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## Personal Health Systems: Deployment opportunities and ICT research challenge

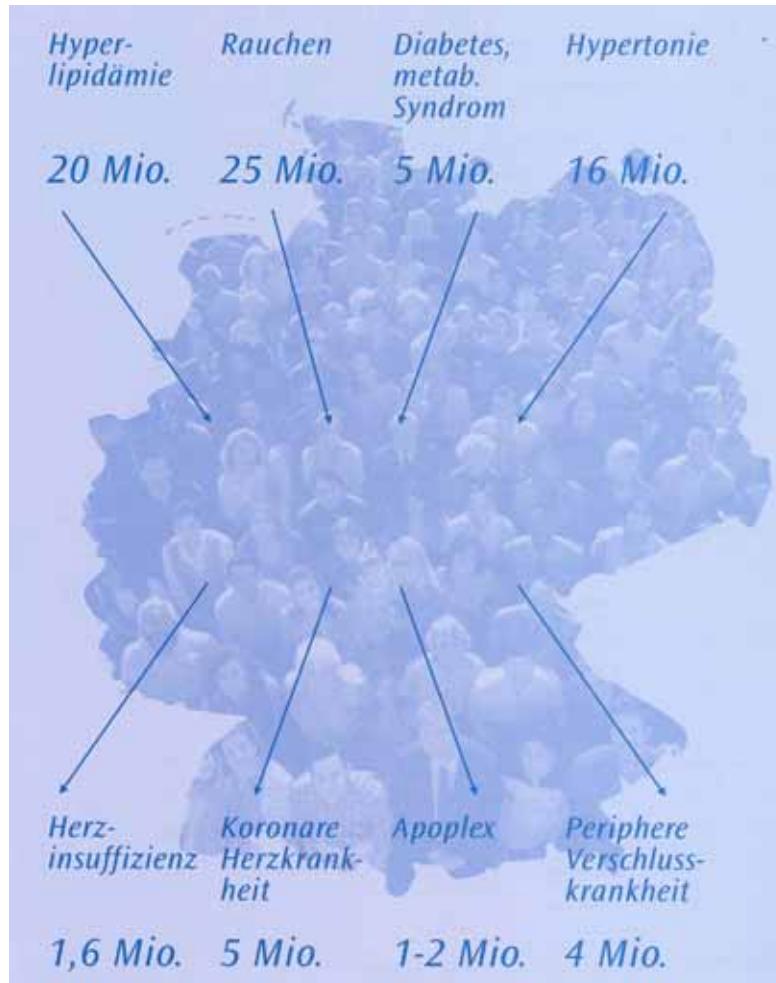
12 – 13 february 2007, Brussels

„How Personal Health Systems have changed the way patients with cardiovascular diseases are handled“

Prof. Dr. med. Harald Korb, PHTS Telemedizin, Düsseldorf

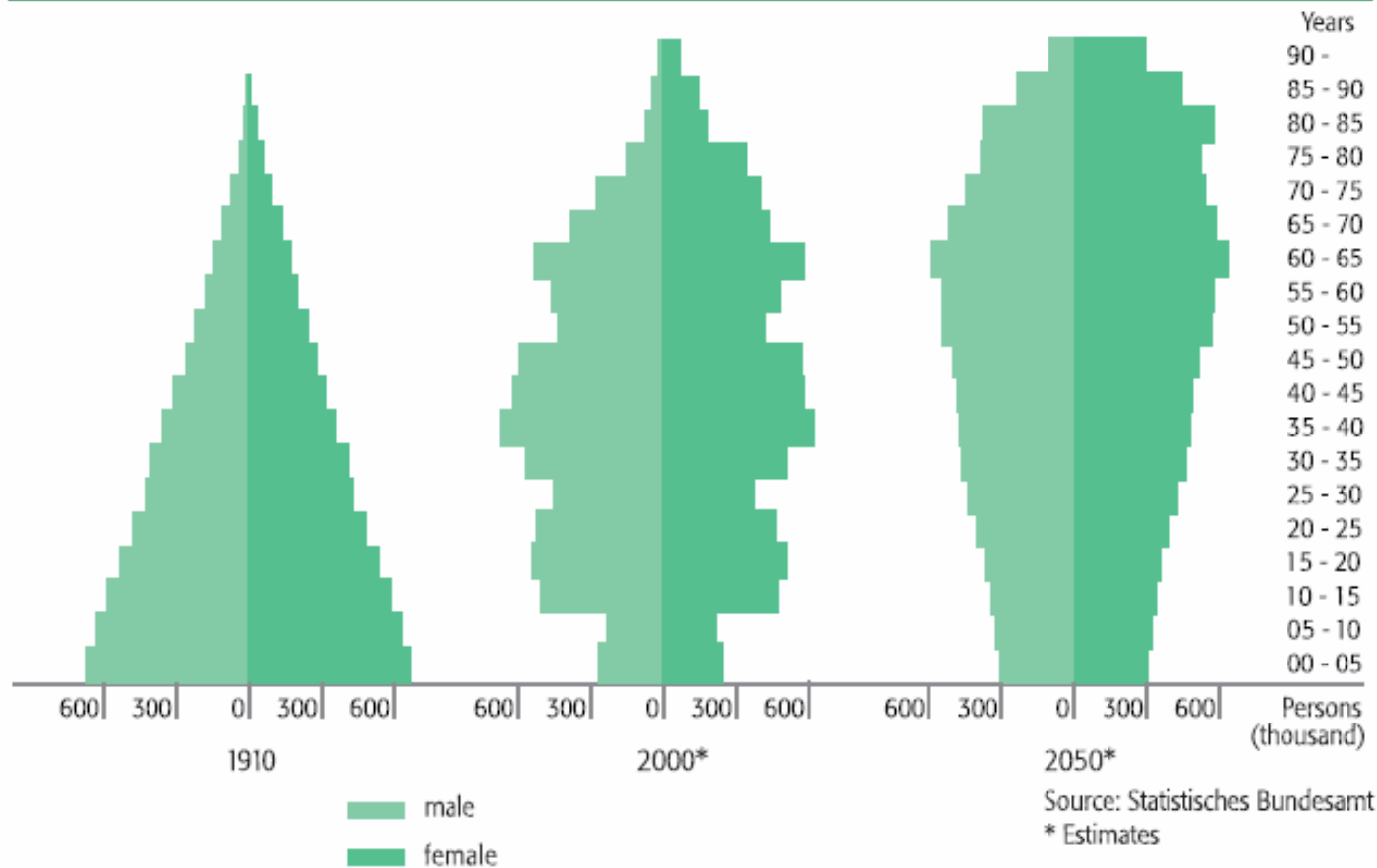
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# Acute and chronic heart disease Risk potential in Germany



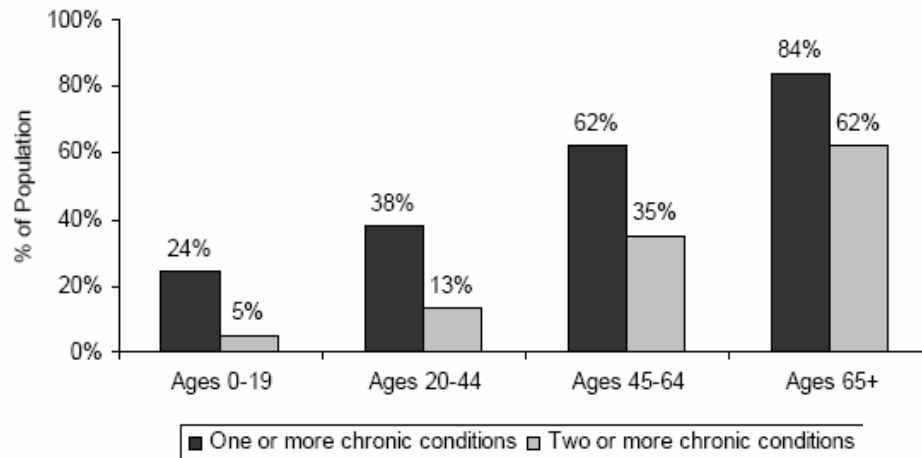
# Aging Population

Demographic development in Germany



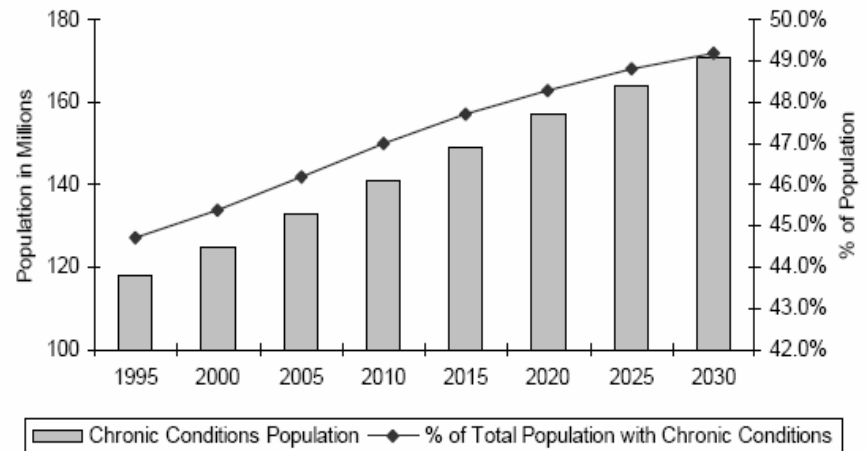
# Aging Population = More Chronic Conditions

**Age and Chronic Condition Prevalence**



Source: Wu, Shin-Yi and Green, Anthony, *Projection of Chronic Illness Prevalence and Cost I*. RAND Corporation, October 2000.

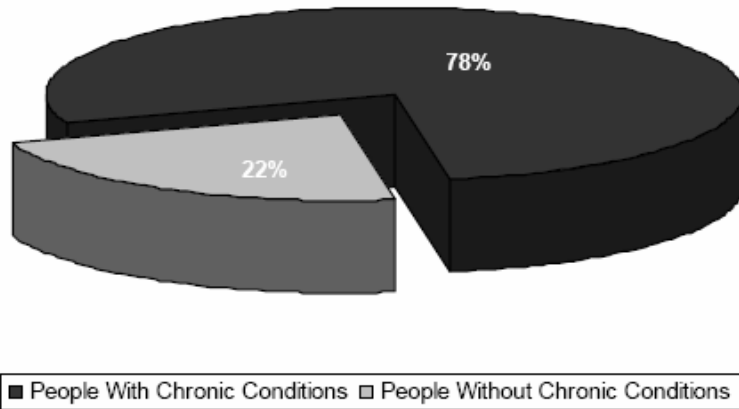
**Chronic Conditions Population Growth**



Source: Wu, Shin-Yi, and Green, Anthony. *Projection of Chronic Illness Prevalence and Cost Inflation*. RAND Corporation, October 2000.

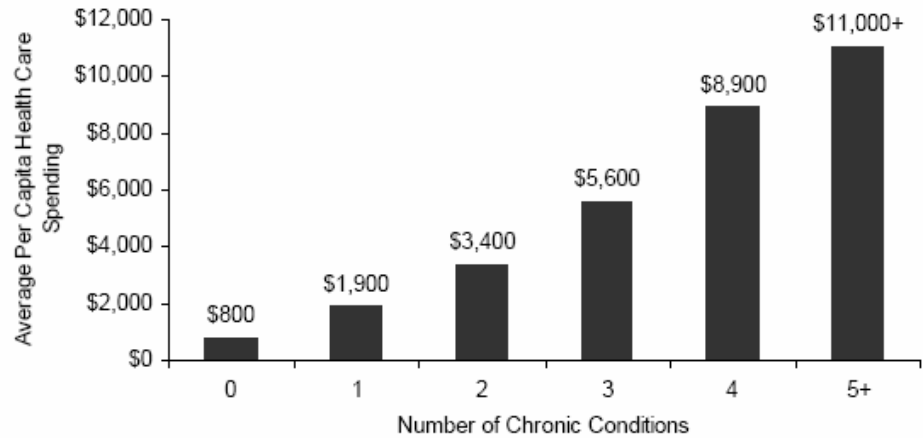
# More Chronic Conditions = Increased Cost Burden

Effect of Chronic Conditions on Health Care Spending

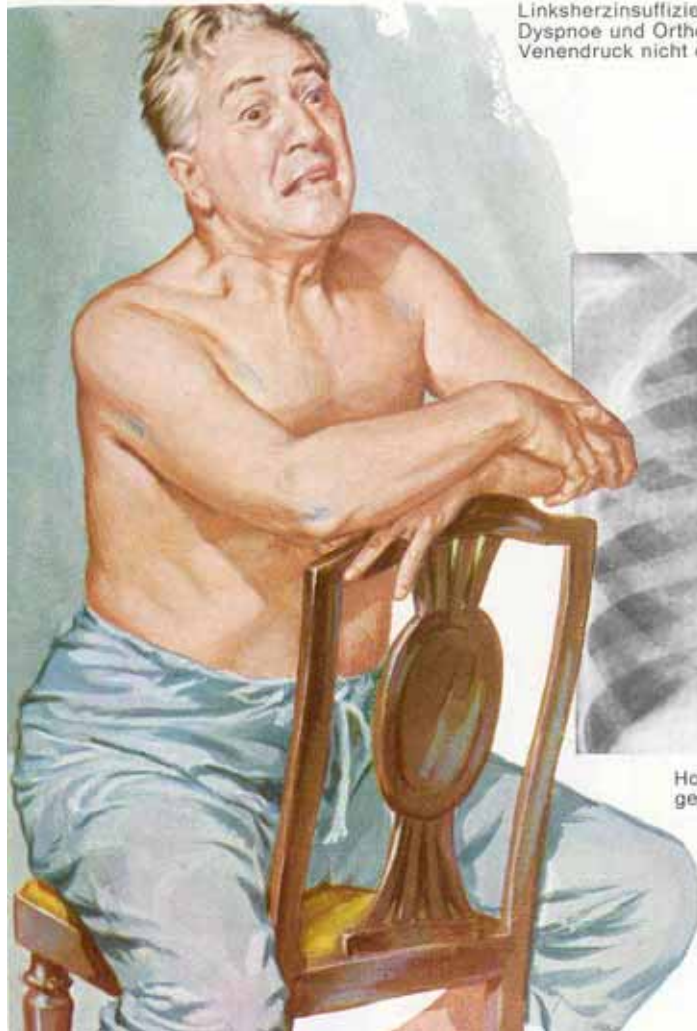


Source: Medical Expenditure Panel Survey, 1998

Health Care Spending by Co-Morbidity Level

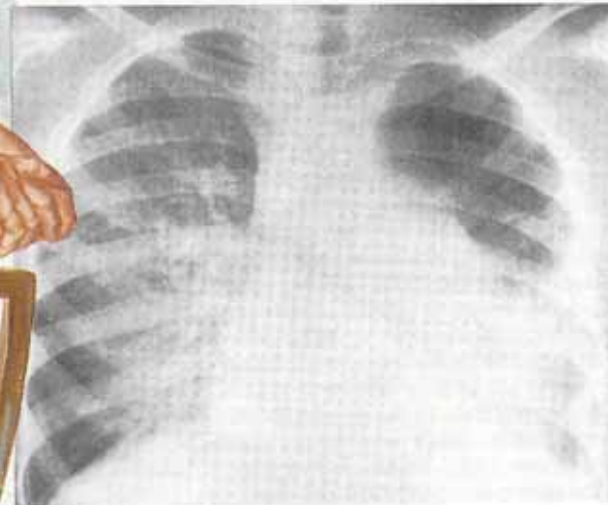


Source: Medical Expenditure Panel Survey, 1998.



Linksherzinsuffizienz:  
Dyspnoe und Orthopnoe;  
Venendruck nicht erhöht

*H. Vetter*  
M.D.  
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Hochgradige, akute Stauung der Lungen-  
gefäße infolge Linksherzversagen

**PHTS**  
TELEMEDIZIN

**MEHR ALS  
EINE LÖSUNG**



# The problem „Chronic Heart Failure“

## Synopsis

Profound reduction of quality of life

Extreme reduced long-term prognosis

Extreme load on the health budget

- estimated 2 to 3% of the total budget = 5 - 10 Bill. €/ year

Extreme work load for physicians in clinic and practice

- No. 2 reason for consultation
- 5% of all hospital admissions
- No. 1 reason for hospital admissions of patients > 65 years
- up to 50% readmission in the first 6 months after dismissal

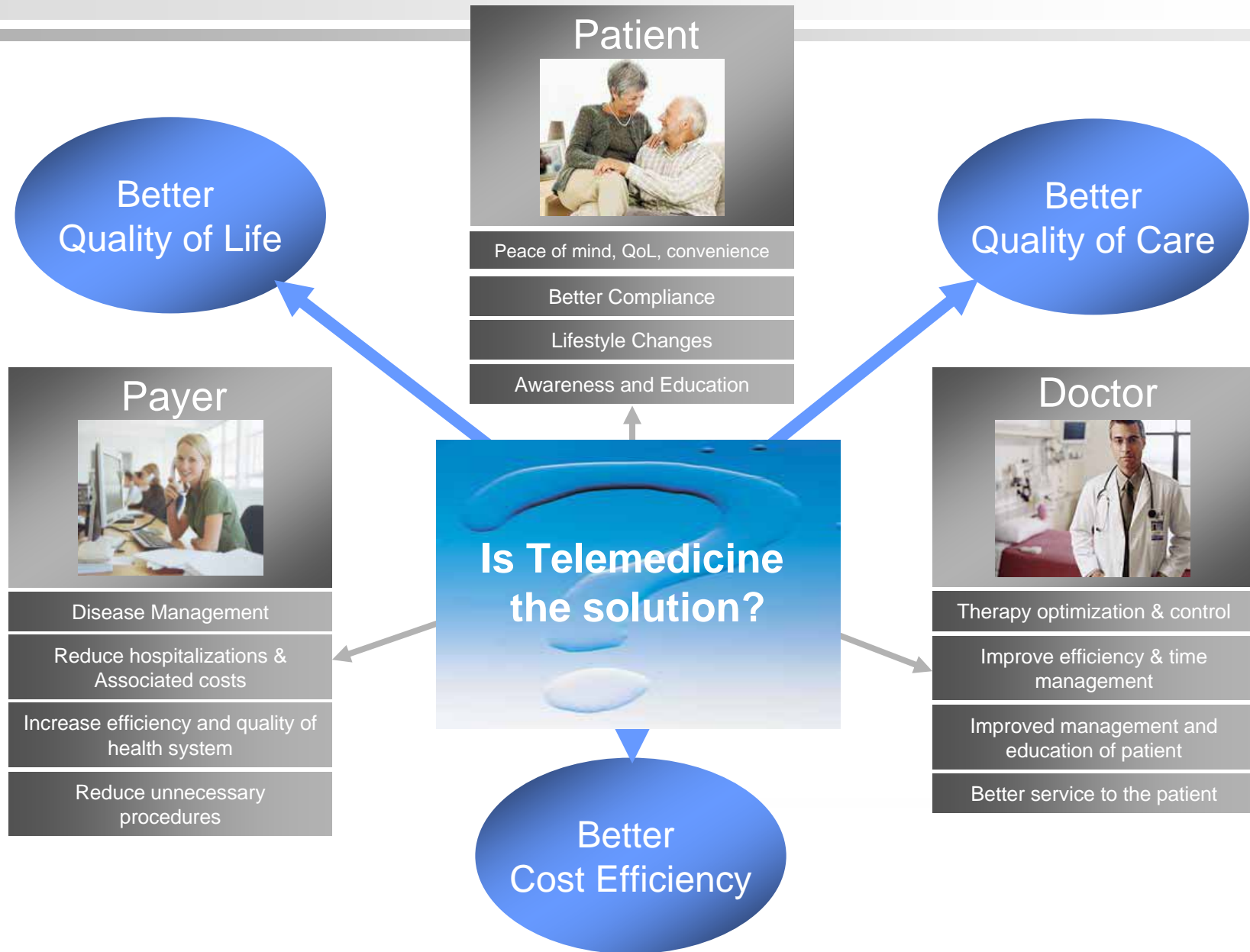
Commonness (tendency increasing)

- 2,5% of total population
- up to 15% of people > 65 years

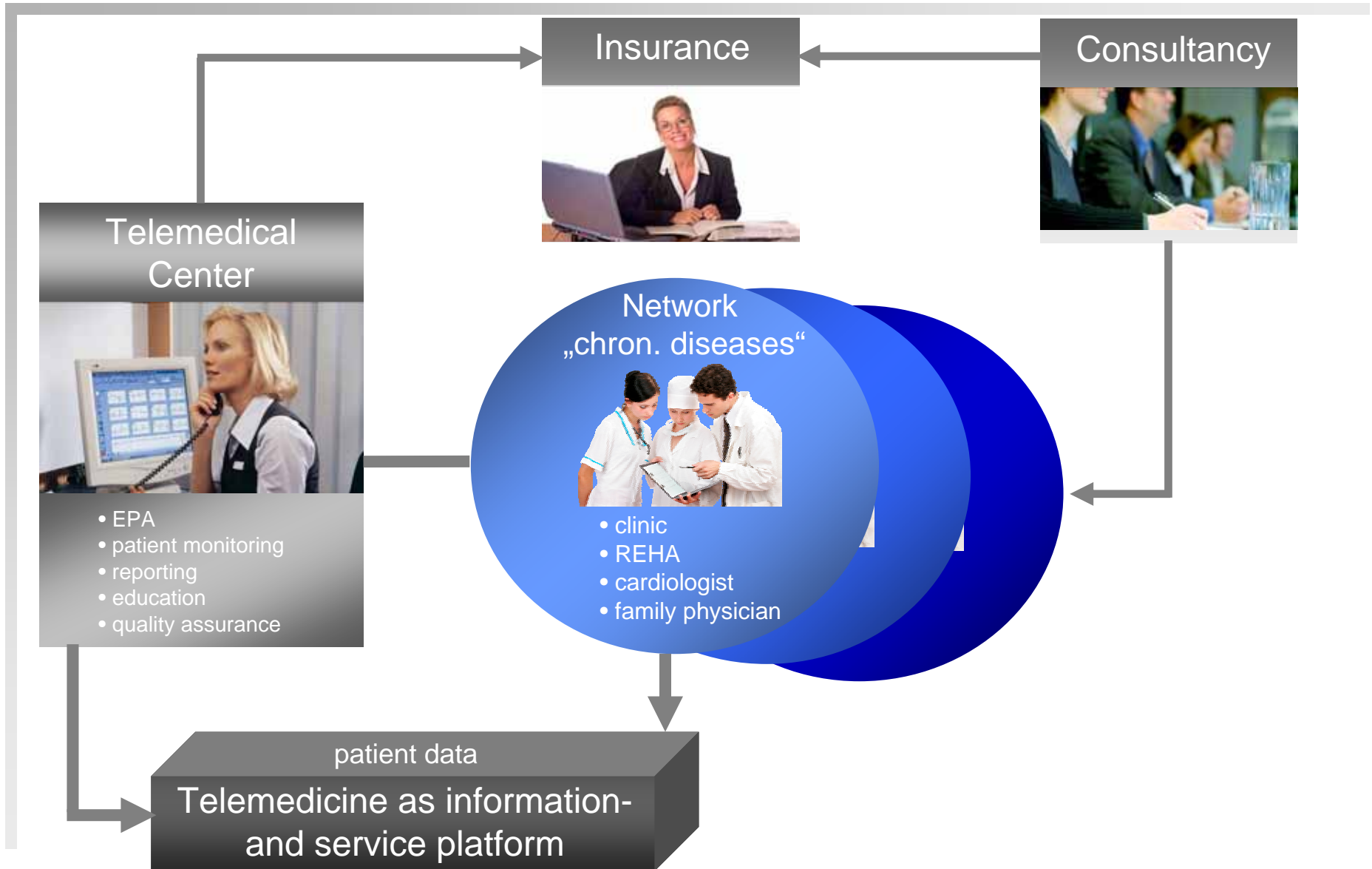
Inadequate therapeutical management with insufficient medical and non-medical therapy



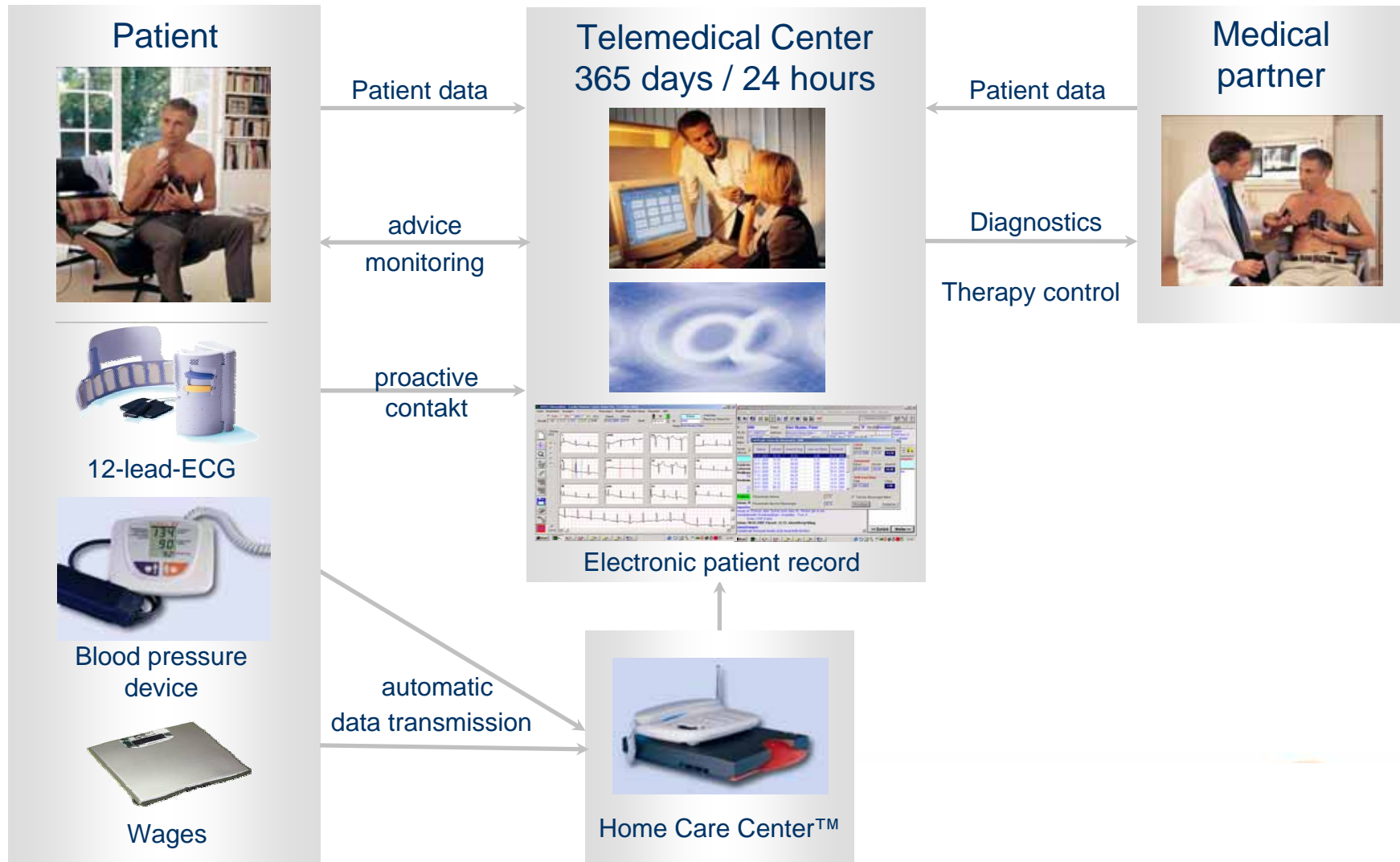
# Value Proposition



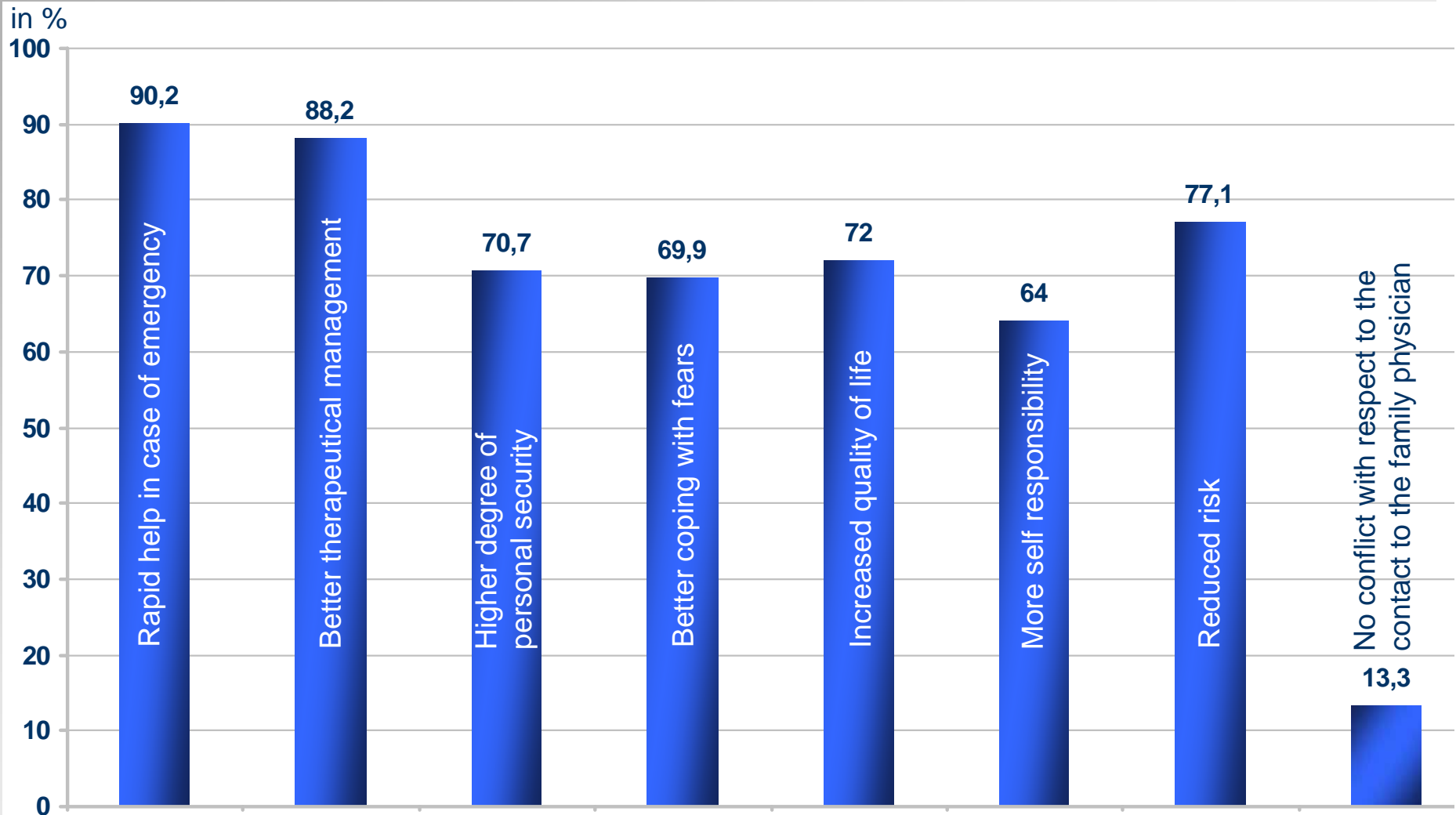
# Integrated care model (according to Prof. Dr. med. H. Korb)



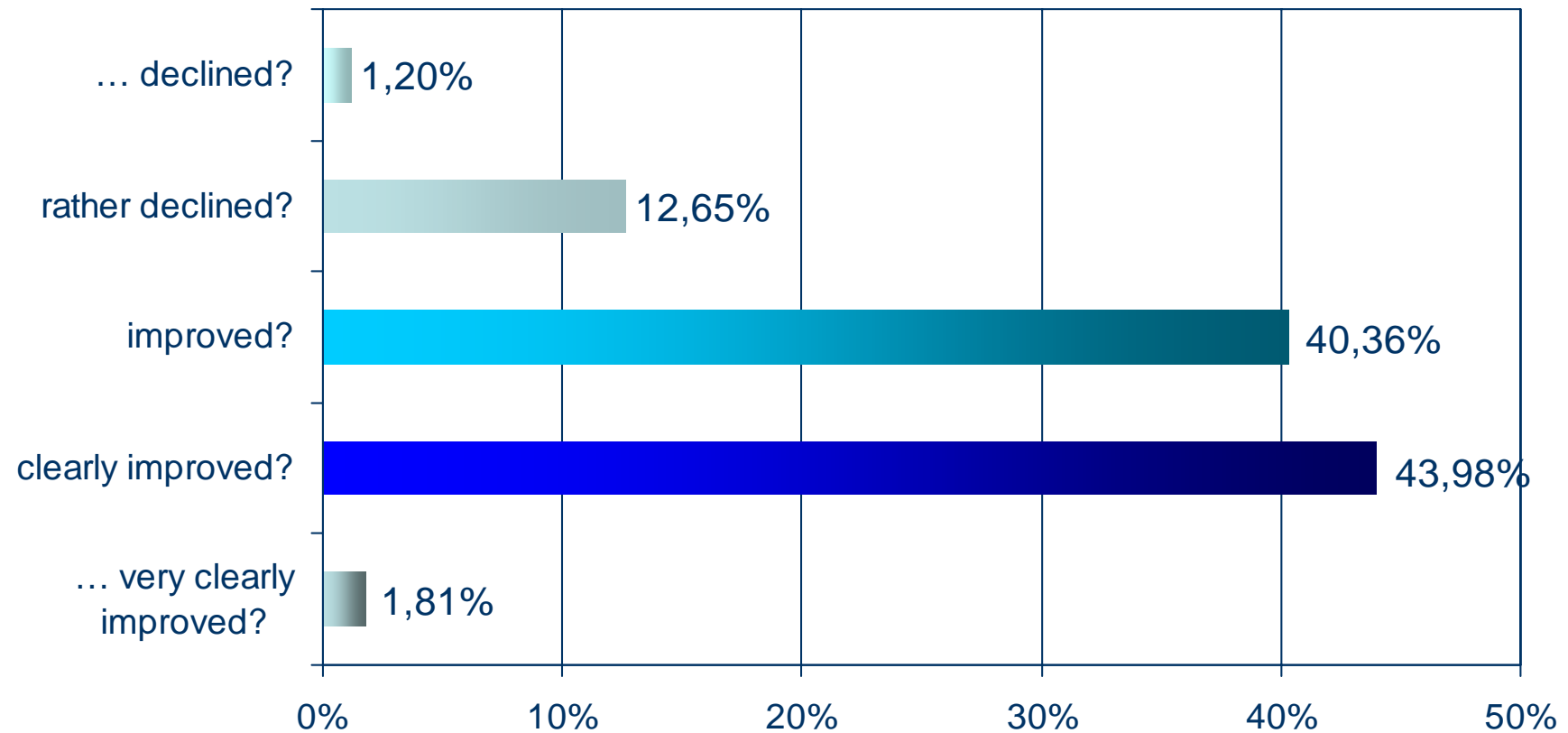
# Telemedical architecture



# Is the telemedical service accepted by the patients?

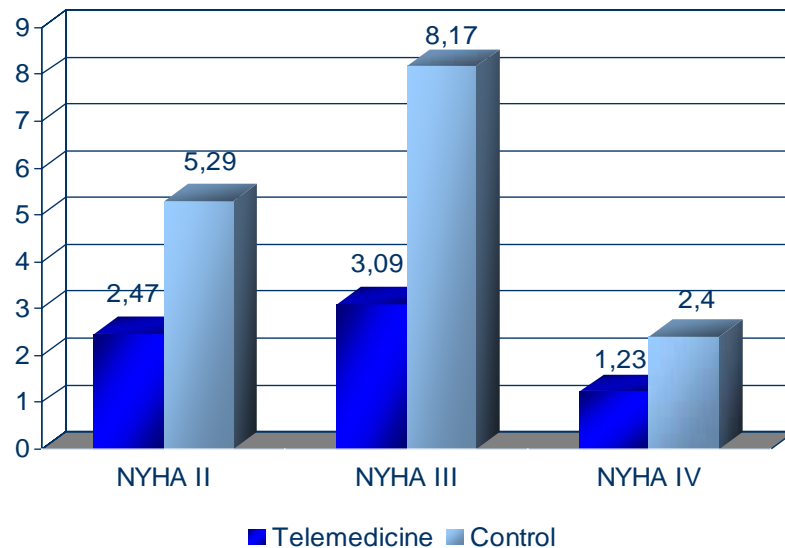


# Is it possible to improve the health status of the patient by the telemedical monitoring program?

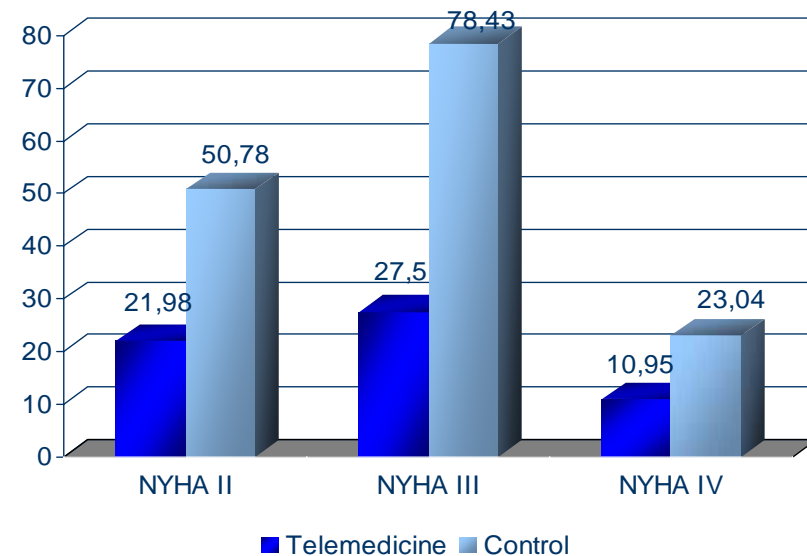


# Is a consequent telemonitoring of CHF patients economically justifiable?

## Reduction of hospital admissions



## Reduction of length of stay in the hospital



A first step...

...in a new era of the health care system!



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