

# ACCU-CHEK® VIEW: MOTIVATION, INTERACTION AND REACTION UNDER THE MICROSCOPE: WHAT DRIVES THE WEIGHT-REDUCTION SUCCESS?

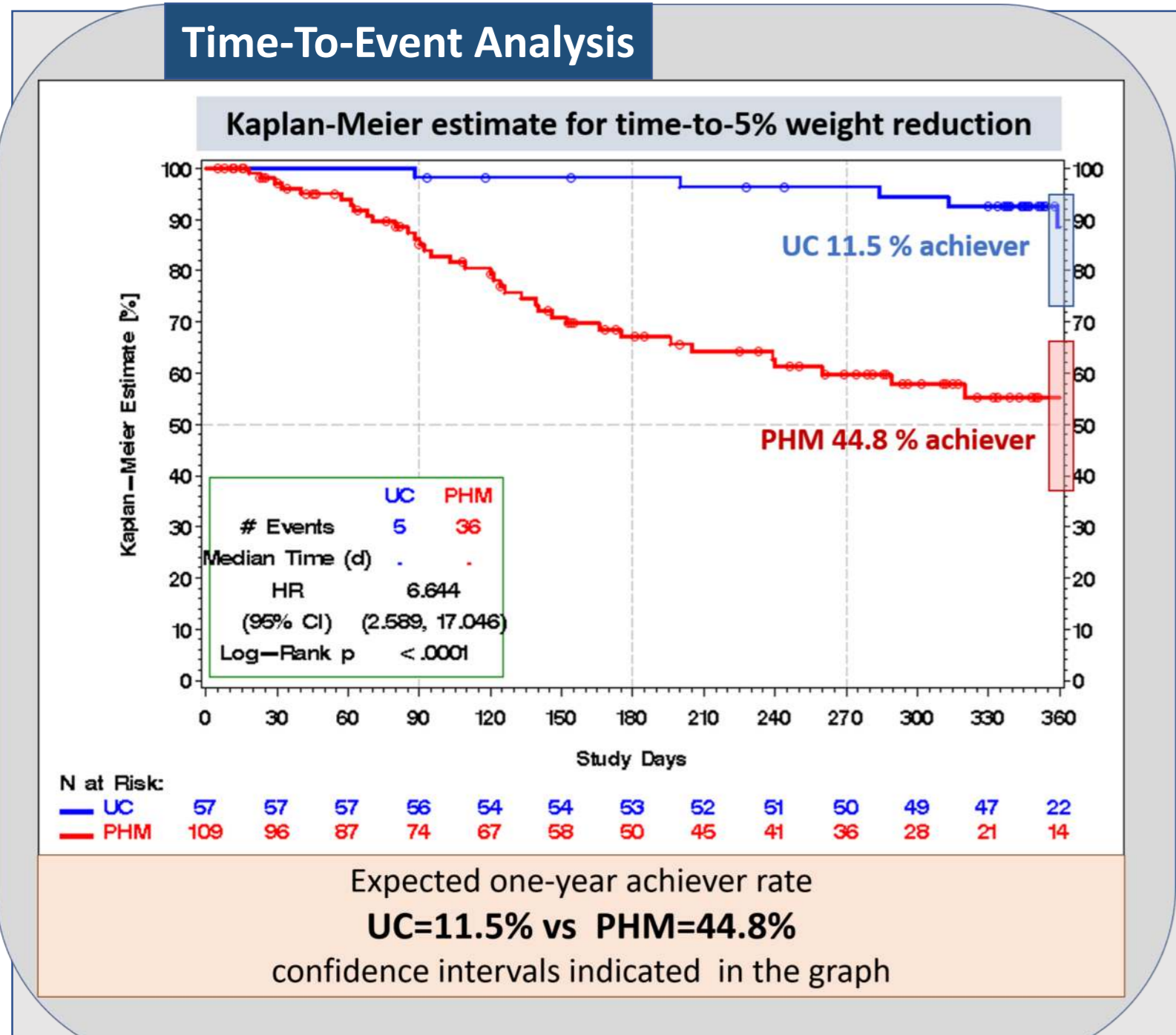
Joachim Moecks<sup>1</sup>, Johann H. Arens<sup>2</sup>, Wolfgang Hauth<sup>3</sup>, Sandra Bloethner<sup>4</sup>, Norbert Weis<sup>4</sup>, Joerg Weissmann<sup>4</sup>

The present database derives from this study

Reference:  
Novel App- and Web-Supported Diabetes Prevention Program to Promote Weight Reduction, Physical Activity, and a Healthier Lifestyle: Observation of the Clinical Application  
Johann H. Arens, MD<sup>1</sup>, Wolfgang Hauth, MD, MBA, MSc<sup>2</sup>, Joerg Weissmann, MD<sup>3</sup>  
Journal of Diabetes Science and Technology, vol. 12, 4: pp. 831-838, First Published March 27, 2018.

**Main Results**

- PHM gave a **6-fold better chance** to achieve a weight reduction of 5% compared to UC
- Expected one-year success rates read: **PHM 44.8 % vs UC 11.5%**
- The extend of weight reduction ranged similar for 5%-achievers of both groups
- PHM-achievers reduced weight on the average by 8 kg (8%) and reduced BMI by 2.7 points



**Time-To-Event Analysis**

**COX Regression: time-to-5%**

	Chance Ratio	p-value	95% CI
PHM vs UC	6.2	0.0003	2.4 - 16.2
Age	1.0	0.99	0.7 - 1.4
Sex	1.3	0.50	0.7 - 2.4
BMI at start	1.05	0.09	0.99 - 1.1

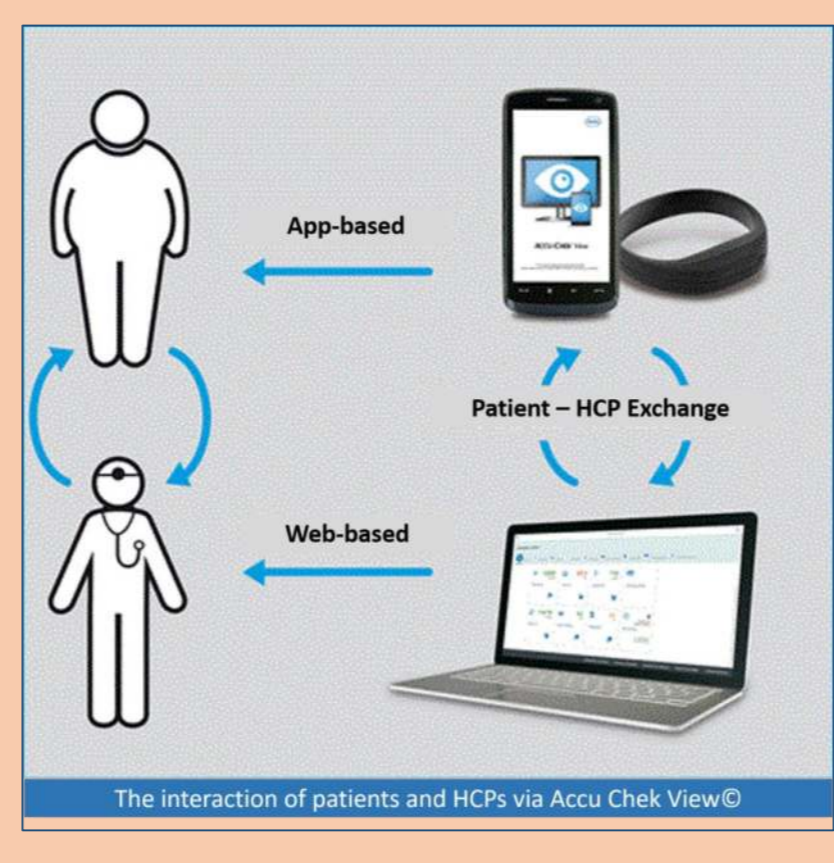
adjusted for Sex, Age and baseline BMI shows for PHM a 6.2 fold better chance to achieve 5% weight reduction.

**ACCU-CHEK® VIEW Mission**

- Bring **weight reduction and lifestyle modification** away from a personal lifestyle topic by involving qualified health care professionals with an evidence based medical perspective
- Capitalize on advanced **digital technology** to allow for close and personalized interaction of HCP's with the patients
- Foster **sustainable lifestyle changes** with health gains and **T2DM prevention** while staying affordable for the healthcare system. Establish this way a win-win situation for patients and the healthcare system

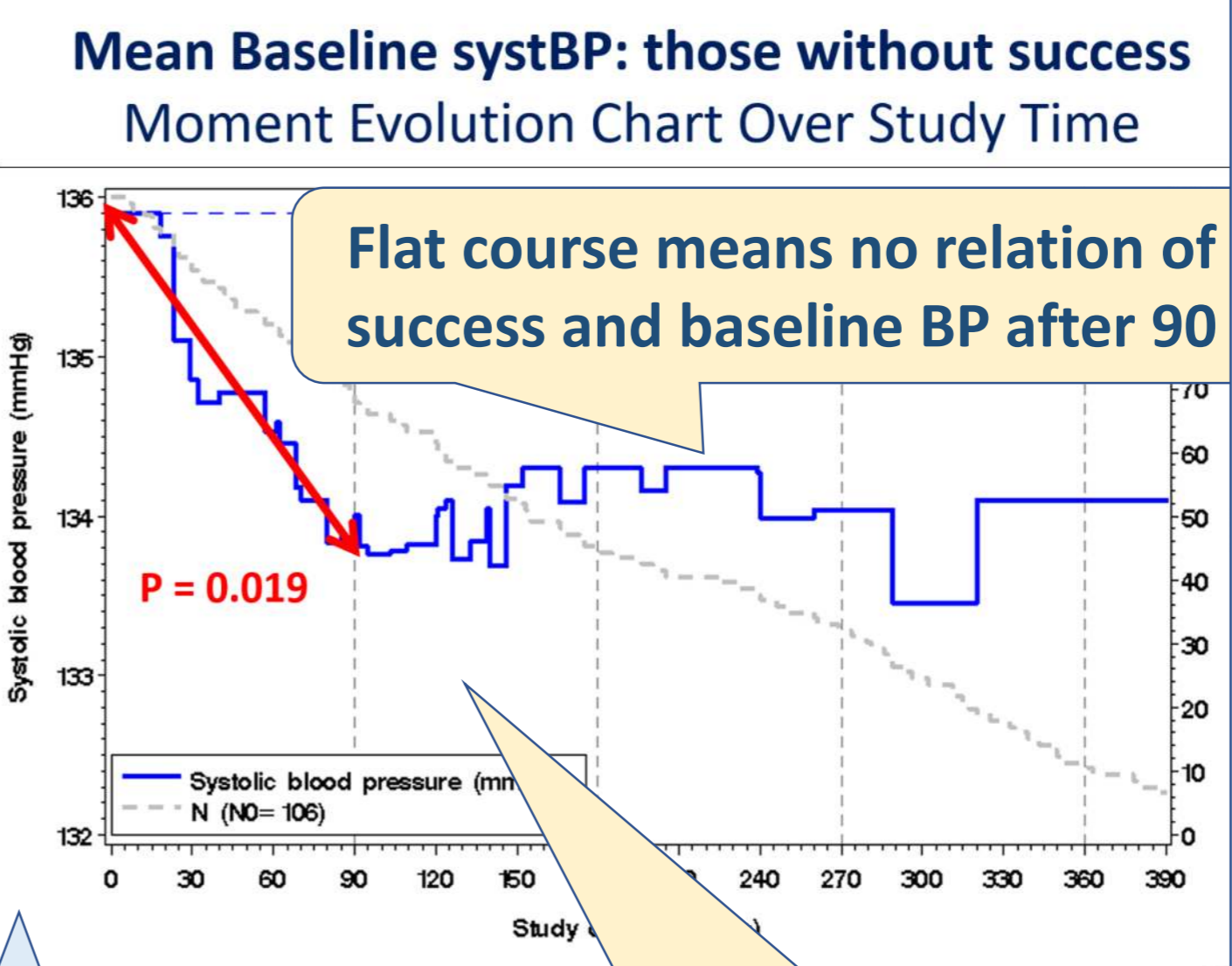
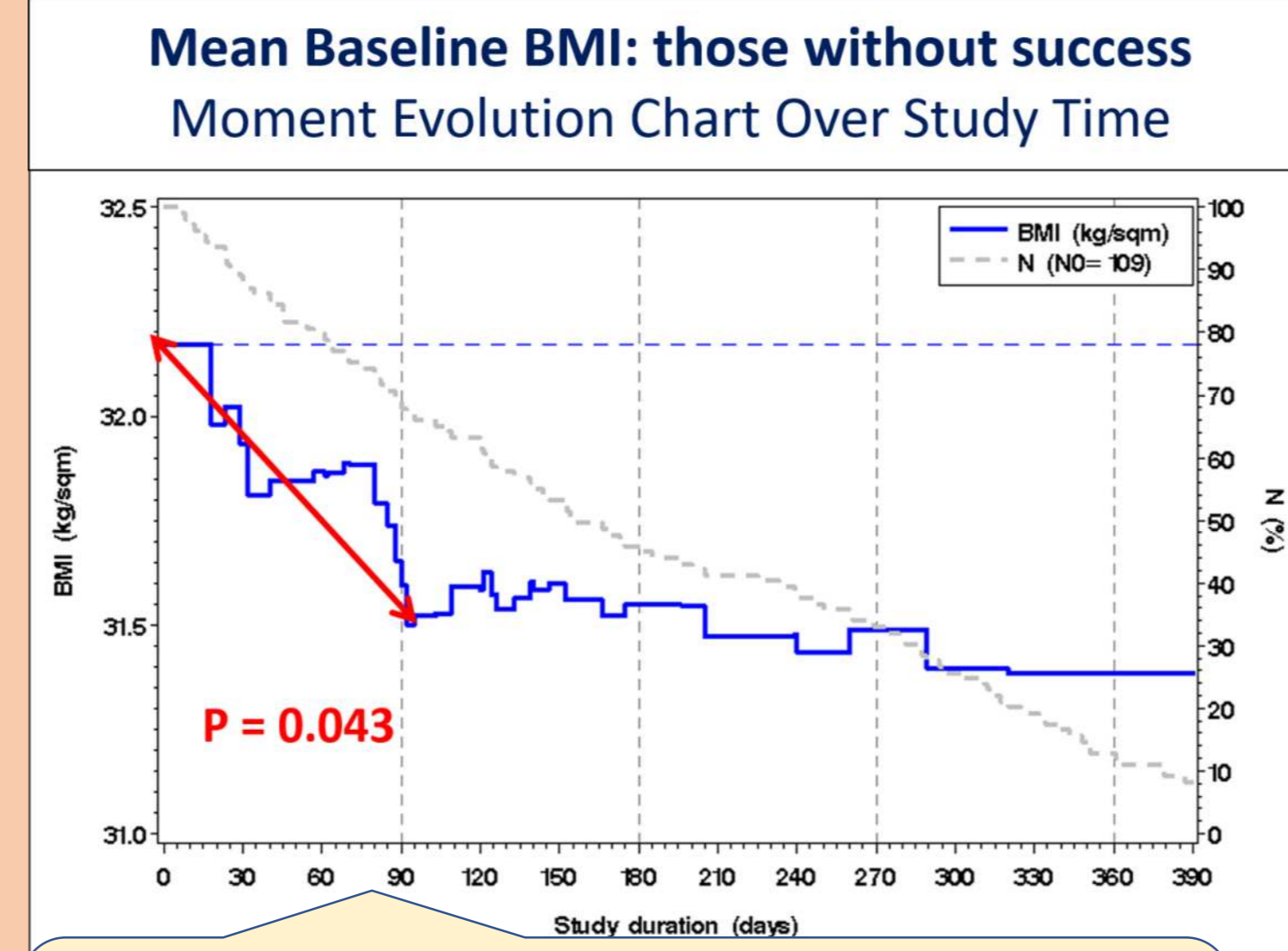
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<sup>4</sup> Roche Diabetes Care Deutschland GmbH, Mannheim, Germany

## Drill Deeper: Subgroup Analyses for n=109 PHM Patients



**Questions:**

- Are there identifiable subgroups who interact differently with the program conduct, by time pattern and/or characteristics at start?
- By understanding these effects, can we further improve the Accu Chek View responder rate?



**Basic idea behind Evolution Charts:**  
For a time point t take the mean of a baseline-property of those patients who didn't succeed in weight reduction!  
**Deviations from a constant course indicate association of the baseline property and success**

The significant decline shows that patients with high baseline BMI have early success in weight reduction

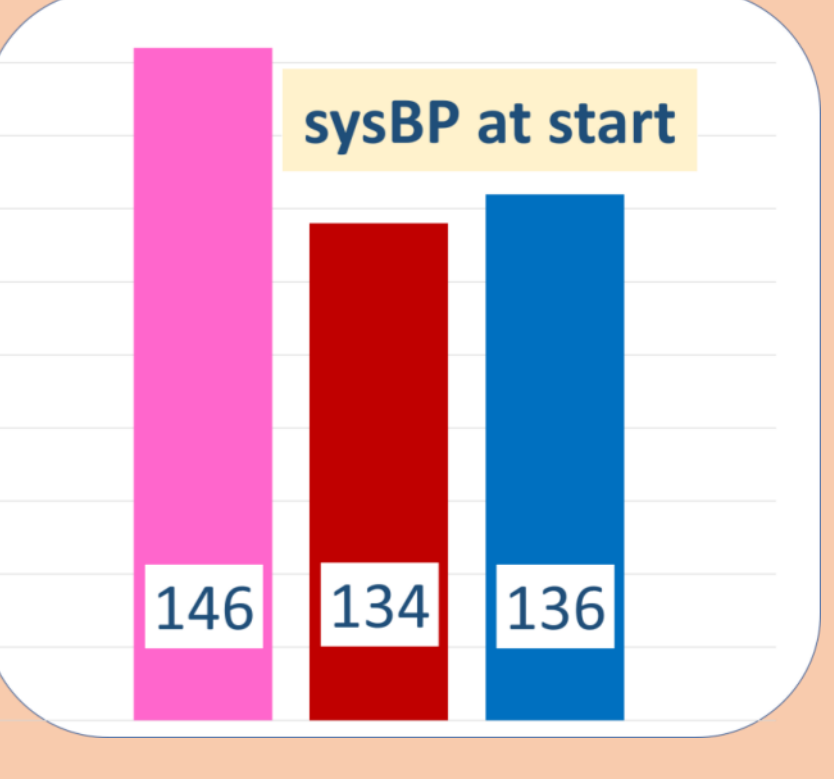
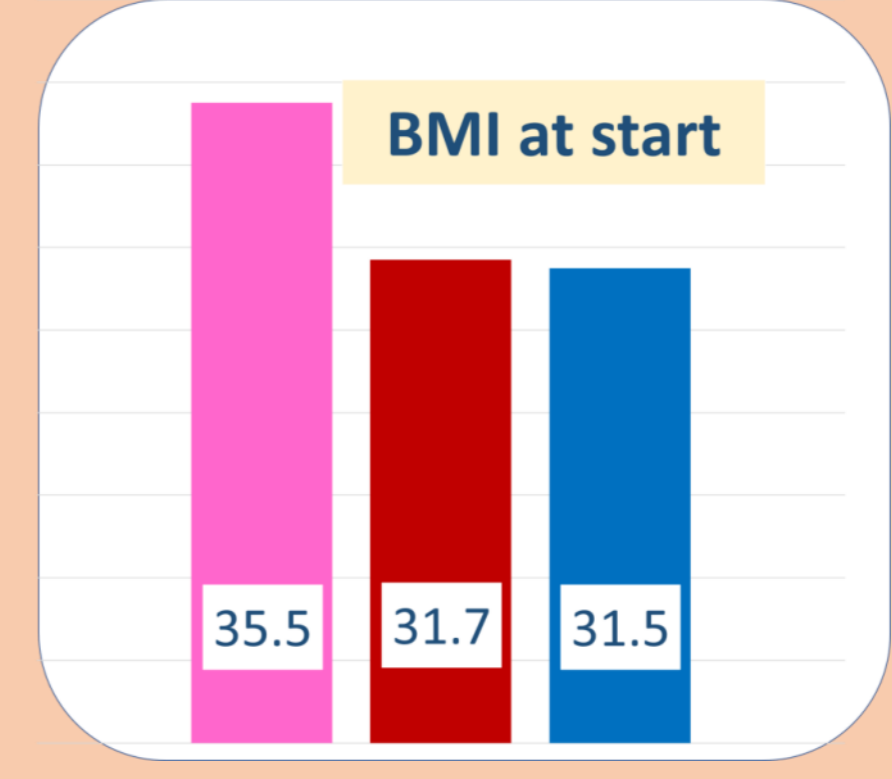
Likewise, patients with early success start with high baseline systolic BP

**Define the group of Early Achievers:**  
5% weight reduction within 90days

**Define the group of Late Achievers:**  
5% weight reduction after 90days

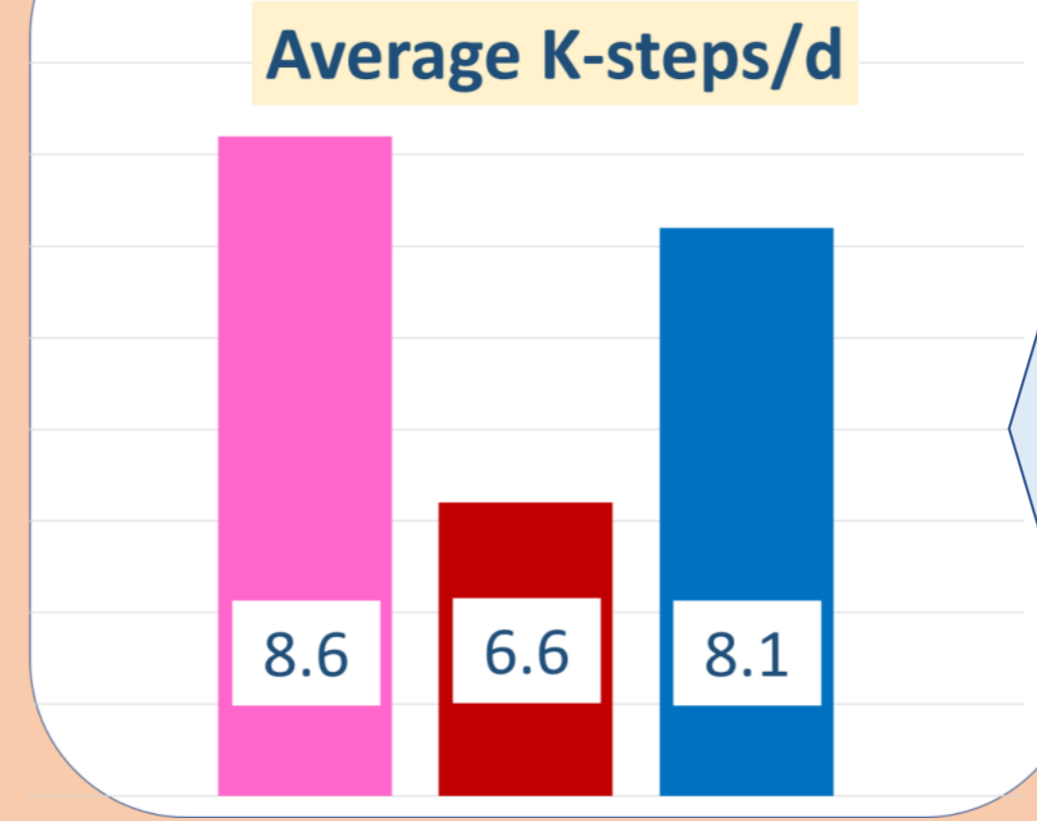
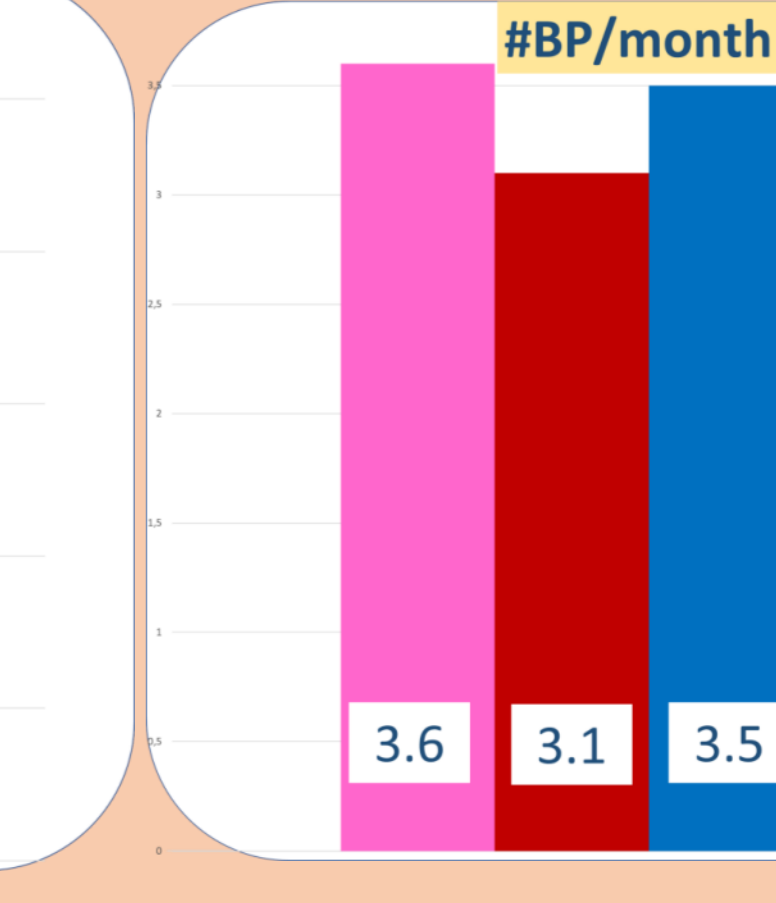
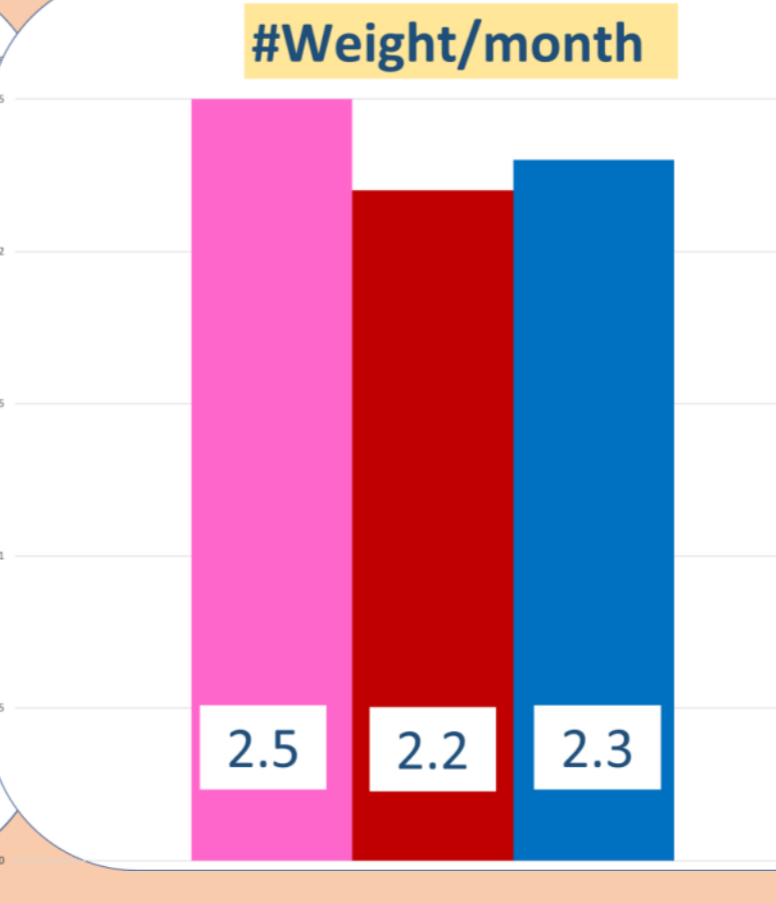
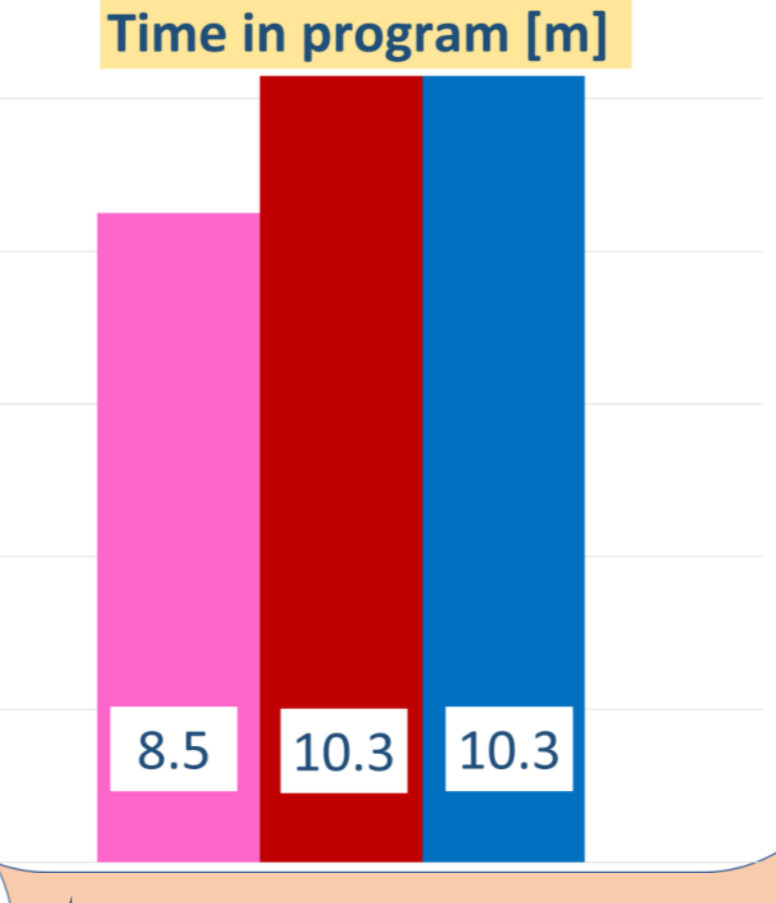
**Define the group of Late Completers:**  
In the program more than 90 days and never achieving 5% weight reduction

The population dynamics suggests to distinguish between Early and Late Achievers



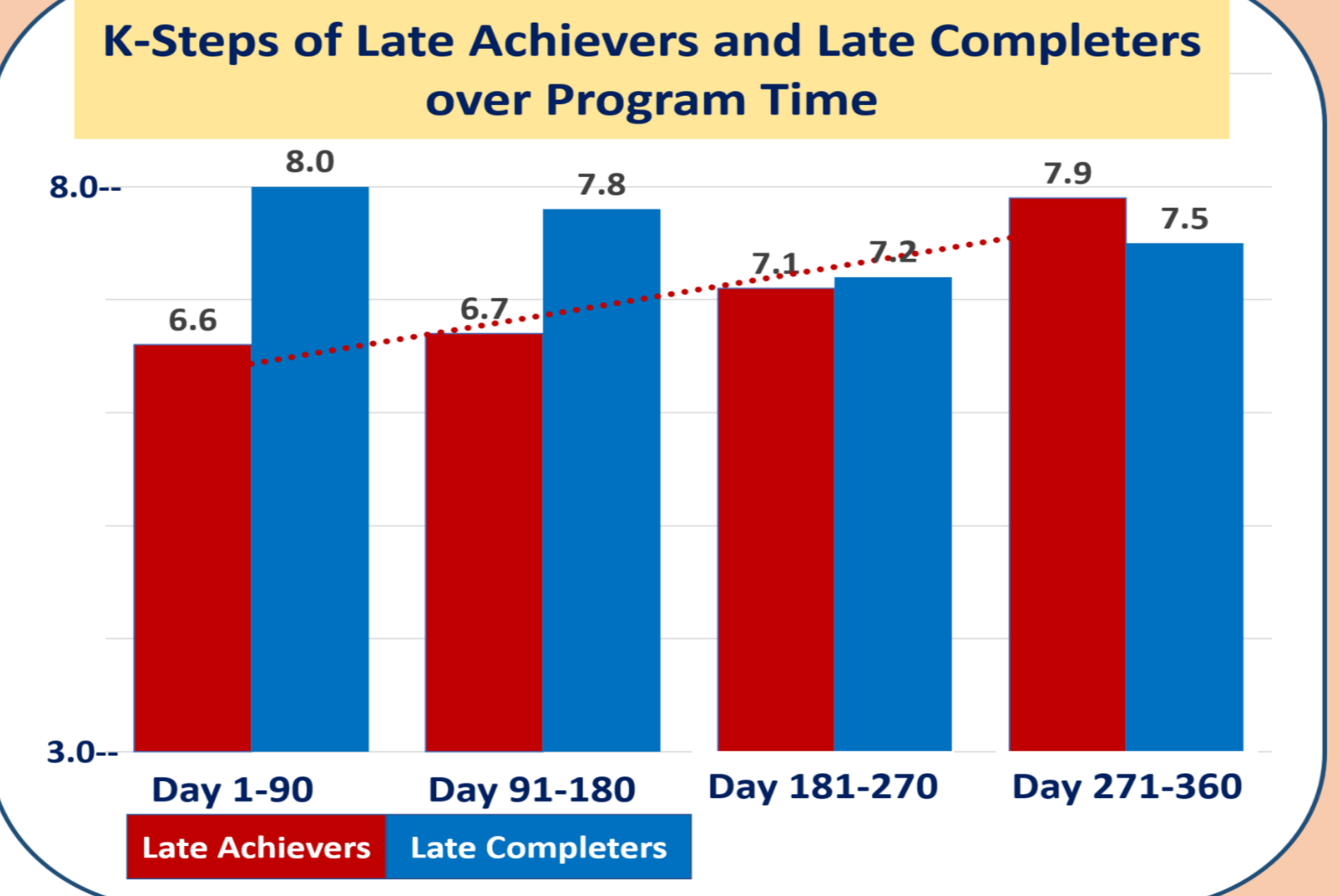
## Program Conduct: Compare 3 Subgroups for compliance

There was similar program compliance across groups



**Surprise!**  
NON-Achievers seem to do more daily steps than Late Achievers

**K-Steps over time: Late Completers start off with an ambitious program. In the course of non-success the efforts decrease. Late Achievers the other way round.**



**Conclusions (ACCU-CHEK® VIEW)**

- PHM fostered within three months successful weight reduction for a group(16%) with severe obesity and high BP from start (Early Achievers)
- A perseverant group (25%) with less problems from start could reduce the weight successfully after 3 months by continuously improving in daily steps
- A perseverant group of non-achievers (59%) started off with high levels of daily steps, but in the longer term tended to reduce activity