

Mind and conceptual maps in the representation of norms for nuclear medicine

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In a routine practicing, professionals must follow specific rules concerning their activities to achieve the best services and products safely. The Nuclear Medicine Services in Brazil fulfills two major regulations, RDC 38/2008 and CNEN NN 3.05/2013, which are applied for the Owners of the Nuclear Medical Services, Nuclear Physician, Medical Physicist, Radiological Protection Supervisor and Technicians professionals. The goal of this work is to evaluate and to discuss through conceptual maps and mind maps what tool represents best the norms of Nuclear Medicine Services.

Conceptual Maps were developed in 1972 by Joseph Novak through a study that sought understand how the children's understanding about science changed [1]. The study was based in meaningful learning of David Ausubel, where the meaningful knowledge is constructed from pre-existing knowledge [2]. In need to represent could be represented in the form of a conceptual map. Conceptual Maps are graphical tools for organization and representation of knowledge. The representation of a concept on this map is done within circles or squares in a hierarchical and interconnected way, using keywords that express the relationship between concepts. In this construction, the representation of a subject or area of knowledge requires relative knowledge on the part of the author. The advantages of this tool are the ability to identify conceptual errors and learning difficulties, to manage personal projects and progress, besides the capacity of synthesis and organization. As disadvantages, we quote the preparation time and representation of concepts interconnected hierarchically, that is not an easy task.

Mind Maps are graphics tools of thought that allow reflecting and organize externally what is going on in the mind, enjoying the maximum mental capacity. Buzan, the creator of this technique, was born in 1942 [3]. Due to the difficulty in assimilating the content besides the uninteresting

teaching method of his teachers, sought a new form of learning. Buzan [3] associated his studies with psychology and discovered that association and imagination were fundamental to any mental process. From these new ideas the mental maps were created. The construction of a Mind Map is based on a key idea or main of prior knowledge on the part of the idealizer, which will be the starting point. The key idea is the main topic of the map, which is organized from the center where other sub-topics will be linked through traces in order to develop the theme. Sub-topics should be evenly distributed and made up of different colors and images for clarity and evolution of reasoning, thus providing a set of interconnected ideas about a theme. Mind Maps can be used in teaching, daily, career, management, among others, but they cannot always represent the best way to record information. Factors such as preparation time and cost benefit should be checked. Among the advantages of Mind Maps is the capacity of being creative in its construction using colors and images besides favoring the association between the concepts. However, in the field of abstractions, in addition to those already mentioned in the Conceptual Maps, is the difficulty of reading, since their production is personal and make it difficult to be created in a group.

By analyzing of each tool, we conclude that Mind Maps are more suitable to represent the norms, because allow a approach much more associative than the conceptual maps, being more succinct. Moreover, Mind Maps allows the use of different colors and images in the representation of keywords, allowing the creation of a more creative and illustrative map that makes the reading of the norms become more enjoyable.

References

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