

## Outcomes of a community echo service

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## Need for community echo

- By end of 2008, no one will wait longer than 18 weeks from GP referral to hospital treatment
- Maximum wait for diagnostics should be 4 weeks
- These targets unlikely to be achieved across the whole country with current echo service provision

## Potential services available for primary care

- Traditional NHS Hospital Clinics
- Open Access Echo Hospital Services
- GPSI run clinics
- Private ECHO community services

## Echotech: The Company



## The Clinical Department

- 15 BSE accredited cardiac physiologists
- 3 regions: Midlands, London, SE England
- Each region has a Clinical Operations Manager
- All activity supervised by a Clinical Operations Director
- 1 Clinical Lead

## Echotech Requirements For Scanning

- Minimum BSE dataset for a standard adult transthoracic echocardiogram
- Fully trained BSE accredited cardiac physiologists
- Clear descriptive report relating to specific question posed by referring physician
- Echocardiogram reports available to GP on the same day or within 48 hours if 2<sup>nd</sup> opinion sought
- For patients requiring immediate medical attention, the referring physician is contacted on the day of the report

## Clinical Lead

- Develop reporting and referral guidelines
- Oversee peer review process
- Provide clinical advice relating to individual scans
- To provide twice yearly training sessions for whole department
- To help develop Clinical Governance, Clinical Effectiveness and Risk Management (monthly meetings)
- Assess suitability for ultrasound equipment

## Referral Reasons

### Patients with suspected heart failure

- 1. Based on clinical findings (dyspnoea or peripheral oedema)
- 2. Based on abnormal ECG or abnormal chest X ray
- 3. Based on raised BNP or NT pro-BNP

### Patients with heart murmur

- 4. Heart murmur with cardiac symptoms
- 5. Asymptomatic heart murmur with abnormal ECG or abnormal chest X ray

### Other

- 6. Suspected cardiomyopathy or left ventricular hypertrophy based on clinical findings or abnormal ECG or abnormal chest X ray

## Referral Process

- Once a referral has been received by the PMC, the referral is checked for appropriateness - the referring clinician is required to tick at least ONE of the referral criteria boxes.
- If the referral is deemed appropriate, then the patient is contacted within 48 hours and an appointment time and location is agreed.
- A letter of confirmation will then follow including a map of the NHS site.
- Finally, the patient will be phoned on the day before the clinic to remind him / her of their appointment. This approach has proved highly effective in minimising the rate of DNAs.

### Clinics

- Half day (4 hrs) and full day (8hrs) clinics available
- Scans via portable echo machine
- Each clinic allows between 30 to 45 minutes per patient (therefore a half day clinic scans approximately 7 patients and a full day clinic scans approximately 14 patients)
- All reports are returned to the referring clinician within 48 hours of the test and by at least two different methods including post, fax and email.

### Weekly Peer Review (PR)

**Step 1**

- Echo conducted and reported by a BSE accredited Cardiac Physiologist (CP)
- If the CP requires PR, a request is made on the report form

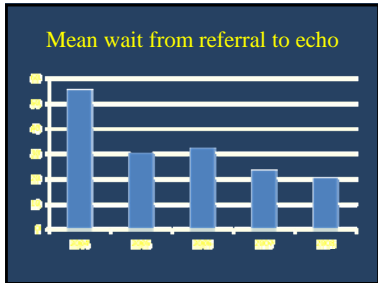
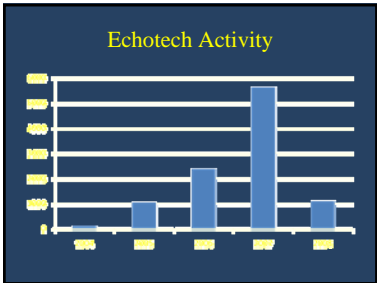
**Step 2**

- 10% of studies performed by a CP are reviewed by a Clinical Operations Manager (COM)
- In addition, all studies 'suggested' for cardiac referral are reviewed by a COM
- In addition, the studies requested for PR are reviewed by a COM

**Step 3**

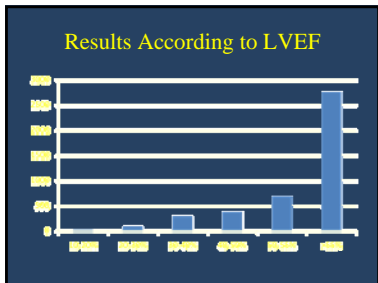
- 10% of studies performed by a COM are reviewed by the Clinical Lead (CL)
- 10% of studies performed by a CP (one per month) are reviewed by CL at monthly Clinical Governance meeting

Approx 30% of all studies undergo weekly peer review



### 2007 Results

- 5613 patients scanned
- 1209 had LVEF < 55%
- 435 had significant (> moderate) valvular heart disease
- 958 referred on for hospital assessment
- 1% DNA rate



### Isle of Wight Results

- 79/365 patients with significant results
- 49 with LVEF < 40%
- 32 > moderate valve disease
- 38 patients referred to local hospital
- 27 had repeat echos; none differed from echotech reports
- 5 deaths

### Icondiogram

- Images, data and report uploaded directly to a secure server and filed online
- Images stored as MP4 files
- Access of images and report from any internet terminal within minutes of the report being uploaded
- Can be utilised by all members of echotech and consultant cardiologists with security access

### Referral Suggested if:

- LV / RV systolic dysfunction of moderate or above
- Grade 3 or 4 diastolic dysfunction
- Moderate or above valve disease
- Pericardial effusion
- Suspected intra cardiac shunt
- Unexplained left ventricular hypertrophy

### Urgent Referral:

- Post MI
  - ventricular septal rupture
  - severe MR
- pseudo aneurysm
- Aortic dissection
- Large pericardial effusion
- Cardiac mass (myxoma, thrombus, vegetation)
- Severe valve disease

### Conclusions

- A community echo programme from a private service is feasible
- Service should be complementary to existing services
- To be successful, the service requires a model similar to hospital setting with adequately trained staff, good referral criteria, strict reporting guidelines
- Regular peer review essential