A Game-Based Approach to Monitor Parkinson's Disease: The bradykinesia symptom classification CBMS 2016

Leonardo Medeiros, Hyggo Almeida, Leandro Da Silva, Mirko Perkusich and Robert Fischer

Federal University Of Campina Grande

20/06/2016

Roteiro

Introdução

Health Monitoring Systems (HMS)

Health Monitoring Systems (HMS) are designed to support continuous treatment by moving healthcare services from the hospital to the patients' home.

Parkinson Disease (PD)

The symptoms associated with PD are caused by a degeneration of dopaminergic neurons in the substantia nigra. Common treatment focuses on drugs that activate dopamine receptors. However, the medication's effectiveness decreases over the years requiring higher dosages [1].

Sistemas de Monitoramento da Saúde (SMS)

Atualmente, os Sistemas de Monitoramento da Saúde (SMS) permitem ao médico:

- ► Tratar preventivamente e pró-ativamente o estado de saúde [?]
- ▶ Reabilitar o paciente [2]
- Melhorar a qualidade de vida [3]

DÚVIDAS?



N. I. for Health and C. E. G. Britain. *Parkinson's Disease:* Diagnosis and Management in Primary and Secondary Care, ser. NICE clinical guideline. National Institute for Health and Clinical Excellence, 2006.



S. Graziadio, R. Davison, K. Shalabi, K. M. A. Sahota, G. Ushaw, G. Morgan, and J. A. Eyre, "Bespoke video games to provide early response markers to identify the optimal strategies for maximizing rehabilitation," in *Proceedings of the* 29th Annual ACM Symposium on Applied Computing, ser. SAC '14, 2014.



H. Chen, G.-T. Liao, Y.-C. Fan, B.-C. Cheng, C.-M. Chen, and T.-C. Kuo, "Design and implementation of a personal health monitoring system with an effective sym-based pyc detection algorithm in cardiology," ser. SAC '14, 2014.