TEACHER'S GUIDE SHEET

MODULE	BIOMECHANICS OF SPINE
DIDACTIC UNIT	D: INSTRUMENTED ANALYSIS OF THE SPINE D.4. How is a normal biomechanical assessment of the lumbar spine?
TITLE OF ACTIVITY/CLASS	Normal biomechanical assessment of the lumbar spine
OBJECTIVES	• To recognise the normal results of a lumbar biomechanical assessment. • To become familiar with the interpretation of the results obtained from the lumbar biomechanical assessment in a normal population. • To become familiar with the interpretation of the results obtained from the assessment of lumbar muscle strength in a normal population. • To apply the knowledge acquired through a clinical case.
DURATION	1h' OF CLASS MATERIAL IN TOTAL, including the PowerPoint presentation (about 30') and the class activity (about 30')
PREVIOUS KNOWLEDGE REQUIRED	It is advisable for the student to have at least read the theoretical document associated with this module (.pdf provided in the autonomous work teacher's material). The student has to look up in didactic unit D.2 which thoracic and lumbar biomechanical instrumented assessment protocols exist.
TECHNICAL REQUIREMENTS	PC with software for video and audio playback, and for PowerPoint presentations. Appropriate projector and screen to show the contents to all the students during class.
RESOURCES NEEDED	Activity student in pdf. One physical copy per student.

DESCRIPTION OF THE CLASS/ACTIVITY

A PowerPoint will be used by the teacher to guide the class:

PART ONE:

First, the teacher will explain some basic concepts about the functional assessment of the lumbar spine.

Next, he will introduce the biomechanical analysis techniques that can be used for a lumbar biomechanical assessment, and finally, he will show graph examples of the results that are most frequently obtained using this type of technique. Generally, the results section will be structured in:

- Measuring technique
- Type of analysis
- Graph
- Interpretation of the results

The teacher will take advantage of the didactic content included in Autonomous to support the explanation of each result.

PART TWO: EXAMPLE OF A CLINICAL CASE

In the second part of the class, the teacher shows and explains the results of a normal biomechanical assessment of the functionality of a person with lumbar pathology through biomechanical tests that analyse the performance pattern during an activity.

THIRD PART: ACTIVITY CLASS

After the explanation about the possible normal results that can be found in this type of assessment, the students will perform an activity in class to assess the results of a clinical case evaluated using an instrumental technique.

The objective of the class activity is for the students to work on the interpretation of the results obtained in a clinical case involving low back pain and limited mobility of the spine.

This activity can be done individually or in groups. The recommended maximum number of students per group is 4-5 people.

In order to perform this activity, the teacher must verify that each student has a copy of the clinical case on which they are going to work.

DESCRIPTION OF THE CLASS/ACTIVITY

Activity:

The students must carefully read the data included in the clinical case and review the results shown in the document provided.

Next, they will complete each activity of the clinical case and discuss the results among them.

Afterwards, they will review the final results of the assessment and answer the questions that the teacher provides as a guide on the PowerPoint presentation or at the end of their working document. Solutions are included in the [Activity_Teacher] document.

After discussing in groups for approximately 10', the teacher will collect the answers provided by each group and they will correct them. The teacher can show the solutions on the PowerPoint itself or use software like Kahoot! so that the students can participate with their answers in each question.

At the end, the teacher will answer the questions that the students may have.

TASKS TO BE DEVELOPED BY THE STUDENT OUTSIDE THE CLASS (If required)

It is not compulsory to perform any previous task, although it is recommended that the students review the documentation provided in the class as well as the previous lessons.

EVALUATION METHODOLOGY

The teacher will assess the students through their motivation and participation in the discussion groups.

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