



## **Chronic Care Management in Telemedicine: a way to tackle chronic diseases**

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Med-e-Tel 2012**

# Swiss Center for Telemedicine

[www.medgate.ch](http://www.medgate.ch)

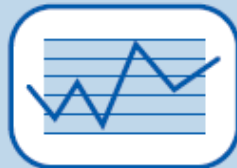
- Modern teleconsultation center in Basel
- The largest telemedical center in Europe run by medical professionals
  - Overall, up to 4'300 patient encounters per day
  - More than 2.5 million patient encounters since the start in October 2000
  - Telephone, Internet, video-conferencing and telemonitoring
- The medical setting is primary health care, similar to that of a general physician

# Medgate Chronic Care Management

- Medgate specializes in the provision of telemedical care to patients with chronic illnesses, such as:
  - **Arterial hypertension**
  - **Congestive heart failure**
  - **Diabetes mellitus type 2**
  - **Obesity and overweight**
- Patients benefit from:
  - structured **educational programs** that are specific to their illness while also addressing overlapping illnesses
  - **optimization of treatment**
  - **individual coaching**
  - ongoing **telemedical monitoring of the bodily functions** relevant to the course of the illness through the MEDGATE Telelabor if indexed

# Chronic Care Management (CCM) Concept

## Modular Structure of Intervention



Tele-  
biometrie



Alarm



Basis-  
untersuchung



Schulung



Coaching

Telemonitoring

Consultation

Education + Coaching

# Presentation of Measured Values

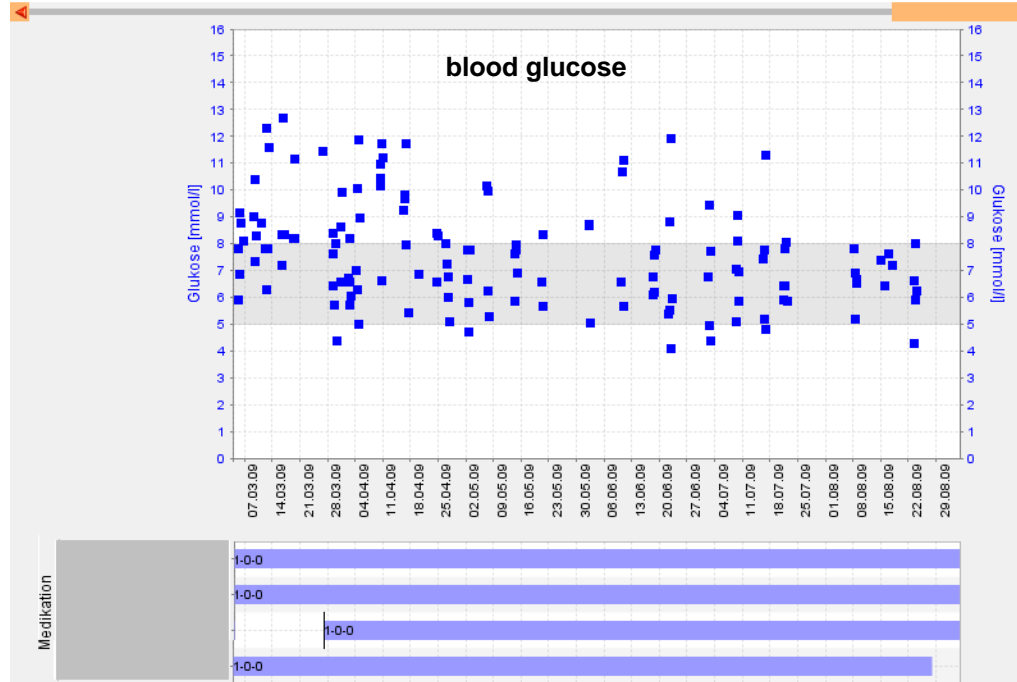
## Blood glucose level at diabetes mellitus type 2

Patientenliste • Alarmverwaltung • << >>

Übersicht | Stammdaten | Dokumente | Gewicht | Blutdruck | **Blutzucker** | Lunge | Pulsoximetrie | Blutgerinnung | EKG | Nachrichten

Darstellung Grafik ▾

Patient



**Grafik Darstellung**

Zeitraum

Beginn

Ende

**HbA1c**

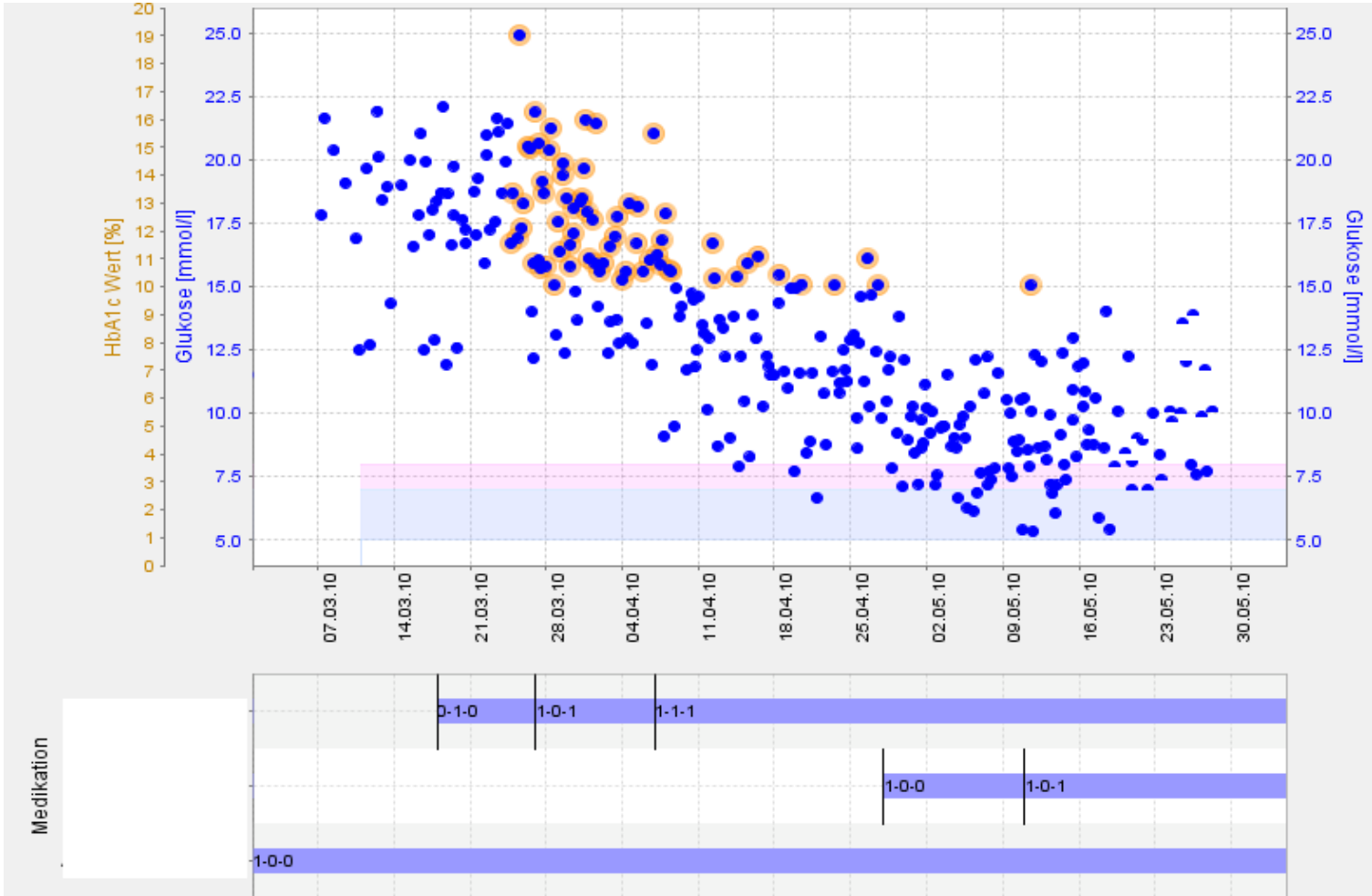
Messzeitpunkt	HbA1c Wert [%]
25.06.09 00:00	6.6
26.03.09 15:57	8.2

# Medgate Telelabor<sup>®</sup> and Education

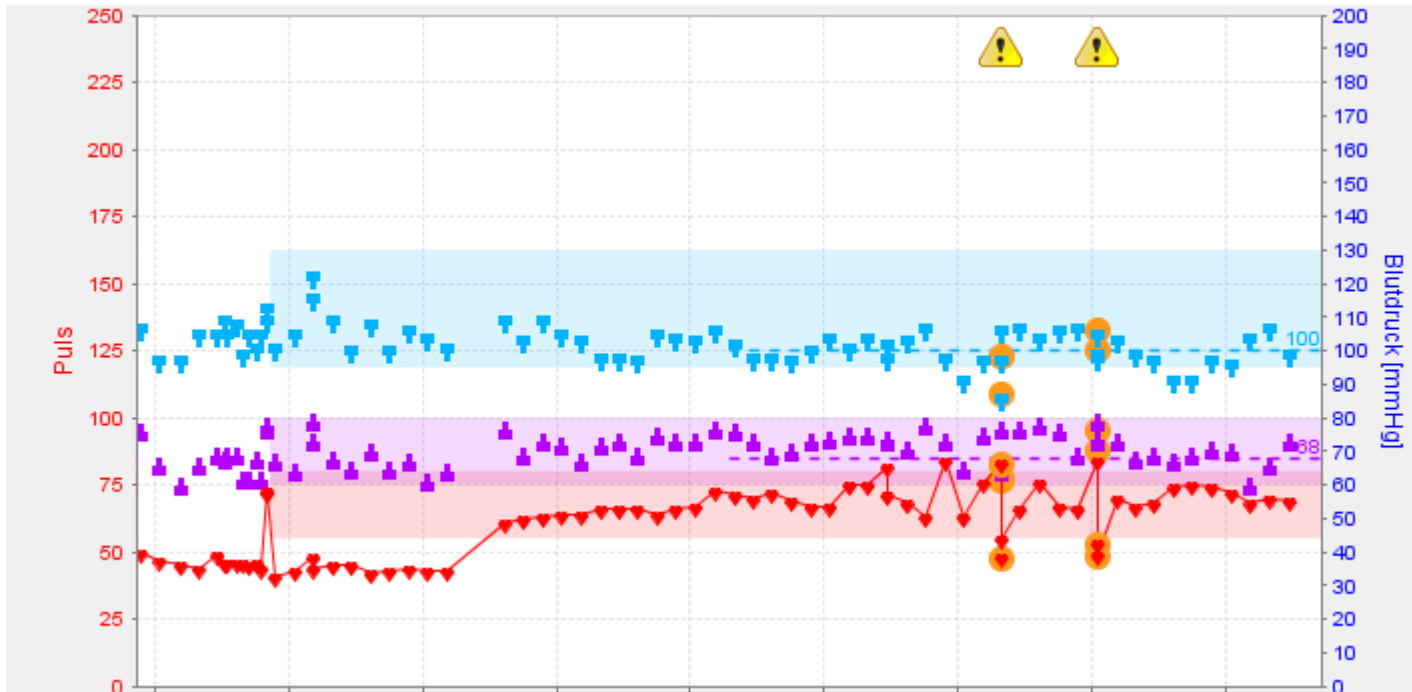
- selective education regarding to measurements
  - i.e. weight gain, hypoglycemia
  
- grafical illustration supports motivation
  
- Better compliance and adherence

# Change of Medication with Telebiometry

## Diabetes mellitus type 2: glucose monitoring



# Detection of Brady- and Tachycardia

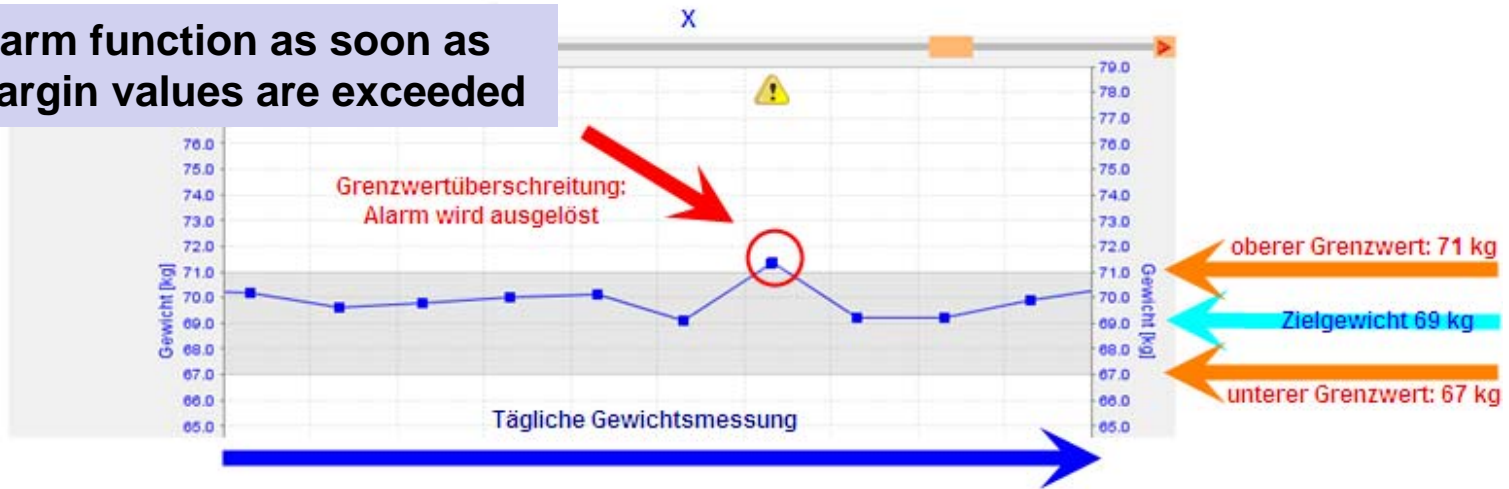




# Alarm Management – Timely Response

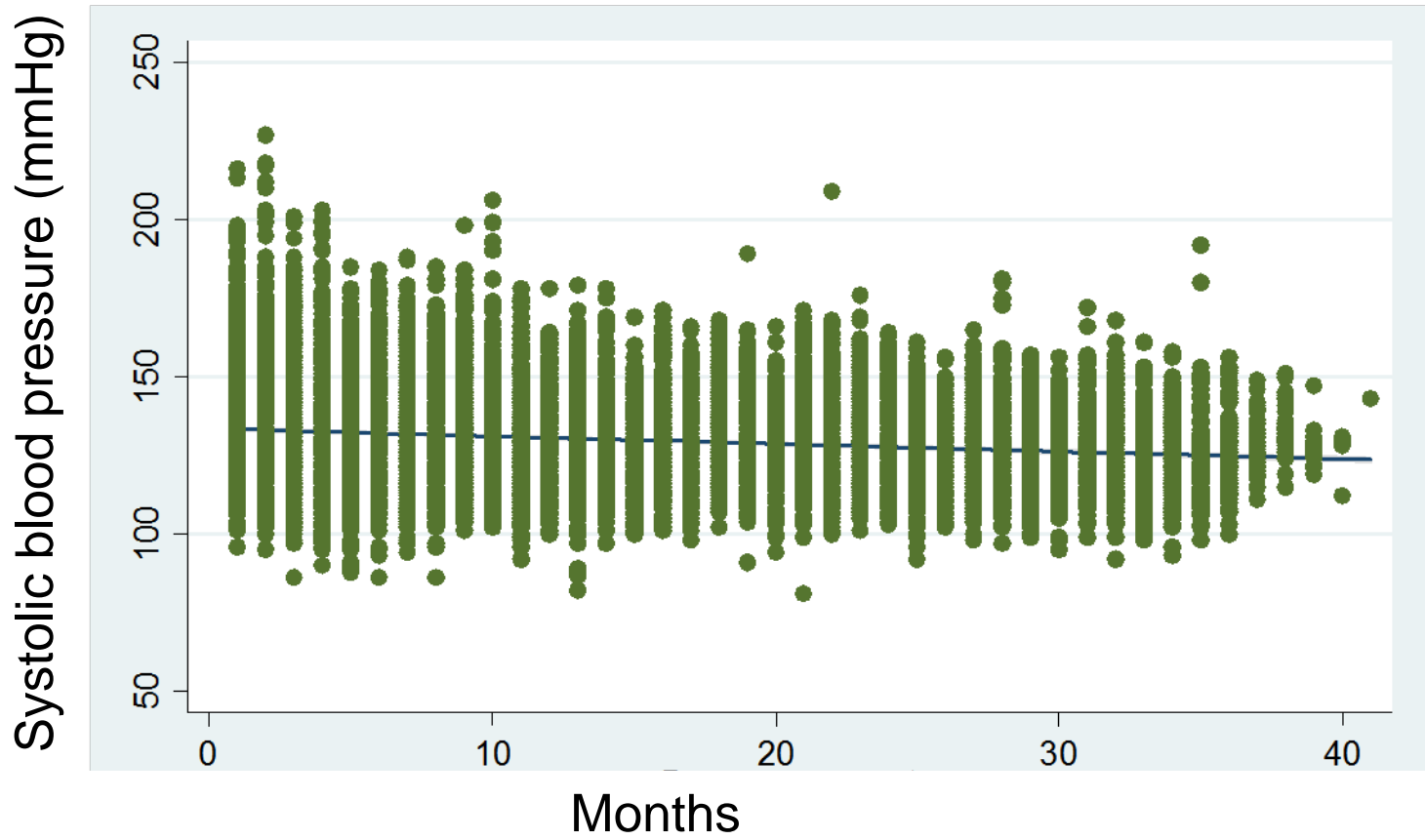
## Heart failure

Alarm function as soon as margin values are exceeded

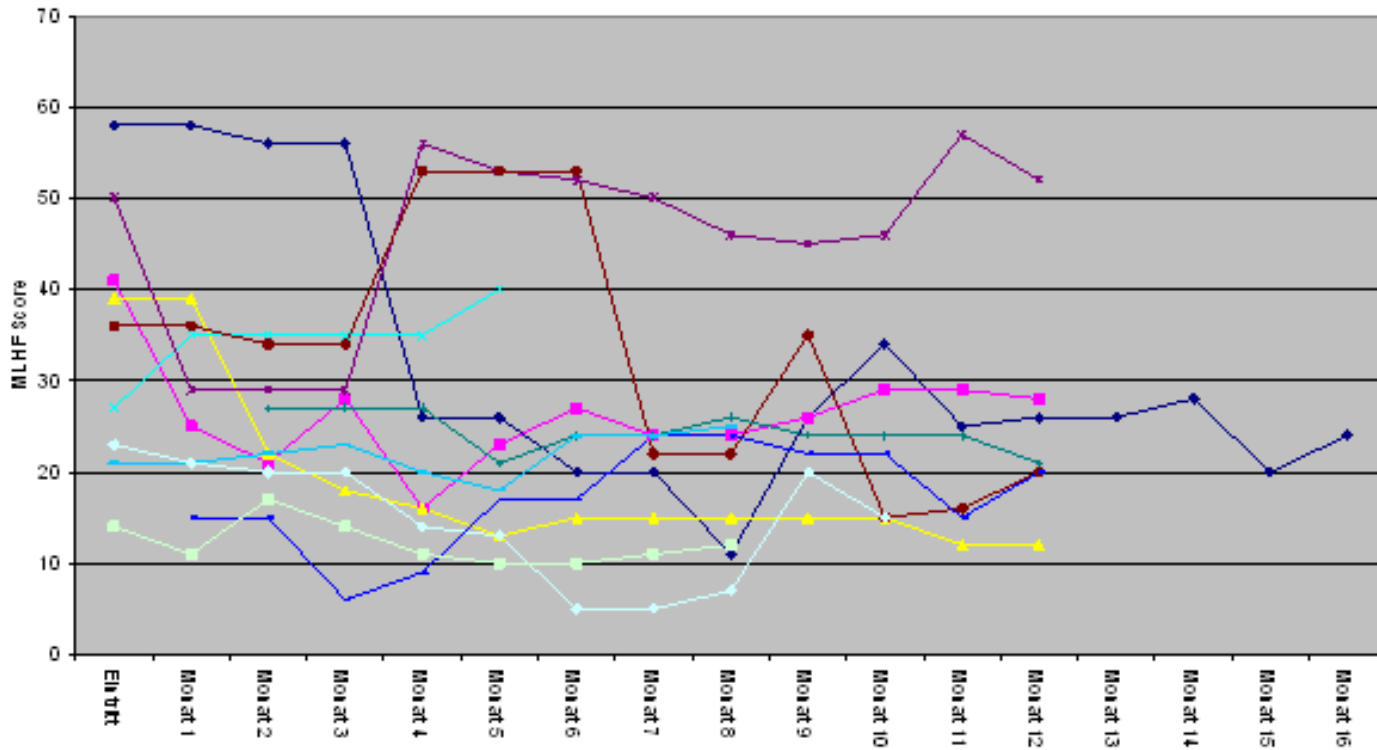


- Weight gain
- Alarm
- Prompt adjustment of diuretic medication

# Blood Pressure Values



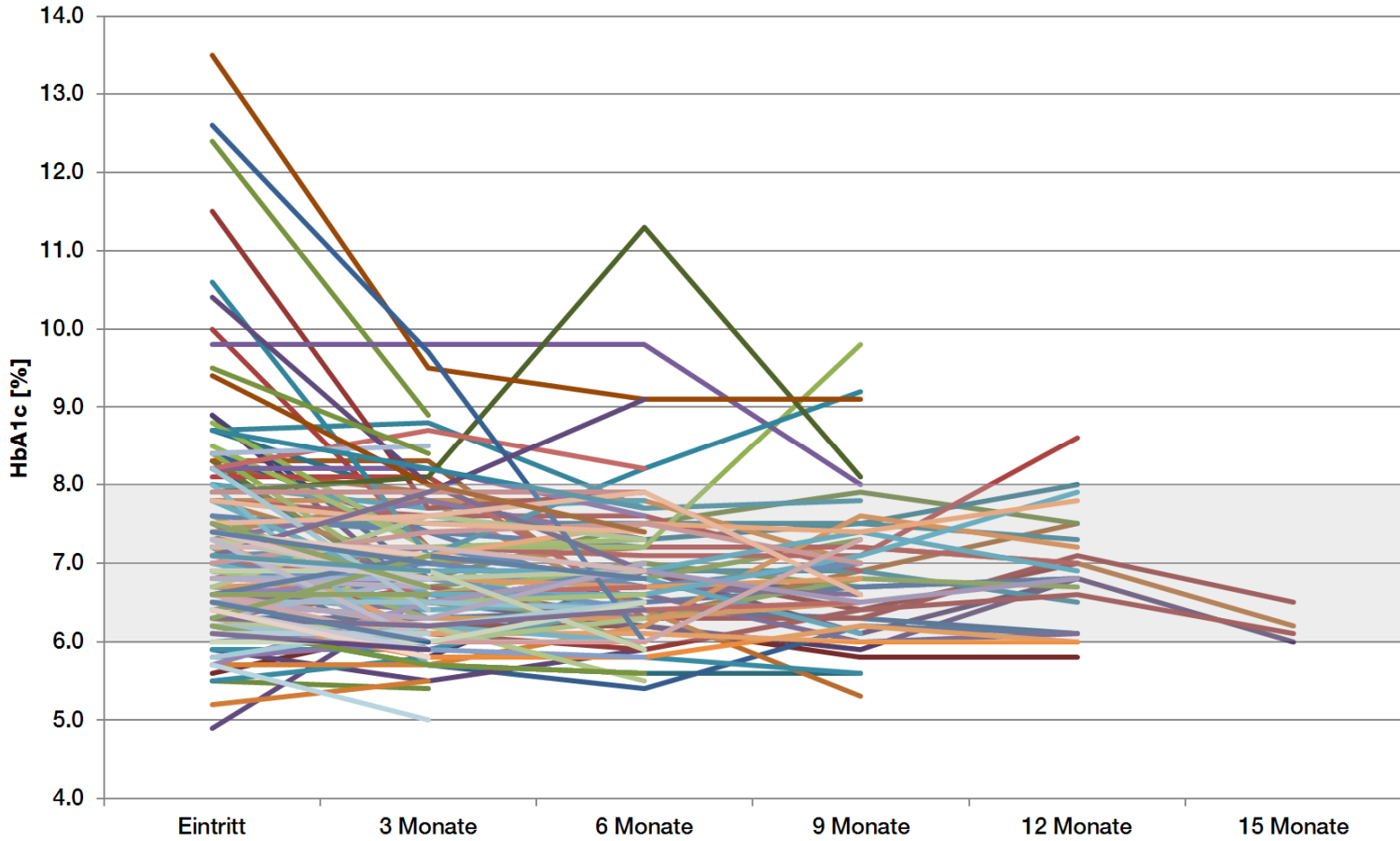
# Minnesota living with heart failure score (MLHF)



- The deeper the score, the less affected of the disease
- The variability of the score reflects the course of the disease

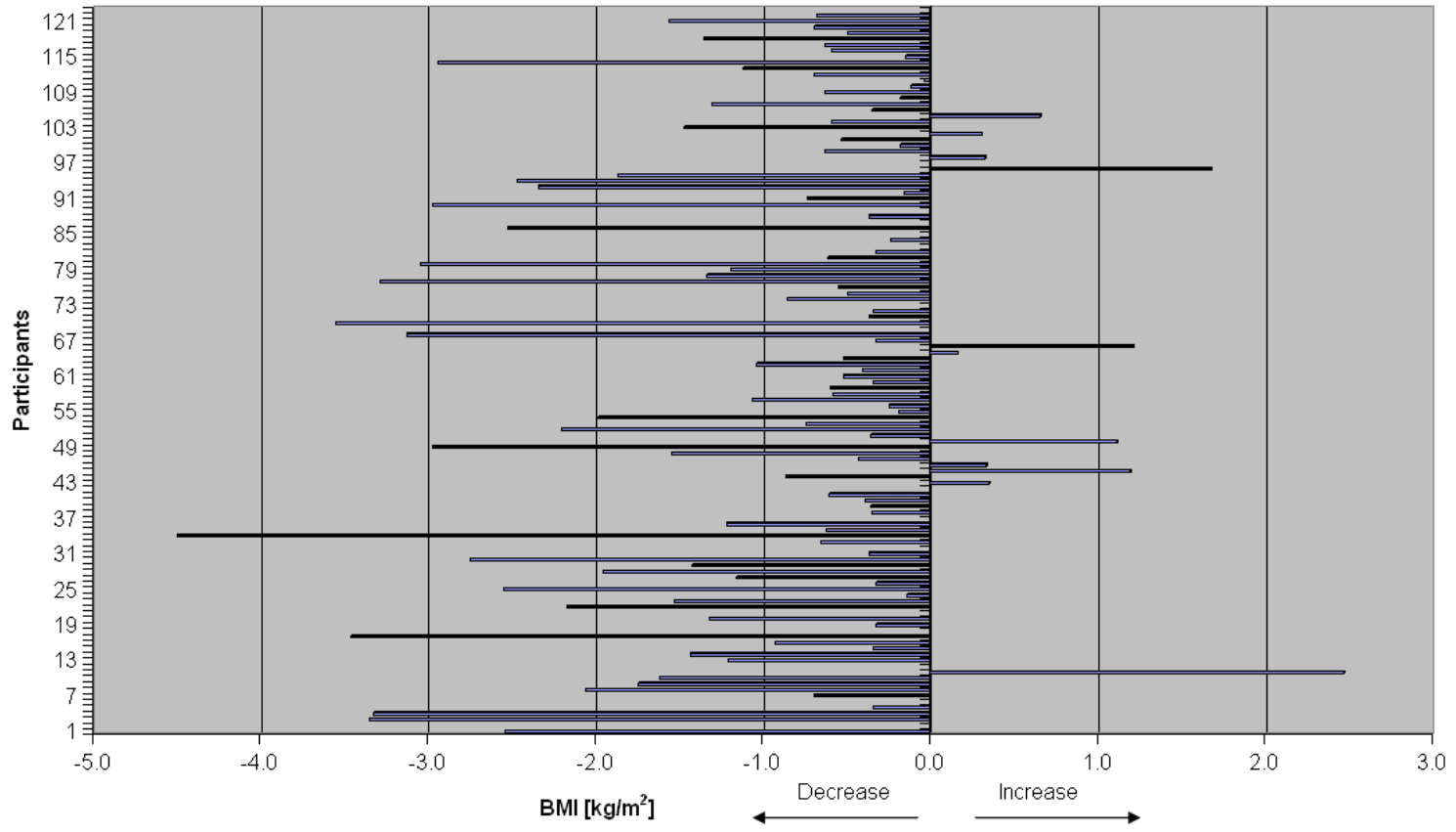
# Diabetes mellitus Type 2

## Glycosylated hemoglobin: HbA1c



# Diabetes mellitus Type 2:

## Developing of the Body Mass Index from start to completion of the program





**Thank you for your attention**