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BHF project
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Cardiology

Need for change

- 15.5% increase in emergency admissions for CHD between 2009 and 2011 with 45% increase in associated inpatient costs nationally
- 2º care not equipped to deal with increases in demand
- East Cheshire has fastest growing elderly population in north west - anticipated that health care demands for long term conditions could increase substantially as a result
- Current economic climate makes increases in beds neither feasible nor desirable
- Long term conditions strategy requires that care is delivered closer to home

BUT

- GP's and other primary care practitioners often ill equipped to manage specialist conditions in the community

Background

- Rapid improvement event Nov 2011 to discuss what was wanted from a cardiology service
- GP's said they wanted a point of contact for clinical discussion, comprehensive discharge planning, upskilling of primary care staff to manage more patients, and services that were more responsive to patient needs
- Commissioners said they wanted to reduce admissions, readmissions and length of stay, and reduce duplication of care
- BHF were asking for bids for innovative projects in managing long term conditions in cardiology

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Formulating a plan

- Nurses could do this!
- Initial pilot inreach service was a huge success but not sustainable with current resources
- Chest pain, AF and heart failure identified as generating greatest number of admissions and readmissions in cardiology
- Our length of stay was longer than the national average probably due to patients not being seen by a specialist early enough (could take up to a week to be seen)
- GP's and others in primary care were not properly equipped with the knowledge and skills to prevent admission and/or readmission

Cardiology nurse team

- 1.8 WTE cardiology specialist nurses working in secondary care providing nurse led clinics and cardiology inreach service
- 1.6WTE community heart failure nurses providing nurse led clinics in the community and home visits
- BHF funded 2 WTE cardiology specialist nurses for 2 years to develop integrated cardiology nurse team
  - Remit to facilitate care for all patients requiring specialist cardiology input across primary and secondary care
- Full support from 3 consultant cardiologists (2 full time one part time)

Aims of the project

- Reduce admissions, readmissions and length of stay
- Facilitate patient/carer self management
- Enable more patients to be managed in primary care
- Improve end of life care

How was this implemented?

- Developing generic cardiology specialist nurses
- Cardiology inreach
- Increasing community clinics
- Day case or Community IV diuretics
- Education for GP's, primary care practitioners and palliative care partners
- Enabling and supporting patients to develop skills for self care

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Development of nurses

- Intensive educational programme
- In house training
- Masters modules in clinical examination skills and diagnostics
- Non medical prescribing
- Advanced communication Skills
- Advance Life Support
- RACPC’s
- Cardioversion Clinics
- Provision of support for specialist echos

Inreach

- Proactively identifying patients on emergency floor with cardiac conditions
- Early intervention and care planning using agreed pathways specifically for chest pain, AF, and heart failure
- Any patients not suitable for management by nurses are escalated to cardiologists
- Ensure appropriate discharge advice and information provided for patients and carers
- Clear discharge plan and follow up arrangements

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Improvements to LOS

ICD codes	Oct 2011 to Sept 2012 No of pts/ ALOS	Oct 2012 to Sept 2013 No of pts/ ALOS	Oct 2013 to Sept 2014 No of pts/ ALOS
I20 - Angina	193 / 4.67	191 / 2.6	132 / 2.48
I21 - MI	238 / 10.7/ 7(median)	295 / 8.16 / 5(median)	261 / 7.93 / 5(median)
I48 - AF	331 / 5.43	305 / 5.62	264 / 2.61
I50 – Heart failure	296 / 14.96	299 / 15.80	293 / 11.80

Increased community clinics

- Expansion of existing community heart failure clinics to manage all cardiology follow up patients with chest pain, AF and heart failure
- Provides flexibility in providing extra clinics geographically closer to patients' own homes
- Can accept referrals directly from GP's
- Helpline enables patients to be booked in at short notice if they develop problems
- Domiciliary visits when patients cannot attend clinics due to frailty

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Community IV diuretics

- Collaborative working with HITS to deliver IV diuretics to suitable patients in their own home
- Pathway set out roles and responsibilities, and parameters for safe management
- HITS:
  - assess home circumstances
  - Gain IV access
  - Deliver infusion
  - Weigh patient, take blood for U&E's, monitor BP and heart rate
- Cardiology specialist nurses provide:
  - Clinical input and weekly assessment of patients (more frequent if required)
  - Prescriptions
  - Telephone liaison with HITS
  - Consideration of day case IV diuretics for those who fall outside the pathway

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Impact of IV diuretics

- Admission avoidance
- Early supported discharge
- Palliative care
- More than 1200 IV diuretic infusions administered since project began
- Nationally heart failure admissions have increased by 6% whilst ours have remained static.

Case study 1

- Mrs H 78 year old lady
- Severe aortic stenosis
- Multiple co-morbidities, diabetes, hypertension, CKD, severe right heart dilatation, pulmonary hypertension, non alcoholic liver disease
- Did not want admission to hospital
- Treatment needed whilst awaiting TAVI
- Valve replacement 6 months ago
- No requirement for IV diuretics since

Case Study 2

- Mr G – IHD and severe LVSD
- Referred by GP 4/9/14 with ↑SOB and wt gain
- 2 month treatment with IV furosemide 200mg daily
- Lost 53Kg
- Now “ feeling better than he has in years”

Case study 3

- Mr J – numerous hospitalisations for symptom management at end of life
- Every time IV diuretics stopped became fluid overloaded and significantly symptomatic but he nor his family wanted further hospital admissions
- 5 months IV diuretics enabled him to remain at home until he died

- The ability to deliver home IV diuretics was also valued by the family “His garden, which was his pride and joy, was one of the last things he saw,” says his son. “This is really what dad wanted. We’re so grateful.”
- http://www.itv.com/thismorning/hot-topics/a-family-with-heart

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Things we have learned

- Need to create hospital environment at home
  - Low salt diet
  - Fluid restriction
  - Rest
- Don’t assume compliance with these

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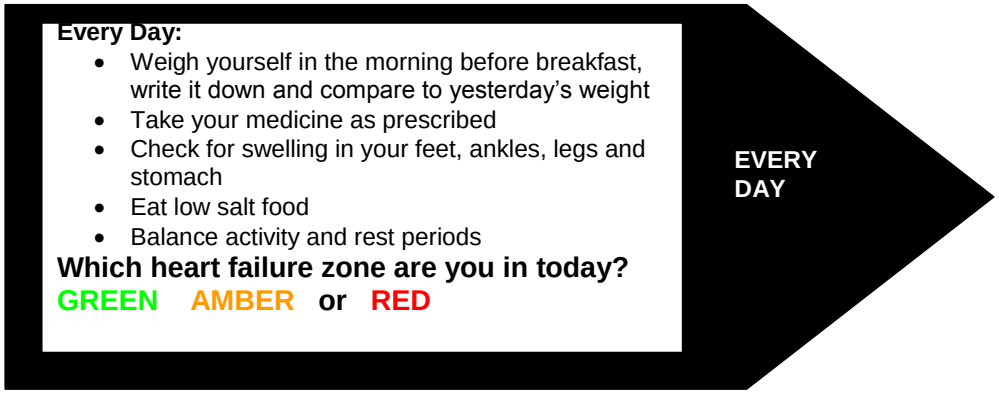
Education

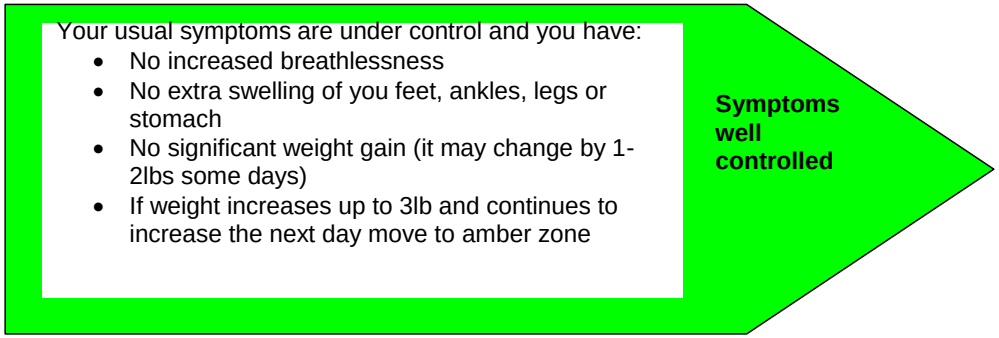
- It was identified that health care professionals working in primary care had limited knowledge of managing cardiac patients
- Cardiac nurses have delivered a total of 18 training sessions to over 200 HCP’s in 2 years
- Training programme of 'red flags' for cardiac conditions for district nurses and nursing home staff
- Development and delivery of a course on management of advanced heart failure in conjunction with East Cheshire Hospice
- Nurses also involved in development and delivery of education about management of long term conditions locally in conjunction with other specialist nurse teams
- All well evaluated
- We provide training sessions for GP's locally on management of heart failure and atrial fibrillation when requested to do so
- Committed to ongoing training which we believe to be key in improving management of patients in primary care.

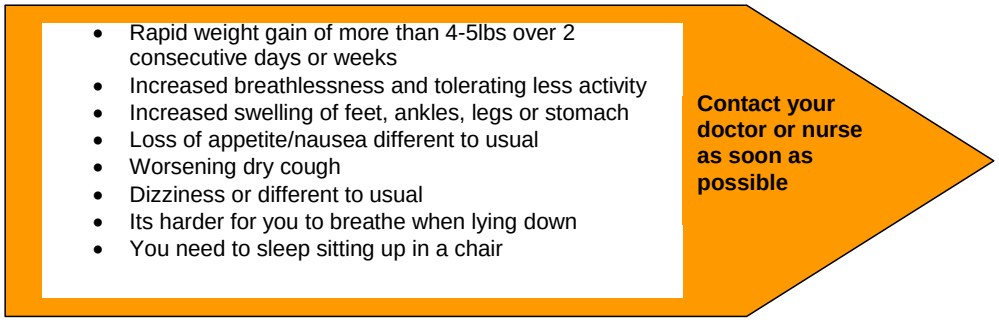
Self management

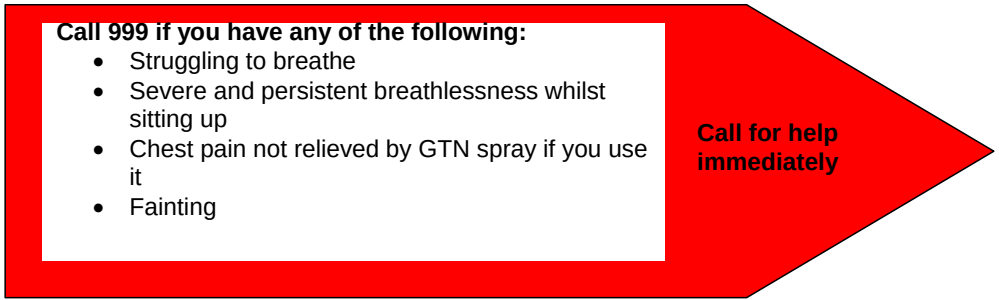
- AQuA self management and decision making pilot project
- The cardiology project created a type of “traffic-light” self-management aid. The nurses show their patients how to understand their own symptoms with the help of three broad indicator levels (green, amber and red)
- Patients take the lead in assessing themselves and decide if they need to step up to the next level, which might be a matter of increasing their home oxygen or contacting the nurse or GP.

TRAFFIC LIGHTS SELF MANAGEMENT TOOL FOR HEART FAILURE









Barriers to implementation

- Communication between primary and secondary care including IT problems
- Acceptance by some consultants and other health care professionals
- Patients

BUT

- Now have been largely overcome
- BHF nurses now have substantive posts

In Conclusion

- A team of multiskilled cardiac nurses who can deliver flexible care wherever required
- Accepted by other HCP's
- Demonstrated reduction in admissions and length of stay
- Improved self management
- Improved management in primary care
- Scope for model to be utilised in other DGH's where cardiology input is inadequate