Global HF Awareness Policy

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Innovation in Clinical Care in Heart Failure

Global Heart Failure Awareness Policy

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The global burden of heart failure

• Heart failure affects 1-2% of population in individual countries (more common in older populations)
• Survival is poor, yet varies widely: 17 – 45% patients die within 12 months of hospital admission
• High economic impact: accounts for 1-4% of hospital admissions, 1-3% of healthcare expenditure
• High symptom burden: for patient and carer
Heart Failure. Preventing disease and death worldwide. Policy recommendations

- Promote heart failure prevention
- Improve heart failure awareness among healthcare professionals
- Ensure equity of care for all patients with heart failure
- Support and empower patients and their caregivers
- Promote heart failure research

Aim: Make prevention and management of heart failure a global health priority

http://www.oxfordhealthpolicyforum.org/reports/heart-failure/heart-failure
Acute Heart Failure: Policy recommendations

- Optimise care transitions
- Improve patient education and support
- Provide equity of care for all patients with heart failure
- Appoint experts to lead heart failure care across the disciplines
- Stimulate research into new therapies
- Develop and implement better measures of care quality
- Improve end-of-life care
- Promote acute heart failure prevention

How can these be achieved?

- **Education**: educating professionals, health policy makers

- **Advocacy**: building coalitions that include patient/carer/professional

- **Activation**: implementing, disseminating, monitoring quality
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Public awareness of ‘heart failure’

Europe
9 countries
N =7958

Slovenia
12 cities
N =850

Heard of HF
Age
Symps of Stroke
Symps of CHD
Symps of HF

Remme et al, EHJ. 2005

Age
Treated with rest

National initiatives include

- Education forums for public and professionals
- School activities
- Government lobbying
- Local media
- Aqua-aerobics class for HF and transplant
- ‘Healthy Heart days’ - risk factor assessment
What more can be done?
Promote heart failure prevention

Risk factors include:
- Coronary heart disease
- Hypertension
- Hyperlipidemia
- Smoking status
- Diabetes
- High alcohol intake
- Physical inactivity
- Obesity

Challenge:
- Identify and manage patients with increased risk
Screening TO Prevent Heart Failure (STOP-HF)

- 39 centres in Ireland, 1374 patients with CV risk
- Intervention. BNP > 50pg/ml (n= 263): screening echo, risk factor management, regular cardiology follow-up, coaching by specialist nurse on individualised risk, adherence to medication and healthy lifestyle
- Mean follow-up 4 years
- Results:
  - left ventricular dysfunction and HF 59 (8.7%) v 37 (5.3%) (P = .003).
  - Asymptomatic left ventricular dysfunction 45 (6.6%) v 30 (4.3%) (P = .01)
  - Heart failure 14 (2.1%) v 7 (1.0%) (P = .12)
- No difference between groups in change of biochemical risk factors (p>0.05)
- Increased prescription of RAAS modifying therapy (p = 0.02)

Ledwidge et al, JAMA, 2013
Therapies and Risk Factors

- BP significantly reduced within both groups (p<0.001) from baseline
- Increased use of RAAS modifying therapies in intervention group
- No differences in change of SBP, HR, LDL-C between control and intervention
- Strong trend to lower HR and LDL-C (both p=0.06) in high BNP subsets

Questions:
- No reporting of outcome from nursing intervention on specific adherence to medication
- Would outcome be the same for non-selected patients
Nurse Led Intervention for Less Chronic Heart failure (NIL-CHF)

- 1 centre in Australia
- N=624 on hospital discharge following cardiac admission
- Intervention;
  - assessment of risk 7 – 10 days of discharge and 1 month.
  - Individualised management of risk: Majority received additional education & telephone coaching by specialist nurse
- Mean follow-up of 4 years
- Results:
  - CHF hospitalisation or death: 38 (12.3%) (C) v 41 (13.3%) (I) ($P = .06$) (no difference in either outcome)
  - Telephone support 1.8 (SD 1) (C) v 5.1 (SD 3.8) (I)

Stewart et al, 2015. Euro JHF
Effect of social deprivation on age of admission (UK)

Challenge:
- Heart failure prevention in the ‘hard to reach’
- Equity of care provision

NICOR, 2012-2013
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Professional’s Knowledge: guideline-based HF medication (HF audit)

Largely compliant with guidelines

Missed diagnosis:
1. Pneumonia (6.7%),
2. **Decompensated heart failure (5.7%)**, 
3. Acute renal failure (5.3%) 
4. Cancer (primary) (5.3%), 
5. Urinary tract infection or pyelonephritis (4.8%) 

- Process errors/difficulties 
- Synthesis of information 

Singh et al. JAMA Intern Med. 2013
Cardiology nurses’ knowledge of heart failure: self-care advice

![Bar chart showing expected scores for USA (2005), USA (2007), and Cyprus (2013). The expected score is 20, with USA (2005) and Cyprus (2013) scoring 15 and 12, respectively, and USA (2007) scoring 18.]
Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study.
Aiken et al. Lancet 2014

- > 420,000 in-patients from 300 acute hospitals in 9 European countries
- **Results**: In hospital & 30-day mortality: 1.3%

<table>
<thead>
<tr>
<th>Adjusted model (patient and hospital characteristics)</th>
<th>OR (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse staffing</td>
<td>1.07 (1.03-1.11)</td>
<td>0.0002</td>
</tr>
<tr>
<td>Nurse education</td>
<td>0.93 (0.86-0.97)</td>
<td>0.002</td>
</tr>
</tbody>
</table>

- **Conclusion**: where 60% of nurses have bachelor's degrees and nurses care for an average of 6 patients there will be 30% lower mortality than in hospitals in which only 30% of nurses had bachelor's degrees and nurses cared for an average of eight patients.

- Nurse to patient ratio of 1: 6 and a high presence of well educated nurses guarantees effective patient surveillance and good clinical judgement
Heart failure education programmes: Challenges

- Embrace all healthcare professionals
- ‘Fit for purpose’ locally
- Increase awareness of other professional's roles
- Follow the ‘patient pathway’: prevention to end-of-life
- Include mentorship and critical discussion
- Stimulate research
Heart Failure. Preventing disease and death worldwide. Policy recommendations

Promote heart failure prevention

Improve heart failure awareness among healthcare professionals

Ensure equity of care for all patients with heart failure

Support and empower patients and their caregivers

Promote heart failure research

http://www.oxfordhealthpolicyforum.org/reports/heart-failure/heart-failure
Equity of care: regardless of access point

Patients with severe symptoms
- Emergency room
- Hospital admission
- Inpatient care
- Facilitated discharge

Patients with mild/moderate symptoms
- General practice/family physician
- Outpatient visit/cardiology consultation
- Treat and discharge
- Chronic heart failure management services

Heart failure clinic
- Treatment
  - Day-care facility
  - Telemonitoring
  - Community HF services
  - Community HF services
  - Heart failure clinic

Cardiology input

a Possible future provision
Diagnosis

• Access to diagnostic tests:
  – Natriuretic peptide testing available in > 50% cardiology centres – 45% countries
  – Echocardiography available in > 50% cardiology centres – 75% countries
    Seferovic et al, Euro JHF. 2013

Challenges:
• Variation in availability across primary and secondary care
• Wide variation in ‘waiting time’ (echo)
Within country variation in diagnostic testing: data collection and benchmarking

Hospitals (London) 2014
Equity of care: regardless of place of care

<table>
<thead>
<tr>
<th>Medication</th>
<th>Cardiology ward (%)</th>
<th>General medical ward (%)</th>
<th>Other ward (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE inhibitor</td>
<td>76</td>
<td>68</td>
<td>69</td>
</tr>
<tr>
<td>ARB</td>
<td>18</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>ACEI and/or ARB</td>
<td>89</td>
<td>81</td>
<td>82</td>
</tr>
<tr>
<td>Beta blocker</td>
<td>87</td>
<td>76</td>
<td>76</td>
</tr>
<tr>
<td>MRA</td>
<td>56</td>
<td>40</td>
<td>37</td>
</tr>
<tr>
<td>ACEI and/or ARB, beta blocker and MRA</td>
<td>46</td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>Loop diuretic</td>
<td>90</td>
<td>93</td>
<td>90</td>
</tr>
<tr>
<td>Thiazide diuretic</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Digoxin</td>
<td>23</td>
<td>21</td>
<td>21</td>
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NICOR, 2012-2013

*Possible future provision*
Seamless transition to community

Current provision of heart failure programmes
Survey of National Societies of the ESC
Seferovic et al, Euro JHF. 2013

- 25/33 (75%) countries HF management programmes
- 18/25 (72%) countries HF nurse within HF team

Within country variation in availability
Variation in components of follow-up & support

Challenges:
- Local demographics/geography
- National regulation of roles
- Reimbursement/incentives
- Quality metrics
Transitional care

- 5000 patients in 29 trials
  - Multi-professional
  - Education for self-care
  - Access to specialists

Results:
- Mortality
- Hospitalisation; all cause & HF related

McAlister et al
JACC, 2004. 44:810-9
The Heart Failure Team: local variation in roles and responsibilities?

The number of physicians per million inhabitants varies widely: 540-4550
Number of cardiologists per million inhabitants: 15-20 -250
55% countries had Heart Failure Nurses

National number of nurses to 1000 population
Ratio of nurse: doctor
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Support and empower patients and caregivers

Supportive resources include:

Self-care:
- Maintenance: adhering to treatment advice
- Monitoring: observing for change in symptoms/signs
- Management: responding to change

Possible challenges:
- Culturally sensitive information
- Cross cultural views of self-care
- Literacy: educational and health literacy
- Socially isolated
Heart failure self-care behaviour: measured by EHFScBS

Scores influenced by general illness behaviour
Challenge: assessing readiness to self-care

• **Patient:**
  ‘The GP prescribed a nasal spray to treat what he thought was an infection. He also prescribed an antibiotic in case the spray didn’t work. The idea was that I should use the antibiotic if after a few days the spray didn’t work.’

• **Wife:**
  ‘He had been to the GP who thought it was a sinus problem. And the GP, well I mean, to give him a nasal spray, and if that doesn’t work take some antibiotics. Now that really frightens me about these kind of situations.’
Are we ‘ready’ for shared decision making?

• Legare et al, 2014; Cochrane review:
  – unable to conclude which interventions improved shared decision making
    • Any activity is better than none
    • Activities that include patients and professionals may work better
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