



TEACHER MANUAL EMUTOM

August 2012

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Welcome to the 5-day taught module in a three weeks period, incorporating the European Module for Undergraduate Teaching in Occupational Medicine in your programme.

I. Purpose of the Module

These Module and Manual have been developed to help you, the trainer, teach in a standardized way essential information on occupational health to undergraduate students in Medicine and Health Sciences. The issues covered in this Module are areas of concern in many European countries and workplaces.

Providing information on these topics through training classes or any other means will increase awareness and knowledge about hazards in the workplace and help health professionals to protect workers' health and their lives.

In addition, we aim to enhance medical students' interest in this field and encourage them to consider occupational medicine as a career.

II. Who should teach this Module?

This Module is originally intended for blended learning or a mixing of different learning environments. Instructors such as faculty staff, teachers from Medical Universities, Public Health Schools, etc.... can use the classical learning materials (text, presentations,...) for traditional face-to-face classroom education and the computer-mediated activities such as multiple choice questions, cases,... for self-learning and self-assessment by students. Nevertheless, in case there is no qualified teacher available, or the learner wishes to study independently, the Module can be used as a self-guided course.

As instructor, you do not need to have a background in occupational health to teach these materials to others but some previous experience as a trainer is desirable. You will need to familiarize yourself with the information if it is new for you and present it to the students. If necessary, you may supplement this information with other resources such as textbooks and websites (See VI. Resources).

As learner, you need a certain level of background education. In this case, some understanding of the basic sciences, physiology and anatomy will be assumed. You will need access to internet but no further special software or equipment are required.

III. Course Topics and Format

The module is delivered to be used by teachers as a 5-day taught programme in a three weeks period, with a student workload of 84 hours (3 ECTS credits).

The course will cover the following topics in 4 chapters:

1. General introduction : Basic principles
2. Impact of work on health
3. Effect of health on work
4. Workplace health promotion

Learning outcomes

The objectives are that by the end of this undergraduate course students are able to :

1. Understand the relevance of work and the wider environment to health and disease (Knowledge)
2. Understand the impact of health and disease on participation in daily life and work (Knowledge)
3. Take an occupational history (Skills)
4. Describe the outline structure and the role of occupational health services and occupational physicians (Knowledge)
5. Appreciate the different perspectives required by the occupational health approach (Attitudes)
6. Access further resources and know where to look for specialist help (Knowledge, skills)
7. Dispense appropriate advice to their patients about disability, workplace adjustment and rehabilitation back to the workplace (Knowledge, skills)
8. Accept their responsibility towards preventing and reporting occupational ill-health and the promotion of health at work (Attitudes)
9. Have insight in the legal aspects and manage the ethical problems of work-related issues (Knowledge, skills)

Each chapter and subchapter follows the same format and contains usually the following sections:

1. Introduction : what is in this (sub)chapter
2. Learning material:
 - A. Text : manual for the student
 - a) Learning objectives in terms of knowledge, skills and attitudes
 - b) Concept map : a diagram showing the relationships among concepts
 - c) Advance organizer : information presented by an instructor prior to learning that helps the student organize and interpret new incoming information e.g. case description, photo, article,....
 - d) Core of the text with the specific information on the topic such as definitions, health effects, exposure, prevention
 - e) Summary : provides the most important points contained in the (sub)chapter
 - f) Keywords
 - g) References
 - B. Powerpoint presentation : slides with information on the most important topics
 - C. Self-assessment exercises : multiple choice questions give students the opportunity to self-evaluate what they have learned
 - D. Feedback on the self-assessment exercises
 - E. Assignment : exercises give students the opportunity to apply some of what they have learned
 - F. Documentation : additional information on some topics

IV. Using this Module

A. Adapt the Module to the needs of the target group

In order to make the course as relevant as possible to the target group, namely undergraduate students in Medicine or other Health Sciences across Europe, it is recommended that you address the specific concerns of the trainees in your class (depending upon the students' prior learning and experiences) and the specific needs or problems in your country.

It is suggested that, if possible, you do a "needs assessment" prior to the teaching. You can make yourself a list of the 'work and health' competencies, your students should have at the end of their (medical) study. You can use a questionnaire to ask stakeholders in your country (such as occupational health institutions, general practitioners and clinical specialists, professional organizations,...) about health and safety concerns, or ask them in person if possible. Alternatively, you can always ask trainees about their specific concerns at the beginning of the course.

Once you have all this input, try to integrate the specific needs or problems and your local laws, regulations, etc. with the content of the Module.

For example, if in your country some specific industries or professions are largely practiced (mining, agriculture,...), the chapter(s) related to the hazards in these workplaces would probably be more relevant than those not related to these hazards. Your role could be to collect information about those specific hazards as well as information on any local or national standards/regulations.

For example, if there exists a special Fund in your country for occupational diseases, you can explain in more details which procedure the doctor and patient has to follow to obtain a compensation.

Here are some suggestions on ways to adapt the materials.

1. Substitute examples that are in the Module with your own experiences.
2. Graphics or photos showing real workplaces in your country are more meaningful than slides from other countries. Use national data in addition to European or international statistics.
3. Obtain information about a specific product that you know is used a lot in your country (a particular solvent or pesticide, for example), then devise an exercise or discussion about that chemical, biological,... agent.
4. If the Module is not available in the local language, than you may need to adapt the materials. The first choice is to translate the material into the local language. If that is not possible, then the second choice is to extract and simplify the most important points from the Module you need to use in preparing the course in the local language. (Some of the most important points for trainees will be identified through your "needs assessment".) From there you can use the existing exercises or develop your own activities for use in the course.

We encourage teachers and students to go systematically through the whole Module starting with the General introduction and continue with the consecutive chapters. If there are many issues to address, or you have not enough time to use them all, you may want to choose to deal with only the high priority topics.

B. Planning the Module

It is a 5-day taught programme meaning that a teacher will need five days (or circa 28 contact hours) for face-to-face traditional lectures and group discussions, exercises in small groups,.... However, the total work load for the students is higher : we estimate 84 hours. They have to study the material, make MCQs, write assignments, prepare exercises (e.g. taking an history), consult additional information, explore the multimedia....

The 5 days of the Module do not have to be consecutive! To allow students to assimilate the new information, we recommend to spread the module over 3 (or more) weeks.

When deciding how to schedule the Module, consider factors such as the time you have available, the number of students and staff, prior knowledge and specific needs of the learners, access and availability of technical infrastructure and support etc. Several other course schedule are therefore possible.

Suggested scheme and teaching techniques

Chapter 1: 3 hours of teaching & 3 hours practical training & 1 hour small group learning
General introduction

Chapter 2: 6 hours of teaching & 5 hours practical training and small group learning
Effect of work on health

- a. Chapter 2.1 : Introduction
- b. Chapter 2.2 : Toxicological agents & chemicals
- c. Chapter 2.3 : Biological agents
- d. Chapter 2.4 : Physical agents
- e. Chapter 2.5 : Ergonomics
- f. Chapter 2.6 : Psychosocial risk factors

Chapter 3: 3 hours of teaching & 2 hours small group learning
Fitness for work : effect of health on work

Chapter 4: 2 hours of teaching & 1 hour small group learning
Workplace health promotion

Final Discussion and evaluation: 2 hours assessment

Tentative schedule 5–day thought programme

Time	Topic	Activity
Day 1	<p>Chapter 1 : General introduction to work and health</p> <p>Description :</p> <ul style="list-style-type: none"> - Definitions - The importance of occupational medicine - Relationships between health and work - European labour market - European legislation - Structure and role of occupational health services and tasks of occupational physicians - Extent of the problem : accidents, occupational diseases, absenteeism - Key questions for the future : WARP - Taking an occupational history - Ethics 	<p>Lecture Ppt</p> <p>Practical training Assignment</p>
Day 2	<p>Chapter 2 : Effect of work on health</p> <p>Description :</p> <ul style="list-style-type: none"> - <u>2.1 Introduction</u> - <u>2.2 Toxicological agents & chemicals</u> Definitions and basic concepts, Material Safety Data Sheets as sources of hazard information, routes of exposure, entry/absorption, metabolism, exposure assessment, biological and ambient monitoring Occupational toxicology of mineral fibres, metals, gases, asphyxiants, irritants, organic solvents Prevention - <u>2.3 Biological agents</u> Definitions, occupations with exposure to biological agents Overview of the main biological hazards and their effects on humans Prevention 	<p>Lecture Ppt</p> <p>Assignment Videos Cases Reading</p>
Day 3	<p>Chapter 2 : Effect of work on health</p> <p>Description :</p> <ul style="list-style-type: none"> - <u>2.4 Physical agents</u> 	

	<p>Noise : Overview of the physics of sound and units of measurement, basic physiology of the ear and the effects of noise.</p> <p>Vibration : Overview of the physics of vibration and its health effects on the whole body and locally.</p> <p>Climate : Introduction to human responses to the thermal environment and ways to evaluate it.</p> <p>Radiation : Introduction to the electromagnetic spectrum and the various bands of non-and ionizing radiation.</p> <p>- <u>2.5 Physics (ergonomics)</u> Physical demands Nonspecific low back pain Counseling the worker and prevention</p>	<p>Lecture Ppt</p> <p>Case Exercises Assignment</p>
Day 4	<p>Chapter 2 : Effect of work on health</p> <p>Description :</p> <p>- <u>2.6 Psychosocial/mental aspects</u> Definitions Work related mental disorders Psychosocial risk factors</p> <p>Chapter 3 : Effect of health on work (Fitness for work)</p> <p>Description :</p> <p>- Introduction : impact, positive and negative, of health on work. Consequences of (chronic) illness, ICF model Clinical reasoning and decision making Activities assessing fitness for work and participation, Interventions and active support Prevention</p>	<p>Lecture Ppt</p> <p>Exercises Assignment</p>
Day 5	<p>Chapter 4 : Workplace health promotion</p> <p>Description :</p> <p>- Definitions - Background - European reference model for Workplace health promotion</p> <p>- General discussion and evaluation of the Module</p>	<p>Lecture Ppt</p> <p>Exercises</p> <p>Final assess- ment</p>

Tentative schedule 3 weeks period

Time	Topic	Activity
<p>Week 1</p> <p>Introduction, cases, objectives, Effect of health on work</p>	<p>Introduction (Chapter 1) Effect of work on health Introduction (2.1.) Effect of health on work Fitness for work (3)</p> <p>Taking an occupational history</p>	<p>Lectures: 2x3 hours</p> <p>Self-study: Reading, self-assessments and assignments of Chapter 1 and 3</p> <p>Practical training: 3 hours</p>
<p>Week 2</p> <p>Effect of work on health</p> <p>Assignments Chapter 1 and 3</p>	<p>Effect of work on health (Chapters 2.2. – 2.6)</p> <p>Presentation and discussion about the assignments</p>	<p>Lectures: 6 hours</p> <p>Self-study: Reading, self-assessments and assignments of the Chapters</p> <p>Small group learning: 1 session of 3 hours</p>
<p>Week 3</p> <p>Workplace health promotion</p> <p>Assignments Chapter 2 and 4</p>	<p>Workplace Health Promotion (Chapter 4)</p> <p>Presentation and discussion about the assignments</p> <p>General discussion and evaluation</p>	<p>Lectures: 2 hours</p> <p>Self-study: Reading, self-assessments and assignments of Chapter 4</p> <p>Small group learning or practical training 3 sessions of 2 hours each</p> <p>Assessment: 2 hours</p>

Contact hours = 28 hours

Lectures 14 hours, Training skills 3 hours, Small groups discussions 9 hours,
Assessment 2 hours

Self-study = 56 hours

Total hours 28 + 56 = 84 hours

Chapter 1

General introduction on work and health

The goal of this unit is to introduce undergraduate students to the basic principles of occupational medicine, and to explain the importance, the structure and the role of this discipline.

Content of this chapter

1. Definitions and general principles
2. European labour market and support
3. Extent of the problem
4. Key questions for the future

Before you start teaching the Module, students may complete a **pre-assessment test** : multiple choice questions can be used to evaluate prior knowledge or a questionnaire can be used to measure students' self-efficacy beliefs (see V. Evaluation).

After completion of the Module (or some chapters) you can assess the increase and change in knowledge, skills and self-efficacy beliefs by conducting a **post-assessment test**.

This chapter contains the following learning material

- A. Student manual : text-pdf
- B. Slides : powerpoint presentation
You can adapt this ppt by incorporating additional slides relevant for your country
- C. Structure, law and role of the occupational health care in some European countries
EXTRA : this is a document with specific information on the national law and regulations concerning occupational medicine in Belgium, France, Romania and the Netherlands
- D. Self-assessment exercises (MCQs)
- E. Feedback on the self-assessment exercises
- F. Assignment
- G. Documentation : international and some national resources

Overall assignment or assignment per chapter

The skills pursued in each chapter can be assessed through the elaboration of a particular case by the student, individually, or in small groups. Students may develop for the Module as a whole, one real life case scenario. In each consecutive chapter, they may continue to work on the case, building on the particular items presented in the specific chapter.

Alternatively, students may elaborate chapter per chapter a different and new case.

For a start, students themselves may look around and search for a person among their family, friends, neighbours, patients,... who has a paid job and who has already a health problem. By

preference, this is someone who is not self-employed but works at a small, medium or large company (e.g. nurse, mechanic, office worker, baker's assistant,...). In the coming weeks, while they are taking this course, short interviews/discussions with the "real life case" should take place.

If this is not feasible, use actual case studies or combine multiple cases to create a series of fictitious illnesses or incidence of disease. Create an actual medical history for a patient and provide the students with a list of problems, symptoms, work- and lifestyle information.

Ask the students to examine the content and then make a report based on their findings and/or ask the students to present the findings. Request that each student (or group) provide medical reasoning for each problem and create the most effective and safe plan for confirming the diagnosis, treating, managing and preventing the problem.

Read more: How to Make Medical School Teaching Assignments | eHow.com
http://www.ehow.com/how_4673577_make-medical-school-teaching-assignments.html#ixzz1OxcFP22Q

Background information :

Descriptions of several occupations : <http://laborsta.ilo.org/applv8/data/to1ae.html>

International Hazard Datasheets on Occupations : this is a multipurpose information resource containing information on the hazards, risks and notions of prevention related to a specific occupation.

http://www.ilo.org/safework/info/publications/WCMS_113135/lang--en/index.htm

Practical skills training : occupational history taking

The goal of this session is to practice and to apply the knowledge and skills on work and health related issues pursued during the Module, especially the Section 4.2 of Chapter 1 : " How to take an occupational history".

This is a small group session introduced and supervised by a teacher or occupational physician (OP). This practical training offers the students the possibility to interview a patient with a work-related disease or condition. Next to more general questions regarding the patient's symptoms, problems, etc... an occupational history should be taken to recognize the link between illness and occupation. (In addition, students may have to report orally and in written on their findings).

Real patients are preferably used, but demo-patients or role play are other valuable teaching techniques.

These are the following basic questions of an occupational history taking (See Chapter 1)

1. What is your job? What do you do for a living?

2. What do you work with? What is a typical working day for you? What do you actually do at work?
3. How long have you been doing this kind of work? Have you done any other work in the past?
4. Have you been told that anything you use at work may make you ill? Has anybody at work had the same symptoms?
5. Do you have any hobbies (do-it-yourself or gardening) that may bring you into contact with chemicals (or exposures in the household)?
6. Is there an occupational health doctor or nurse at your workplace (who you can contact)?

When presuming a work-related disease or condition, additional questions can be used to elaborate more complex cases. Examples of more detailed questions are given below. You can discuss and formulate more questions during the session with the teacher or OP.

7. When and how did the symptoms start in relation to exposure?
8. What was the intensity and the duration of the exposure to the risk(s)?
9. When are the symptoms at their worst and when are they at their best? Are they improved after a weekend off work, or better still after a fortnight's holiday?
10. Are there any collective control measures e.g. local exhaust ventilation?
11. Do you wear personal protection equipment e.g. gloves, mask?

Another example of questionnaire can be found on "Taking an Occupational History" by Raymond Agius, University of Manchester, UK, <http://www.agius.com/hew/resource/occhist.htm>

It is suggested to ask also additional relevant questions specifically related to your case. For example ask and report the relevant elements of family and personal medical history to the work-related problems.

Other questions can be added and asked (in a second,... interview) while further taking the Module (See the acronym WARP and the assignments of the other chapters)

Acronym: WARP

Work: could the work of the patient be (part of) the cause or the aggravation of his/her complaint / disease? (Effect of work on health)

Activities: could the complaint / disease of the patient have consequences for his/her activities and participation in work (Fitness for work)

Referral: should / can I refer my patient to an occupational physician or another specialist (Structure / legislation / roles)

Prevention: Can I do something to prevent the (return of the) complaint / disease?

Provide some instructions when students actually interview a real patient/worker

- Introduce yourself, and your role (moderator, questioner,...) : you can even make a nameplate or put a sticker with your name on your t-shirt, blouse,...

- Explain again the reason of this interview. Try to reassure the employee.
- Note that the employee should be treated with the necessary courtesy and respect. A proper ethical attitude is expected from the student. Medical confidentiality must be preserved at all times. Emphasize that you will respect the privacy concerning the obtained (medical) data. Discuss this with the employee who you will interview. He will greatly appreciate this and it will result in better interviews in which everything can be discussed.
- Avoid offensive (or too suggestive) questions.
- In case of emergency or problems, there will be a contact person : your teacher or an assistant or the secretariat will be available/stand-by (at least by phone) during the interview.
- Consider that the interview may last up to two hours.
- At the end, express your gratitude towards the employee.

Chapter 2

Effect of work on health

The goal of this unit is to provide an overview of the health effects caused by exposure to different hazards and unsafe working conditions, and information on various methods that can be used to control workplace hazards.

This chapter is the only chapter in this Module that contains several subchapters! All subchapters follow the proposed format with the exception of 2.1 Introduction.

We assume that medical students have prior knowledge on concepts of toxicology including routes of entry/absorption, dose, and metabolism. Therefore, only a written overview text is provided but no slides nor additional information or exercises on this topic.

Overall, in the other subchapters the most important hazards are presented and documented. You may adapt the learning material according to the needs and priorities of you students and country.

Sections of this chapter

1. Introduction
2. Toxicological agents and chemicals
3. Biological agents
4. Physical agents
5. Physics – Ergonomics
6. Psychosocial – mental aspects

Chapter 3

Fitness for work

The goal of this unit is to provide information how to advice about fitness for work and to improve patient's health through work.

Content of this chapter

1. Consequences of (chronic) illness for the work and how to actively support return to work
2. Fitness of an individual for a job: pre-employment examination and preventive periodical medical examination
3. What every physician should ask about fitness for work

Chapter 4

Workplace health promotion

The goal of this unit is to explain the process of health promotion and how to use the workplace as an important channel for disease prevention and health promotion efforts.

Content of this chapter

1. Definitions
2. Background to workplace health promotion
3. European reference model for workplace health promotion
4. Case study : the FAG Hospital

The case study of the FAG Hospital is a workplace based scenario : it can be used solely in chapter 4 or you may use it in every other chapter as an example or for assignment,...

Another similar learning material is the Hospital eTool developed by OSHA (Occupational Safety and Health Administration, US). This online training tool focuses on some of the hazards and controls in the hospital setting, and describes standard requirements as well as recommended safe work practices for employee safety and health (attention: these are US standards and regulations, and they can differ from the European ones).

www.osha.gov/SLTC/etools/hospital/index.html

CASE STUDY – The FAG Hospital

Introduction in the case-study

This case is a component of the WHP chapter. Presented data are similar with some real situation that can be found by young physicians at their workplaces. They can recognize individual and common problems, in the medical system, caused by a sum of factors. Hospital example can be considered a model of enterprise.

We kindly ask the student to read attentively the case study, trying to imagine them as part of this medical structure, or as staff personnel who must try to recognize the problems, and especially to solve them. Please, try to solve the exercises after reading all this material.

Situation description

The FAG hospital in the FAG city is a 65 years old medical structure, with sections and compartments: internal medicine, paediatrics, infectious diseases, obstetrics gynaecology, surgery, emergency room, laboratory, radiology unit, cuisine, administrative and technical staff, and maintenance workshop. It is the unique hospital for the healthcare in the western part of the T rural region. The next Hospital is situated at 50 kilometres distance.

The number of employees in the beginning of the last year was 158 medical staff and 34 auxiliary and technical staff. Today there are 107 and 26.

The hospital has 3 buildings (A, B, C) that are communicating between, and one (D) at 700 metres distance. The last building is an old one that needs substantial investments, to repair the damaged walls, windows, etc. It is functioning at the limit of the legal demands, because of the old apparatus and medical technique, too. Here are located the Surgery section and the Infectious diseases unit.

A reason (?) that the building was not renovated yet is the few year situations that the hospital did not find a stable intensive care specialist. In these circumstances the surgeons made just small interventions. Now the medical team is complete, but the working conditions are not proper.

Hospital staff asked a few years ago for funds, but they obtained just promises from the local administration. The budget was maintained at the same level in the last five years, in despite of currency and inflation course.

Especially in the last year, the good atmosphere in this hospital was affected by frequent problems.

One year ago the hospital was on the list of medical units that must be closed by the Health Ministry, for economic reasons. After 7 weeks of “terror” the decision was annulated, but, in these circumstances, the level of stress, for the entire personnel was high. Some workers started to look after safe workplaces and leaved the hospital. The number of employees started to

decrease, because of the migration of the medical staff in other countries, for better working conditions and salaries.

In these new conditions, the volume of work and norms increased, especially for the medical team.

Salaries are stationary for few years, and so the hospital founds, too. People must work in plus for the same amount of money.

Workers report problems of protective equipment, mainly not enough “one use” gloves. They are afraid for their health.

There are discussions between different sections’ nurses, about similar payment, but different working conditions and real volume of work.

The non-medical staff was demanded to increase and enlarge the volume of activity, in the same time and same salary conditions.

The unemployment in the region increased in the last 14 months, and the working offer is not attractive. So, people are in the situation to accept compromises at their workplaces.

Education and professional status is high, adequate with job demands.

The hospital personnel are stable. Excepting three physicians and two nurses who were employed in the last two years, no other engagements were possible, because the ministry blocked the employment.

Population perception is negative, in general, regarding the hospital medial services: crises situations, not enough and adequate medication (they are obliged to pay, but they already paid insurances), hygiene deficiencies, staff attitude, high demands that are not achieved. Here an objective element is the gap of legislation and a deficiency in communication with the patient. As individuals, the patients are contended with the medical assistance, the diagnoses and treatment.

Staff data

Medium age for medical staff is 43 years and for non-medical personnel is 39 years. The limit ages are 21 years (2 persons) and 61 (one man, physician).

79% are women.

Marital status: married 68.2% married, 12% divorced, 9% single, 10.8% not married or widow.

81.6% have 1 or two children. Just 4 of them have 3 or more than three children. They have minors in proportion of 54.7%. One person has a handicapped child.

26% of people have one or two old parents / relatives to take care of.

Medium age is relative high. More than half of them must take care of a family member.

65% of employees have their own apartment or home. 42% of them (81.3% medium studies) have part time activity in agriculture, their own small “farms”.

7.4% of hospital personnel are continuing their studies.

The number of smokers is 37.2%. The proportion is similar, in both sexes.

Alcohol use is common, but in low quantities (1 unit of alcohol) for 62.7% of them. Abuse of drinking was registered for two cases, both men, workers, with family problems.

More frequent chronic diseases find at all categories are: arterial hypertension (29%), obesity (17%), diabetes mellitus (4.2%).

Workplace characteristics

Hospital personnel consist of: 49% nurses, 14% physicians, 11% administrative, non-medical personnel 16%, technical/workers 7%, management 3%.

98% of them have entire norm. 2% have 0.5 norms.

Work program implies normal (morning) shift for 43% of them, shift activity including night shift 38%, week-end work 9%. Just 9 persons have flexible program.

Contract time was unlimited for 94%, and for 6% limited at 6 month – 2 years. The norm is 7 hours/day for physicians and 8 hours/day for all the other categories.

Supplementary and weekend hours are not pay but they have free days. For the section and compartments with enough personnel in holidays is very difficult to organize shift activity and to give the compensatory free days. This is a reason of staff complains. No money are paid for supplementary hours.

72% work with patients and public. Often they report violence at their workplaces, and problems of communication with patients or their families.

Absenteeism rate is very low. People prefer to come with health problems at work.

There is an occupational physician and a safety responsible in hospital, and they perform specific activities.

The union is involved in social problems (especially in salaries), and is not very implied in workplace risks management or health aspects. Workers representatives' use to present current specific problems at the management team, and their relation is appreciate like a permanent competition.

The human resources department conducts the risk management sector activity.

Stress and biological risk seems to be the most important hazards identified. Chronic fatigue signs are described by 37% of hospital staff.

One source of occupational stress is considered the unsure status of the employment, the materials deficit, the management style, especially the lack of dialog between the management and workers, patient and their relatives' behaviour.

Healthcare workers who are working in the building D (45 persons) report often than the other colleagues fatigue, high stress, small accidents. Depression was diagnosed at 2 persons.

In the last year was reported one case of hepatitis B (a nurse from gynaecology) and one case of pulmonary tuberculosis (a young physician from internal medicine section).

But another real problem is the musculoskeletal disorders. No training for MSD prevention, no enough personnel and no enough devices to carry and handle the patients who need assistance.

In these circumstances, low back pain is in the top of complaints; cervical zone is affected in the secondary place, other locations of MSD have a lower frequency.

Questions

1. Do you consider that is necessary to project a program of health promotion at the workplace?
2. Identify which are the actions needed at the workplace to assure the wellbeing and to improve the health of the workforce?
3. Which are the actors who should be involved in making interventions at the workplace?
4. Enumerate enabling and constraining factors for workplace health promotion in this hospital? Please, try to put your answer in a table form.

V. Evaluation

A. Evaluation of students

According to the assessment techniques usually used at your School or University, students will be rated based upon submitted work, written or oral exam,...

1. Multiple choice questions (MCQs) (See the self-assessment exercises online)
2. Open questions
3. A rating scale of satisfactory or requires revision can be used. The rating is based upon whether the student completed the work as specified and demonstrates a knowledge and skills level required for the assignment
4. Self-efficacy

Self-Efficacy in Occupational Medicine (SEFOM)

This guide includes a test designed to measure an increase and change in students' self-efficacy beliefs. To attain a competence, not only is the development of conditional knowledge and skills needed, but also related beliefs about one's personal efficacy. Bandura (1997) defines self-efficacy as students' judgments of their capabilities to successfully perform specific tasks. Research is rather consistent as to the relationship between high self-efficacy levels and resulting learning performance.

A test was developed to use as a pre- and post-assessment of self-efficacy : it includes ten items that cover conceptual knowledge and ten items that cover skills elements of occupational medicine.

Students are asked to indicate on a scale from 0 to 100, the degree of certainty that they have knowledge/mastery of subject matters concerning "Work and Health".

B. Evaluation of the Module

A questionnaire is available to evaluate the Module (or specific chapters) at the end by students concerning its relevance and difficulty level, what has been gained from it, its weaknesses and its successes.

Self-Efficacy in Occupational Medicine (SEFOM)

Version August 2012, ©UGent

An example to practice

To get acquainted with the way of answering on the next pages, we ask you to read the following question carefully and answer it.

When you are asked to lift up some heavy weights, how sure are you that you could lift up one of the following weights.

Indicate the level of certainty on a scale from 0 till 100. Put a score ranging from 0 to 100 next to each question. Use the following scale :

0	10	20	30	40	50	60	70	80	90	100	
▲					▲					▲	
I cannot do this at all					There is a 50% chance that I can do this			I can do this for certain			

Confidence in one's own strength (0-100)

Lift up a weight of 5 kg _____

Lift up a weight of 10 kg _____

Lift up a weight of 25 kg _____

Lift up a weight of 40 kg _____

Lift up a weight of 50 kg _____

Lift up a weight of 75 kg _____

Lift up a weight of 100 kg _____

Lift up a weight of 150 kg _____

<u>Skills items</u>	
1. Declare a health care worker fit for the job after surgery for a lumbar disc herniation.	
2. Explain the procedure how to obtain a compensation from (The Belgian Fund of Occupational Diseases).	
3. Investigate if the patient's asthma is caused by work.	
4. Explain the consequences of a medical certificate of unfitness for the job to the patient/worker.	
5. Take an occupational history.	
6. Estimate the consequences of a chronic diseases such as diabetes for the job	
7. Adopt an ethical attitude when attesting a medical certificate of unfitness for the job.	
8. Formulate advices concerning primary prevention to a patient who works as a bricklayer.	
9. Explain the definition of a work accident to the patient/worker.	
10. Give advice with regard to workplace adjustment to the employer of a patient/worker with low back pain.	

Student evaluation of the Module (EMUTOM)

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I. Feasibility

Level of difficulty

1. Do you have enough prior knowledge to study this Module/chapter?
Yes/No
2. Did you go over the whole Module/chapter (text and other material)?
Yes/No
3. Is the theoretical content (text-pdf) in the Module/studied chapter of appropriate difficulty?
Yes/No

If the answer is no : a. Which parts of the text are too difficult?
b. Which parts of the text are too easy?

4. Are the multiple choice questions (MCQs) of appropriate difficulty?
Yes/No
5. Is it feasible to learn this Module/chapter by self-study only?
Yes/No
6. Is the timing of the course (third year) appropriate and well placed within the medical curriculum?
Yes/No

Please, feel free to give additional comments :

Time

1. Is the time that you have spent on studying in relation with the knowledge that you gained?
Yes/No

2. How much time have you spent in total to study this Module/chapter?
.....hour
3. How much time have you spent on the theoretical content (text-pdf)?
.....hour
4. How much time have you spent on the material that was added (the cases and/or exercises, multiple-choice questions) to the theoretical content (text-pdf)?
.....hour
5. How much time have you spent on consulting the extra documentation and links (if applicable)?
.....hour

Please, feel free to give additional comments :

II. Goal oriented

In the beginning of each chapter, we distinguished knowledge and skills/attitude learning objectives:

1. Are the learning knowledge objectives of the chapter(s) clearly stated?
Yes/No
2. Are the learning skills/attitude objectives of the chapter(s) clearly stated?
Yes/No
3. Do you achieve the learning knowledge objectives after studying this Module/chapter?
(Score from 1 to 10)

No, not at all 1 2 3 4 5 6 7 8 9 10 Yes
4. Do the exercises help you to achieve the learning skills/attitude objectives?
(Score from 1 to 10)

No, not at all 1 2 3 4 5 6 7 8 9 10 Yes

Please, feel free to give additional comments :

III. Design

Website

To what extent... very very very low.....very very very high

- | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|----|
| 1. Is the website user-friendly? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2. Is the website attractive? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3. Do you find the structure of the whole course (website) clear and well organized? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 4. Do you find the structure of the chapters clear and well organized? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Learning material

- | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|----|
| 5. Are the definitions adequately explained? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 6. Is the documentation helpful to study this Module/chapter? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 7. Are the cases helpful to study this Module/chapter? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 8. Are the exercises/MCQs a good way to test your knowledge? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 9. Do you find the content of the chapters of practical value for your future career? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 10. Do you find the content of this Module/ chapter challenging? | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

What is the most interesting part?

Which part is less useful?

Please, feel free to give additional comments :

VI. Resources and other learning materials

Glossary

International Labour Organization – International training centre – Bureau for workers' activities – Actrav distance learning project

Website-URL: <http://actrav.ilo.org/actrav-english/telearn/osh/glos/gloss.htm>

Glossary for Basic Occupational Safety and Health – F van Dijk, I Varekamp, K Radon, M Parra - 2011

Website-URL:

http://www.beroepsziekten.nl/datafiles/Glossary_for_basic_occ_safety_and_health_11-10-2011_forBOHS_course_version_def_2.pdf

Glosario básico para Salud y Seguridad Ocupaciona - F van Dijk, I Varekamp, K Radon, M Parra – 2011

Website-URL:

http://www.beroepsziekten.nl/datafiles/Glossary_BOSH_spanish_orden_alfabetico_revisado08_02_12.pdf

Web-based learning materials

International Labour Organization (ILO), **Your health and safety at work (series)**. The modules of this series have been developed to help trainers teach essential information on occupational health and safety to workers. Trainers can use these modules to teach workers from any workplace where basic health and safety information and training are needed

Website-URL: http://www.ilo.org/safework/info/instr/WCMS_113080/lang--en/index.htm

Virtualpatient-Work.Net, another EU funded project for the further development and the worldwide dissemination of web-based virtual patients for Occupational Medicine (the former Network project : Net-based-training for work-related medicine).

Website-URL: <http://www.virtualpatient-work.net>

Workers' Health Education, the database of learning materials for safe and healthy work all over the world. Funded in 2011 by the Coronel Institute of Occupational Health (AMC, The Netherlands) and supported by the WHO Network of Collaborating Centers in Occupational Health.

Website-URL: <http://www.workershealtheducation.org>

Links

The European Association of Schools of Occupational Medicine (EASOM)

Website-URL: <http://www.easom.org>

European Agency for Safety and Health at Work

Website-URL: <http://osha.europa.eu/en/about>

International Labour Organization (ILO)

Website-URL: www.ilo.org

World Health Organization (WHO)

Website-URL: www.who.int - www.who.dk/ (WHO Europe)

VII. References

International Labour Organization. Your health and safety at work. Instructor's guide to the modules. <http://actrav.itcilo.org/actrav-english/telearn/osh/guide/gumain.htm>

Bandura A. Self-efficacy: The exercise of control. New York: W.H. Freeman and Company, 1997.