CAN A FACILITATED MODEL IMPROVE EVIDENCE BASED PRACTICE FOR HEART FAILURE IN PRIMARY CARE?

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PURPOSE:

Management of heart failure (HF) in primary care practices (PCPs) does not always conform to guidelines. The aim of this project was to test a facilitated model of improvement in HF care, Greater Manchester Heart Failure Investigation Tool (GM-HFIT) for effect on PCP identification and management of patients with HF.

AIMS:

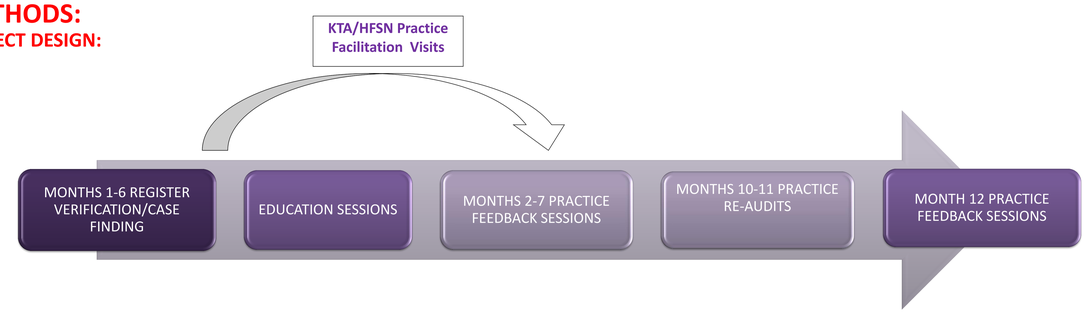
The overarching aim of the project was to improve the quality of service and care for people with HF. The specific aims include:

- Ensure patient care is consistent with evidence based guidelines from NICE and the European Society of Cardiology
- Improve the knowledge and skills of heath care professionals in relation to HF
- Improve data quality and standardisation of documentation

METHODS:

PROJECT DESIGN:

Figure 1



As part of the Greater Manchester Collaboration for Leadership in Applied Health Research and Care (GM CLAHRC) HF improvement project, we conducted a cross-sectional assessment of HF management in a sample of 10 PCPs in 2 different areas of Manchester in 2010–2011. The baseline assessment consisted of HF register validation, case finding, and a skills audit of HF management using GM-HFIT. Case finding was based on 19 discrete searches using read codes for medications (eg ACEI), echocardiography and associated conditions. Records were reviewed by a heart failure specialist nurse (HFSN) supported by a Knowledge Transfer Associate (KTA) working with GM CLAHRC and individual patient recommendations provided if required. Practices were audited on 21 evidence-based indicators of care, and scores were given for the proportion of patients meeting the standard for a total possible score of 80. The practice's total score was further classified according to a traffic light system as red < 25, amber 25 – 49, green 50 – 76, and gold > 76. Re-audit was conducted at 10-11 months. Anonymous patient data was entered onto a SPSS 16.0 database for comparison between audit and re-audit.

Facilitation was provided throughout the project by a HFSN and KTA. This was in the form of interactive education sessions and individual practice support comprising of tailored education for clinical and non clinical staff, assistance with standardising practice systems, for example, coding and advice regarding individual patient management.

Audit Criteria:

Table 1

Audit data	<20%	20-39%	40-59%	60-79%	>=80%
Diagnosis confirmed using echocardiogram	0	1	2	3	4
Aetiology investigated / confirmed	0	1	2	3	4
Functional capacity assessed/ severity using NYHA	0	1	2	3	4
Heart failure review	0	1	2	3	4
Weight done at review	0	1	2	3	4
Ankle oedema checked	0	1	2	3	4
BP recorded	0	1	2	3	4
Pulse rate checked	0	1	2	3	4
Pulse rhythm checked	0	1	2	3	4
Has an ECG been performed	0	1	2	3	4
ACE use or contraindicated in LVSD patients	0	1	2	3	4
Treated to target dose of ACE-I or ARB*	0	1	2	3	4
Beta blocker use or contraindicated in LVSD patients	0	1	2	3	4
Treated to target dose of BB*	0	1	2	3	4
Screening for depression	0	1	2	3	4
Smoking status checked	0	1	2	3	4
Alcohol intake checked	0	1	2	3	4
Nutritional information given	0	1	2	3	4
Flu vaccine given	0	0.5	1	1.5	2
Pneumococcal vaccine given	0	0.5	1	1.5	2
Self care/ education material given	0	1	2	3	4
Total Score					

Traffic Light Score:

Figure 2

As part of the HF skills audit, additional data were also collected, this largely involved co-morbidity information and more specific information around the performance indicators.

RESULTS:

Skills Audit:

- At baseline, patients on the HF register had a mean age of 73 (±14) years, 45% were female, and 80% had 2 or more comorbidities
- The most common comorbidities were hypertension (64%), ischaemic heart disease (46%), atrial fibrillation (36%), and diabetes (32%)
- Only 24% were concurrently or recently (within 12 months) seen in specialist services
- At baseline 60% of 303 patients were appropriately on a HF register, 19% were inappropriate, and 20% needed further investigation.
- A total of 1303 patients were found for definite (n = 173) or possible inclusion to the register.
- At re-audit, inappropriate patients on the HF register decreased by 85%
- Characteristics of HF patients did not change between audits: mean age 73, 55-58% were male, and most had multiple co-morbidities
- Significant improvement to HF patient care was seen at re-audit (see Table 2), and all PCPs improved their overall scores
- Changes to practice and service re-design were ongoing at the time of re-audit, and patient reviews increased by 217%.
- There were also improvements in collaboration with specialist HF services

Traffic Light Scores

Figure 3 shows the baseline traffic light scores and the re-audit traffic light scores by practice. All practices increased their traffic light score at re-audit:

- The **mean Traffic Light score increase was 10 points (a 24% improvement)**
- The highest increase being **91.5%** and the lowest **4.1%**
- **4** practices moved from an **Amber** Traffic Light status to **Green** ***(providing very high quality of care)***
- **1** practice improved their score but still had a Traffic Light status of **Green** ***(providing very high quality of care)***
- **5** practices improved their score but still had a Traffic Light status of **Amber** ***(providing good care, but need to improve in certain areas)***

Increase in Heart Failure Prevalence

Figure 4 shows the percentage increase in HF prevalence for the practices involved in the project:

- There was an overall increase in HF prevalence from 0.55 to 0.67
- Locality A achieved an increase in HF prevalence from 0.56% to 0.84% (a 50% increase)
- Locality B achieved an increase in prevalence from 0.46% to 0.48% (a 5% increase)

The GM CLAHRC team were able to build stronger relationships and had more opportunity to act as facilitators to guide the improvement work in Locality A. It is suggested that this is reflected in the higher increase in prevalence in this locality.

CONCLUSIONS:

The GM-HFIT facilitated model was effective in improving evidence-based management of HF in PCPs, and supporting communication between PCPs and specialists. Support was individualised by the HFSN and KTA, who also served as bridges to other services.

"The GM-HFIT project was a very useful exercise; it has made the clinical team much more aware of heart failure, in general, and the needs of the patient. Very interesting feedback was given by the GM CLAHRC project team, in an easy and understandable format."
Practice Manager

"The GM CLAHRC Heart Failure Programme provides practices with an audit tool that stimulates improvement in management and is tailored to the needs of the practice. It is essential for any Clinical Commissioning Group which is serious about improving care, reducing admissions and raising quality of life for those at the end of their life"
General Practitioner

TABLE 2

	Audit	Re-audit	P value
Traffic Light score (n = 10 PCPs)	42 ± 12	52 ± 9	.003
HF confirmed by echo	82%	93%	<.001
Aetiology confirmed	61%	81%	<.001
LVSD	55%	72.5%	<.001
If LVSD, on ACEI or contraindication noted.	90%	89%	.213
Up-titrating or target dose	58%	65%	.063
If LVSD, on BB or contraindication noted.	75.5%	83%	.001
Up-titrating or target dose	40%	47.5%	<.001
Self-care education	13%	22%	.003

Figure 3

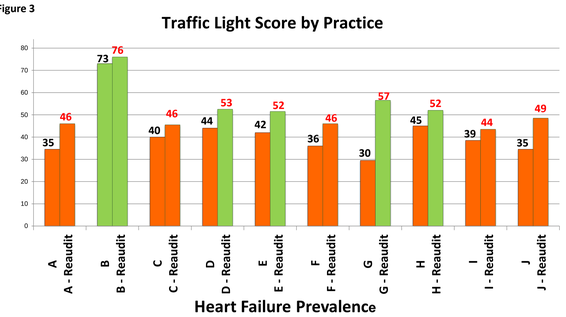
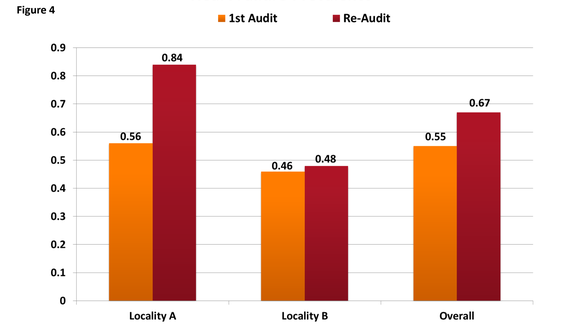



Figure 4