**Template for designing cases in learning activities**

**Designing cases to be used in teaching musculoskeletal anatomy**

**Learning outcomes:**

What are the main learning outcomes that you want the students to achieve with this learning activity?

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| Learning outcome in curricular plan: | *As described in curricular plan* |
| Break down of learning outcome | *Break down learning outcome above in multiple concrete learning outcomes as required* |

**Instructions to teachers creating a patient case:**

# **Introduction:**

Describe your fictive patients´ problem in short words, with age, gender and relevant context.

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| **Example of introduction:**  *You are doing your Clinical practice in primary health care where you meet Wille 19 years old who trains basketball several days a week. Wille complains of pain in the groin and reduced mobility in the hip joint.* |

# **Starting questions:**

Start simple and add on more information about the patient and more complex questions further on.

**Instructions for the students:**

* *Give three examples of questions that you would like to ask your patient about his/her current problem, from a biopsychosocial perspective.*
* *Enter the latin name of the joint (in this case, the hip joint), type of joint, possible movements and in what movement-planes they take place*

# **Add more information on the patient as the case progresses:**

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| **Example of further information**:  *Your supervisor examines Wille and discovers that flexion at 90 degrees provokes pain. You start to wonder what normal mobility in the hip is.* |

**Instructions for the students:**

* *Estimate full joint motion in degrees, in all movement directions of the joint (the hip).*

1. **Add more information on the patient as the case progresses:**

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| **Example of further information**:  *After the examination, the supervisor suspects that it is a Femuroacetabulary impingement (FAI). FAI is an anatomical abnormality on either the joint head (then called cam) or joint cavity (then called pincer).* |

**Instructions for the students:**

* *What joint structures do you need to have knowledge of to do a good examination? Draw the (hip)joint with the joint head and joint cavity and other important joint structures, such as capsule, ligaments and other relevant structures (not muscles).*
* *Which of the bony structures around the joint and other joint-related structures do the students* ***THINK*** *they can palpate? (Not muscles)*

1. **Add more information on the patient as the case progresses:**

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| **Example of further information**:  A*s part of the examination, your supervisor has also examined the surrounding muscles that are possible to examine.* |

**Instructions for the students:**

* *Enter the names of the muscles passing the joint as well as their origin and insertion and place them in the following categories:*
  + *Flexors*
  + *Extensors*
  + *Adduktors*
  + *Abduktors*
  + *Outword rotators*
  + *Inword rotators*
* *Which of the muscles surrounding the joint do the students* ***THINK*** *they can palpate?*
* *List the larger arteries that pass close to the joint. Can you palpate the pulse of any of these arteries and in that case, where?*
* *List the peripheral nerves that are of interest for this specific area and specify which nerve-plexus they origin from (if so). Draw these peripheral nerves on a fellow student. Also, suggest at least one muscle that each nerve innervates.*

1. **Application of knowledge using models of the skeleton.**

**Instructions for the students:**

* *Tape some muscles on the skeleton for example with red thread, so that you get a better understanding of the muscle’s origins, insertions and functions and also the muscle function in relation to its origin and insertion.*
* *How would you explain* ***to a patient*** *how the (hip) joint is constructed? Use a skeleton or joint model for help.*

1. **Add more information on the patient as the case progresses:**

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| **Example of further information**:  *After a few months, you come across Wille at your next clinical practice at a Rehabilitation Center. He has undergone surgery and has now come back to you for a rehabilitation program.* |

**Instructions for the students:**

* *Give an example of an exercise that can strengthen muscles for a specific joint-movement (for example hip abductors). Discuss the terms agonist/antagonist/synergist.*

1. **After completing the case:**

**Reflection and analysis for students after completing the case:**

* *Reflect about what was the most difficult to understand in this case and what further knowledge you need to improve your understanding of the patients´ problem.*