Medical staff reasoning employs linguistic concepts to deal with patient information (young, tall, fat, etc.) instead of numerical ones (14 years, 200 cm, 120 Kg, etc.) as it is proposed in commercial Medical Information Systems.

Using Linguistic Variables improves the expressivity of medical sentences. Let’s take this two sentences referring to the same patient: “The patient Px is young and fat” “The patient Px is 15 years old and weights 70 Kg”

The first message can be understood by any doctor belonging to any medical domain, and even by people from non-medical domains. On the other hand the second message requires a minimal (in this case) knowledge about the relation between age and weight. Further, it is not possible to conclude that the patient Px is fat if the height value is unknown. In this case there is an implicit relationship among the age, height and weight.

Linguistic Variable:
Linguistic variables have a set of linguistic values. For example, child, adult and elderly could be the values for the age variable in cardiology. In pediatrics, a fourth value like newborn could be useful.

Variable linguistic values in most of cases are modified by other variable values. We can’t assert that a person measuring 170 cm is tall if we don’t know if he is a child, adult or an elderly person.

Modification occurs at different importance levels: Very Important, Important and Fairly Important.

Alerts detection occurs over different contexts. A context is composed by: a group of patients; a dependency graph; and an alert involving some graph variables.

References