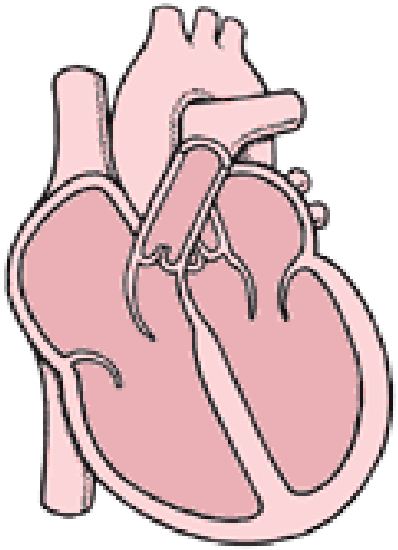
Adherence to health behaviour advice in heart failure



Prof. Nana Pogosova

National Research Center for Preventive Medicine
Moscow, Russian Federation

Heart Failure (HF)

- As the final point for many cardiac diseases HF is a growing problem. In contrast to other CVD, incidence of HF increased over past 20 years because more patients survive after MI and population is getting older. HF affects 10% of the elderly.
- Although there is a considerable progress in management of HF pts, HF is still characterised by high rates of disability, frequent re-hospitalizations and high rate of mortality.

Heart Failure (HF)

- HF is a big burden for both patients, their families, and also for society, as it contributes significantly to the high costs associated with the care of HF patients.
- The greatest contributor to the costs of treatment and care for HF patients is hospitalization, which accounts for almost 70% of total costs

McMurray JJV, et al. Eur Heart J 2002;4(suppl.):D50–D58.
Tsuyuki RT et al. Arch Intern Med 2001;161:2337–2342.

HF: adherence to treatment

- Non-adherence to medications and life-style modification lead to worsening of HF symptoms, hospital re-admissions and poor quality of life.

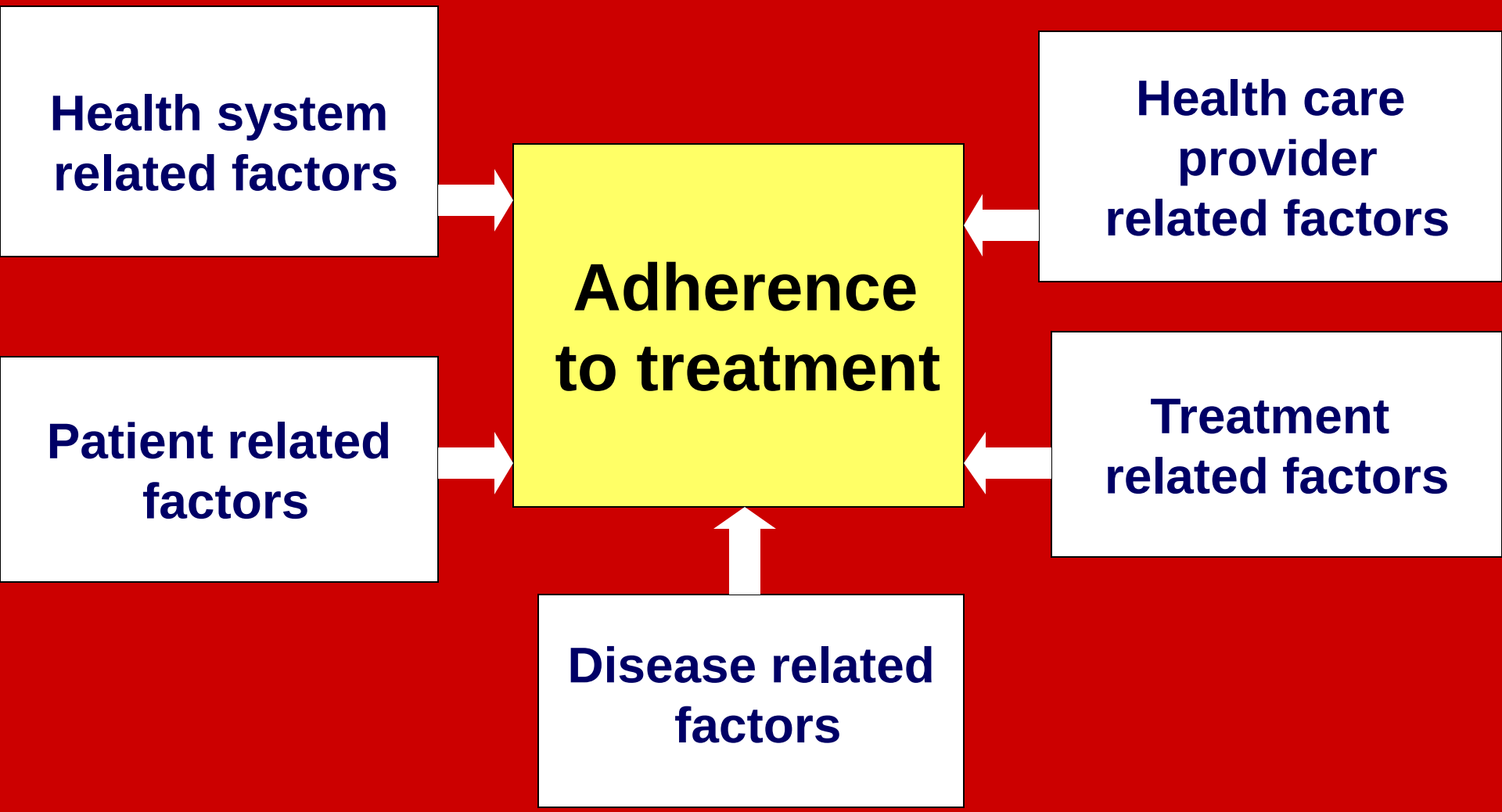
  B.Riegel 2000; S.Bennett 2000; H.Krumholtz 2002; T.Jaarsma 1999; A.Driscoll 2009

Adherence: definition

Adherence

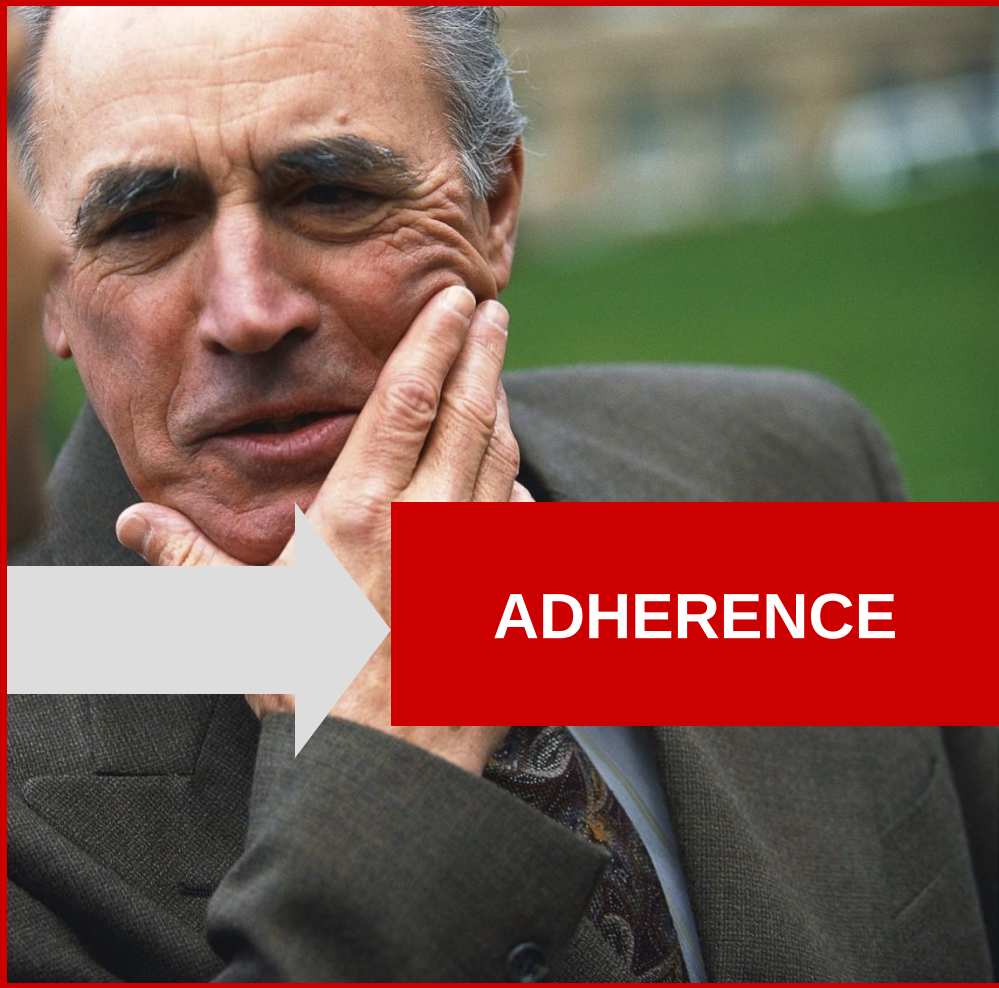
is the extent to which the patients' behavior (in terms of taking medications, following diet, and other life-style changes) corresponds with agreed recommendations from a health care provider

Sabate E. Adherence to Long-term Therapies: Evidence for Action. Geneva: World Health Organisation; 2003


Health system related factors
Health care provider related factors
Adherence to treatment
Patient related factors
Treatment related factors
Disease related factors

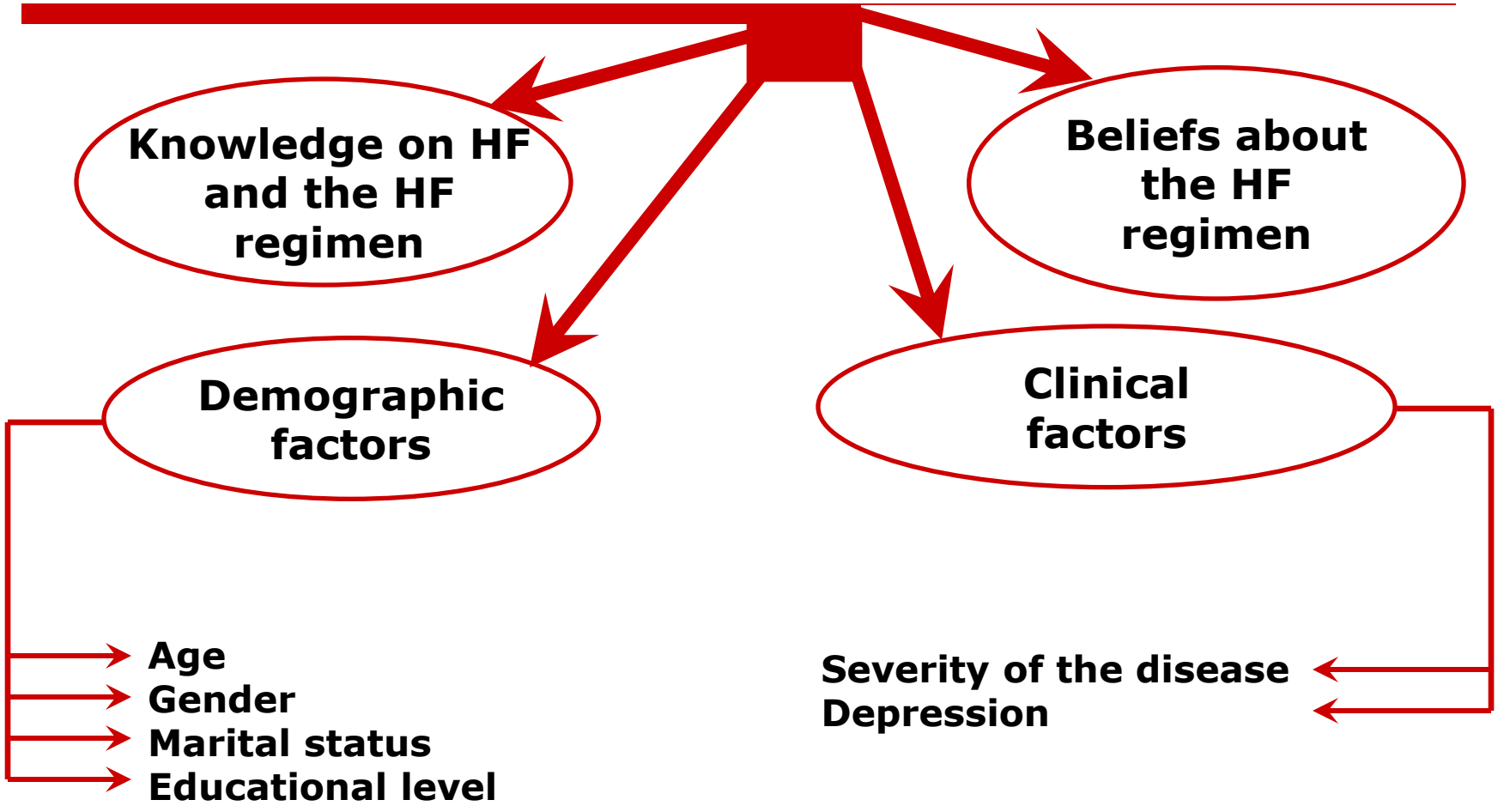
Health Belief Model

Attitude & Believes



Becker MH. The Health Belief Model and Personal Health Behavior. Thorofare, NJ: Charles B Slack Inc; 1974.

Patient-related factors affecting adherence



Patient-related factors: knowledge

- Although knowledge alone does not insure compliance, patients can only comply when they have some minimal level of knowledge about the disease and the health care regimen.

Becker MH. The Health Belief Model and Personal Health Behavior. Thorofare, NJ: Charles B Slack Inc; 1974.

Barriers to lifestyle modifications and adherence to treatment

- Stressful family situation
- Stressful work situation (monotonous, poor rewarded job)
- Living alone
- Low social support
- Anxiety disorder
- Depressive disorder

Patient-related factors: depression

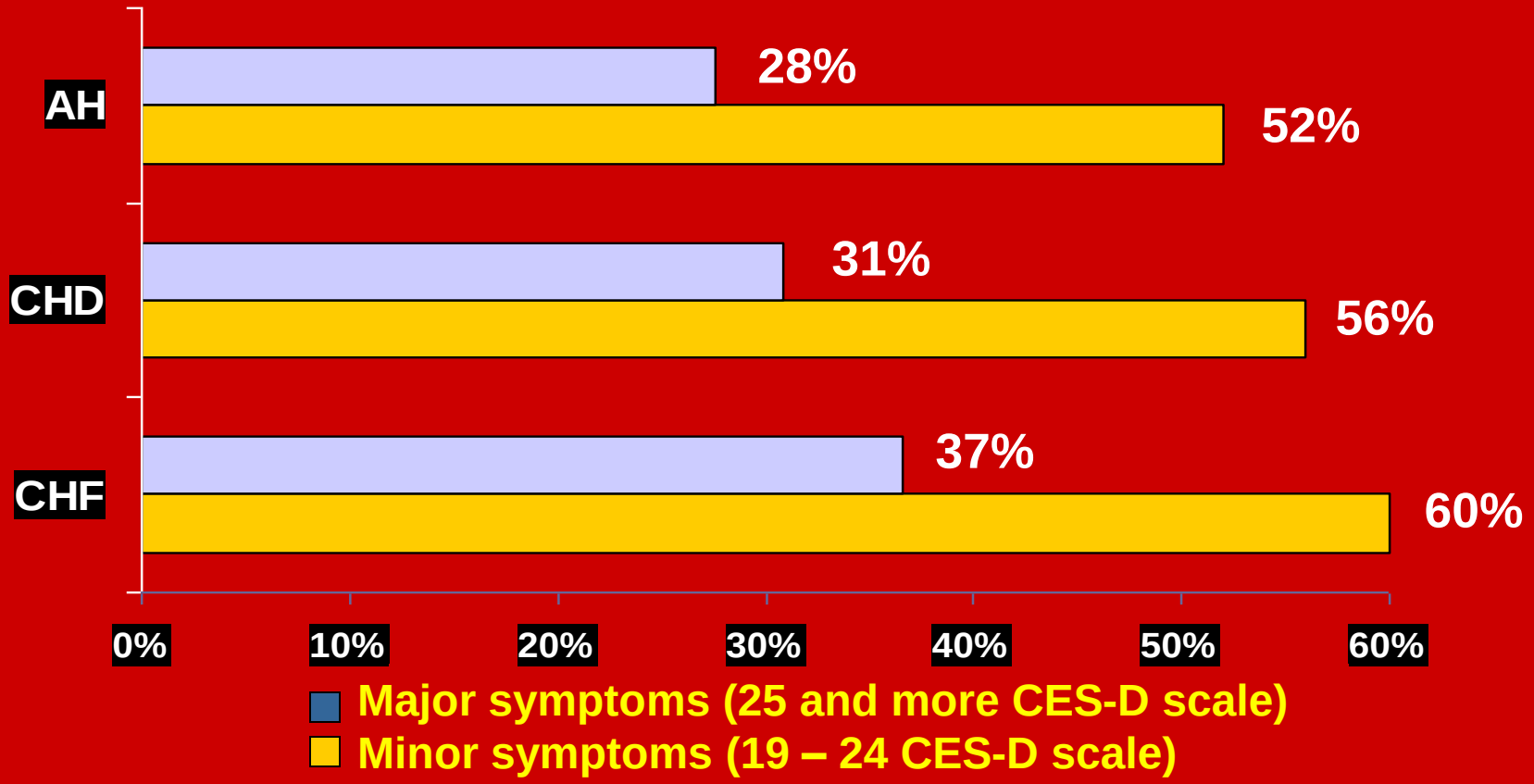
- Depression is an important risk factor for non-compliance with HF treatment.

  Mood disorders can affect patient's motivation, willingness and ability to follow the health behavior advice.

- Depression is associated with social isolation and with reduction of cognitive functioning, which both can have negative impact on compliance.

DiMatteo MR et al. Arch Intern Med 2000;160:2101–2107.

Depressive symptoms rates in CVD patients (COMPASS 2002, n=10 541)



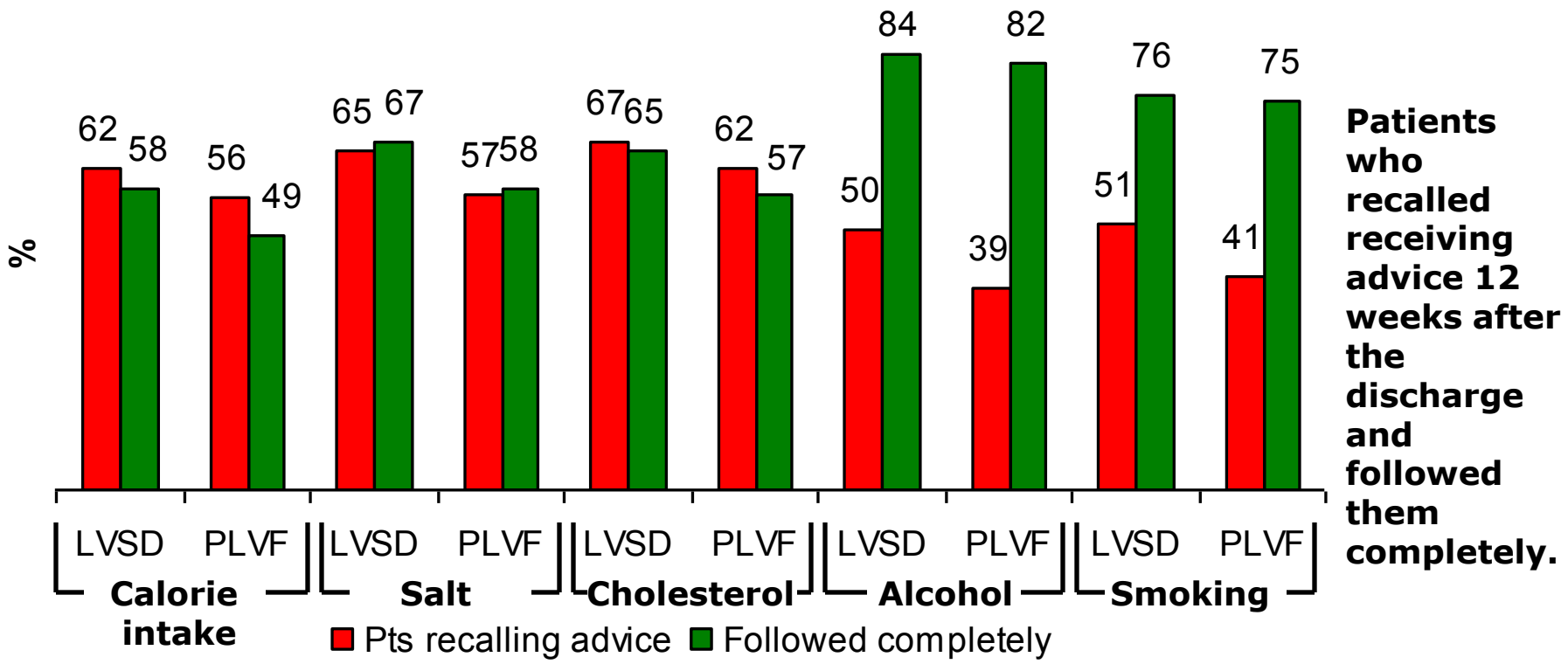
Oganov R, Pogosova N, Shalnova S. et al . Cardiologia 2005; 8

Core components of HF management

Taking Medications,
that prolong life, alleviate symptoms, reduce hospitalizations:
ACE inhibitor, diuretics, β-blocker, vasodilatator.

Life-style modification
Avoiding:
Sodium
Excess fluid intake
Alcohol
Tobacco
Exercise regularly
Weight control

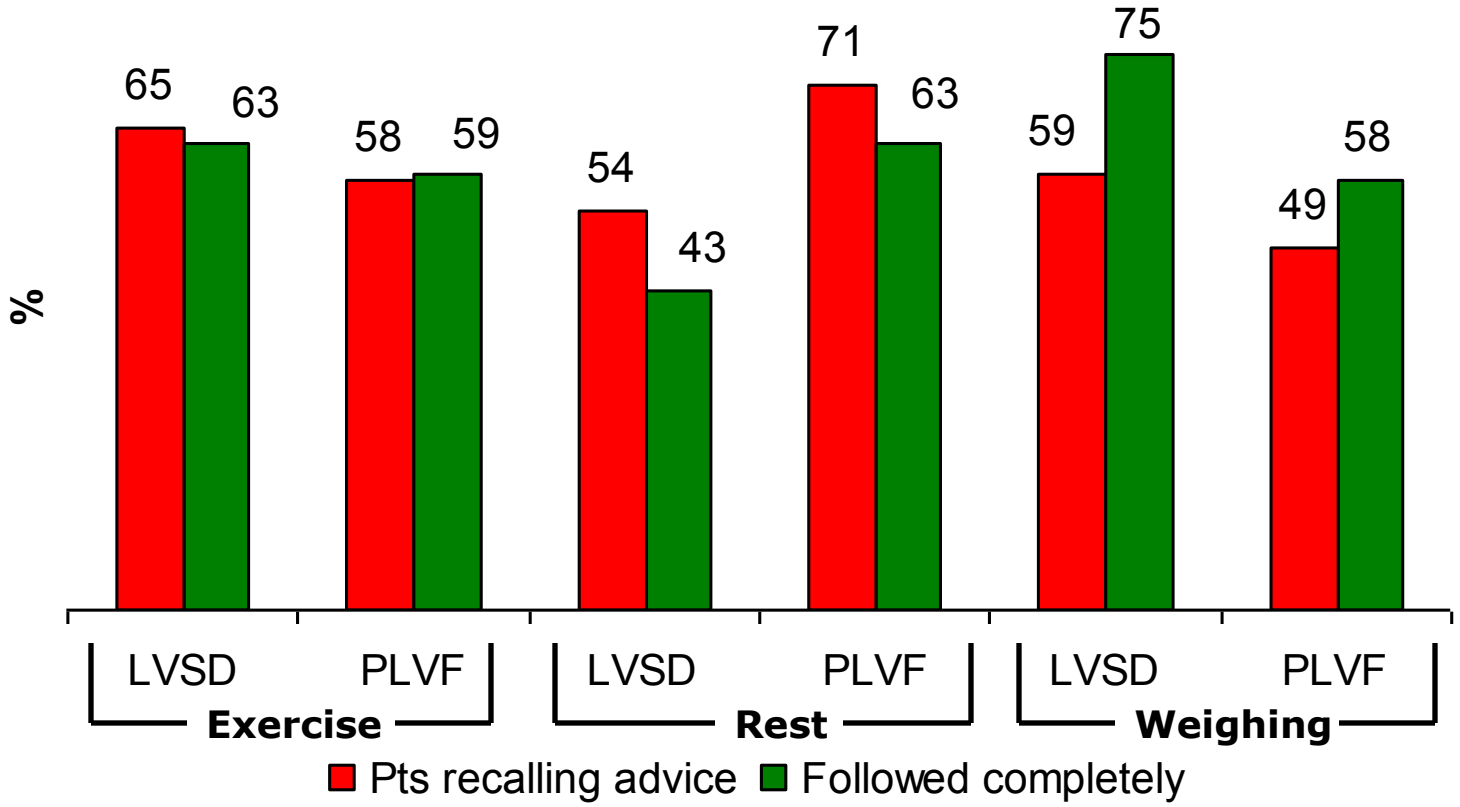
EuroHeart Failure Survey: recall of lifestyle advice in pts recently hospitalized with HF (n=3261; 24 European countries, 115 hospitals)



LVSD= Left ventricular systolic dysfunction, n=1309
PLVF= Preserved left ventricular function, n=599

Lainščak M. et al. European Journal of Heart Failure 9 (2007) 1095–1103

EuroHeart Failure Survey: recall of lifestyle advice in pts recently hospitalized with HF (n=3261; 24 European countries, 115 hospitals)



Patients who recalled receiving advice 12 weeks after the discharge and followed them completely.

LVSD= Left ventricular systolic dysfunction, n=1309
PLVF= Preserved left ventricular function, n=599

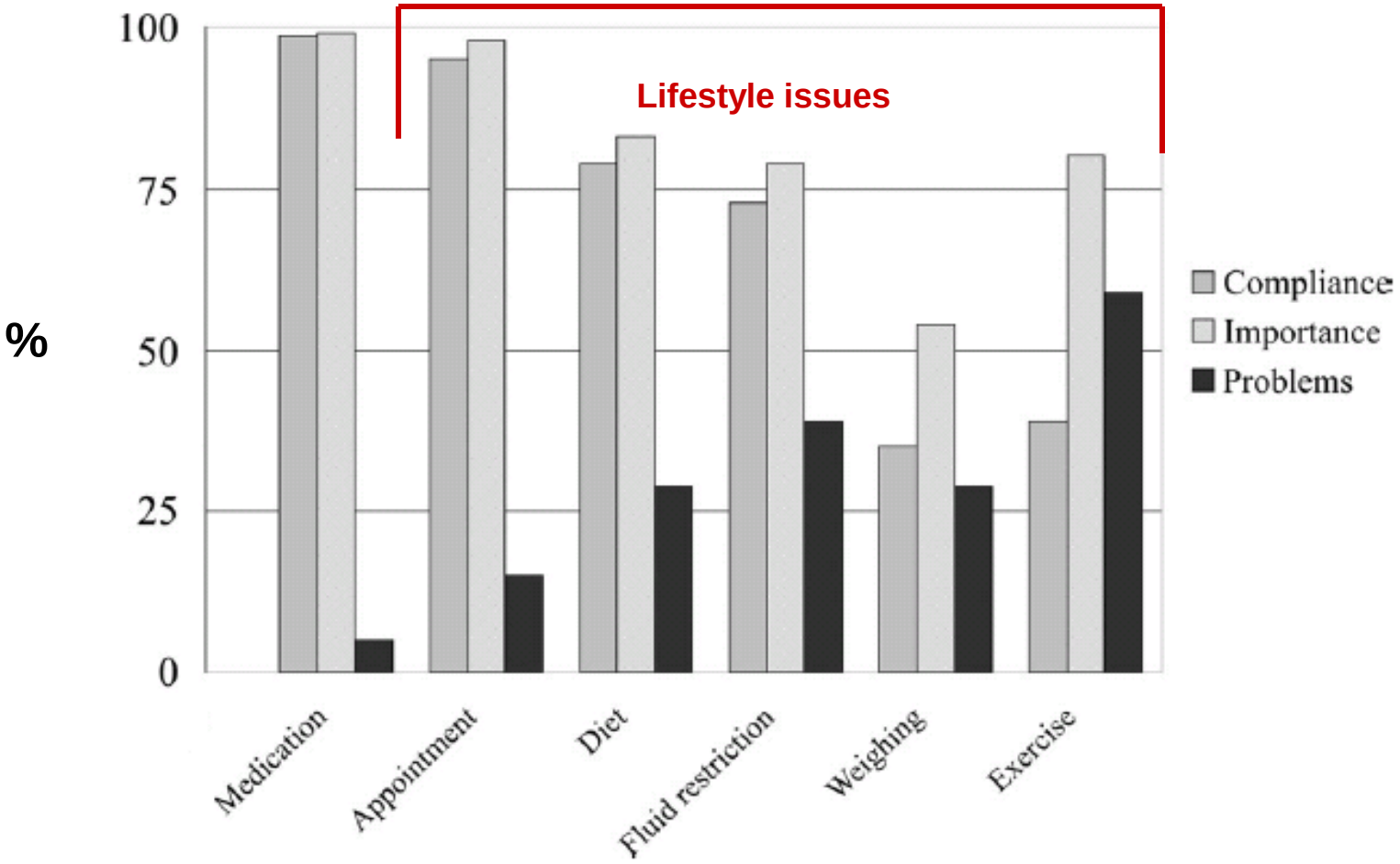
Lainščak M. et al. European Journal of Heart Failure 9 (2007) 1095–1103

EuroHeart Failure Survey: Lifestyle advice recalled and followed (n=3261)

Conclusion of this large European cross sectional survey: Recall and adherence to advice in HF pts is disappointing.

Younger age, male sex, pts awareness of their condition and received clear explanation given by health professional were strongest predictors of recall.

Compliance with the HF regimen was related to knowledge, beliefs and depression (n=501)



van der Wal M.H.L. et al. European Heart Journal 2006; 27: 434–440

Lifestyle changes in patients with heart failure: general impression

- Although most HF pts reported appropriate lifestyle changes, more than 50% did not exercise regularly and almost all had recently eaten high-sodium foods.

  Sneed N.V., Paul S.C. Am J Crit Care. 2003;12: 444-453

- A big number of studies revealed HF pts confusion in regards to their medication and lack of understanding of their condition.
- Physical and mental lack of energy, which HF pts can feel, cause beliefs that neither they nor their treatment can improve their health. Pts feel themselves in a vicious circle of limitations and resignation.

Educational issues

- Education, most often delivered by nurses, is a component of nearly all HF management programs.
- Education program in HF pts and carers: causes of disease, drug regimen, diet, physical and work activities, measures of self-control. Attention to personal needs of patients and their cognitive function.
- Education alone does not guarantee changes in behavior.

Holst D et al. *J Card Fail.* 1999;5:156.
McAlister FA et al. *Am Heart J.* 1999;138:87-94.

Multidimentional management programme is important to curb the rising cost of HF treatment and to improve morbidity and mortality.

Cardiac rehabilitation is the ideal comprehensive intervention aimed to stabilize or slow disease progression, alleviate symptoms, improve exercise tolerance and QL, reduce morbidity and mortality.

Executive summary of the Position Paper of the Working Group on Cardiac Rehabilitation and Exercise Physiology of the European Society of Cardiology (ESC)
Core components of cardiac rehabilitation in chronic heart failure.

EJCPR 2005, 12:321–325

- **Baseline clinical assessment and risk stratification**
- **Treatment of HF causative factors and correction of precipitating causes**
- **Optimal pharmacological therapy in line with national and international guidelines**
- **Management of HF-related diseases and competing comorbidities**
- **Implementation of a continuing program of physical activity and exercise training**
- **Counselling and education: lifestyle, dietary recommendations, sexual difficulties and coping strategies, medications, self-monitoring, prognosis**
- **Psychological support**
- **Planning of a continuum of care through an efficient organized link between hospital and community**

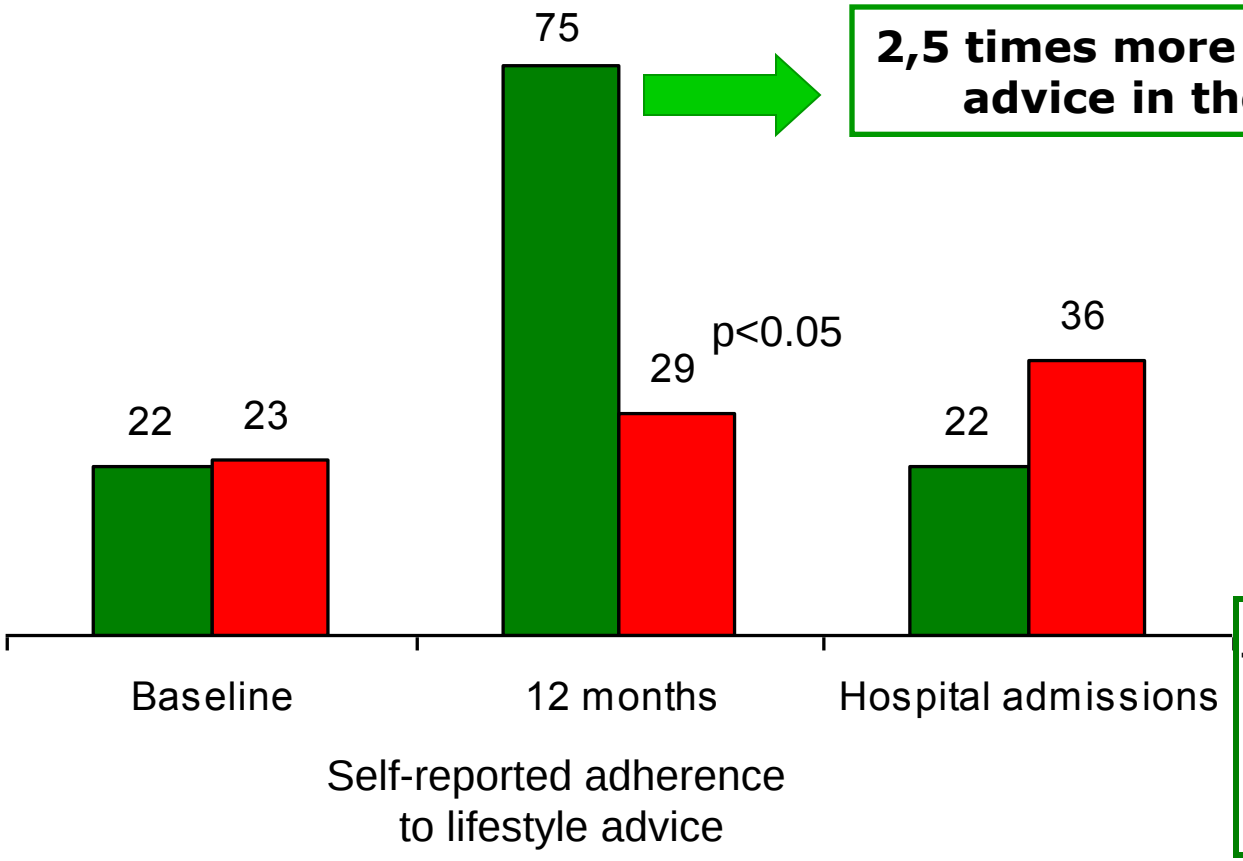
Most common signs and symptoms reported by those in action and not in action to change behavior

Sign or symptom	% of patients with sign or symptom	Behavior change, frequency (%)					
		Avoiding sodium		Avoiding fluid		Getting exercise	
		Action	No action	Action	No action	Action	No action
Fatigue	65	84 (61)	27 (82)	78 (65)	30 (65)	64 (57)	43 (78)
Shortness of breath	49	62 (45)	20 (63)	54 (45)	25 (56)	53 (48)	27 (49)
Weakness/dizziness	45	54 (41)	21 (64)	49 (42)	24 (53)	44 (41)	28 (51)
Irregular or fast heartbeat	44	53 (40)	19 (59)	50 (43)	20 (44)	44 (41)	25 (46)
Shortness of breath after sex	41	40 (35)	19 (66)	39 (38)	19 (48)	32 (34)	27 (55)
Paroxysmal nocturnal dyspnea	32	42 (31)	11 (34)	39 (33)	13 (30)	35 (32)	18 (33)
Weight gain >0.9 kg (>2 lb)	26	34 (26)	9 (29)	28 (24)	13 (30)	22 (21)	18 (33)
Edema	24	32 (24)	9 (28)	25 (21)	13 (29)	24 (22)	14 (26)

Action indicates maintenance and action stages; no action, preparation, contemplation, and precontemplation stages.

Sneed N.V., Paul S.C. Am J Crit Care. 2003;12: 444-453

Optimization of drug treatment, intensive education and self-monitoring of patients help to increase adherence and cut costs



2,5 times more pts adherent to lifesyle advice in the intervention group

Intervention n=109
Control n=112

Total cost of care, 12 months

Intervention £32670
Control £56580

Sadik A. et al. Br J Clin Pharmacol. 2005 August; 60(2): 183–193

Could adherence be improved in HF patients?

Strategies to improve adherence in HF

- Establishing guidelines and treating HF patients according to guidelines
- Implementing structured programmes for HF pts. Increasing participation of HF pts in CR programmes.
- Increasing HF patients' knowledge
- Self-monitoring (e.g. daily weighing) and self-management. It is important to explain how a patient should react to the results of self-monitoring (e.g. a flexible diuretic regimen based on weight changes)

Strategies to improve adherence

- Overcoming existing barriers
- Changing patients' beliefs. Interventions that can improve perceptions of benefits.
- Improving communication between patient and health care provider
- Teaching health care providers to recognize depressive symptoms in HF patients and treat depressed patients according to existing psychiatric guidelines