

Aktuelle Therapie der chronischen Herzinsuffizienz. Braucht es wirklich all die vielen Medikamente? Wie beginne ich in der Praxis mit der Therapie?

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# Disclosures

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all paid to the institution



# «Fantastischen 4»

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## Wie viele davon braucht es?

You = patient with a deadly disease,

4 drugs have been shown to independent from each other

Mortality ↓ & HrQoL ↑

How many of these would you like to be on:

- 1
- 2
- 3
- 4

# «Fantastischen 4»

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**1. Fälle**

**2. Auftrations-Visite**

**3. Adäquate Polypharmazie**



## 56y U.D., Acute Dyspnea, AHF, HFrEF (LVEF 20%)

**Dilatative CMP** (moderate mitral regurgitation), LBBB

**Day 3 in-hospital:**

**No more dyspnea at rest, Pulse 88/min, BP 110/70mmHg, 67kg↓**

- warm extremities, still some rales, eGFR 107 ml/min

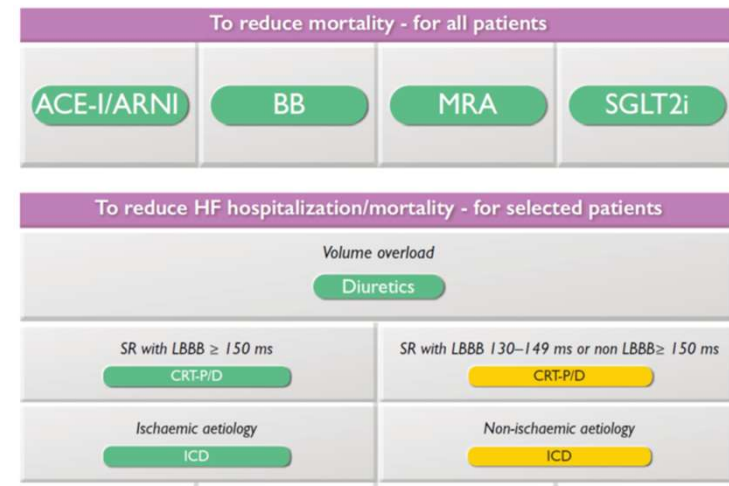
Med: Ramipril 1.25mg 1-0-1 (Furosemid IV,

**What would you do?**

- 1) Add low-dose Betablocker
- 2) Add Aldactone 25mg
- 3) Add SGLT2-Inh
- 4) All of the above



### Management of HFrEF





## 56y U.D., Acute Dyspnea, AHF, HFrEF (LVEF 20%)

**Dilatative CMP** (moderate mitral regurgitation), LBBB

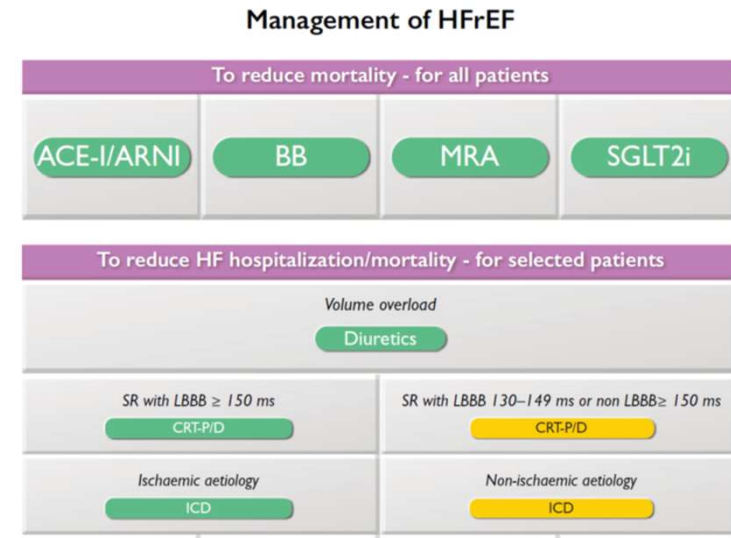
Day 3 | **FU 2 months: NYHA I-II, LVEF 40%, mild MR**  
**No mo** | **FU 4 months: NYHA I-II, LVEF 55%, mild MR**



Med: Ramipril 1.25mg 1-0-1 (Furosemid IV,

**What would you do?**

- 1) Add low-dose Betablocker
- 2) Add Aldactone 25mg
- 3) Add SGLT2-Inh
- 4) All of the above



# Class I recommendations Management of HFrEF

To reduce mortality - for all patients			
ACE-I/ARNI	BB	MRA	SGLT2i
To reduce HF hospitalization/mortality - for selected patients			
Volume overload			
Diuretics			
SR with LBBB $\geq 150$ ms		SR with LBBB 130–149 ms or non LBBB $\geq 150$ ms	
CRT-P/D		CRT-P/D	
Ischaemic aetiology		Non-ischaemic aetiology	
ICD		ICD	
Atrial fibrillation	Atrial fibrillation	Coronary artery disease	Iron deficiency
Anticoagulation	Digoxin PVI	CABG	Ferric carboxymaltose

## 85y R.H., HFrEF (LVEF 35%), AHF Hosp 8.2020

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**CAD** (no relevant ischemia), **Hypertensive and Valvular Heart Disease** (moderate mitral regurgitation), Lung emphysema, Chronic kidney disease

V1, 3 weeks after discharge:

**Much better, NYHA II, Pulse 60/min, BP 120/65mmHg, 63kg ↔**

Cold extremities, Delayed capillary refilling, cyanosis of lips, Rales

- NT-proBNP 3'600ng/L (18'000 in 8.2020), eGFR 45 ml/min

Med: Ramipril 10 mg, Bisoprolol 2.5mg, Aldactone 25mg, Torasemide 20mg,  
Aspirin 100mg

**What would you do?**

Add **Dapagliflozin 10mg**

After 5 days: Email from patient «drug for diabetes», «I did not know that I also have diabetes»  
«I would like to better informed about my health conditions prior to taking the new drug»



## 85y R.H., HFrEF (LVEF 35%), AHF Hosp 8.2020

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**CAD** (no relevant ischemia), **Hypertensive and Valvular Heart Disease** (moderate mitral regurgitation), Lung emphysema, Chronic kidney disease

**V2**, 2 months after discharge:

**Feels good, NYHA II, Pulse 56/min, BP 110/60mmHg, 63kg ↔**

warm extremities, Delayed capillary refilling, cyanosis of lips, Rales

- NT-proBNP 1'900ng/L , eGFR 43 ml/min, **LVEF 40%, mild MR**

Med: Ramipril 10 mg, Bisoprolol 2.5mg, Aldactone 25mg, Torasemide 20mg,  
Aspirin 100mg, Dapagliflozin 10mg

**What would you do?**

**ARNI vs ACE-I**

**Entresto 50mg 1-0-1**, increase to 100mg 1-0-1 in 4 weeks

## **85y R.H., HFrEF (LVEF 35%), AHF Hosp 8.2020**

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**CAD** (no relevant ischemia), **Hypertensive and Valvular Heart Disease**  
(moderate mitral regurgitation), Lung emphysema, Chronic kidney disease

**V3**, 4 months after discharge:

**Feels good, NYHA I-II, Pulse 56/min, BP 110/60mmHg, 63kg ↔**

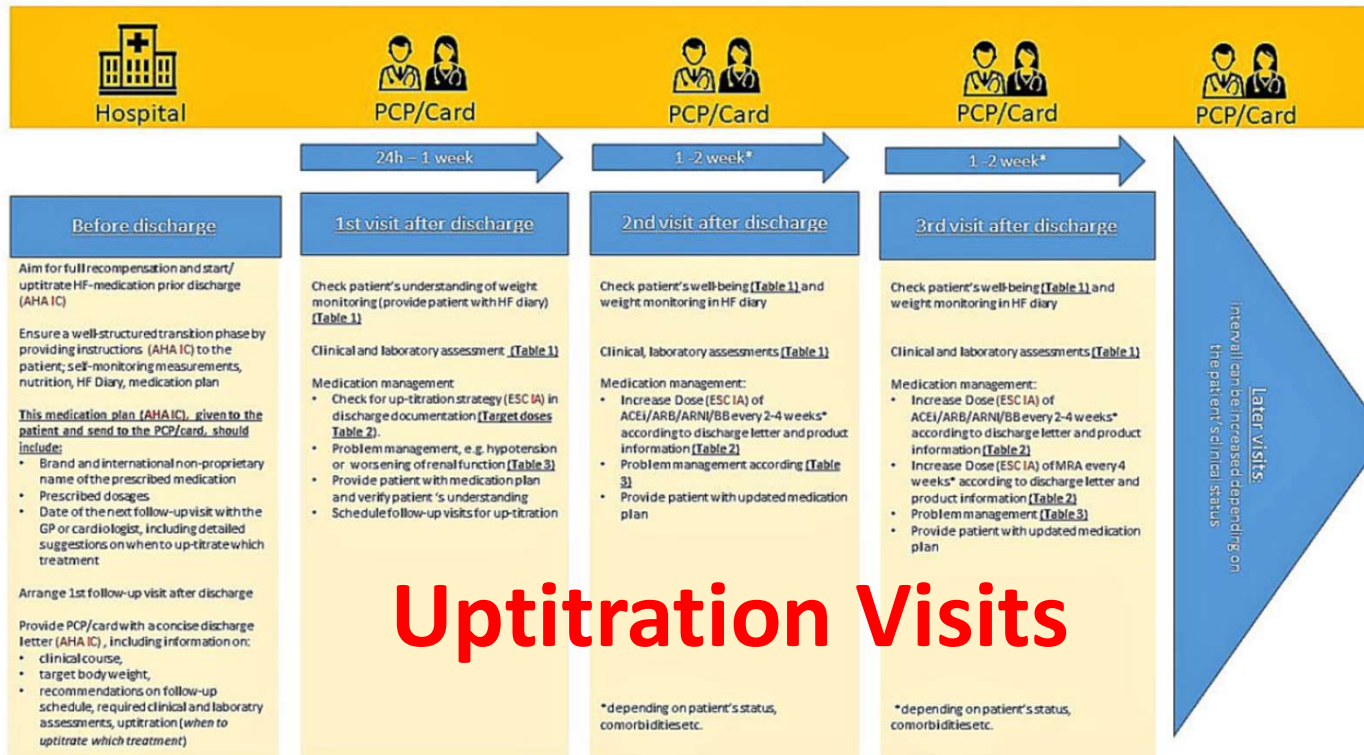
warm extremities, Delayed capillary refilling, cyanosis of lips, Rales

- NT-proBNP 1'100ng/L , eGFR 37 ml/min, LVEF 40%, mild MR

Med: Entresto 100mg 1-0-1, Bisoprolol 2.5mg, Aldactone 25mg, Torasemide 20mg, Aspirin 100mg, Dapagliflozin 10mg

# Roadmap for the treatment of heart failure patients after hospital discharge: an interdisciplinary consensus paper

Mueller Christian<sup>a</sup>, Bally Klaus<sup>b</sup>, Buser Marc<sup>c</sup>, Flammer Andreas J.<sup>d</sup>, Gaspoz Jean-Michel<sup>e</sup>, Mach François<sup>f</sup>, Moschovitis Giorgio<sup>g</sup>, Paul Matthias<sup>h</sup>, Zeller Andreas<sup>b</sup>, Heitlinger Ellen<sup>i</sup>, Fay Bianca<sup>f</sup>, Rosemann Thomas<sup>k</sup>



# Why is **Polypharmacy** dangerous

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## **Polypharmacy** $\geq$ 4-5 Drugs

- Old Patients
- Several chronic disorders
- Interactions  $\uparrow$ , Side effects  $\uparrow$  (>10% of all hosp)
- Adherence  $\downarrow$
- Risk  $\uparrow$  of Undertreatment



**Aim: appropriate polypharmacy**

# Appropriate Polypharmacy

## 7 STEPS TO APPROPRIATE POLYPHARMACY



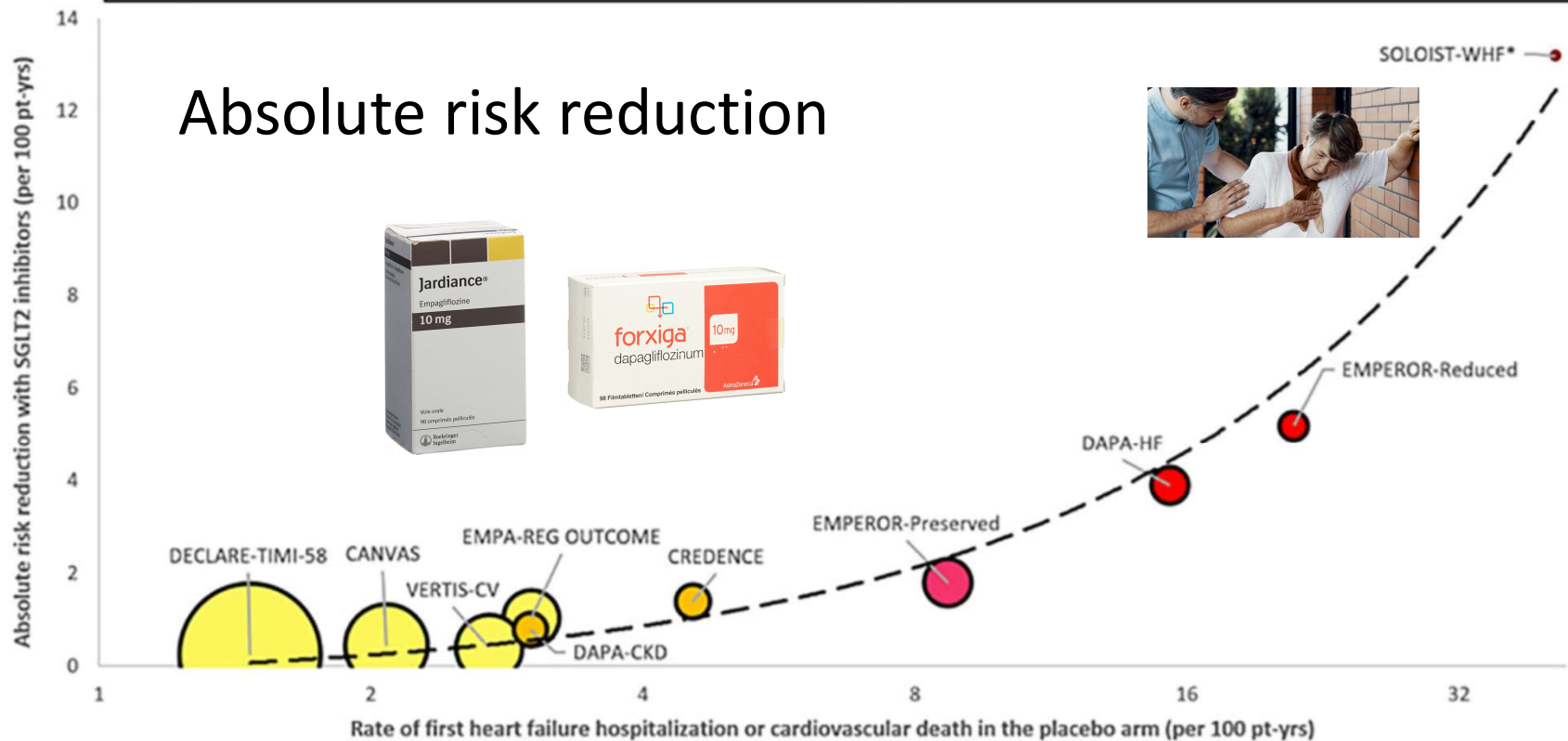
If possible 1x/d  
Small pills  
Dispenser



Absolute Risk ↓

High Risk T2DM	CKD	Chronic HFpEF	Chronic HFrEF	Worsening HF
ARR: 0.25 - 1.04 per 100 pt-yrs	ARR: 0.80 - 1.39 per 100 pt-yrs	ARR: 1.8 per 100 pt-yrs	ARR: 3.9 - 5.2 per 100 pt-yrs	ARR: 10.4 per 100 pt-yrs
NNT: 96-400 RRR: 12% - 34%	NNT: 72-125 RRR: 29% - 31%	NNT: 59 RRR: 21%	NNT: 21-36 RRR: 25%	NNT: 10 RRR: 29%

# Absolute risk reduction



Butler J, et al. Eur Heart J 2021

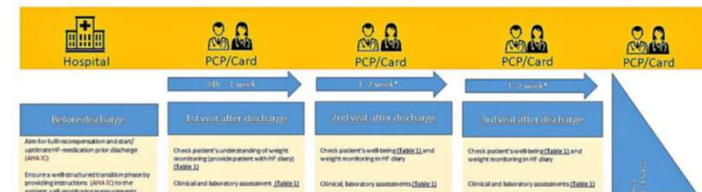
# «Fantastischen 4»

## 1. Fälle



## 2. Auftitrations-Visite

## 3. Appropriate Polypharmacy



### 7 STEPS TO APPROPRIATE POLYPHARMACY

