content on your own Moodle course, you must have the H5P plugin installed and enabled on your Moodle.

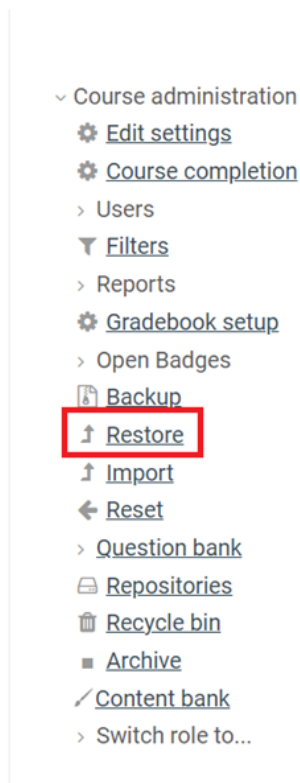
A backup of the course is available as a Moodle backup. To use the course, you must have your own Moodle installation, as well as the H5P add-on, for the H5P tasks to work. The backup contains the entire content of the RENE – Renewing Ergonomic Education for Health Care Students in European HEIs course.

If you have used Moodle before, the course restoration can be done in minutes. If you have not used Moodle before or do not have Moodle, you should reserve more time for restoring the course.

If you do not use Moodle, the course material is also available as files that allow you to build the course yourself on other platforms. There are separate instructions for using the materials to help build the course.

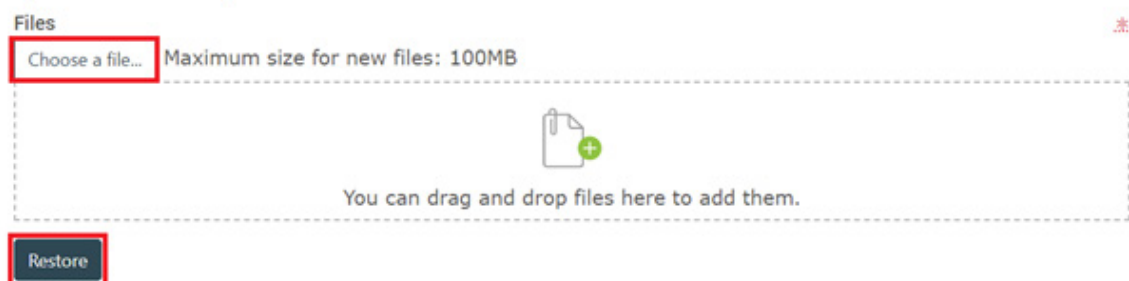
Instructions for copying the SAPHA course to Moodle

- Download the Moodle course from: https://sisu.ut.ee/rene/sapha_course
- After you have downloaded the course file, login to your Moodle, click on the gear icon and then select "Restore".



- Click "Choose a file..." and select the downloaded course file and after that, click "Restore".

Import a backup file



Confirm – Check that everything is as required, then click on the Continue button

Destination – Choose whether the course should be restored as a new course or into an existing course, then click on the Continue button

Settings – Select activities, blocks, filters and possibly other items as required, then click on the Next button

Schema – Select/deselect specific items and amend the course name, short name and start date if necessary, then click on the Next button

Review – Check that everything is as required, using the Previous button, if necessary, then click on the 'Perform restore' button

Complete – Click on the continue button

If you are not using Moodle

- Download the course material from: https://sisu.ut.ee/rene/sapha_course

Appendix 1: Matrix of case scenarios for practical lesson 4 and the exam

The case descriptions can be found in Moodle: Section 6. Practical lessons > Practical lesson 4

The same cases can be used both in Practical lesson 4, in the student's optional self-directed study groups and in the exam. Of course, the teacher can also create own cases for all of them.

CASE	CASE DESCRIPTION	TASKS FOR STUDENTS	FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE
1	A 70-year-old hemiplegic patient lying on the bed on his left side.	<p>Assist the patient from lying in bed to wheelchair:</p> <ul style="list-style-type: none"> from lying to sitting on the bed from sitting on bed to sit in the wheelchair from sitting in a wheelchair to stand (in front of the bookshelf) and back to sitting from sitting in a wheelchair to sit on the bed in good full sitting position 	<p>Mobility Gallery C:</p> <ul style="list-style-type: none"> Dependent on caregiver in most situations. Unable to perform daily activities without assistance but can contribute to the action or perform part of the action independently. It is important to maintain or improve this capacity as far as possible. Stimulation of functional mobility is important. Notice the utilization of the environment (accessibility, bed level, support for balance). Standing and raising aids are recommendable.
2	A 75-year-old man undertook a non-complicated surgery due to prostate cancer this morning and is in hospital. He wants to go to the WC.	<p>Assist the patient from lying in bed to the bathroom and back to bed</p> <ul style="list-style-type: none"> to get up from the bed to walk to the bathroom and to sit on the toilet seat after washing the hands to return to the room and to lie on the bed 	<p>Mobility Gallery A:</p> <ul style="list-style-type: none"> Able to perform daily activities independently without assistance from another person. May require verbal guidance while ensuring independent function. Ambulatory but may use a walking stick for support. Accessible environment is recommended. Stimulation of functional mobility is important to maintain independence.
3	A 68-year-old lady is in a rehabilitation centre after right hip replacement surgery which took place three months ago. While walking with crutches outside the centre in the park, she fell but did not hurt herself. She needs to get up from the ground and rest for a while on a bench close by before going back into her room to take a nap.	<p>Assist the lady</p> <ul style="list-style-type: none"> to get up from the ground and to walk to the nearest bench to rest for a while to get up from the bench and to walk back in to lie on her side in the bed to take a nap 	<p>Mobility Gallery B:</p> <ul style="list-style-type: none"> Partly capable of performing daily activities independently and not generally physically demanding for the caregiver. Verbal support, feedback or instructions are needed. Light physical assistance may also be necessary with small aids (walking aids, support or grips and handles). Utilization of the environment (accessibility, bed level, support for balance). Remaining capability should be stimulated.

CASE	CASE DESCRIPTION	TASKS FOR STUDENTS	FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE
4	<p>A 14-year-old girl with severe cerebral palsy.</p> <p>A: The girl fell on the floor and her mother shouted for help. She needs to get back in the bed before the doctor comes to check if everything is good.</p> <p>B: She has slid downwards in the bed</p>	<p>A: Assist the girl from the floor back to bed by using a hoist</p> <p>B: Assist her upwards in bed and lying on her side</p>	<p>Mobility Gallery D:</p> <ul style="list-style-type: none"> • Dependent on caregiver in most situations. Is incapable of performing daily activities independently or actively contributing in any substantial or reliable way. • Cannot stand and is not able to weight bear through her feet. Can sit if well supported. • Assistance equipment should be used to reduce this risk for injury and caregiver overload. • Stimulation of functional mobility is important. • Utilization of the environment (accessibility, bed level, support for balance). <p>• Hoist is recommendable</p>
5	<p>An 82-year-old man with mid-stage Parkinson's disease.</p> <p>A: He wants to go back to his room and lay down in bed.</p> <p>B: He has slid downwards in his bed and wants to be assisted into better posture</p>	<p>A: Assist him</p> <ul style="list-style-type: none"> • to get up from the chair and to get back to his room • to lie down on his bed <p>B: Assist him upwards in bed and lying on his side</p>	<p>Mobility Gallery C:</p> <ul style="list-style-type: none"> • Dependent on caregiver in most situations. • Unable to perform daily activities without assistance but is able to contribute to the action or perform part of the action independently. • It is important to maintain or improve this functional capacity as far as possible. • Stimulation of functional mobility is important. • Utilization of the environment (accessibility, bed level, support for balance). • Standing and raising aids are recommendable.
6	<p>A 35-year-old woman, who had a severe car accident two years ago. She had a traumatic injury to her back (Th11-12). She needs to go to the examination room for the ultrasound examination.</p>	<p>Assist her from lying to wheelchair and to examination table – back to bed</p> <ul style="list-style-type: none"> • from lying on the bed to sit in her wheelchair • from wheelchair to the examination table • from examination table to a wheelchair • from a wheelchair back to bed • to lie on her right side 	<p>Mobility Gallery D:</p> <ul style="list-style-type: none"> • Dependent on caregiver in most situations. Is incapable of performing daily activities independently or actively contributing in any substantial or reliable way. • Cannot stand and is not able to support weight through her feet. Can sit if well supported. • Assistance equipment should be used to reduce this risk for injury and caregiver overload. • Stimulation of functional mobility is important. • Utilization of the environment (accessibility, bed level, support for balance). <p>• Hoist is recommendable.</p>

CASE	CASE DESCRIPTION	TASKS FOR STUDENTS	FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE
7	A 56-year-old man had an open chest operation two weeks ago. He was in bed taking a nap after lunch and just woke up. He would like to go to a day room to read a newspaper and after that return to bed to rest on his side.	<p>Assist the patient from lying – walking – back to bed</p> <ul style="list-style-type: none"> to get up from the bed walk to the day room and sit on a chair get up from the chair and walk back to room to lie down on the bed on his right side 	<p>FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE</p> <p>Mobility Gallery A:</p> <ul style="list-style-type: none"> Able to perform daily activities independently without assistance from another person. May require special aids or appliances to assist their independent function. Ambulatory, but may use a walking stick for support. Stimulation of functional mobility is important to maintain independence. Accessible environment is recommended.
8	A 72-year-old lady suffered a stroke three weeks ago. She wants to move to the dining room to have breakfast sitting in a wheelchair.	<p>Assist the patient to move from lying to wheelchair – back to bed</p> <ul style="list-style-type: none"> from lying to sitting in the bed from sitting on bed to sit in a wheelchair back to bed after having breakfast 	<p>Mobility Gallery C:</p> <ul style="list-style-type: none"> Dependent on caregiver in most situations. Unable to perform daily activities without assistance but can contribute to the action or perform part of the action independently. It is important to maintain or improve this capacity as far as possible. Stimulation of functional mobility is important. Utilization of the environment (accessibility, bed level, support for balance). Standing and raising aids are recommendable.
9	A 70-year-old man with Parkinson's disease is in a rehabilitation centre. He has had left knee surgery two months ago and he still has some pain in the knee. He would like to go to the dining room to have lunch and to have a nap after that.	<p>Assist him</p> <ul style="list-style-type: none"> From lying in bed to sit in full sitting on the bed and vice versa To get up from the bed to sit at the side of the bed To walk to the dining room and back To lie down on the bed to have a nap (lying on his side) 	<p>Mobility Gallery B:</p> <ul style="list-style-type: none"> Partly capable of performing daily activities independently, not generally physically demanding for the caregiver. Verbal support, feedback or instructions needed. Light physical assistance may also be necessary with small aids (walking aids, support or grips and handles) and utilization of the environment. Remaining capability should be stimulated. Utilization of the environment (accessibility, bed level, support for balance).
10	A 40-year-old man with partial spinal cord injury at L3 level and paraplegia. He had slid to the floor while moving from bed to wheelchair. He wants to get up from the floor to a wheelchair and go back to his room to have a nap.	<p>Assist him from floor to wheelchair</p> <ul style="list-style-type: none"> To get up from the floor to sit in a wheelchair From wheelchair to lie on the bed 	<p>Mobility Gallery B:</p> <ul style="list-style-type: none"> Partly capable of performing daily activities independently, not generally physically demanding for the caregiver. Verbal support, feedback or instructions needed. Light physical assistance may also be necessary with small aids (walking aids, support or grips and handles) and utilization of the environment. Remaining capability should be stimulated. Utilization of the environment (accessibility, bed level, support for balance).

CASE	CASE DESCRIPTION	TASKS FOR STUDENTS	FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE
11	An 18-year-old teenager with bilateral spastic cerebral palsy. He wants to go back to his room to have some rest.	<p>Assist him from lying on the therapy table to the wheelchair and to bed</p> <ul style="list-style-type: none"> To move from therapy table to wheelchair To move from the wheelchair to lie on the bed 	<p>FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE</p> <p>Mobility Gallery D:</p> <ul style="list-style-type: none"> Dependent on caregiver in most situations. Is incapable of performing daily activities independently or actively contributing in any substantial or reliable way. Cannot stand and is not able to support weight through his feet. Can sit if well supported. Assistance equipment should be used to reduce this risk for injury and caregiver overload. Stimulation of functional mobility is important. Utilization of the environment (accessibility, bed level, support for balance). <ul style="list-style-type: none"> Hoist is recommendable.
12	A 64-year-old lady had lumbar spine surgery L2/L3 two months ago. She wants to go to the examination room to ask for analgetic before having a nap.	<p><i>Guide the lady:</i></p> <ul style="list-style-type: none"> To get up from a chair in the changing room and walk with her to the examination room to get some analgetic To walk from the examination room to her room To lie down in bed for a rest 	<p>Mobility Gallery B:</p> <ul style="list-style-type: none"> Partly capable of performing daily activities independently, not generally physically demanding for the caregiver. Verbal support, feedback or instructions needed. Light physical assistance may also be necessary with small aids (walking aids, support or grips and handles) and utilization of the environment. Remaining capability should be stimulated. Utilization of the environment (accessibility, bed level, support for balance).
13	A 39-year-old woman with relapse-remitting multiple sclerosis (RRMS) has motor control impairment and due to that increased risk for falls and disability. She is in the cafeteria having lunch before her physiotherapy session, but before that she needs to use the toilet.	<p>Assist her:</p> <ul style="list-style-type: none"> To move from her wheelchair to sit on the toilet seat To stand up from the toilet seat and take some steps to wash her hands To sit back to wheelchair and to get on a low therapy table To lay down on the therapy table and to turn on prone To get up from the therapy table and sit in her wheelchair To move from wheelchair to the bed and lie on her side 	<p>Mobility Gallery C:</p> <ul style="list-style-type: none"> Dependent on caregiver in most situations. Unable to perform daily activities without assistance but can contribute to the action or perform part of the action independently. It is important to maintain or improve this capacity as far as possible. Stimulation of functional mobility is important. Utilization of the environment (accessibility, bed level, support for balance). <ul style="list-style-type: none"> Standing and raising aids are recommendable.

CASE	CASE DESCRIPTION	TASKS FOR STUDENTS	FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE
14	<p>A 43-year-old woman after a car accident. The patient suffered complete Th11 spinal cord injury.</p> <p>A: The patient has just woken up and wants to use the toilet before having her group meeting.</p> <p>B: The patient has slid downwards in the bed, and asks to be assisted into better posture.</p>	<p>Assist the patient</p> <ul style="list-style-type: none"> To move from lying to sit in a wheelchair To move from sitting in a wheelchair to sit on a toilet and back To lie on her side in the bed 	<p>FUNCTIONAL CAPACITY OF THE PATIENT AND THE REQUIRED ASSISTANCE: DEVICES, HOISTS, AND KEY FACTORS DURING THE ASSISTANCE</p> <p>Mobility Gallery D:</p> <ul style="list-style-type: none"> Dependent on caregiver in most situations. Is incapable of performing daily activities independently or actively contributing in any substantial or reliable way. Cannot stand and is not able to weight bear through her feet. Can sit if well supported. Assistance equipment should be used to reduce the risk for injury and caregiver overload. Stimulation of functional mobility is important utilization of the environment (accessibility, bed level, support for balance). <ul style="list-style-type: none"> Hoist is recommendable.
15	<p>A 78-year-old lady with medical history of heart failure, hypertension and osteoporosis (diagnosed 15 years ago). She is lying in bed and wants to go to the day room to watch TV, but before that she needs to use the toilet.</p>	<p>Assist the patient</p> <ul style="list-style-type: none"> From lying on the bed to sit in a wheelchair From the wheelchair to the toilet seat and back From the wheelchair back to bed, to have a nap on her side 	<p>Mobility Gallery D:</p> <ul style="list-style-type: none"> Dependent on caregiver in most situations. Is incapable of performing daily activities independently or actively contributing in any substantial or reliable way. Cannot stand and is not able to weight bear through her feet. Can sit if well supported. Assistance equipment should be used to reduce this risk for injury and caregiver overload. Stimulation of functional mobility is important. Utilization of the environment (accessibility, bed level, support for balance). <ul style="list-style-type: none"> Hoist is recommendable.
16	<p>An 83-year-old man with medical history of Alzheimer's for over 20 years. The past five years he has been in a nursery home because he needs care and assistance in all activities full-time.</p> <p>He needs to take a shower and after a short rest to sit in a geriatric chair in the day room.</p>	<p>Assist him</p> <ul style="list-style-type: none"> Upwards on bed Turning on side and back From bed to shower trolley and back to bed From bed to geriatric chair and back to bed 	<p>Mobility Gallery E:</p> <ul style="list-style-type: none"> Might be almost completely bedridden, can sit out only in a special chair. Incapable of performing daily activities or actively contributing to them. Adaptation of environment is crucial: like bed level, suitable for caregivers' working postures. Equipment should be used to reduce the risk of overload of assistants: such as a sling lift and/or sliding aids within the bed. Needs maximum help of two assistants when moving in bed and a hoist when moving from bed to geriatric chair and three assistants and gliding material bathroom.

Appendix 2: Scenario preparation and manuscript for simulations

Wheelchair transfer: Made by the RENE Simulations team

CONFIDENTIAL: Do not give this to students, or you may hinder the full learning experience

If you want other cases, please contact Kati Naamanka (kati.naamanka@turkuamk.fi) or Marion Karppi (marion.karppi@turkuamk.fi).

NAME OF THE SCENARIO: WHEELCHAIR TRANSFER

LEARNING OBJECTIVES

In the end of this scenario, the students will be able to demonstrate the following learning objectives.

(Add others if needed)

Technical/Practical skills

- Assess the patient's functional mobility and participation level
- Assess specific demands of the mobility task and risk assessment
- Prepare the environment
- Effectively use the equipment
- Perform fluent, ergonomic and safe patient transfer
- Perform safe patient handling, activating the patient

Reasoning and communication skills:

- Be aware of current situation
- Effectively communicate with others (students in patient's, professionals' or caregivers' roles)
- Inform patient and caregiver
- Select proper assistive aids
- Select adequate patient handling methods
- Use different communication styles and resources to perform safe patient handling
- Support patient independence and participation
- Integrate ethical principles in the intervention

SIMULATION SCENARIO

Entails the only information given to overall class of students

Patient is Veikko, 60 years old, recovering from a stroke (6 months ago) in a rehabilitation hospital ward. He has no active movements in his right extremities. Mobile with wheelchair, needing assistance in wheelchair-bed transfers. Veikko is a big man, BMI 35. Before the stroke, Veikko has moved independently without assistive aids and devices. Lives alone in a two-storey detached house.

Daughter Kaisa, 40 years old.

Physiotherapy and nursing students Outi, 22, and Juuso, 24.

PARTICIPANTS

Identify the participants and their roles

Two teachers as supervisors, 4 students in simulation roles

Rest of the group as observers

PREPARATION (DONE BY THE TEACHER)

Timing, setting the equipment, notes for role setting, environment

EQUIPMENT

Identify the equipment students may need to play the scenario

- Patient health records
- Working uniform for students
- Wheelchair, sliding board, sliding sheets / gloves, sliding stop, transfer belt
- Patient clothes and shoes

SCENARIO MANUSCRIPT (ISBAR)**IDENTIFY**

Identify who are the characters in the scenario and what information will be given to each one

Example: student 1 (role and information); student 2, (role and information), ...

• Student 1 (strict role setting): Veikko 60 years old, recovering from a stroke in a rehabilitation hospital ward. No active movements in right extremities. Mobile with wheelchair, needing assistance in wheelchair-bed transfers. Not recognizing his current functional status, just wants to go back home.

• Veikko is a big man, BMI 35.

• Student 2 (strict role setting): Daughter is a busy career-centred woman, living 200 km away in another city. Runs own beauty business in Capital Hill, single. Wants his dad to stay at the hospital, has no time to concentrate on his future rehabilitation plans.

• Students 3 and 4: trying to do their best, no detailed roles. Only background information of the patient is given to the students: previously he has moved independently without assistive aids and devices. Lives alone in a two-storey detached house. Stroke 6 months ago, since then rehabilitation progressed slowly.

SITUATION

S: Describe the situation

• Patient Veikko lies on his back on the hospital bed. He has slid down on his bed, legs slightly bent. He is afraid of transfers, and it is the reason for his passive attitude towards rehabilitation. The students transfer him to the wheelchair. The aim is to help him to have a cup of coffee in the rehabilitation ward's living room.

BACKGROUND

B: Describe the background

• Previously Veikko has moved independently without assistive aids and devices. Lives alone in two-storey detached house. Stroke 6 months ago, since then rehabilitation progressed slowly.

ASSESSMENT

A: Assessment

• Mobilizes with wheelchair. Needs assistance in transfers and activities of daily living (ADL). Students should assess the functional capacity of the patient prior to mobilising. No active movement in right side extremities.

RECOMMENDATIONS

- Based on the assessment of the functional capacity of the patient.
- Active rehabilitation continues.

PREREADING MATERIAL

Identify the articles, videos or other resources needed for scenario comprehension

• As a prereading material: SAPHA Theory part and Practical lessons accomplished

• *The teachers may guide students on task performance if needed by raising some questions to the scenario actors before the roleplay*

• *Example of questions:*

• *How will the students solve this situation? Will they work together?*

• *Will someone take the responsibility for the communication?*

.....

DEBRIEFING

Checklist for the teacher for debriefing; Essential issues to bring up in debriefing

- E.g. examination of a patient's functionality, mood

Note to the teacher: Maintain a positive and constructive atmosphere in the debriefing session

.....

DESCRIPTION (5 MIN)

• What happened in the simulation?

.....

FEELINGS (5 MIN)

• What kind of feelings did you experience in the simulation?

.....

EVALUATION (15 MIN)

- Which of the tasks were successful?
 - How would you develop your actions and how would it benefit the patient?
 - What are the alternatives for action and the output?
 - What are the probable outcomes of the actions?
 - Did you find alternative choices to fulfil the task?
-

ANALYSIS (10 MIN)

• Did we find common solutions? How can we learn from alternative perceptions?

.....

CONCLUSION AND ACTION PLAN (10 MIN)

- What else could have been done?
 - What can you learn from the simulation for the next time?
 - How are you going to capitalize on what you have learnt?
-



Co-funded by the
Erasmus+ Programme
of the European Union