

## POSTER ABSTRACT

# Tackling the care crisis in PD in East-Saxony, Germany – #Improve diagnosis and therapy in Parkinson's disease #Telemedicine-based care management #Intersectoral and interdisciplinary collaboration #Cost containment and quality improvement

18<sup>th</sup> International Conference on Integrated Care, Utrecht, 23-25 May 2018

Daniel Dröschel<sup>1,2</sup>, Stefan Walzer<sup>1,3</sup>, Gertjan Wilpshaar<sup>4</sup>, Peter Lynch<sup>4</sup>

1: MArS Market Access & Pricing Strategy GmbH, Germany;

2: Riedlingen University, SRH FernHochschule, Riedlingen, Germany;

3: University of Applied Sciences Baden-Württemberg, Lörrach, Germany;

4: Global Kinetics Corporation, Melbourne, Australia

---

**Introduction:** Four major problems in Parkinson's disease PD frame the current care crisis in Saxony and beyond in Germany:

1. Prevalence of PD in Germany is reported with 220:100.000. Data from AOK Plus in Saxony shows that the PD population with ICD code G20. idiopathic PD is at 20,000 which is far higher than what would be expected from prevalence alone. In Saxony alone, the population in need is already 2.5 times higher than expected with growing trends due to life expectancy.

2. Specialist care of PD nowadays takes place predominantly in larger cities, while in many rural regions there is an under-supply. Due to limited capacities of office-based neurologists time and specialised knowledge, motor fluctuations in advanced PD are often recognized at a late stage, leading to suboptimal treatment, unnecessary handicaps in daily life, frequent shifts to neurological clinics where patients are usually hospitalized for often unnecessary multi-modal complex treatment. This blocks capacities at expert centres, leading to long waitinglists and patients with advanced PD do not receive timely access to advanced therapies Deep-Brain-Stimulation, Apomorphin infusion, Duodopa pumps.

3. Lack of objective measurements prevents effective and timely management of PD in clinical practice, especially in the outpatient setting. Current methods patient histories, diaries show validity and reliability problems and test and retest scores in current methods e.g. UPDRS have low intra and inter-rated reliability.

4. Uncontrolled PD e.g. dyskinesia, fluctuations is associated with significantly higher overall costs than controlled PD. Cost drivers of PD include onset of motor fluctuations & dyskinesias and increasing costs with worse motor off/on & UPDRS state. Bad mobility is a predictor of hospitalization and a high re-hospitalization rate.

Dröschel; Tackling the care crisis in PD in East-Saxony, Germany – #Improve diagnosis and therapy in Parkinson's disease #Telemedicine-based care management #Intersectoral and interdisciplinary collaboration #Cost containment and quality improvement

**Method:** Care Concept - Introduction of telemedicine-based care management for improved diagnosis and treatment of PD will sustainably change intersectoral and interdisciplinary collaboration, especially in East-Saxony with low supply. Through health economic evaluation based on profitability calculation, a prospective analysis of saving potentials and quality of care improvements was conducted.

**Results:** By incorporating specialized expertise of movement disorder experts via telemedical approach, diagnostic accuracy can be improved. In particular, if improving guideline-based treatment across all care sectors inter-sectoral and interdisciplinary through a consistently structured and controlled care process. Objective measurement by means of the Parkinson-Kineto-Graph PKG, can accurately depict motor symptoms which drives the decision to start or change treatment dose; type, timing. For patients, this can improve the quality of life and increase safety, by preventing events e.g. fractures caused by fall. Cost savings based on population in East-Saxony achievable: ~€18.9mio overall – savings that could provide economical provision of care for PD for 3 years. Savings can be achieved through case shifts from inpatient to outpatient care, non-medical and reduced drug costs.

**Conclusions:** The new care approach is tackling the crisis at its roots. It changes the current treatment setting to address the need for specialised care. Specialists' knowledge on the treatment of PD can be made available locally, relieving the distress of office-based neurologists by enabling them to treat their patients most accurately.

---

**Keywords:** improve diagnosis and therapy in parkinson's disease; telemedicine-based care management; intersectoral and interdisciplinary collaboration; cost containment; quality improvement

---