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Robots for the elderly - a possibility?

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Background & Aim: The current demographics show that the world's population is rapidly growing older, mainly because of the global drop of birth rates. Populations live on average 20 years longer than 50 years ago, what increases the prevalence of noncommunicable diseases. As such, the need for long term care rises exponentially, as many elderly lose the ability to live independently and look after themselves.

Technology has been evolving fast, exploring new ways to make daily lives of elderly, easier. This includes the development of robots, namely of social robots.

The presentation will consist in a brief presentation on social robots, some results of their application and make participants familiar with this area of robotics.

Method: Review of the literature published in PubMed, from 2013 to 2016 on the keywords "Robot assisted therapy", "Human-Robot interactions" and "social robots".

Results: Some robot prototypes that have already been submitted to clinical trials and have shown positive results, not only in terms of providing support regarding mobility and memory-loss associated problems, but they are also showing an important role as human companions. Robots that are inspired in animal assisted therapy have shown results in reducing the level of aggressiveness and agitation, promoting more social behavior in elderly people suffering from dementia.

Conclusions: The inclusion of robots in our daily lives is not far to become a reality. The development of robotics, namely of the social robots, show that they are able to provide solutions to improve patient's quality of life and the caretaker's task when caring for a patient with long term supportive care needs. This presentation should motivate participants to reflect on possible applications for social robots and to brainstorm on possibilities to conduct research in health with the application of robots.