



# 8<sup>th</sup> BSH Heart Failure Nurse and Healthcare Professional Study Day 2018

**Presentation title:** Older people and Heart failure (with a bit of Frailty)

● **Speaker:** Janine Beezer – Advanced Clinical Pharmacist - Heart Failure. Sunderland Royal Hospital

**Conflicts of interest:** Nil

# Should we treat old people differently?

- Heart failure
- Old people
- Drug therapy
- Case

# Remember!

- Go low
- Go slow
- Don't let go!

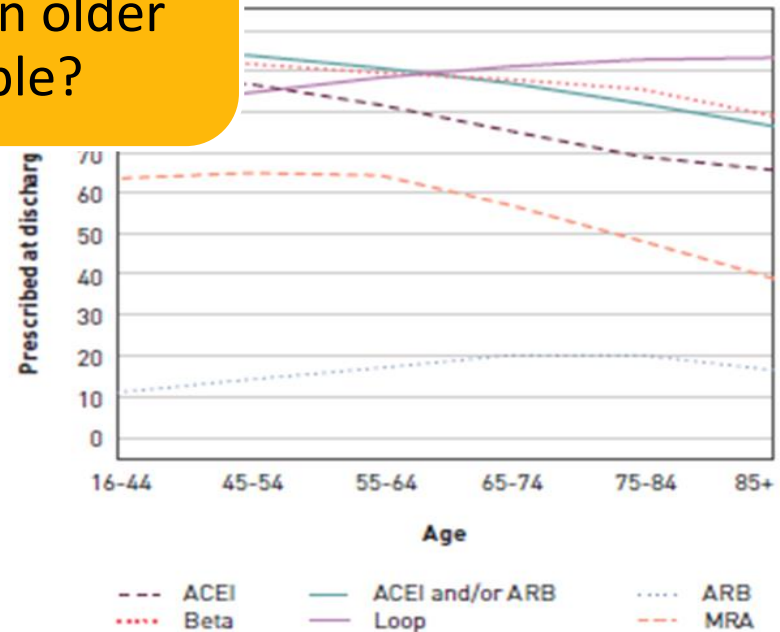
Ave Age 78  
Median 80.4

67% > 75 years  
32% > 85 years

Age independent risk factor  
mortality elderly HF patients

What do we know  
about Heart  
Failure in older  
people?

4.8% compared 12%



## Multi-morbidity

50% pts over 75 >3 co-morbidities

## Polypharmacy

50% pts over 80 >5 meds

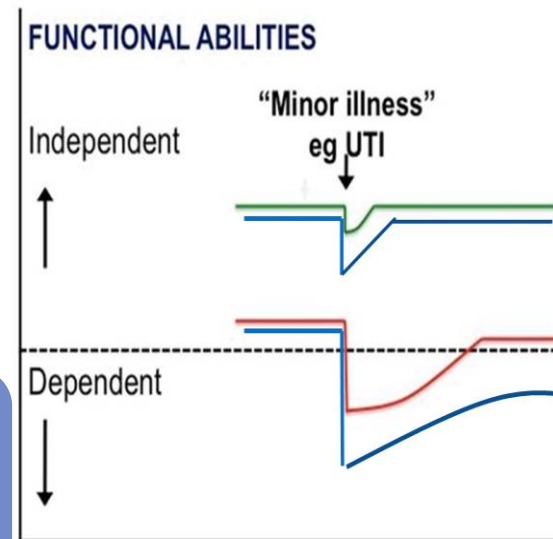
What do we know about older people?

Poorer organ function

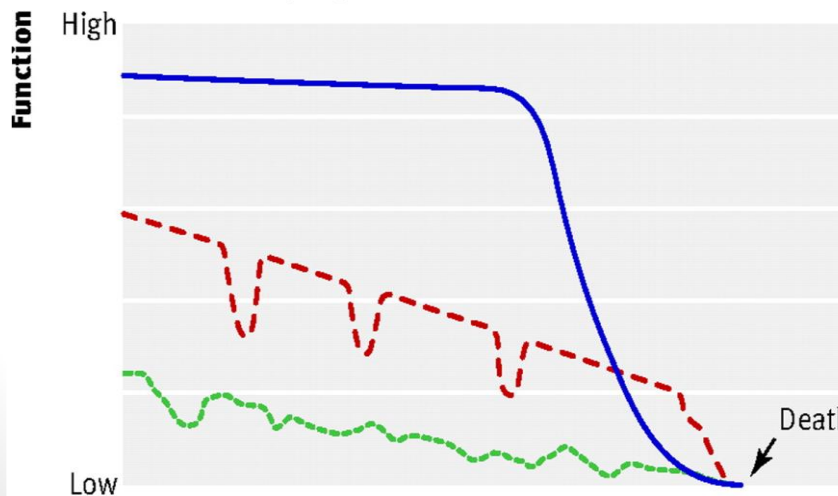
Increased risk ADRs

# Body systems lose built in reserves

## Frailty



- Cancer (n=5)
- - - Organ failure (n=6)
- · - · Physical and cognitive frailty (n=7)
- Other (n=2)



High prevalence  
and worse  
outcomes

# Pharmacokinetics

(What body does to a drug)

- Absorption
- Distribution
- Metabolism
- Excretion

# Pharmacodynamics

(What drug does to body)

What do we know  
about Medication  
in older people?

# Poorer organ function

- Change response receptor stimulation
- Reduced homeostasis mechanisms
  - Reduced total body water
  - Reduced lean body mass
  - Increased adipose tissue

# Frailty

# Distribution

## Water soluble

Perindopril  
Lisinopril  
Metoprolol

## Lipid Soluble

Carvedilol  
Digoxin  
Ramipril  
Enalapril  
ARBs  
ARAs  
Ivabradine

# Metabolism

What do we know about Medication in older people?

# Absorption

# Excretion



# Pharmacokinetics

(What body does to a drug)

- Absorption
- Distribution
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# Pharmacodynamics

(What drug does to body)

What do we know  
about Medication  
in older people?

# Poorer organ function

- Change response receptor stimulation
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# Frailty

- Heart failure
- Old people
- Drug therapy
- Case

## Multi-morbid

5 co-morbidities

## Polypharmacy

12 medications



Mavis

## Poorer organ function

Likely

## Increased risk ADR's

likely

## Symptoms

Feels terrible

Poor oral intake

Confused

Lethargic

Denies SOB

## Examination

Looks frail washed out

HS – Normal

Chest clear

JVP ↔

No peripheral oedema

BP 128/71

HR 58

ECG – NSR

Severe LV impairment EF 18%



## Medication

Bisoprolol 7.5mg od

Candesartan 16mg od

Spirolactone 12.5mg od

Furosemide 40mg om

Lansoprazole 15mg om, Alendronic acid  
70mg weekly, Adcal D3, Apixaban 2.5mg

bd, Levothyroxine 25mcg om,

Paracetamol 1g qds, Docusate 100mg bd,

Visctears eye drops

## Bloods

Hb 116 G/L

Na 111 mmol/l

Ur 4.3 mmol/l

Cr 95  $\mu$ mol/l

Admitted to Hospital from clinic

# Time line

June 16  
(3 weeks)

- Admitted #NOF
- ECHO performed as part of pre-surgery work up
- Prolonged stay and difficult rehabilitation
- Discharged to rehab facility
- Candesartan 16mg od, Bisoprolol 5mg om

August 16  
(10 days)

- Generally unwell, hypokalaemia, fluid overload, AF
- Given IV furosemide, b-blocker increased, anticoagulated
- Discharged on Candesartan 24mg od, Bisoprolol 7.5mg od, Furosemide 80mg bd, Eplerenone 25mg od + others
- Na 137, K+ 3.6, Ur 4.8, Cr 83
- Seen heart failure team on admission and referred for follow up with geriatrician specialises heart failure

September 16  
(1 day)

- GP referred to GP assessment ward with hyponatraemia
- Na 123
- Reviewed and discharged with a reduced dose of furosemide 80mg od as euvolemic.

September 16  
(1 day)

- Chest pain and hyponatraemia
- **Na 113**
- Discharged with increased dose Furosemide 80mg bd, Candesartan reduced to 12mg and Eplerenone changed to Spiro 12.5 (reduced dose)
- Heart failure clinic appointment in 3 days.

## Symptoms

Feels terrible

Poor oral intake

Confused

Lethargic

Denies SOB



## Examination

Looks frail washed out

HS – Normal

Chest clear

JVP ↔

No peripheral oedema

BP 128/71

HR 58

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## Bloods

Hb 116 G/L

Na 111 mmol/l

Ur 4.3 mmol/l

Cr 95  $\mu$ mol/l

5 Week admission

Pharmacokinetics

Pharmacodynamics



Polypharmacy  
+  
Increased risk ADRs

Frail  
+  
Multimorbid  
+  
Poorer organ  
function

## Symptoms

No confusion  
Independent ADL  
Eating and drinking well

## Examination

Frail  
HS – Normal  
Chest clear  
JVP ↔  
No peripheral oedema  
BP 108/53  
HR 70  
ECG – NSR  
Severe LV impairment EF 18%



## Medication

Bisoprolol 2.5mg od  
Candesartan 2mg od  
Furosemide 40mg om  
Lansoprazole 15mg om, Alendronic acid  
70mg weekly, Adcal D3, Apixaban 2.5mg  
bd, Levothyroxine 25mcg om,  
Paracetamol 1g qds, Docusate 100mg bd,  
Viscotears eye drops

## Bloods

Hb 108 G/L  
Na 132 mmol/l  
Ur 8.1 mmol/l  
Cr 70  $\mu$ mol/l

Discharged from hospital – own home!



# Summary

- Should elderly Heart Failure patients be treated differently?
  - Still have ABBA
  - Start low
  - Go slow
  - Monitor regularly – retain in clinic – Don't let go
  - Multidisciplinary working
  - Be mindful other conditions such Frailty me have bigger impact on outcomes.