Post Percutaneous Coronary Intervention (PCI) Clinic Guideline

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and/or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction
Patients will be referred to the “Post Percutaneous Coronary Intervention (PCI) clinic” via the interventionist Cardiologist. The patient will be seen in a Cardiologist-led clinic and assessed by a Cardiology Clinical nurse specialist.

This guideline is for use by the following staff groups:
Cardiology clinical nurse specialist team

Lead Clinician(s)
Dr Jasper Trevelyan
Consultant Cardiologist

Approved by Clinical Effectiveness Committee on:
21st July 2015
This guideline should not be used after end of: 21st July 2017

Key amendments to this guideline

<table>
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<tr>
<th>Date</th>
<th>Amendment</th>
<th>Approved by:</th>
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<tbody>
<tr>
<td>24.08.2015</td>
<td>New Document</td>
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Post Percutaneous Coronary Intervention (PCI) Clinic Guideline

Introduction
The Post PCI clinic has been set up to review patients post PCI. The Cardiology specialist nurse (CNS) will see this group of patients. Clinics will need to be run alongside a Cardiologist. Patients will be identified by the interventionist Cardiologist following a presentation of either elective PCI or PPCI to return to see the specialist nurse.

The Clinical Cardiac Specialist Nurse will provide this service alongside a Cardiologist. Guidelines will be adhered to by the specialist nurse (see chart 3).

Competencies Required
The cardiology specialist nurse team will assist with this service. Competence will be assessed by already established cardiac knowledge, clinical supervision, clinical professional development and relevant educational courses.

The team is experienced within Cardiology and are non-medical prescribers and have health assessment skills and Advanced Life support.

Patients Covered
The CNS will see patients post PCI with no further complications as identified by the Cardiologist. (i.e. patients requiring further intervention should not be referred).

Guideline
- Patients will initially be referred to the CNS via the Interventionist Cardiologist. Cardiology secretaries will inform appointments department and letters will be generated to invite the patients to the Cardiologist led clinic for a nurse appointment. (flow chart 1)
- Health records will generate an outpatient pack to use in clinic.
- CNS will utilise clinic pro-forma as their reference point (Chart 3)
- Patients attending the clinic will need baseline observations (BP, HR, and SPO2) and ECG (performed by outpatient staff).
- Patient notes and angiogram report will be viewed via ez-notes/Bluespier.
- Patient will be seen by the CNS. A history will be taken and any further chest pain will be assessed. The patient will be physically examined and medication will be reviewed.
- The CNS will discuss any concerns or new symptoms with the Cardiologist. (Flow chart 2)
- At the end of the consultation the history sheet and patient outcome will be completed.
- Audit data will be collected by the CNS.
Monitoring Tool
This should include realistic goals, timeframes and measurable outcomes.
- This service will be monitored on a quarterly basis initially then on an annual basis.

How will monitoring be carried out?
- Monitoring will look at patient numbers and patient outcomes

Who will monitor compliance with the guideline?
- The cardiology specialist sisters will collect data and present outcomes at cardiology group meetings

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<tbody>
<tr>
<td>Referral numbers will be monitored, patient outcomes will be reviewed and discussed.</td>
<td>Audit of the service provided will be carried out, devising datasets to capture outcomes. Informal clinical supervision with all members of the team.</td>
<td>Review of outcomes via GP letters and informal clinical supervision.</td>
<td>The lead nurse for post PCI clinic will be responsible for these checks</td>
<td>The results of the monitoring will be provided at cardiology audit meetings.</td>
<td>The reports will be shared at the audit meetings 4 times a year.</td>
</tr>
</tbody>
</table>
References:

Acute coronary syndrome guideline. (including management of ST elevation and non-ST elevation myocardial infarction) WAHT-CAR-043. May 2012

CG67 Lipid Modification. NICE 2010
CG127 Hypertension. NICE 2011

www.nice.org Secondary prevention in primary and secondary care for patients following a myocardial infarction. NICE clinical guideline 48

www.nice.org Hypertension. NICE clinical guideline 34

www.nice.org Lipid modification. NICE clinical guideline 67

Strategy for Management of Patients with suspected or known stable angina in angina in primary care. WAHT-CAR-032

Acute Coronary Syndrome Guideline (including management of ST elevation and non-ST elevation Myocardial Infarction) WAHT-CAR-043

Cardiac Catheterisation WAHT-CG-056

Guideline for treatment of chronic Heart Failure caused by left ventricular dysfunction WAHT-CAR-041
Flow chart 1

Referral system for PCI clinics

Patient had PCI, no further treatment planned. Cardiologist refers patient to post PCI clinic via cardiology secretaries

Appointments send letter to patient inviting them to post PCI clinic

Ez-notes pack prepared by health records and sent to clinic for nurse. Header sheet, patient outcome, stickers and continuation paper.
Flow Chart 2

PCI Clinic flow

- No admin support

Call 1<sup>st</sup> patient into clinic

- Review patient’s notes, angio’ report, Echo report and bloods
- Take history.
- Examine patient
- Review of chest pain
- Any issues with BP and Cholesterol refer to guidelines and pro-forma
  Discuss with Cardiologist

CHEST PAIN?

- NO
  If no concerns, patient well, bloods, ECG and examination satisfactory- Discharge from Cardiology clinic.

- YES
  Assess patient’s chest pain via OLDCARTS. Discuss with Cardiologist
  - Outcome the patient.
  - Complete letters.
Flow chart 3

Shared Cardiology Clinic Pro-forma

To see patients returning post MI/PCI.

Initial Diagnosis:

Any Angina, new symptoms? Y/N

If yes discuss with Cardiologist
Any new problems?

Lifestyle issues: Smoking, healthy diet, alcohol consumption, exercise

ECG normal Y/N  Cardiac rehab Y/N

BP within normal limits Y/N  Lipids checked Y/N

Appropriate medication Y/N

Physical examination if clinically indicated:

Investigations required Y/N

Check angio puncture site- pulse?

Review ECHO report-
Discuss with cardiologist if EF < 35%

Disposal:

Discharge
Follow up in Shared clinic
Follow up with Cardiologist
Flow chart 4
Guidelines for shared Cardiology clinic

Patients attending shared clinics will have been selected following post MI/PCI

- Angina symptoms, such as chest discomfort, exertional symptoms – if so discuss with Cardiologist
- Any new problems? If in doubt discuss with Cardiologist.
- ECG Normal- if not, document reading. Discuss with Cardiologist.

- Appropriate medications:
  - Betablocker- Bisoprolol 1.25mg – 5mg daily
  - ACE I- Ramipril 1.25mg-5mg bd
  - Clopidogrel 75mg od / Ticagrelor 90mg bd (for 1 year post PCI or post MI with no intervention)
  - Aspirin 75mg life- long unless contra-indicated –(clopidogrel 75mg- added if not tolerated)
  - Statin- Atorvastatin 80mg: Aim for >40% reduction in non-HDL cholesterol from starting level (Total cholesterol - HDL) or LDL <1.8, whichever is higher. If not achieved on maximum tolerated dose of atorvastatin, consider adding ezetimibe).

- BP within target range as per NICE guidelines:

If BP raised above 140/90mmHG recheck manually. Are they on a beta blocker, ACE I, if so titrate ACE I. (maximum Ramipril 5mg bd) (ensure no contra-indications: deranged U&E’s, deranged LFT’s, heart failure- if so discuss with Cardiologist)

If ACE I contra-indication:

Consider Amlodipine 5mg od

If patient >55 years or of African Caribbean origin : Calcium channel blocker or Thiazide type diuretic.

Consider Amlodipine 5mg or Indapamide  2.5mg od

If patient <55 years prescribe ACE I or Angiotensin II receptor antagonist if not tolerated.

Ramipril or Lisinopril
It is the responsibility of every individual to check that this is the latest version/copy of this document.

- **Lipids**: has cholesterol been checked by GP (fasting) Target range as per NICE guidelines:
  
  Aim for Total cholesterol < 4mmols/l
  And LDL <2 mmols/l
  If high trigs > 3mmols/l and HDL t<0.8 then discuss with Cardiologist

- **Lifestyle issues**:
  - Attended Cardiac rehab programme. Exercise taken each week- recommended 30 minutes a day.
  - Smoking- any referral required to NHS smoking cessation
  - Alcohol consumption- <3-4 units a day for men and < 2-3 units a day for a women, avoid binge drinking.
  - Healthy diet- 5 a day, low fat, high fibre, low salt, low sugar.

- **Investigations**:
  - Echocardiogram if clinical signs indicate i.e new heart sounds, clinical signs of heart failure.
  - Exercise tolerance- ?new onset angina.
  - 24 hour tape- palpitations/ arrhythmias
  - Angiogram- if indicated by new symptoms of chest discomfort and Cardiologist request.
  - Ultrasound- false aneurysm post angiogram

- **Disposal**:
  
  Discharge into GP’s care
  Follow-up in 3 months in shared clinic
  Cardiologist follow-up pending on plan of care and investigation.
**Contribution List**

**Key individuals involved in developing the document**

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
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<tbody>
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<td>Sally Baker</td>
<td>Senior Cardiac Assessment Sister</td>
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<td>Katherine Smith</td>
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<td>Consultant Cardiologist</td>
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<td>Dr Helen Routledge</td>
<td>Consultant Cardiologist</td>
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<td>Dr David Smith</td>
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<td>Dr William Foster</td>
<td>Consultant Cardiologist</td>
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<tr>
<td>Dr Dzifa Abban</td>
<td>Consultant Cardiologist</td>
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<tr>
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<tr>
<td>Emma Innes</td>
<td>Cardiology specialist nurse Matron</td>
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<td>Jo Kenyon</td>
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<td>Emma Fisher</td>
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<td>Kim Bull</td>
<td>Cardiac Catheterisation manager</td>
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**Circulated to the following CD’s/Heads of dept for comments from their directorates / departments**

<table>
<thead>
<tr>
<th>Name</th>
<th>Directorate / Department</th>
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<tbody>
<tr>
<td>Ann Carey</td>
<td>Head of Nursing</td>
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**Circulated to the chair of the following committee’s / groups for comments**

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<tr>
<th>Name</th>
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<tr>
<td>Cardiology</td>
<td>governance</td>
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**Supporting Document 1 - Equality Impact Assessment Tool**
To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

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<tr>
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<tr>
<td><strong>1. Does the policy/guidance affect one group less or more favourably than another on the basis of:</strong></td>
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<tr>
<td>• Race</td>
<td>No</td>
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<td>• Ethnic origins (including gypsies and travellers)</td>
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<td>• Nationality</td>
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<td>• Religion or belief</td>
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<td>• Sexual orientation including lesbian, gay and bisexual people</td>
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<td>• Age</td>
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<td><strong>2. Is there any evidence that some groups are affected differently?</strong></td>
<td>No</td>
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<td><strong>3. If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?</strong></td>
<td>N/A</td>
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<td><strong>4. Is the impact of the policy/guidance likely to be negative?</strong></td>
<td>No</td>
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<td><strong>5. If so can the impact be avoided?</strong></td>
<td>N/A</td>
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<tr>
<td><strong>6. What alternatives are there to achieving the policy/guidance without the impact?</strong></td>
<td>N/A</td>
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<td><strong>7. Can we reduce the impact by taking different action?</strong></td>
<td>N/A</td>
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If you have identified a potential discriminatory impact of this key document, please refer it to Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Human Resources.
Supporting Document 2 – Financial Impact Assessment
To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

<table>
<thead>
<tr>
<th>Title of document:</th>
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<tbody>
<tr>
<td>1. Does the implementation of this document require any additional Capital resources</td>
<td>No</td>
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<td>2. Does the implementation of this document require additional revenue</td>
<td>No</td>
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<td>3. Does the implementation of this document require additional manpower</td>
<td>No</td>
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<tr>
<td>4. Does the implementation of this document release any manpower costs through a change in practice</td>
<td>No</td>
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<tr>
<td>5. Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff</td>
<td>No</td>
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<tr>
<td>Other comments:</td>
<td>Nil</td>
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If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval.