

28<sup>th</sup> February 2010

Dear Colleague,

### **NHS Health Check in Lambeth**

Welcome to the 2010 edition of the NHS Health Check Resource folder. This pack describes the requirements for the delivery of NHS Health Check in Lambeth. It provides the guidance for any subsequent treatments and health promotion interventions that your patients may need.

Patients without pre-diagnosed Cardiovascular Disease (CVD) and other exclusions aged 40 -74 will be called for an NHS Health Check on a 5 yearly basis. In Lambeth the decision has been made that patients will be invited to come on their, 40<sup>th</sup>, 45<sup>th</sup>, 50<sup>th</sup>, 55<sup>th</sup>, 60<sup>th</sup>, 65<sup>th</sup> and 70<sup>th</sup> birthdays. This year all patients aged 71 – 74 will also be invited to have a check. .

Under the terms of the LES, you are also encouraged to opportunistically offer checks to any patient using your service who is within the Health Check age range, particularly targeting high risk groups, which are men, people from lower socio-economic groups and people who are of South Asian, African and Caribbean origin.

### **Background**

The term 'vascular disease' directly or indirectly includes heart disease, stroke, diabetes, kidney (renal) disease and peripheral arterial disease. Almost all vascular disease is preventable, for instance, diabetes is preventable in 2/3 of people at high risk. CVD is the main cause of death and disability in England, accounting for 38% of deaths and costing the economy an estimated £25.8 billion a year.

The NHS Health Check in Lambeth is made up of two parts. The first part is risk assessment, where a patient's characteristics (history – familial and personal plus physical and biological elements) are collected to enable risk calculation. The second part is risk communication and lifestyle advice and referral (if appropriate). It places great focus on prevention, enabling people to remain healthy for longer. At the same time it tackles inequalities, including socio-economic, ethnic and gender inequalities.

### **The Resource Pack**

In Lambeth an NHS Health Check Implementation group was established in September 2008 with multi-disciplinary representation, including representation from

the SEL Cardiac Network as well as General Practice and Community Pharmacy. This group has worked collaboratively to produce this pack, which includes the two components required to implement the checks. The clinical lead for the development of the pack was Dr Cajeat.

The pack contains:

- The Best Practice Guidance on how to undertake a vascular check in Lambeth
- Information on the call process and guidance on opportunistic and targeted screening
- Information on non pharmacological interventions (lifestyle interventions) to support patient's post risk assessment
- Information on current pharmacological interventions and prescribing guidelines
- Data collection and monitoring requirements
- Plus useful contacts to give you support in implementing the checks

This pack is available in both electronic and paper versions. To view these documents electronically, log on to ([www.lambethpct.nhs.uk/](http://www.lambethpct.nhs.uk/) - *this is being arranged*)

You will note that the pack is in modular form, with separate sections. This means that we can update the information and provide you with new inserts if changes are made during the pilot year and beyond.

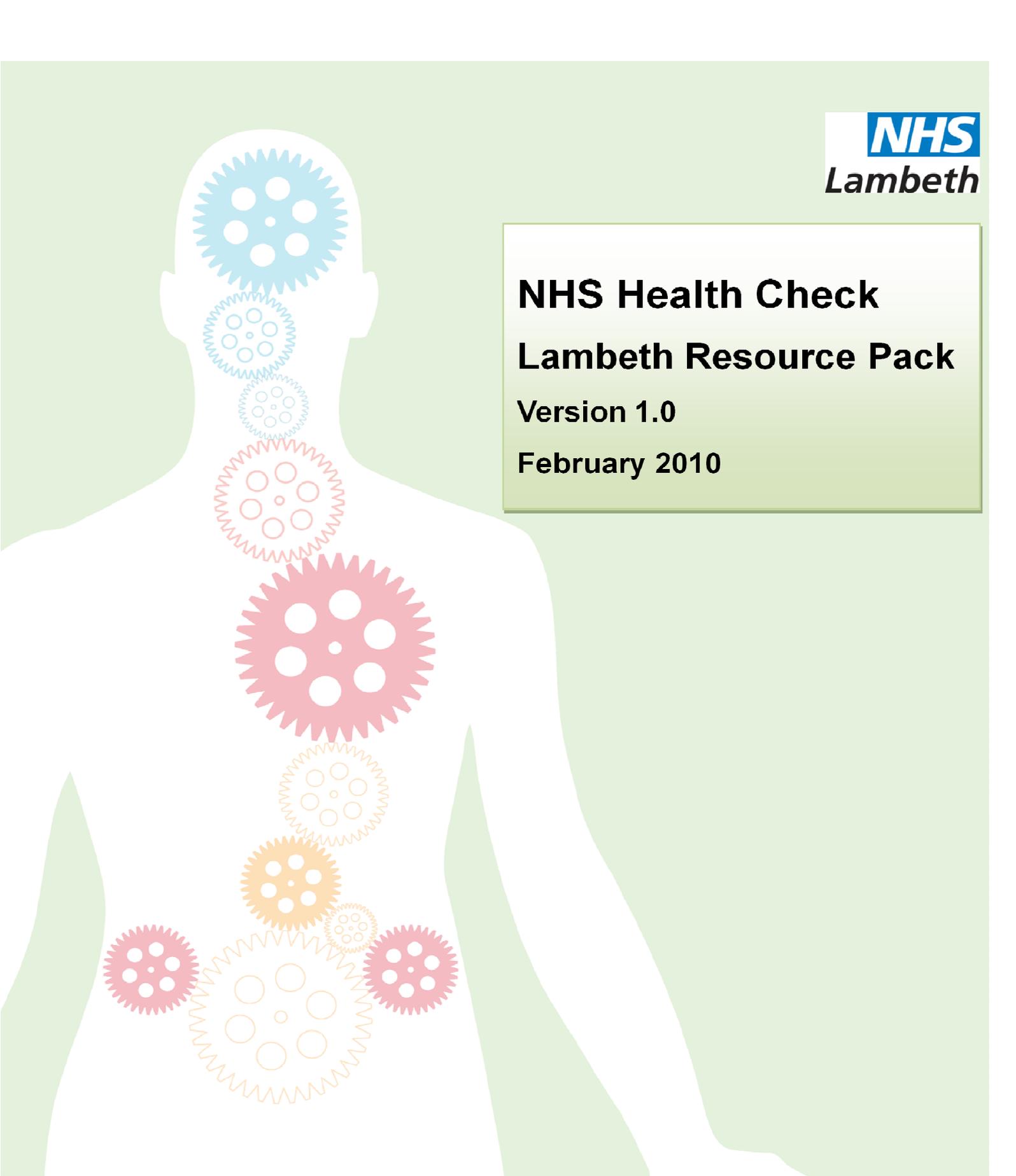
We do hope you find this resource pack useful. If you have any suggestions for additional items, or any corrections/updates, we would be most grateful if you would send them to: [lam-pct.healthchecks@nhs.net](mailto:lam-pct.healthchecks@nhs.net)

Many aspects of the NHS health checks will evolve with time. This is an ambitious new programme we are undertaking. The pack reflects the best of our knowledge at this point in time and will no doubt change in due course as more guidance comes from the Department of Health.

With best regards

Dr Ruth Wallis  
Director of Public Health

Dr Eric Cajeat  
NHS Lambeth CVD Lead  
GP



**NHS Health Check  
Lambeth Resource Pack**

**Version 1.0**

**February 2010**

**NHS Health Check Lambeth Resource Pack**

**Version 1.0, February 2010**

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## Preface

This guidance on delivery of NHS Health Check was produced for providers commissioned by NHS Lambeth to support providers in delivering checks in the first pilot year of our implementation. It is a collective effort and reflects best practice and Lambeth policies and procedures as we know them at the time of writing. We expect to amend and update this pack during the course of the year.

I am very grateful to the team who have contributed an enormous amount of time and energy to this, particularly Dr. Cajeat for the clinical guidance in Part 2 on this resource pack.

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Health and Well-Being/Long Term Conditions

NHS Health Check Resource Pack  
Version 1.0  
February 2010  
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## Instructions: How to use this pack!

This pack is in sections so that you may flip to the pages you need most. It is divided into three parts and each part into sub sections:

### **PART 1 .....Page 9-10**

1.1

#### **• NHS Health Check Call and Recall System**

This describes the process that the PCT has put in place for the initial call of eligible population between the age of 40 to 74 without a pre-diagnosed cardiovascular disease, hypertension, heart disease, stroke, diabetes and chronic kidney disease.

### **PART 2 .....Page 12-59**

2.1

#### **• NHS Health Check: Vascular Risk Assessment and Management Best Practice Guidance**

This covers all the guidance that you need for the successful delivery of the checks, including clinical management, risk score and brief advice on monitoring processes involved.

**3.0**

• **SECTION 3: DATA COLLECTION AND MONITORING.....Page 64-71**

This identifies how data is collected and the methodology for assessing and monitoring its usage

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• **SECTION 4: NON PHARMACOLOGICAL INTERVENTIONS.....Page 72-101**

This covers all the information you need for providing your patients with post risk assessment advice and support.

**5.0**

• **SECTION 5: PHARMACOLOGICAL INTERVENTIONS.....Page 106-114**

This includes both pharmacological prescribing guidelines.

**6.0**

• **SECTION 6: OTHER INFORMATION.....Page116-117**

This includes NHS Lambeth Health Check key staff contact details.

# PART 1

1.0

- **SECTION 1: VASCULAR CHECK**

1.1

- **NHS Health Check Call and Recall System**

## **The Call Process**

Patients will be called on the basis of their age; every 5 years after their 40<sup>th</sup> birthday so the initial call will consist of patients aged 40, 45, 50, 55, 60, 65, 70, up to 75 yrs old. Patients with pre-existing cardio-vascular disease (i.e. CHD, Diabetes, CKD, Hypertension and Stroke) will be excluded from the list as well as a small number of other patients on the basis of clinical indications.

Invitations for health check will be sent as if from the practice, and it is important that the PCT are informed of any reasons that the mail could not be delivered, or the patient should not be contacted again (see example letter Page 11).

Newly registered patients will be put on a postponed flag for 6 months in order to establish if they have had a check or not.

Non-responders will be picked by exclusion of responders within 16 weeks of the initial invitation, and will be sent a reminder letter.

Undelivered mail if returned to the PCT will trigger a flag on the patient for postponement by 6 months.

Changes in patients' addresses, if received by the PCT, will be done manually on the database and GPs will be sent notification.

Contact: Jay Pallet Tel: **0203 0493876** Email: ***lam-pct.hcadmin@nhs.net***

## **GP Approval of call lists for NHS Health Check**

On a monthly basis the practice nominated contact will receive notification of a list ('Puri Notification List' – PNL) of patients who will be called for a Health Check. The practice will need to review the list and indicate whether or not each patient should be called. Reviewing the list will be done using a form on the Lambeth Health Check website. It is anticipated that the list will include approximately 4 patients per 1000 practice population per month, so an average practice would review a list of about 20 patients per month.

Patients who are to be opted out of the call program will need to be marked with an appropriate reason by selecting an option on the system. The remaining patients can be approved for call by a single action. Once the PNL has been reviewed by the practice, the patient will be invited for a free NHS Health Check by the PCT.

## Template of Invitation Letter

Dear Xxxx

We are inviting you to attend your free NHS Health Check on xx xxxxxx xxxx at xxxx.

NHS Health Check is being offered to people aged between 40 and 74 once every five years.

The check assesses your risk of developing heart disease, stroke, kidney disease or diabetes. If there are any warning signs, then together we can do something about it.

There is good evidence that taking early action can improve your health and prevent the onset of these conditions.

The check should take about 20–30 minutes and is based on some simple questions around age, sex, family history, height, weight and blood pressure. There will also be a simple blood test to measure your cholesterol level.

Following the check, you will receive free personalised advice about what you can do to stay healthy. You may be offered further treatment or medicine to help you keep healthy.

Take a look at the enclosed leaflet for more information about the NHS Health Check and how it could benefit you.

To find out more information about your local resource for health and wellbeing in Lambeth visit [www.nhs.uk/lambeth](http://www.nhs.uk/lambeth)

If you cannot attend this appointment, please call the xxxx on xxx xx xxx and we will arrange a more suitable time for you.

Yours sincerely

Xxxxxxxxxxxxxxxxxxxx

# Free NHS Health Check

Helping you prevent heart disease, stroke,  
diabetes and kidney disease.



## **PART 2**

**2.0**

- **SECTION 2: BEST PRACTICE GUIDANCE**

**2.1**

- **NHS Health Check:  
Vascular Risk Assessment and  
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- **References**

## • NHS Health Check: Vascular Risk Assessment and Management Best Practice Guidance

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## **A. Acknowledgements:**

Firstly, I would specifically like to thank the following for their help and/or expert advice towards the production of this guideline:

- **Dr Anthony Wierzbicki**, Consultant Lipids & Metabolic Medicine, Guy's & St Thomas Hospitals.
- **Anna Hodgkinson**, Senior Prescribing Adviser, NHS Lambeth.
- **Dr Aman Bhandari**, Darzi Management Fellow, NHS Lambeth.

I would also like to thank:

- **Dr Hiten Dodhia**, Consultant in Public Health Medicine, NHS Lambeth.
- **Catherine Kironde**, Project Manager, Health Promotion in Primary Care NHS Lambeth.
- **Fraser Serle**, Commissioning Manager Staying Healthy, Directorate of Service Strategy & Commissioning, NHS Lambeth.
- **Helen Williams**, consultant pharmacist for cardiovascular disease, South London

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- **Sara Nelson**, Associate Director SE London Cardiac & Stroke Network (chair)
- **Dr Carol Gayle**, Consultant in diabetes, King's College Hospital.
- **Dr Stephen Thomas**, Consultant in Diabetes & Endocrinology, Guy's & St Thomas Hospitals.
- **Dr Charles Gostling**, GPwSI in diabetes, Lewisham.
- **Dr John Balazs**, GP, Lambeth.

Dr E. Cajeat

## **B. Executive summary:**

The NHS Health Check, vascular risk assessment and management programme is an innovative primary prevention national initiative targeting vascular disease: heart disease, stroke, diabetes, kidney disease and peripheral arterial disease. Vascular diseases are the main cause of death and disability in England and all have common risk factors.

Offered every 5 years for all patients aged between 40 and 74 years of age via a universal risk assessment and management programme it aims to reduce the modifiable risk factors of those vulnerable to developing vascular disease, and to detect those already suffering.

This systematic recall will exclude all patients already diagnosed with the following conditions: hypertension, ischemic heart disease, stroke, diabetes and chronic kidney disease.

The programme is made of 4 key components:

- 1- A Cardio-vascular Disease (CVD) risk assessment,
- 2- A CVD risk calculation, adjustments & communication,
- 3- Three additional modules (Diabetes filter, Kidney disease filter and hypertension assessment)
- 4- A risk management and interventions programme.

The CVD risk assessment is undertaken as a face to face consultation (Department of Health requirement). The following core information, measurements and blood tests are conducted: age, gender, ethnicity, family history of coronary heart disease, smoking status, level of physical activity, brief alcohol FAST screen, height/weight/BMI, BP & pulse, random TC/HDL-C.

If systolic blood pressure (SBP) or diastolic blood pressure (DPB) exceeds 140mmHg or 90mmHg respectively, Creatinine blood measurement and eGFR calculation are required and if BMI is over a specific ethnicity threshold a random blood measurement of HbA1c is also required (diabetes filter).

Near patient testing will be used in a small number of pilot settings in year 1 to inform year 2 for random TC/HDL-C and HbA1c.

A CVD risk score is then calculated using Framingham modified risk tool (JBS2), importantly adjusted as per necessary, and stratified in 4 categories:

- <10% low risk,
- ≥10 - <20% moderate risk,
- ≥20 - <30 high risk
- ≥30% very high risk.

CVD risk is then appropriately communicated to the patient with brief advice/information for risk reduction and maintenance. Patients with moderate/high/very high CVD risk are referred on to specific care pathways (including lipid modifying interventions) to address their risk. Newly diagnosed patients with hypertension, diabetes or hyperlipidaemias are referred and treated using existing pathways, best practice and current evidence based guidelines.

Any patient, independently of their CVD risk, who is a smoker and wants to quit smoking, should be offered the support of a NHS Stop Smoking Service. Similarly, where a patient's weight status is a key risk factor (e.g. morbid obesity), advice and/or onward referral should be provided following current evidenced based guidelines.

## **C. Introduction:**

### **1. Program rationale:**

Vascular diseases (heart disease, stroke, diabetes, kidney disease and peripheral arterial disease) are the main cause of death and disability in England accounting for 38% of deaths and costing an estimated £25.8 billion per year<sup>1</sup>.

Diabetes increases risk of heart attack (MI) by 2-4 times and an increase in fasting blood glucose of 1mmol/litre increases risk of mortality from ischaemic heart disease (IHD) by 20% and from stroke by 28%. 75% of those with diabetes die from cardiovascular disease.

The two main causes of kidney disease are high blood pressure and diabetes.

Most of Vascular Disease is thought to be preventable. In the INTERHEART study<sup>2</sup>, one of the largest prevention studies **9 modifiable risk factors** were associated with 90% of the risk of acute MI in men and 94% in women (smoking, diabetes, hypertension, abdominal obesity, low psychosocial index, low dietary intake of fruit/vegetables, lack of physical activity, alcohol, ApoB/ApoA1 ratio).

Established cardiovascular risk factors fall into 3 categories:

- 1- Lifestyles: **(Modifiable)**
  - ✓ Diet (fruit-veg./alcohol/salt intake)
  - ✓ Smoking
  - ✓ Physical activity
- 2- Biochemical or physiological characteristics: **(Modifiable)**
  - ✓ Blood pressure
  - ✓ LDL cholesterol
  - ✓ HDL cholesterol
  - ✓ Glycaemia / Diabetes (Diabetes is preventable in 2/3 of people at high risk)
  - ✓ Overweight / Obesity
  - ✓ Psychosocial factors
  - ✓ Thrombogenic factors
  - ✓ Markers of chronic inflammation
  - ✓ Erectile dysfunction
- 3- Personal characteristics: **(Non-modifiable)**
  - ✓ Age (Age is the most powerful risk factor)
  - ✓ Sex
  - ✓ Family history of premature CVD
  - ✓ Personal history of CVD
  - ✓ Genetic markers (includes ethnicity)

Most of the current national strategies focus largely on secondary prevention, e.g. QOF contract. However, there is strong evidence that primary prevention is effective in reducing vascular disease mortality:

- CHD mortality rate fell by 54% between 1981 and 2000 in England and Wales. Modelling this fall, Belgin et al. (2004)<sup>3</sup> concluded that:
  - half could be attributed to primary prevention (defined as reduction in the 3 major risk factors in people without recognised CHD)
  - compared with secondary prevention, primary prevention achieved a fourfold larger reduction in death (risk factor reductions in CHD)
  - reduction of smoking prevalence (39 to 28%) was the largest contributor followed by cholesterol and BP reduction (diet and life-style advice)
- Both blood pressure and lipid lowering primary prevention studies have shown a reduction in risk of heart disease:
  - WOSCOPS<sup>4</sup>: 30% reduction in risk of fatal and non fatal MI (pravastatin versus placebo)
  - AFCPS/TexCAPS<sup>5</sup>: 37% reduction for the first acute major coronary event (fatal/non fatal MI, unstable angina, sudden cardiac death) (Lovastatin versus placebo)
  - LRC-CPPT<sup>6</sup>: 24% reduction in CHD death and 19% reduction in non fatal MI (cholestyramine versus placebo)
  - Lipid lowering arm of ASCOT<sup>7</sup>: 36% risk reduction of nonfatal MI and fatal CHD (atorvastatin versus placebo)
  - Cholesterol Treatment Trialists' meta-analysis<sup>8</sup>: 21% reduction of all major cardiovascular events per 1mmol/L reduction in LDL-C with statin therapy.
- For CVD primary prevention with aspirin, current evidences are unclear (please see appendix 1)

At present, vascular disease is detected in primary care, and primary interventions are implemented to reduce risk factors. However, there is no systematic programme and a considerable amount of vascular disease goes undetected (i.e. those at risk are not identified). If the status quo is maintained then the rates of non-detection and un-assessed risk factors will continue, leading to high levels of disease as the population ages.

The NHS Health Check programme is a key component to achieving the national 2010 health inequalities target relating to life expectancy and highlights a major policy shift toward primary prevention. It offers a universal risk assessment and encompasses a management programme aiming to reduce the risk factors of those vulnerable to developing vascular disease and to detect those already suffering.

The intended effect is a higher uptake of primary prevention interventions including: statins, antihypertensive medication, brief exercise interventions, weight management, intensive lifestyle management for impaired glucose tolerance and smoking cessation. These aim to reduce vascular disease

mortality, morbidity and health inequalities. Locally, this should reduce the gap in CVD mortality and in life expectancy between Lambeth and England.

The Department of Health modelling<sup>1</sup> estimates that the programme has the potential to prevent 1,600 heart attacks and strokes, save up to 650 lives each year, prevent over 4,000 people a year from developing diabetes and allow early detection at least 20,00 cases of diabetes and kidney disease.

## 2. Scope<sup>9</sup>:

All patients aged between 40 and 74 years old inclusive will be recalled every 5 years for an NHS Health Check to assess their vascular risk and provide appropriate management.

This systematic recall will exclude all patients already diagnosed with the following conditions:

- Hypertension
- Ischemic Heart Disease
- Stroke
- Diabetes
- Chronic Kidney Disease

- **Hypertension:** under 2009-10 QOF guidance all patients newly diagnosed with hypertension should have a full CVD risk assessment within 3 months of diagnosis.
- **IHD:** all patients should already be benefiting from secondary prevention risk reduction strategies
- **Diabetes:** all diabetic patients are considered at high CVD risk and should benefit from appropriate risk reduction strategies
- **CKD:** all patients should benefit from secondary prevention risk reduction strategies

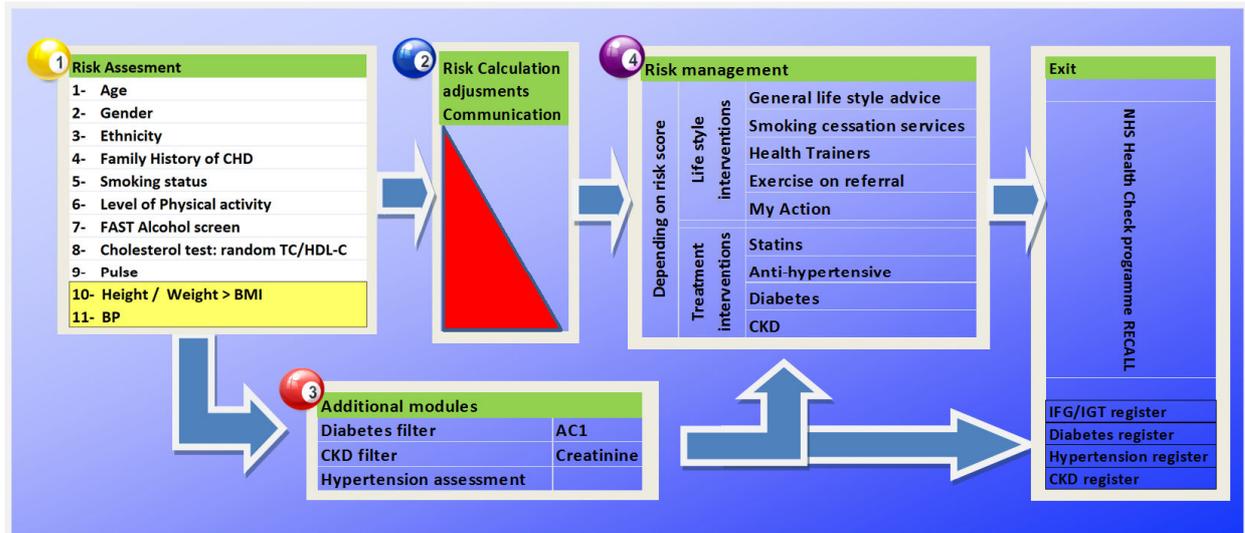
**At various stages in the NHS Health Check assessment new co-morbidities will be found which will need investigation, treatment and eventually referral to an appropriate Health Care Professional (GP, Nurse practitioner, secondary care specialist).**

## 3. Overview:

The NHS Health Check programme is made of 4 key unequivocal components<sup>9</sup>:

1. A CVD risk assessment,
2. A CVD risk calculation, adjustments & communication
3. Three additional modules:
  - a. Diabetes filter
  - b. Kidney disease filter
  - c. Hypertension assessment
4. A risk management and interventions programme

# NHS Health Check programme



**It is important to note that CVD risk assessments carried out under Lambeth high CVD risk register LES do not comply with NHS health check programme requirements.**

The NHS Health Check programme is a more holistic programme (e.g. including a diabetes and CKD filter). Patients between 40 and 74 years old inclusive and on high CVD risk register will be part of the 5 years recall programme and will have the benefit of a new CVD risk assessment.

## **4. Work force service delivery specification:**

Depending on workforce availability, each primary care practice will have the flexibility to involve a large range of Health Care Professional (HCP): phlebotomists, health care assistants, nurses, nurse practitioner and GPs. All primary care HCP and Pharmacists must remain within their professional remits and follow clinical governance frameworks.

*“Appropriate training is an essential part of being able to convey an individual’s risk of developing vascular disease in a way that can help motivate them to change, while not being alarmist”<sup>8</sup>. Any primary care HCP and Pharmacists involved in communicating CVD risk will have to have undertaken PCT approved training.*

## **D. Initial Assessment – Visit 1:**

### **1. Core requirements:**

Under DH guidance<sup>9</sup> this is expected to be delivered in a **face to face setting**.

The patient should be given an explanation in lay words of the reasons for this assessment, what is going to be done, and its benefits and consequences:

- *By asking you simple questions and measuring specific elements (e.g. BP, height/weight) and doing some appropriate routine blood*

tests we are able to have a rough estimate/idea of your chance (risk) of developing some types of diseases (CVD - Hypertension, Stroke, IHD, PVD / diabetes / kidney disease) in the near future (over the next 10 years).

- We may also detect early stages of those diseases for which you currently have no or very little symptoms.
- We have interventions (advice, treatments) to reduce your risk and to treat any problems detected, e.g. high cholesterol, high BP...
- This will allow us to:
  - give you life-style advice to reduce your risk and prevent you developing such diseases in the future
  - give you specific treatments if you are at “high risk” or if we have detected some diseases

Informed consent must be obtained from the patient at this point to identify if they wish to continue with the assessment. If the answer is “no”, discuss reasons, offer options to review and document in the patient record and read-code appropriately using the template.

## 2. Core risk assessment data requirement:

- 1- Age
- 2- Gender
- 3- Ethnicity
- 4- Family History of Coronary Heart Disease
- 5- Smoking status
- 6- Level of Physical activity
- 7- Brief Alcohol FAST screen
- 8- Random TC/HDL-C
- 9- Height / Weight and BMI
- 10- BP / Pulse

### Inclusion rules for previous tests and observations: 10

- Non-blood results: valid for up to 2 months
- Blood results: valid for up to 6 months prior to date of NHS Health check

1- **Age**: should be between 40 and 74 inclusive

2- **Gender**

3- **Ethnicity**: self-assigned ethnicity

Needed both for Framingham modified (JBS2) and diabetes filter

4- **Family History**:

For first degree relatives - father, mother, brother(s) & sister(s)

Asking patient for:

- “Angina” or “heart attack” before age of 55 for men and 65 women.
- Familial hypercholesterolemia

5- **Smoking status**:

- Current smoker
- Ex-smoker: if quit over 5 years ago<sup>11</sup>
- Best evaluated by life time tobacco exposure (1 pack year = 20 cigarettes/day for one year)

**6- Level of physical activity:** (see appendix 4)

Using GP Physical Activity Questionnaire (GPPAQ) available at:  
[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_063812](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063812)

The General Practice Physical Activity Questionnaire takes approximately 30 seconds to fill in and can be completed by patients waiting for their appointment.

**Classification:** Inactive, moderately inactive, moderately active, active.

**7- Alcohol FAST screen:**

A FAST alcohol screen should be carried out following NHS Lambeth alcohol screen LES specifications. The alternative is an AUDIT screen which is more comprehensive but may take up to 10 minutes.

**Thresholds:** positive / negative

**8- Cholesterol test:**

**A non-fasting sample** is required for total and HDL cholesterol

**Rational for a non fasting Cholesterol / Lipid profile<sup>12</sup>:**

- Values of fasting and non fasting total cholesterol (TC) do not differ considerably. Non fasting HDL-C measurement may marginally overestimate CVD risk because HDL-C in the non fasting state is lower by 5 to 10% than in fasting state.
- LDL-C is calculated using the Friedewald equation  $TC = HDL-C + LDL-C + (TG/2.2)$ . Because TG measurement varies by 20 to 30% between fasting and non-fasting periods a fasting sample is only required for accurate TG value and for calculation of LDL-C.
- It is also a more acceptable test for patients.

**Threshold:** no specific threshold but **if  $TC > 7.5 \text{ mmol/l}$  it is important to consider familial hypercholesterolemia** (see chapter F.3.a.).

**9- Pulse:**

**Best checked manually** or using a BP machine with pulse feature

**Threshold:** if irregular pulse ECG to be requested

**10- Height / Weight - BMI:**

**Thresholds:**  $\geq 27.5 \text{ kg/m}^2$  for Indian, Pakistani, Bangladeshi, other Asian and Chinese ethnicity categories  
 $\geq 30 \text{ kg/m}^2$  for other ethnicity categories

**11- BP:**

Should be checked following best practice guidance. For HCP not routinely taking blood pressure, please refer to the British Hypertension Society guidance available at:

[http://www.bhsoc.org/how\\_to\\_measure\\_blood\\_pressure.stm](http://www.bhsoc.org/how_to_measure_blood_pressure.stm)

If raised BP (SBP  $\geq 140$ mmHg and/or DBP  $\geq 90$  mmHg), do two more readings (at 2mns intervals if in a row, one could be a last reading at the end) and **take the mean of the 2 best readings**

**Threshold: SBP  $\geq 140$ mmHg and/or DBP  $\geq 90$  mmHg**

### **3. Additional modules:**

#### **a- CKD filter:**

If SBP  $\geq 140$ mmHg and/or DBP  $\geq 90$  mmHg  
**Creatinine & eGFR calculation are required**

**Threshold: eGFR (and corrected for ethnicity)  $< 60$ ml/min/1.73m<sup>2</sup>**

#### **b- Hypertension filter:**

If SBP  $\geq 140$ mmHg and/or DBP  $\geq 90$  mmHg **all patients must have:**  
1- HbA1c for diabetes filter  
2- Creatinine and eGFR for CKD filter

- If BP abnormal (SBP  $\geq 140$ mmHg and/or DBP  $\geq 90$  mmHg) patient should be reviewed at least twice for further BP readings
- Refer immediately to the appropriate Health Care Professional if:
  - ✓ BP  $> 180/110$ mmHg (possible accelerated hypertension)
  - ✓ BP  $\geq 140/90$  mmHg and labile or postural hypotension, headaches, palpitations, pallor, excessive perspiration (possible phaeochromocytoma)

#### **c- Diabetes filter:**

The South East London Cardiac and Stroke Network in conjunction with consultants in diabetes from two tertiary centres (GSTT and KCH), GPs with special interest in diabetes and cardiology, specialist nurses and other representatives from PCTs across the sector have looked at the Department of Health suggested flowchart<sup>8</sup> and have agreed an algorithm and guidance (see filter algorithm next page)

**If: 1- Either BMI  $\geq$  27.5 or 30kg/m<sup>2</sup>**  
(based on ethnic group threshold, see D.2.10)

**2- Or SBP  $\geq$ 140mmHg and/or DBP  $\geq$ 90 mmHg**

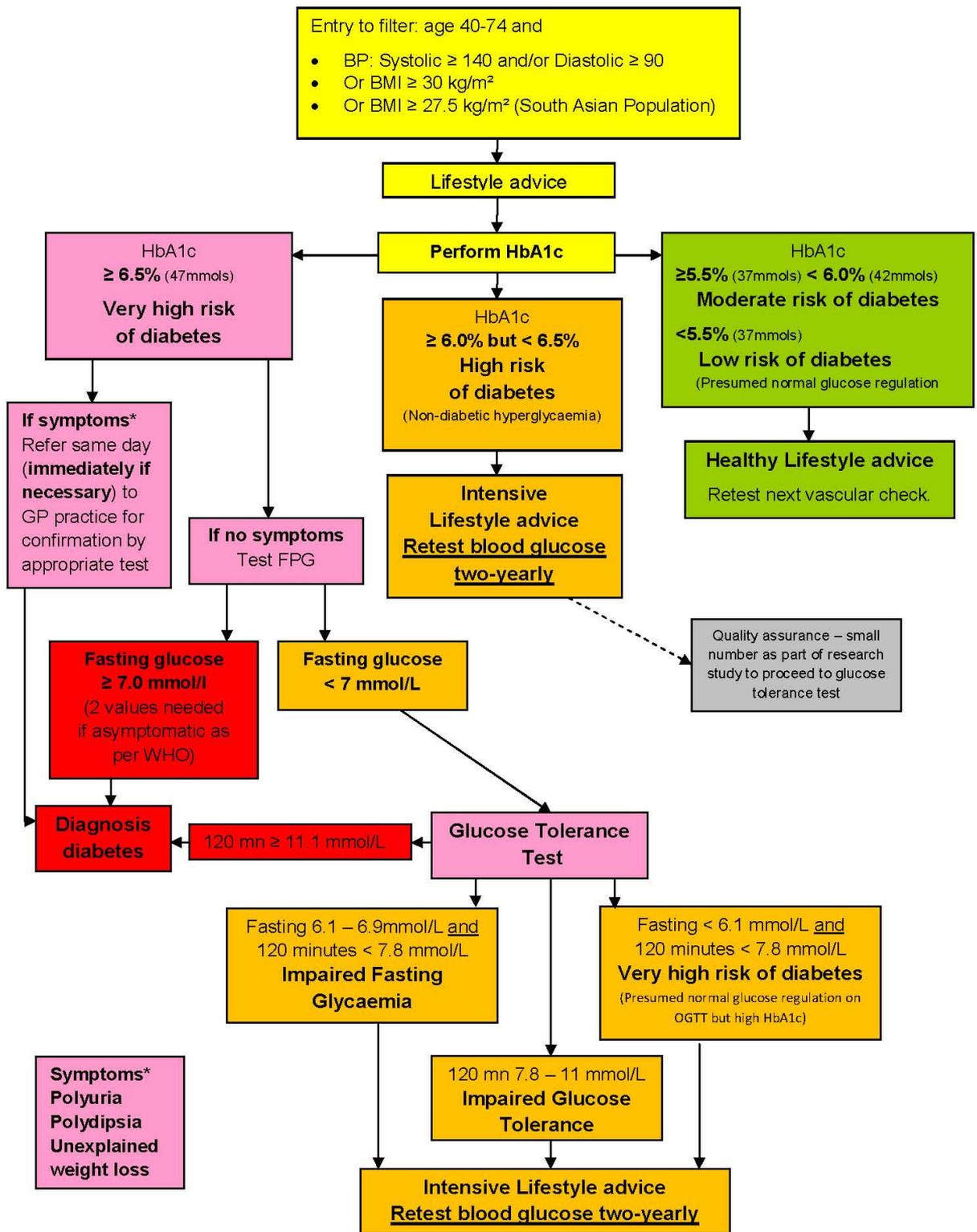
**A random HbA1c is required**

**Consideration should be given to the following groups at significant risk<sup>9</sup>:**

- People with 1<sup>st</sup> degree relative with type 2 diabetes or ischaemic vascular-diseases
- Women with:
  - o Past gestational diabetes
  - o Poly Cystic Ovarian Syndrome
- Tissue damage known to be associated with diabetes:
  - o Retinopathy
  - o Kidney disease
  - o Neuropathy
- Severe mental health disorders
- Patients on oral corticosteroids

**A detailed filter rationale is developed in appendix 1. The filter involves very recent evidences detailing new ways in screening for diabetes using HbA1c. We highly recommend that all HCP involved in the delivery of NHS health checks do take some time to read it and familiarised themselves with the interpretation, limitations and pitfalls of HbA1c testing in a screening setting.**

## Diabetes filter



**This filter is designed to identify those with positive vascular risk factors who are at highest risk for Type 2 Diabetes. It is not a universal screening test for identifying people at risk of diabetes or impaired glucose regulation (non-diabetic hyperglycaemia).**

## **E. Risk calculation, adjustments and communication:**

### **1. Risk calculation & stratification:**

Risk must be calculated using **Framingham modified risk tool calculator (JBS2)** available at

[http://www.heartuk.org.uk/HealthProfessionals/index.php/jbs\\_cv\\_risk\\_assessor/](http://www.heartuk.org.uk/HealthProfessionals/index.php/jbs_cv_risk_assessor/)

**Please see in appendix 3 the rationale supporting use of JBS2 risk calculator over QRISK2**

**Risk stratification: in 4 categories**

- **< 10% = low risk** (Read code 662k)
- **≥ 10 - < 20% = moderate risk** (Read code 662l)
- **≥ 20 - < 30% = high risk** (Read code 662m)
- **≥ 30% = very high risk** (Read code 662n)

### **2. Risk adjustment:**

**Risk assessment is an imprecise science. It is important to avoid common sources of error in data collection for risk assessment: risk factors must be exhaustive and some specific adjustments may be required. But most importantly clinical judgement is fundamental in guiding clinicians to apply or not these adjustments for risk calculation.**

#### ✓ **Lipid profile:**

- **If with a random lipid profile a patient falls in the ≥20% risk category a fasting lipid profile is required, and CVD risk should be recalculated.**
- Ideally, two measurements are needed to measure TC within 10% of the actual value<sup>13</sup>.
- Do remember to exclude secondary causes of hypercholesterolaemia and dyslipidemia (see chapter F.3.a. on lipid modifying intervention)
- The result of the fasting test(s) may, in a few cases, drop the individual's risk score below 20%

#### ✓ **Other risks factors:**

- Calculated risk should be multiplied by<sup>11</sup>:
    - **1.3** if: (adjustments included in JBS2 tool)
      - ✓ Fasting triglyceride >1.7 mmol/L (if available)
      - ✓ Family history (FH) of premature CVD in a first degree relative (55 for men and 65 women)
    - **1.4** if:
      - ✓ Chronic Kidney Disease (CKD) with eGFR < 45 ml/min/1.73m<sup>2</sup>
      - ✓ Impaired fasting glucose / IGT in line with JBS2
- and by 1.5 if more than one of the above**

- LVH: if previous ECG available or requested for irregular heart (included in JBS2 tool)
- Other recognized risk factors (but with no determined correction factors):
  - Erectile dysfunction
  - Premature menopause
  - Rheumatoid Arthritis
  - Aortic stenosis
  - Obesity and increased waist circumference
  - Familial Hyperlipidaemias other than Familial Hypercholesterolemia

For patients just below a threshold and one or more of above risk factors clinical judgment should be used to uplift patient's risk to the next category of risk.

- **Age threshold:** JBS2 risk calculation tool uses 3 different age cut-offs: <50, 50-59, ≥60. Therefore risk is underestimated for patients aged much over 60.

**The JBS2 calculator accepts a maximum age value of 69. Therefore, for any patient aged 70 or over a value of 69 will be used, resulting in risk underestimation. If risk estimate is not far below a threshold, and if other risk factors are present (e.g. increased BMI/waist circumference, erectile dysfunction, micro-albuminuria, premature menopause, socio-economic deprivation), risk could be revise upwards... but again clinical judgement should always been used.**

### **3. Risk communication**

Must be delivered by appropriately trained health care professional  
Must be effectively and individually delivered to everyone who receives a health check

#### **Key points:**

- Risk is a continuum: there is no “negative” result for the health check assessment
- Estimated level of risk / risk score should be clearly explained: e.g. “your estimated risk of heart attack or stroke in the next ten years is 20%. This means that out of a group of 10 people like you with same age, sex, habits and other biological characteristics, 2 will develop a CV disease” “this is one chance out of 5”
- Impact of risk reduction interventions using JBS2 tool can be clearly demonstrated, especially for smokers. Smoking in conjunction with other risk factors is a strong risk factor.

## F. Risk management and interventions

### 1. **Goals:**

The main goals are:

- For high CVD risk patients to actively prevent any future CVD events and reduce their risk if possible,
- For medium risk patients to address all preventable risk factors to avoid the patient's risk score worsening in the future,
- For low risk patients to maintain their low level of risk or adapt their lifestyle if high risk behaviour such as smoking.

During the post-health check appointment, the healthcare professional would discuss with the patient any lifestyle changes they wish to make. There are a number of lifestyle interventions available for patients defined as high and intermediate risk. These are structured programmes which aim to support patients in making a lifestyle change.

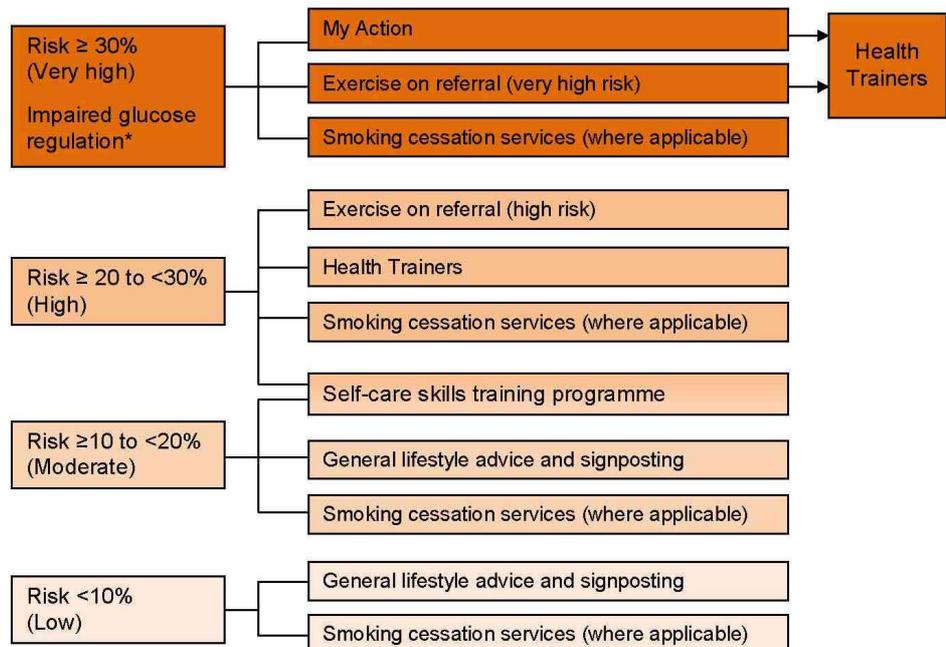
When considering which would be the most appropriate option you should also take into account the following factors:

- Is the patient ready to make a lifestyle change?
- Can they commit the time required for the programme in question?
- Are the activities/format/venues suitable for them?

We would suggest you refer patients to only one structured programme initially, in order to ascertain whether this sort of format is suitable for them. In addition focussing on one achievable goal at a time can promote patient motivation.

### 2. **Life style interventions:**

#### a. Overview:



\* Impaired fasting glucose, impaired glucose tolerance & non diabetic hyperglycaemia (see diabetes filter F.3.d)

### **b. Life style interventions referral process:**

A standard referral form has been developed which can be used to refer patients to any of the following services:

- MyAction
- Exercise on Referral
- Health Trainers Services
- Self-care skills training course
- Stop Smoking Services

Forms are available both **electronically and in paper form:**

- **Paper** – the form should be completed and faxed to the relevant number (details are on the form)
- **Electronically** – a template will be circulated by the clinical facilitator team with instructions for use. This will allow practices to produce a word document with the majority of patient details populated from the clinical system. This should then be sent to the secure email accounts listed at the bottom of the form.

The form should be completed and signed by **both** the referring healthcare professional and patient.

### **c. MyAction:**

This is a nurse led multidisciplinary family based Cardio-vascular prevention programme for individuals who attend for the NHS Health Check and are identified with:

- **≥ 30% CVD risk** over 10 years
- **or impaired glucose regulation:** (please see F.3.d – diabetes filter)
  - impaired fasting glucose
  - impaired glucose tolerance
  - non diabetic hyperglycaemia

### **Key points:**

- The team consists of a lead nurse, dietician and physical activity specialist
- They will provide comprehensive assessment and individualised risk factor management for participants and their partners, tailored to their needs so as to maximise uptake.
- The aim is to facilitate a change in lifestyle in three key areas namely smoking, poor dietary habits and physical inactivity, and to enable achievement of target goals.
- The programme constitutes 12-16 weekly sessions including group and individual reviews, a structured exercise programme and health promotion workshops. **Therefore this entails a significant time commitment on behalf of both the patient and their nominated partner, which is important to communicate to when discussing this as a potential option.**
- MyAction is a more holistic programme aiming to address diet and smoking in addition to physical inactivity. Therefore, Exercise on

Referral would be a more appropriate option for patients who wish to focus upon increasing their physical activity.

**d. Exercise on Referral & Health Trainers Services:**

Refer to:

- Exercise on Referral very high ( $\geq 30\%$ ) and high CVD ( $\geq 20 - < 30\%$ ) risk patients
- Health Trainers Services for intermediate CVD risk ( $\geq 10 - < 20\%$ ) patients

Please refer to the NHS Health Check Lambeth resource pack, sections Exercise on Referral and Health Trainers Services.

**e. Self Care Skills Training Course (SCSTC):**

The SCSTC is a six week course offered as a referral option for individuals who attend for the NHS Health Check and are identified at moderate to high risk of developing CVD over 10 years.

It has been designed to motivate and empower communities and individuals to better understand self care approaches that will help them improve their lifestyle and lead to positive health behaviours.

Each weekly session will last about 1.5 – 2 hrs and will be facilitated by trained volunteer tutors. The activities will introduce a variety of ways to do self care and outline theories relevant to self care. Group discussions will help participants to apply their new skills to their own personal experiences and help them identify how to make important changes to their health behaviours and those of their family. Each participant will be given a self care manual to take home for reference

**f. NHS Stop Smoking Services referral:**

Any patient who is a smoker, regardless of their CVD risk level and who wants to quit should be offered the appropriate NHS Stop Smoking Service support. Smoking Cessation Support is offered on a 1 - 1, group, or drop-in basis with most participants eligible to receive free smoking cessation drugs.

**Key points:**

- Individual support: most GP practices and community pharmacies in Lambeth have specially trained staff who offer advice and support.
- Group support: this is provided as a 7-week program, with one group session each week.
- A specialist pregnancy counsellor is available to support pregnant women who would like to quit and can do home visits.
- For further details, contact the Lambeth Stop Smoking team on Free phone **0800 856 3409**

**g. Weight management:**

Practices will need to continue providing dietetics advice to patients as they currently do. At present, there is a review of the commissioning of dietetics provision in Lambeth.

Following on from this and using the findings of the Dietetics and Nutrition Rapid Needs Assessment undertaken earlier on this year, we will be looking to commission a more equitable service across the borough, based on public health needs.

Any obese patient, regardless of their CVD risk level, qualifies for obesity management in line with NICE guidance.

Please refer to: NICE, Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. NICE Clinical guideline 43. December 2006. [www.nice.org.uk/guidance/CG43](http://www.nice.org.uk/guidance/CG43)

**h. Alcohol use intervention:**

The Chief Medical Officer recommends for lower-risk drinking that men should not drink on a regular basis more than three to four units per day, and that women should not drink on a regular basis more than two to three units a day (with 'regular' here meaning most days or every day of the week).

Any patients with a positive FAST screen should benefit from a full AUDIT assessment at a separate appointment and depending on the AUDIT score:

- No further action
- Brief intervention (simple structured advice for no more than 5 min)
- Referral to a specialist agency if problematic drinking is indicated following a discussion with the patient

**In brief:** short intervention can take as little as five minutes and consists of the three basic topics:

- Understanding alcohol units
- Understanding alcohol consumption risk levels and knowing where they sit on the risk scale
- Understanding benefits of cutting down and tips for cutting down.

Please refer to NHS Lambeth Alcohol LES

**i. General lifestyle advice and signposting:** (for detailed information please refer to Lambeth health checks resource pack, part 2)

• **Physical activity:**

The Chief Medical Officer recommends that for general health benefits adults should take a minimum of 30 minutes a day of at least moderately intense physical activity on five or more days a week. The recommended levels of activity can be achieved either by doing all the

daily activity in one session, or through several shorter bouts of activity of 10 minutes or more. The activity can be a lifestyle activity or structured exercise or sport, or a combination of these.

- **Behaviour change tool – NHS Mid-life Life check:**

This is a self-completed on-line health assessment tool providing lifestyle advice to help encourage behavioural change in those attending for their check. It focuses on factors including smoking, healthy eating, alcohol, physical activity and emotional well-being. It analyses the information given (all information provided is strictly confidential) and then presents them with detailed feed-back. The service identifies causes for concern and helps people plan, provide information and support. Users are able to set personal goals and request helpful reminders.

It is available at: <http://www.midlifelifecheck.co.uk/>

### **3. Pharmacological interventions:**

#### **a. Lipid modifying intervention:**

**Please refer to:**

- NICE Lipid modification guideline: Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease. NICE clinical guideline 67. May 2008.

Available at: [www.nice.org.uk/guidance/CG067](http://www.nice.org.uk/guidance/CG067)

- South East London Cardiac Network prescribing forum guideline: “Lipid management for primary prevention of cardiovascular disease” (2009).

**In brief:**

- CVD risk  $\geq 20\%$  = start patient on a statin whatever their cholesterol level.

**Do remember:**

**If a patient’s 10 year CVD risk is found to be  $\geq 20\%$ , then before lipid modification therapy is offered for primary prevention assessment should include a fasting lipid profile (see E.2. above)**

- NICE recommend initiating simvastatin 40 mg OD at bed time. If there are potential drug interactions or 40 mg simvastatin is contraindicated, offer a lower dose of simvastatin or pravastatin. A higher intensity statin should not routinely be offered for primary prevention.
- Baseline liver enzymes should be measured before starting a statin. Liver function (transaminases) should be measured within 3 months of starting treatment and at 12 monthly intervals thereafter. If transaminases  $>3x$  upper limit of normal (ULN) discontinue statin and refer. For lesser increases in transaminases, which remain elevated at 6 months consider specialist advice

- Measurement of Creatine kinase (CK) is necessary at baseline but only indicated after initiation of lipid lowering therapy if symptoms of myalgia/myositis are present.
- Routine checking of cholesterol is not recommended by NICE. However, this could be used to monitor compliance.
- **Please note, there are no target levels for total cholesterol or LDL cholesterol for primary prevention.**

**Remember to:**

- Exclude **secondary causes** of Hypercholesterolaemia/dyslipidemia:
  - ✓ Check TFT (Hypothyroidism), fasting glucose (diabetes/IGT), U&E (renal disease/nephrotic syndrome), LFTs (alcohol, fatty liver)
  - ✓ Medications: antipsychotics, immuno-suppressants and HIV treatments (see SELCN notes on prescribing lipid lowering drugs)
- Look for **Familial Hypercholesterolaemia**

**Familial Hypercholesterolemia (FH):**

Familial Hypercholesterolaemia (FH) is a genetic condition that causes high concentrations of low density lipoprotein (LDL). An estimated 1 in 500 people are affected by the most common form-heterozygous FH. Homozygous FH is extremely rare with only 1 case in a million. If untreated FH leads to >50% risk of CVD in men by the age of 50 and >30% risk of CVD in women by the age of 60<sup>14</sup>.

In August 2008, NICE published key recommendations for diagnosis and treatment of affected individuals and their extended family (Identification and management of Familial Hypercholesterolaemia. NICE clinical guideline 71. August 2008. Available at: [www.nice.org.uk/guidance/CG71](http://www.nice.org.uk/guidance/CG71)). NICE recommendations for the implementation of screening for FH are extremely challenging: patients should be referred to a specialist to confirm the diagnosis, family history should be taken for at least 3 generations by a HCP with expertise in FH and cascade testing using DNA testing and LDL-C should be used to identify affected relatives, including children (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> degree relatives).

The South East London Cardiac network is developing a primary and secondary care assessment and long term management care pathway for FH. When agreed, NHS Lambeth will consider its implementation, including provision for DNA testing and specialist services (adults and children) and will update this guidance accordingly.

**In the interim we would recommend the following:**

- If TC ≥ 7.5 mmol/L, recheck full fasting lipid profile and exclude secondary causes (see above)

- **Consider FH if:**
  - ✓ Fasting TC  $\geq$  7.5mmol/L and family history of CVD in 1<sup>st</sup> degree relative before age 60 or 2<sup>nd</sup> degree relative before age 50.
  - ✓ or TC  $\geq$  9 mmol/L and no family history (pragmatic cut-off: very few conditions could give a TC > 9mmol/L: hypothyroid, nephrotic syndrome, primary biliary cirrhosis, some diabetes mellitus, familial hypercholesterolemia and familial combined hyperlipidaemia, all of them requiring further investigation)
- Look for cholesterol deposits (e.g. tendon xanthomata) but absence does not exclude the diagnosis!
- Organise a further TWO measurements of TC and LDL-C
- Exclude secondary causes of severe hypercholesterolemia (see green box above)
- Start and optimise statin therapy to achieve a  $\geq$  50% reduction in LDL-C from baseline values. This may require use of high intensity statins.
- Consider ezetimibe if statins are contraindicated or not tolerated (after an alternative statin has been tried) or co-administer ezetimibe with a statin when LDL-C not appropriately controlled after appropriate statin dose titration.
- Appropriate life-style advice is an important component of medical management and should not be neglected (smoking advise, Diet, Physical activity, weight management and alcohol intake)
- **Do NOT calculate CVD risk:** people with FH are already at high risk of CVD.

Offer a referral for confirmation of diagnosis, genetic testing and initiation of cascade testing (family screening) – **formal pathway in development.**

**Read-code:**

- Familial Hypercholesterolemia                    C3200
- Family history of FH                                    1269

**b. Hypertension:**

**Please refer to:**

- NICE Hypertension: Management of hypertension in adults in primary care CG 43. June 2006. [www.nice.org.uk/guidance/CG034](http://www.nice.org.uk/guidance/CG034)
- Southwark and Lambeth “Choosing drugs for non-diabetic patients newly diagnosed with hypertension” guideline
- Southwark and Lambeth “Type II diabetes and hypertension” guideline
- Lambeth hypertension check list for secondary care referral

**In brief:**

- Give lifestyle advice (salt reduction, alcohol moderation, physical activity)
- Offer drug therapy if BP  $\geq$  160/100 mmHg following A(B)CD treatment algorithm

- If BP  $\geq$  140/90 mmHg but  $<$ 150/90 mmHg and CVD risk  $<$  20% patient should be advised to have annual BP checks
- For secondary care referral, see Lambeth checklist for referral for hypertension

**c. CKD:**

**Remember: all patients with SBP  $\geq$ 140mmHg and/or DBP  $\geq$ 90 mmHg, irrespective of risk scores, must have a Creatinine and eGFR for CKD filter**

**Threshold:  $<$  60ml/min/1.73m<sup>2</sup> and do not forget to correct for ethnicity**

Please refer to NICE: Chronic Kidney Disease National clinical guideline for early identification and management in adults in primary care and secondary care CG 73. September 2008. [www.nice.org.uk/guidance/CG73](http://www.nice.org.uk/guidance/CG73)

**In brief:**

- If eGFR  $\geq$  60 ml/min/1.73m<sup>2</sup>: no further assessment is required, unless patient is diagnosed with hypertension and/or diabetes whereby their CKD risk will be monitored as part of the management of their diabetes and/or diabetes.
- If eGFR  $<$  60 ml/min/1.73m<sup>2</sup>:
  - a- Management follows NICE guideline
  - b- Quantitative assessment of Urine Albumin Creatinine ratio (ACR) is required
- If hypercholesterolaemic, hypertensive and have a very low urea and Creatinine remember to exclude nephrotic syndrome (urine dipstick protein and then ACR if positive)

**d. Diabetes:**

**Remember: 1- Either BMI  $\geq$  27.5 kg/m<sup>2</sup> (Indian, Pakistani, Bangladeshi, other Asian and Chinese ethnicity categories)  
or  $\geq$  30 kg/m<sup>2</sup> (All other ethnic ethnicity categories)**

**2- Or SBP  $\geq$ 140mmHg and/or DBP  $\geq$ 90 mmHg**

**A random HbA1c is required**

**Interventions in brief:**

**Please note that HbA1c has not been approved in the UK as a diagnostic test, although this is likely to change in the near future.**

**In the interim, diagnosis of diabetes should be made/confirmed following the current UK diabetes best practice guidelines using endorsed testing, namely FPG or OGTT**

- **For low/moderate risk of diabetes (HbA1c < 6%):**
  - ✓ **Remember when communicating a result to patient, there is no such thing as “no” risk of diabetes nor a “normal” result....!**
  - ✓ All patients should receive healthy life style advice and when appropriate:
    - weight management intervention
    - alcohol use intervention
  - ✓ Address CVD risk pharmacologically if >20% (statin) and other risks (e.g. hypertension)
  - ✓ And based on your clinical judgment for the individuals in the 5.5-<6% moderate range (especially for those close to the threshold of 6%) and with added recognized risk factors, a FPG could be checked, and/or a closer follow-up might be clinically indicated as well as more intensive life-style interventions<sup>15</sup>.

**Other recognised risk factors:**

- sedentary life-style,
- history of gestational diabetes,
- FH of diabetes or of premature vascular disease or hypertension,
- elements of metabolic syndrome:
  - o hypertension,
  - o Low HDL-C (<1mmol/L for males / <1.3mmol/L for females),
  - o high triglycerides (fasting > 1.7 mmol/L)
- Ethnicity (Asian, Turkish)

- **For high risk of diabetes (HbA1c ≥6% - <6.5%):**
  - ✓ **Intensive life-style advice -> referrer to “MyAction”**
  - ✓ Address CVD risk pharmacologically if >20% (statin) and other risks (e.g. hypertension)
  - ✓ Retest blood glucose every two years.
  - ✓ And based on your clinical judgment for the individuals with added recognized risk factors, a FPG/OGTT could be checked, and/or a closer yearly follow-up might be clinically indicated.
- **For very high risk of diabetes (HbA1c ≥6.5):**
  - ✓ If symptoms of diabetes (Polyuria, Polydipsia, unexplained weight loss), diabetes is very likely, then refer same day to designated Practice Health Care Professional or to Rapid Access Diabetes Clinics for appropriate management.
  - ✓ No symptoms of diabetes: do a FPG,
    - Fasting ≥ 7 mmol/L: diabetes highly likely, reconfirm with a second fasting plasma glucose
    - Fasting < 7 mmol/L: do an **Oral Glucose Tolerance Test**

- Under health check guidance this should be performed within GP practice team (See protocol in appendix 3).
- Results:

	FPG (mmol/L)	120 PG (mmol/L)
<b>Very high Risk of Diabetes</b>	< 6.1	< 7.8
Impaired fasting Glycaemia	6.1 – 6.9	< 7.8
Impaired glucose tolerance		7.8 - 11
Diabetes		≥ 11.1

**Very high risk of diabetes: after been previously tested with an HbA1c ≥ 6.5%, it is not reasonable to presume a normal glucose regulation. Patient should be advised accordingly, referred for intensive life-style intervention (ideally “MyAction” program) and re-tested with either FPG or OGTT two yearly or yearly in the presence of added recognised risk factors.**

**For IFG or IGT please refer to “MyAction” program.**

**Read-coding for registers and recall:**

- Non-diabetic hyperglycaemia: Ryu8A (Hyperglycaemia, unspecified)
- Impaired glucose tolerance: C11y2
- Impaired fasting glucose: C11y3

**G. Near Patient testing pilot:**

NHS Lambeth is evaluating a Near Patient Testing (NPT) Pilot using Cholestech LDX™ analysers for total cholesterol/ LDL cholesterol and Afinion™ analysers for HbA1c across selected practices, community pharmacists and for NHS health check outreach team.

Dr Aman Bhandari, NHS Lambeth Darzi Fellowship will conduct a qualitative evaluation through focus groups with staff involved and practice managers and patient’s questionnaires especially looking at patient’s NPT acceptability.

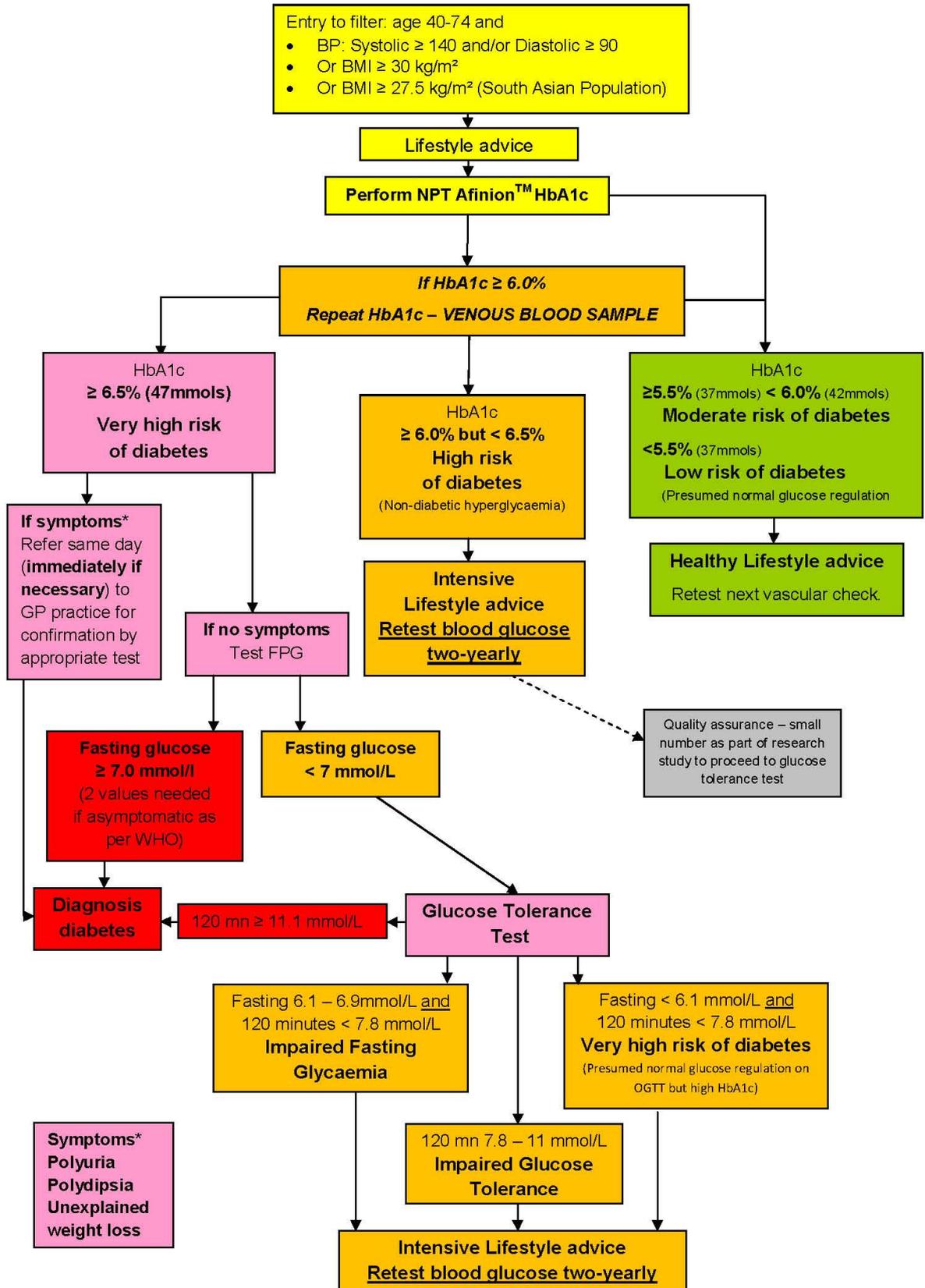
**Diabetes filter:** due to a total coefficient of variation imprecision (analytical variability plus biological variation) of up to +4.7%<sup>16</sup>, **any abnormal HbA1c reading (≥ 6%) will require confirmation using a venous blood sample.**

**Please see NPT diabetes filter next page**

**Remember: after NPT - required venous sample**

- **For any patient qualifying for the CKD filter (SBP  $\geq 140$ mmHg and/or DBP  $\geq 90$  mmHg)**
  - > Creatinine and eGFR.
- **Diabetes filter: any HbA1c reading  $\geq 6\%$** 
  - > HbA1c
  - > Full fasting lipid profile
- **Risk adjustment for CVD risk  $\geq 20\%$** 
  - > Full fasting lipid profile
- **If TC  $\geq 7.5$  mmol/L**
  - > Recheck full fasting lipid profile and exclude secondary causes

## NPT diabetes filter



## H. Templates:

For data entry please use “NHS health check Lambeth” template. If this template is not available on your clinical system please contact Bernadette Chipp-Smith Email: [Bernadette.Chipp-Smith@lambethpct.nhs.uk](mailto:Bernadette.Chipp-Smith@lambethpct.nhs.uk)

**1- Initial Assessment**

Ethnicity: British or mixed British - ethnic category 2001 census 23/10/2006  
Other white ethnic group 26/03/2009

Risk of premature CVD

Smoking status: Cigarette smoker, 10 Cigarettes/day 12/01/2009

level of physical activity - GPPAQ

Alcohol FAST screen

Height Weight BMI

D/E - height [ ] cm  
D/E - weight [ ] Kg BMI: 21.97

Systolic blood pressure [ ] mm Hg  
Diastolic blood pressure [ ] mm Hg

Pulse [ ]

**Bloods**

1- Random lipid profile / TC:HDL-C  
2- If BMI:  
>27.5 Indian, Pakistani, Bangladeshi other Asian/Chinese  
>30 other ethnicity  
do a random HbA1C  
3- If BP >= 140/90  
do a random HbA1C and Creatinine/eGFR

**Near Patient testing**

Serum cholesterol [ ]  
Random HDL cholesterol level [ ] mmol/L  
Haemoglobin A1c level [ ]

**2- Risk adjustment**

If using a random lipid profile patient falls in the > 20% CVD risk a FASTING profile is required

**3- Risk Stratification**

JBS cardiovascular disease risk <10%   
JBS cardiovascular disease risk 10-20%   
JBS cardiovascular disease risk >20% up to 30%   
JBS cardiovascular disease risk >30%

**Life Style interventions**

**For all Patients**

Smoking cessation advice   
Referral to smoking cessation advisor   
Lifestyle counselling   
Lifestyle advice regarding exercise   
Lifestyle advice regarding alcohol

**MyAction**

Healthy lifestyle programme declined   
Healthy lifestyle programme commenced   
Healthy lifestyle programme completed

Refer to weight management programme   
Referred for health coaching (health trainer)   
Declined referral to physical exercise programme

**Administration**

DNA NHS Health Check   
NHS Health Check declined   
Vascular disease risk assessment done

**New diagnosis / LTC registers**

Hypertensive disease   
Type 1 diabetes mellitus   
Type 2 diabetes mellitus   
Non-diabetic hyperglycaemia   
Impaired glucose tolerance   
Impaired fasting glycaemia   
Chronic renal impairment

**Other interventions**

Glucose tolerance test   
Referral to lipid clinic   
Lipid modifying - Statin [ ]

Please DO NOT modify - Dr E. Cajeat NHS Lambeth CHD Lead Version 1.1

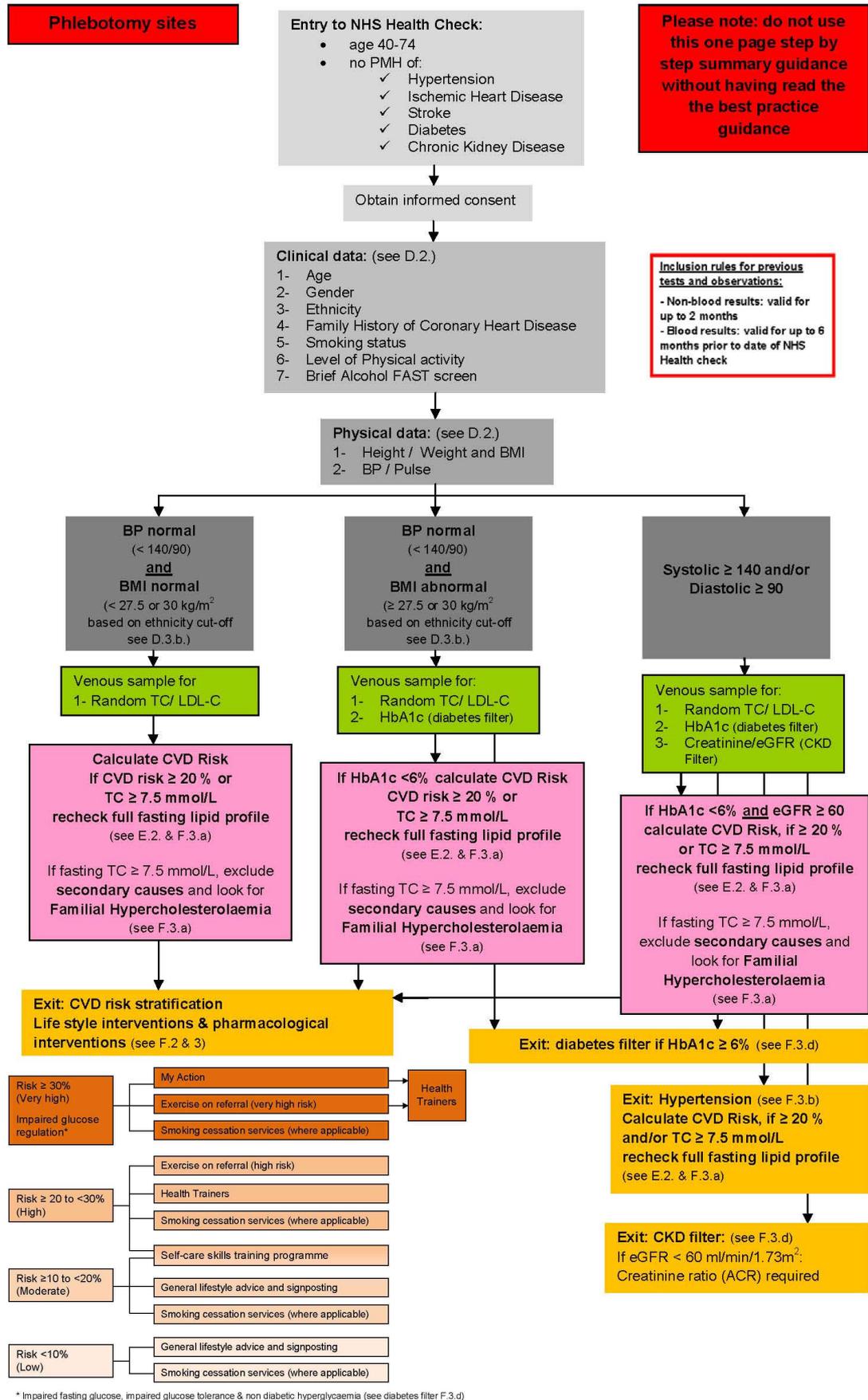
OK Cancel

EMIS-PCS  
template  
For other clinical  
systems,  
template aspect  
will vary.

**Please note that a number of read-codes especially for life-style interventions are missing. When available this template will be updated.**

**Reminder:** use of an integrated risk calculator within clinical systems could lead to errors by using inappropriate data (e.g. old cholesterol value or BP value under treatment) and / or could interfere with QOF data.

# I. One page step by step guidance:



**NPT sites**

**Entry to NHS Health Check:**

- age 40-74
- no PMH of:
  - ✓ Hypertension
  - ✓ Ischemic Heart Disease
  - ✓ Stroke
  - ✓ Diabetes
  - ✓ Chronic Kidney Disease

Please note: do not use this one page step by step summary guidance without having read the the best practice guidance

Obtain informed consent

**Clinical data: (see D.2.)**

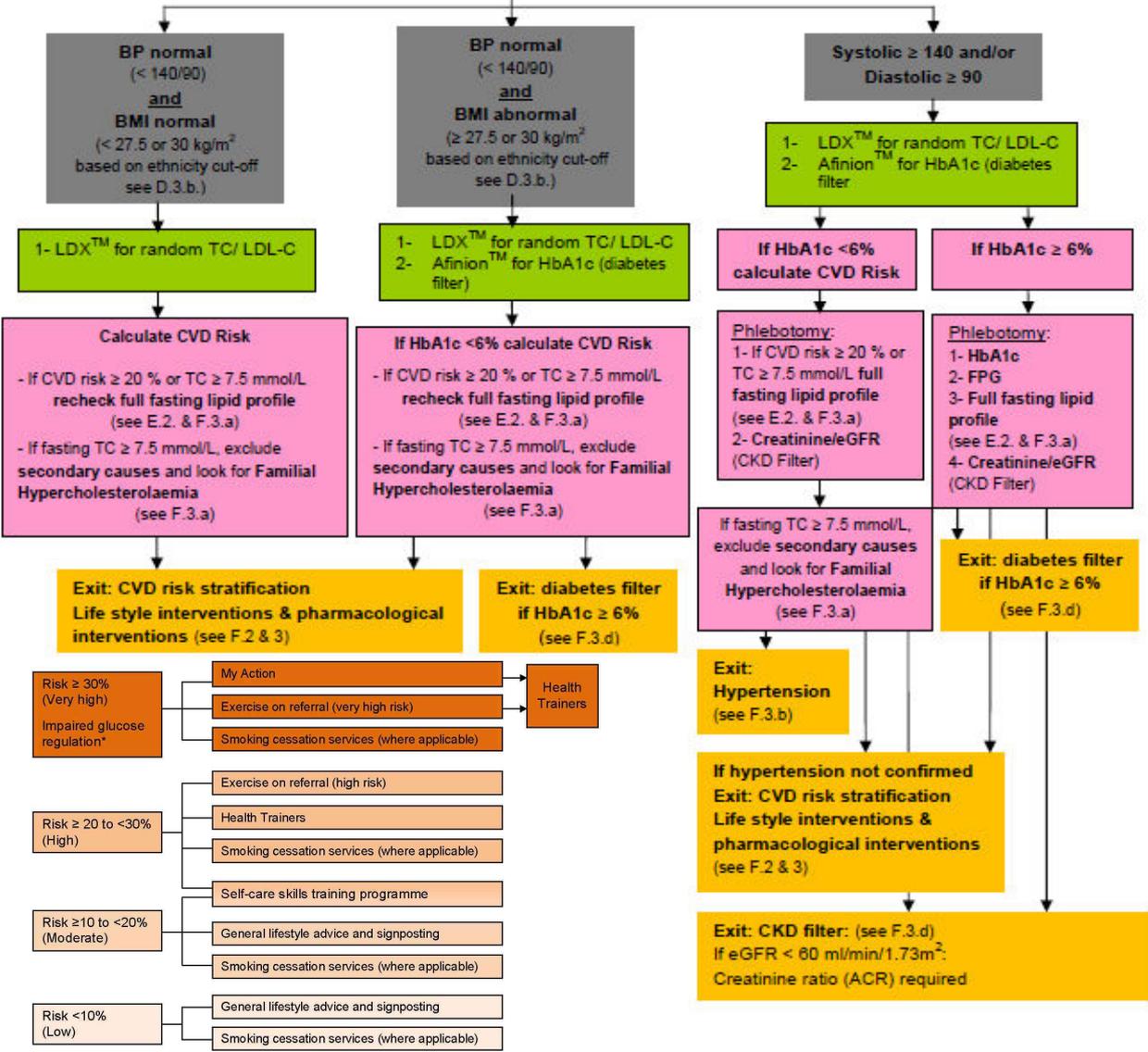
- 1- Age
- 2- Gender
- 3- Ethnicity
- 4- Family History of Coronary Heart Disease
- 5- Smoking status
- 6- Level of Physical activity
- 7- Brief Alcohol FAST screen

**Inclusion rules for previous tests and observations:**

- Non-blood results: valid for up to 2 months
- Blood results: valid for up to 6 months prior to date of NHS Health check

**Physical data: (see D.2.)**

- 1- Height / Weight and BMI
- 2- BP / Pulse



\* Impaired fasting glucose, impaired glucose tolerance & non diabetic hyperglycaemia (see diabetes filter F.3.d)

## J. Appendices:

### 1. **CVD primary prevention with aspirin:**

For primary prevention, recent evidence suggests that *“aspirin is of uncertain net value as the reduction in occlusive events needs to be weighted against any increase in major bleeds”* (Antithrombotic Trialists’ – ATT Collaboration, 2009)<sup>17</sup>. The ATT collaboration demonstrated a small absolute reduction (0.07% per year) of serious vascular events, mostly due to a reduction in non-fatal MI, almost independent of baseline 5 year CHD risk and with age been the strongest predictor of risk. However, there was no clear reduction in mortality from CHD and aspirin in primary prevention was associated with an increase risk of haemorrhagic strokes (p=0.05). Looking at fatal strokes, the number of haemorrhagic strokes was greater than for ischaemic strokes with an adverse effect on overall stroke mortality. In patients with CVD risk  $\geq 20\%$  who should receive statin therapy they questioned the benefit of adding aspirin. In this scenario, statin therapy would approximately reduce risk of occlusive events by 50% but at the same time the overall benefit of aspirin would be reduced as the aspirin bleeding risk remains. The overall additional benefit of aspirin seems uncertain and yet to be demonstrated. Lastly, they raised the possibility of a more substantial benefit for diabetic patients.

In light of this, a recent Drug and Therapeutic Bulletin (2009) concludes that: ***“current evidence for primary prevention suggests the benefits and harms of aspirin in this setting may be more finely balanced than previously thought, even in individuals estimated to be at high risk of experiencing cardiovascular events, including those with diabetes or elevated blood pressure. We believe, therefore, that low-dose aspirin prophylaxis should not be routinely initiated for primary prevention”***.

For secondary prevention all patients with known cardiovascular (CV) disease or other atherosclerotic vascular disease (such as ischaemic stroke or peripheral vascular disease) should receive low dose aspirin prophylaxis<sup>18</sup>.

In both primary prevention and secondary prevention known contra-indications and cautions for aspirin prophylaxis should be followed.

The South London Cardiac and Stroke Network (SLCSN) prescribing group is working on an updated guidance on Low-Dose Aspirin for Primary and Secondary Prevention of Cardiovascular Disease and will be disseminated once ratified by NHS Lambeth.

Once again, clinical judgment should prevail.

### 2. **Filter rationale and use of HbA1c for diabetes screening:**

- **Terminology**<sup>19,20,21</sup>:

- ✓ **Sensitivity:** is the fraction of individuals above a test cut-off who have the disease. A highly sensitive test is unlikely to miss an

individual with diabetes (high sensitivity = low false negative rate, sensitivity rate + false negative rate = 100%)

- ✓ **Specificity:** is the fraction of individuals below a test cut-off who do not have the disease. A highly specific test is unlikely to misclassify an individual who does not have diabetes as having diabetes (high specificity = low false positive rate, specificity rate + false positive rate = 100%).
  - ✓ **Cut-off points:** are always an arbitrary decision, balancing sensitivity and specificity, as increasing sensitivity decreases specificity. The Receiver Operator Curve (ROC curve) is the graphic expression of this relationship. It is used to determine the discrimination power of a test (high when the curve creeps in the upper left corner and expressed by the area under curve) and the best cut-off which should have a high sensitivity and a preserved high specificity.
- Generally, in a screening setting sensitivity is favoured over specificity. As a result, a good screening cut-off will be lower than in a diagnostic setting and this will result in a loss in specificity. Therefore the “perfect” screening cut-off will have a high sensitivity with the smallest possible reduction in specificity.
- ✓ **Test reproducibility:** ability of obtaining the same result on repeated measurements on an individual
  - ✓ **Predictive value:** probability for an individual to have or not have the disease given the result of a test.

- **Positive Predictive Value (PPV):** probability of the disease in an individual with a positive test
- **Negative predictive Value (NPV):** probability of the absence of the disease in an individual with a negative test

The predictive value of a test is influenced by the prevalence of a disease: a highly specific test will have a greater PPV with high disease prevalence. Selective screening of an at-risk population will increase the PPV of a test.

- Different tests are available for assessing glycaemic regulation, mainly fasting plasma glucose (FPG), random plasma glucose (RPG), oral glucose tolerance test (OGTT) and HbA1c. However, no single test reflects the full extent of an individual glycaemic regulation, each test reflecting a specific aspect of it. All tests have their own limitations: no test is perfect! There is therefore “*no single universally recognised way of testing blood for diabetes or for those at high risk of diabetes*”<sup>9</sup> (DH, 2009, page 19) and this field is rapidly evolving with major changes to come in the way we diagnose and screen for diabetes in the future.
- **Fasting plasma glucose (FPG):**
  - ✓ There is a significant day to day intra-individual variation both in subjects with normal and abnormal glucose regulation, ranging from 5.7 up to 20%<sup>22,23,24,25,26</sup> (depending on protocols and population characteristics), with biological variability being substantially greater than analytical variability (approximately 6%). The 95% confidence interval (CI) of a FPG value is large and a single measurement can result in a substantial misclassification of a subject. The 95% CI for

a FPG of 7mmol/L with a biological variation of 6.9% is 6.1-7.9mmol/L and adding 4% assay variation is 5.7-8.3mmol/L<sup>15</sup>. Applying a 95% variability of 14.8% to the current diagnostic cut-off value of  $\geq 7$ mmol/L means that a subject with a FPG value between 6.0 and 6.9mmol/L could have a second FPG value above the cut-off<sup>13</sup>.

- ✓ A short term (few days or weeks) diet improvement and/or increased exercise can significantly affect a FPG test<sup>27,28,29</sup>
  - ✓ Furthermore, FPG does not strictly correlate with an individual glycaemic regulation. FPG level results from endogenous glucose production and in type 2 diabetes high FPG levels mainly results from non-inhibition of hepatic glucose production secondary to hepatic insulin resistance<sup>30</sup>. However, in early stages, basal insulin secretion is maintained or even increased, the early phase of the prandial insulin response being abnormal<sup>30,31,32</sup>. Therefore many individuals with impaired glucose tolerance are euglycemic during their daily lives and an individual could have diabetes based on a GTT but have a normal FPG.
  - ✓ FPG has a modest sensitivity<sup>33</sup>, with just over 70% of individual with diabetes detected with FPG compared with OGTT (based on estimate prevalence of a US population aged 40-74 years old)<sup>34</sup>.
  - ✓ It is a very inconvenient test for patients and especially when used in a screening setting, requiring an overnight fasting for at least 8 hours.
- **Random glucose:** is not acceptable for screening both on clinical and cost effectiveness grounds according to DH guidance<sup>9</sup>. It is indeed extremely influenced by food and post-prandial status. Suggested cut-off of  $\geq 6.6$ mmol/L<sup>35</sup> or  $\geq 7.2$ mmol/L<sup>24</sup> have a much lower sensitivity and specificity than HbA1c, respectively 76%-77% and 63%-87%, with a large number of false positives and a higher cost as a consequence<sup>36</sup>. A multivariate logistic regression equation has been suggested<sup>30</sup> to improve specificity (96%) but it requires post-prandial time, allowing for timing errors and therefore imprecision and a programme calculator!
  - **Oral Glucose Tolerance Test and 2 hours glucose:** reproducibility in classifying patients is poor (overall 50-66%<sup>25</sup>; normal glucose tolerance 91%, IGT 48%, new diabetes 78%<sup>24</sup>), mainly due to a high intra-individual biological variation (Selvin et al.<sup>23</sup> 16.6%, Mooy et al.<sup>24</sup> 12.7-16.4%). OGTT and especially the 2 hours glucose are influenced by peripheral insulin resistance<sup>17</sup>. It also requires the same overnight fasting for at least 8 hours as FPG.
  - **HbA1c:**
    - ✓ HbA1c concentration depends on glucose blood level and erythrocytes average life span. It reflects the average blood glucose level during the preceding 8 to 12 weeks and is related to both post-prandial and FPG levels<sup>37</sup>.
    - ✓ HbA1c has several advantages over FPG<sup>19,29,37,38,39</sup>

- now standardised and aligned to the DCCT/UKPDS (Diabetes Control and Complications Trial/UK Prospective Study Assay) whereas glucose measurement is less well standardized,
  - better index of overall glycaemia exposure and risk of long-term complications,
  - substantially less biologic variability (day to day within-person variance): 3.6% (Selvin et al.<sup>23</sup>), less than 2% (Little et al.<sup>37</sup> in non diabetic individuals),
  - substantially less pre-analytic variability,
  - no need for fasting,
  - relatively unaffected by acute changes in glucose levels (e.g. acute illness, stress).
- ✓ HbA1c is a good predictor for both micro and macro-vascular complications of diabetes<sup>19</sup>. Epidemiological studies have shown the non-linear relationship between glycaemia and retinopathy prevalence<sup>34</sup> with a marked increase at HbA1c values between 6.0 and 7.0% and further analysis have concluded that below an HbA1c value of 6.5%, “moderate” retinopathy or specifically diabetic related retinopathy was “virtually nonexistent”<sup>39</sup>. For macro-vascular complication the EPIC-Norfolk study<sup>40</sup> showed that in men without diabetes, HbA1c levels continuously predict mortality from all causes, cardiovascular and ischaemic heart diseases across the whole population, starting at HbA1c level of 5% which is well below new American Diabetes Association (ADA) diagnostic threshold for diabetes (see further down)
- ✓ HbA1c limitations<sup>37,38,39,41</sup>:
- Haemoglobin variants can affect HbA1c levels. Homozygous HbSS and HbCC prevent measurement of HbA1c (no β chains). Haemoglobin traits with normal red cell turnover such HbAS (sickle cell trait) and HbAC (African populations), HbE (Asian populations), HbD (Indian populations), all interfere with some assay methods but not with HbA1c assay use in our local clinical diagnostic pathology services (GSTT/KCH).
  - **In patients at risk of significant anaemia (Hb < 9g/L) as well as in patients with a splenectomy, the possibility of a false high HbA1c value exists and thus a fasting plasma glucose is preferred.**
  - Ethnicity: in Latinos, Asians and African and/or African-Americans HbA1c concentration appears to be slightly higher (0.4-0.7% greater in African-Americans than Caucasians<sup>29</sup>) but the significance is unclear<sup>39</sup>.
  - Increased rates of haemolysis in rheumatoid arthritis or secondary to drugs like antiretroviral, ribavirin and dapsone can reduce levels of HbA1c.
  - HbA1c has a limited sensitivity in detecting mildly raised levels of glycaemia<sup>34</sup>; Bennett et al. (2007)<sup>19</sup> quotes 50% sensitivity for IFG and IGT.

- **Review of HbA1c cut-offs:**

- ✓ Saudek et al. (2008)<sup>29</sup> in a consensus statement, suggested a >6.0% HbA1c cut-off for screening and ≥6.5% for diagnosis of diabetes (confirmed with either a FGP or 2h OGTT). Based on the two National Health and Nutrition Examination Survey (NHANES) data sets, the cut-offs of HbA1c > 6% and HbA1c ≥ 6.5% respectively yield 63-67% and 42.8-44.3% sensitivity and 97-98% and 99.6-99.6% specificity.
- ✓ Ginde et al. (2008)<sup>15</sup> suggested a positive threshold of HbA1c ≥ 6.1% (68% sensitivity, 98% specificity, PPV 50%) and a negative threshold of HbA1c ≤ 5.4% (91% sensitivity, 73% specificity, NPV >99%) excluding therefore diagnosis of diabetes.
- ✓ Bennett et al. (2007)<sup>19</sup> in a systematic review of 9 studies, assessed the validity of HbA1c as a screening tool for type 2 diabetes. Compared to OGTT as a gold standard, Bennett concluded that HbA1c and FPG were equally effective. Compared to FPG, HbA1c had a slightly lower sensitivity and slightly higher specificity. A cut-off of >6.1% or 6.2% was recommended and the need for population specific cut-offs (ethnic group, age, gender, population prevalence of diabetes) was queried.
- ✓ Waugh et al. (2007)<sup>42</sup> in a Health Technology Assessment (HTA) review for screening for type 2 diabetes suggested that *“an HbA1c of 5.5% might be a suitable cut-off for screening”* (page 24).
- ✓ In light of an International Expert Committee Report (IECR)<sup>39</sup> the American Diabetes Association has in its latest guidance (January 2010)<sup>41</sup> not only endorsed HbA1c as a screening test for diabetes but also as a diagnostic test! The ADA guidance is mostly diagnostic orientated with a suggested HbA1c cut-off of ≥ 6.5% confirmed by repeat testing for diagnosis of diabetes (HbA1c, FPG or OGTT). Based on NHANES dataset this cut-off is less sensitive than FPG cut-off of >7mmol/L and identify one-third fewer cases of diabetes but, according to the ADA, this inconvenient outcome should be offset by the greater practicality of using HbA1c as a diagnostic test as opposed to FPG and the resulting increase number of detected cases of diabetes. For screening the IECR suggests an HbA1c cut-off of ≥6% - <6.5% for identification of individuals at highest risk for progression to diabetes but warns that *“this range should not be considered an absolute threshold at which preventative measures are initiated”* (page 6). This is further discussed.

- **Discussion of filter’s entry criterion and cut-offs:**

- ✓ Entry criterion are in line with the HTA suggesting that screening is more cost effective for people aged 40-70 years as well as in the hypertensive and obesity subgroups. Other bodies recommend screening for diabetes in hypertensive individuals<sup>43,44</sup>

- ✓ **Cut-offs:** DH acknowledges that suggested cut-offs “will not pick up everyone at risk of diabetes but this approach achieves a balance between sensitivity and feasibility....”

*Putting more people through to a blood test would identify more people at high risk of diabetes but would increase workload in general practice and laboratories”<sup>9</sup>.*

We could argue, based on above published evidences and new ADA guidance, that DH suggested cut-offs in a screening setting are too high, especially considering the filter entry criterion, acting as a “screening process” and therefore selecting a population at much higher risk of diabetes than the overall population. But, such cut-offs yield higher filter specificity (due to the increased expected prevalence) and therefore a low number of false-positive screens. However, this is at a cost of a higher number of false-negative screens.

This seems acceptable in a disease like type 2 diabetes for the following reasons:

- absence of early diagnosis and treatment might have little immediate consequences due to slow progression,
- a false positive result can put an individual through both unnecessary stress and further tests
- in the context of the NHS Health Check program, the false negative results will eventually be picked-up at re-screening with disease progression.

**How we advise and intervene on individuals with low/moderate risk of diabetes (HbA1c <6.0%) and high risk of diabetes (HbA1c ≥ 6.0% but <6.5%) will be extremely important. Monitoring results in our local population and eventually adjusting cut-offs in the near future will be also crucial: for example if in most patients with HbA1c ≥ 6.5 % diabetes is later diagnosed, then the threshold will have to be lowered.**

- **Rationale for diabetes’ filter risk stratification:**

Confusion may arise for both clinicians and patients as the same tests are used for screening, diagnosis and therapeutic monitoring. Communication of the HbA1c screening test result needs to be clear, consistent. Translating thresholds into falsely reassuring category should be avoided.

We suggest using similar risk stratification to that for cardiovascular risk: low, moderate, high and very high risk of diabetes.

With this pragmatic approach, we would expect the following benefits:

- ✓ Consistent communication for CVD risk and diabetes risk
- ✓ This approach should facilitate patients’ understanding of the importance of and therefore adherence to life-style interventions. Especially for individuals with an HbA1c less than 5.5% (presumed normal glucose regulation) this will avoid communication of a “normal” result or “no” risk of diabetes.

**However, some extra caution might be needed for some individuals in the moderate and high risk categories of diabetes:**

Risk of diabetes and of CVD are a continuum depending on multiple risk factors: HbA1c level, FPG, response to OGTT and subsequent diagnosis of IGT or IFG, obesity (central or general), sedentary life-style, history of gestational diabetes, family history of diabetes or of premature vascular disease or hypertension, elements of metabolic/insulin resistance syndrome: hypertension, low HDL-C (<1mmol/L for males / <1.3mmol/L for females), high triglycerides (fasting level >1.7 mmol/L) and Ethnicity (Asian/Turkish). **Therefore within the moderate or high risk category some individuals with added risks to their HbA1c level of risk might in fact be at a relatively higher risk than other individuals within the same risk category.**

This is demonstrated by Ginde et al. (2007)<sup>15</sup> who looked at the impact of risk stratification to increase the predictive validity of HbA1c in screening for undiagnosed diabetes in a US population. In the high risk subgroup (defined using a risk score based on recognized risk factors for diabetes and multivariate logistic regression), prevalence of undiagnosed diabetes was 11.1% compared to 0.44% in the low risk group; a 25 times difference. For HbA1c values from 5.5 to 6.0%, PPV ranged from 17 to 46% compared to 2 to 27%. In other words, for an HbA1c value of 5.6% an individual had a 21% chance of undiagnosed diabetes in the high risk group compared to a 4% chance in the low risk group (using FPG as gold standard test). And for HbA1c threshold from 6.1 to 6.4%, PPV ranged from 54 to 81% in the high risk group compared to 42 to 54% in the low risk group!

Furthermore, Edelman et al. (2004)<sup>45</sup>, in a prospective cohort study (US population, aged 45-64 year old, mainly males, without diabetes and a 3 years follow-up) looked at the utility of HbA1c in predicting diabetes risk (but without considering the contribution of HbA1c over and above recognised risk factors for diabetes). HbA1c predicted diabetes risk better than BMI: individuals with an HbA1c of 5.6-6% and BMI 27.5-30 had a 2.9% annual incidence of diabetes and 4.1% with BMI >30 compared with an overall 2.5% annual incidence of diabetes for baseline HbA1c of 5.6-6% and 6.4% for HbA1c of 6.1-6.5%.

Lastly, 2010 ADA guidance<sup>41</sup> considers the HbA1c range of 5.5-6 “as *the most appropriate level to initiate preventive interventions*” (page S66) with extra-caution in risk communication when HbA1c is  $\geq 5.7\%$  and even more with presence of recognised risk factors. The continuum of risk is curvilinear so that as HbA1c rises the “*risk of diabetes rises disproportionately*” (page S66)

- **HbA1c range 6-6.5% and high risk of diabetes:**

Based on analysis of the NHANES data the ADA considers that HbA1c values of 5.5% to 6.0% most accurately identify individuals with IFG or IGT and quote for HbA1c values of 6.0 to <6.5% a risk of incidence of diabetes more than 10 times higher than for individuals with lower HbA1c levels but,

at the same time acknowledge that *“the 6 to <6.5% range fails to identify a substantial number of patients who have IFG and/or IGT”*<sup>41</sup>.

However, we suggest not to proceed to further testing in this group. At these levels, HbA1c sensitivity is reduced (and low at a level of 6.5%) but specificity is remarkably preserved (see Saudek et al. above in “review of HbA1c cut-off”). A high false negative rate between 40 and 60% would be expected if this level is used as a diagnostic criterion. Furthermore HbA1c is insensitive at these levels to identify IGT/IFG<sup>19,41</sup>. Therefore in many cases further testing would be required to properly assess an individuals’ glycaemic regulation using an OGTT.

Diabetes screening HTA criterion 10<sup>42</sup> specifies that *“there should be an effective treatment or intervention for patients identified through early detection with evidence of early treatment leading to better outcomes than late treatment”* (page 88). But initial treatment for type 2 diabetes at these levels of HbA1c is unlikely to require pharmacological intervention<sup>34</sup> and like for IGT, IFG and metabolic syndrome it would require intensive life-style intervention (diet & exercise), and eventually a statin if CVD risk was  $\geq 20\%$ .

One could argue that in terms of therapeutic interventions there is some evidences that some pharmacological treatments (some as yet unlicensed for these uses) are effective in delaying transition for IGT to diabetes especially in those who are overweight or obese<sup>21</sup>. But, criterion 18<sup>42</sup> specifies that *“adequate staffing and facilities for testing, diagnosis treatment and program management should be available prior to the commencement of the screening program”* (page 90). Primary and secondary care diabetes clinics are certainly already under pressure and unlikely to cope with the extra workload in testing these patients (criterion not met according to Waugh et al. (2007)<sup>42</sup>).

We therefore suggest communicating a high risk of diabetes to the individual, promoting intensive life-style interventions, addressing CVD risk and other potential risks (e.g. development of hypertension) and retesting blood glucose two-yearly for most patients (see section further “Interventions in brief”). During this period patients are unlikely to develop microvascular complications and their increased risk of macro-vascular complications would have been addressed (see next bullet point down)

Based on Ginde et al. (2007) study<sup>15</sup>, further testing (FPG/OGTT) could be considered for patients with added recognized risk factors especially for those with HbA1c values close to the threshold of <6.5% (In high risk group, PPV from 46 to 81% for HbA1c 6 to 6.4%).

- **High risk of diabetes and IGT: importance of aggressive life-style modifications in term of cardiovascular prevention**

The relationship between CVD risk and glucose levels extends below diabetic threshold: risk of CVD worsen continuously across the spectrum of glucose tolerance categories beginning in the lowest quintiles of normal fasting glucose levels<sup>46</sup>. Compared with a glucose level of 4.2mmol/L,

there is a 30% increase in CVD risk for 120 minutes glucose of 6.1mmol/L and 58% increase risk for 120 minutes glucose of 7.8mmol/L.

In the DECODE study<sup>47</sup>, 30% of men and 44% of women who were diabetic according to OGTT had normal fasting glucose level and had a 50% increase risk for CVD mortality and 100% increase in risk of all cause mortality. IGT predicts mortality from all causes of death, cardiovascular and CHD deaths with a larger number of excess CVD deaths in subjects with IGT and normal fasting levels. For patients with diabetes, CVD risk is better associated with defective glucose tolerance and therefore abnormal postprandial glucose rather than abnormal fasting glucose.

In the FinMonica study<sup>48</sup> after multivariate adjustment risk of CHD, the incidence of CHD was 49% higher in subjects with IGT compared to normal GTT. IGT was an independent risk predictor for incidence of CHD and premature death for CVD and all cause mortality. This was not confounded by development of overt diabetes even after adjustment for other risk factors of increased CVD risk (e.g. age, sex).

In the EPIC-Norfolk study Khaw et al. (2001)<sup>40</sup>, showed that the rise in cardiovascular events with raising HbA1c started well below the diabetic range. Every 1% increase in HbA1c was associated with a 30% increase in all cause mortality and a 40% increase in cardiovascular and IHD mortality. HbA1c is described elsewhere as an *“an independent progressive risk factor for cardiovascular event events regardless of diabetes status”*<sup>42</sup>.

Recently the ACCORD, ADVANCE and VA Diabetes trials have failed to demonstrate that intensive glycaemic control improved cardiovascular outcomes in patient with established diabetes. Looking at post-hoc analyse of subsets comparison analysis of trial data and based on new insight from the DCCT follow-up study and UKPDS cohort, the ADA, the American College of Cardiology Foundation (ACC) and the America Heart Association (AHA) have in a position statement<sup>49</sup> suggested that in type 2 diabetes, the benefit of intensive glycaemic control is most beneficial in the early years in term of long-term reduction in risk of macrovascular disease.

The Diabetes Prevention Program trial<sup>50</sup> compared the effect of early intensive life-style interventions versus metformin in individuals with IGT. Improvements in cardiovascular risk and glucose tolerance profile were statistically significantly larger in the life-style intervention group.

Preventing onset of diabetes in individuals at high risk of diabetes or with known IGT with intensive life-style intervention should result in positive outcomes in term of long-term reduction of macrovascular complications.

### **3. Risk calculator choice rationale: JBS2 (Framingham modified) over QRISK**

In the past years, we have seen an extensive and passionate debate on which risk calculator was the best to be used for the UK population. Even at some point the scientific rationale seemed a secondary matter!

In this context, we are very aware that the choice of one CVD risk tool over another will always appear to be a subjective decision and could be subject to criticism. It is also outside the scope of this best practice guidance to give a full and detailed understanding of CVD risk equations used in CVD risk tools. Risk calculation or to be more accurate risk estimation is an imprecise science relying on numerous confounding factors.

Subjective estimates of risk are inaccurate due to the synergistic effects and complex interaction of risk factors: risk factors have a multiplicative effect and not an additive effect and a quantification factor is associated to each risk factor.

In order of importance, age, gender, previous cardiovascular disease, renal impairment, diabetes, smoking, lipid levels (ratio total cholesterol / HDL cholesterol) and left ventricular hypertrophy have the most effect on an individual absolute risk of CVD<sup>51,52</sup>.

Blood pressure and cholesterol have a minor effect on an individual absolute risk of CVD in the absence of other risk factors but have major effect in the presence of several other risk factors<sup>53</sup>.

To add to the complexity, most cardiovascular events occur in individuals with unremarkable levels of cholesterol and blood pressure. In the Multiple Risk Factor Intervention Trial for Coronary Heart Disease Prevention study (MRIFIT), approximately 50% of CHD events occurred in patients with cholesterol levels between 3.15 and 5.6 mmol/L<sup>54</sup>.

Therefore CVD risk calculators rely on complex risk equations to estimate an individual risk.

The following rationale is based on a limited number of points but referencing could be used for further personal research.

- Lambeth PCT Local Enhance Service (LES) and clinical guidance for high CVD risk registers recommended JBS2 risk calculator tool and JBS2 read-coding, therefore expertise already exists across PCT practices for its use.
- Risk communication is a fundamental step of the health check program. The JBS2 risk tool is extremely patient friendly and in our view superior to other risk calculators in supporting risk communication to patients. As age is the strongest CVD risk factor, young individuals at future risk of CVD will only have an increase in their relative risk. The JBS2 risk tool includes a relative risk score where the effect of any intervention on an individual risk profile could be easily and instantly demonstrated and explained (thermometer graphic display)
- Firstly, the perfect CVD risk calculator should<sup>55,56</sup>:
  - ✓ have a high sensitivity,
  - ✓ have a low false positive rate (FPR equal 100 minus specificity, this been a key point as the predictive value of a screening test dependent on the prevalence of the condition screened),

- ✓ give a CVD risk score with a narrow 95% confidence interval or “true” interval risk value.

To this effect, a risk calculator equation should have a minimal number of input parameters to reduce statistical calculation errors. As described in the diabetes filter rationale, biological measurements are subject to various variations (intra-individual biological, assay variation, analytical variability) and all measurements are subjects to errors (e.g. recording bias). Furthermore, in risk equations each individual risk factor is subject to an exponent with its own confidence interval adding further imprecision. Therefore, even though adding risk factors theoretically increases specificity, *“it actually increases error faster, leading to apparently increased sensitivity but significantly reduced specificity”* (Wierzbicki, 2009, p992)<sup>57</sup>.

Unlike Framingham which uses a limited set of well known and recognized CVD risk factors and JBS2 (a modified version of the 1991 Framingham equation which includes risk adjustment for variables such as TG, family history of CVD and ethnicity), QRISK2 algorithm includes further additional and novel parameters (deprivation core, estimated eGFR, autoimmune disease, rheumatoid arthritis and atrial fibrillation) with very little hindsight for applied coefficients to those novel parameters adding further potential calculation imprecision.

- Secondly, the perfect CVD risk algorithm should also be:
  - ✓ calibrated for the prevalence of risk factors and underlying rate of CVD events in the population on which it is going to be used,
  - ✓ prospectively validated against this population.

Framingham relies on complete set of data from epidemiological studies whereas QRISK relies on incomplete set of primary care databases and the issue of a large number of missing data (e.g. 72% of individuals had missing cholesterol level, 24% a missing blood pressure reading and only 25% had a complete set of data) is part of the controversy<sup>58</sup>. QRISK relies on age and gender based averages for missing data which are then interpolated<sup>59</sup>. Even though this problem was recognized and statistically addressed in the QRISK2 validation<sup>60</sup>, the method used is questioned<sup>61</sup>. It is puzzling that in individuals with recorded lipid values risk was lower than for individuals with missing lipid values<sup>58, 59</sup>. Furthermore, the external validation of QRISK<sup>62</sup> has been questioned in terms of incomplete 10-year prospective follow-up required for 10 years CVD event rates with approximately only 50% of full 10 year follow-up of data<sup>58</sup>.

In terms of prevalence of risk factors and underlying rate of CVD events (endpoints), QRISK rely on the accuracy of primary care cardiovascular risk and diseases registers.

- The accuracy of Townsend deprivation score on cardiovascular risk included in QRISK2 is questionable. It is:
  - ✓ based on old data from the 2001 census,
  - ✓ unlikely to represent the true underlying causes of inequalities in cardiovascular diseases<sup>54</sup> and we all know from daily experience that large variations exist within a postcode area in terms of social deprivation in our local population!

It is known that Framingham underestimates CVD risk in economically and socially deprived populations<sup>63,64</sup>. In the absence of a both validated and consensual deprivation score for our UK population and as explained above, rather than adding further imprecision to risk calculation with an added risk coefficient, we should first ensure that our screening strategy does not increase health inequalities especially in our deprived populations both at PCT and practice levels. At a PCT level this will involve various initiatives including an equality impact assessment, social marketing and recruitment of an “outreached team” to target difficult to reach individuals and communities. And for example at a practice level, specific attention should be given to Afro-Caribbean men.

- Automatic integration of risk calculator within clinical systems (e.g. QRISK2 integrated into EMIS practices) could lead to error by using inappropriate data (e.g. cholesterol value under treatment)
- Framingham over-predicts risk in UK population by 30%<sup>65</sup> and QRISK under-predicts risk by 13% for men and 10% for women<sup>66</sup>. Department of Health estimates that 8% of the vascular checks cohort aged 40-74 years will be identified with a CVD risk  $\geq 20\%$  using QRISK2 and 13% using Framingham/JBS2<sup>67</sup>. In the context of a screening programme and our local population characteristics using a risk calculator that overall over-estimates risk rather than under-estimates is more sensible. This view is shared locally<sup>68</sup>.
- QRISK is not recommended by NICE for CVD risk assessment and unlike JBS2 is also not recommended for the Quality and Outcomes Framework.

#### 4. GPPAQ:

The General Practice Physical Activity Questionnaire comprises:

- 1- A written questionnaire for completion by patients if completed outside of the consultation
- 2- Coding algorithm
- 3- Electronic template (Excel) automatically generates the Physical Activity Index (PAI)

All above components are available at:

[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_063812](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063812)

#### Questionnaire:



##### General Practice Physical Activity Questionnaire

Date.....

Name.....

1. Please tell us the type and amount of physical activity involved in your work.

		Please mark one box only
a	I am not in employment (e.g. retired, retired for health reasons, unemployed, full-time carer etc.)	
b	I spend most of my time at work sitting (such as in an office)	
c	I spend most of my time at work standing or walking. However, my work does not require much intense physical effort (e.g. shop assistant, hairdresser, security guard, childminder, etc.)	
d	My work involves definite physical effort including handling of heavy objects and use of tools (e.g. plumber, electrician, carpenter, cleaner, hospital nurse, gardener, postal delivery workers etc.)	
e	My work involves vigorous physical activity including handling of very heavy objects (e.g. scaffolder, construction worker, refuse collector, etc.)	

2. During the *last week*, how many hours did you spend on each of the following activities?  
*Please answer whether you are in employment or not*

Please mark one box only on each row

		None	Some but less than 1 hour	1 hour but less than 3 hours	3 hours or more
a	Physical exercise such as swimming, jogging, aerobics, football, tennis, gym workout etc.				
b	Cycling, including cycling to work and during leisure time				
c	Walking, including walking to work, shopping, for pleasure etc.				
d	Housework/Childcare				
e	Gardening/DIY				

3. How would you describe your usual walking pace? Please mark one box only.

Slow pace (i.e. less than 3 mph)	<input type="checkbox"/>	Steady average pace	<input type="checkbox"/>
Brisk pace	<input type="checkbox"/>	Fast pace (i.e. over 4mph)	<input type="checkbox"/>

## Coding Algorithm: the 4-Level Physical Activity Index (PAI)

Patients are classified into four categories based on the original EPIC index from which the GPPAQ was developed.

- Inactive: Sedentary job and no physical exercise or cycling
- Moderately inactive:
  - ✓ Sedentary job and some but < 1 hour physical exercise and/or cycling per week OR
  - ✓ standing job and no physical exercise or cycling
- Moderately active:
  - ✓ Sedentary job and 1-2.9 hours physical exercise and / or cycling per week OR
  - ✓ Standing job and some but < 1 hour physical exercise and / or cycling per week OR
  - ✓ Physical job and no physical exercise or cycling
- Active:
  - ✓ Sedentary job and  $\geq 3$  hours physical exercise and / or cycling per week OR
  - ✓ Standing job and 1-2.9 hours physical exercise and / or cycling per week OR
  - ✓ Physical job and some but < 1 hour physical exercise and / or cycling per week OR
  - ✓ Heavy manual job

Note: Questions concerning walking, housework/childcare and gardening/DIY are included.

However, they have not been shown to yield data of a sufficient reliability to contribute to an objective assessment of overall physical activity levels and are not included in the calculation of the PAI. Where patients have reported that they walk regularly and their PAI is less than active, a discussion is needed around the amount of and intensity of walking. This will help to determine whether the patient is currently meeting the Chief Medical Officer's recommendation for 30 minutes of moderate activity on 5 days of the week (or more). Walking, Gardening (Green exercise) Housework, DIY activities can contribute to meeting the Chief Medical Officer's recommendation and walking, in particular, should be encouraged.

### PAI summary:

Physical exercise and / or cycling (hr/wk)	Occupation			
	Sedentary	Standing	Physical	Heavy Manual
0	Inactive	Moderately Inactive	Moderately Active	Active
Some but < 1	Moderately Inactive	Moderately Active	Active	Active
1-2.9	Moderately Active	Active	Active	Active
$\geq 3$	Active	Active	Active	Active

## Electronic template (Excel spreadsheet)

Transferring patient's responses to the electronic template (requires a maximum of 1-2 minutes) allows results analysis, automatic Physical Activity Index (PAI) generation and Physical Activity Index assignment.

### 5. OGTT protocol:

This protocol relates to those non pregnant adult patients who are not systemically ill at the time of the test and who have not had a major illness or major surgery in the previous 6 weeks. Concurrent short or long term medication with oral steroids, thiazide diuretics and beta blockers and their clinical relevance must be considered.

#### Preparation

- **Patient:** should be on an unrestricted diet containing at least 150 grams of carbohydrate for three days before the test and should be fasting from 10pm the previous evening, except for water and any prescribed medications.
- **Practice nurse/HCA:** leave 2 bottles of Orange Original Lucozade **open** in the practice fridge overnight.

#### Procedure

- The patient should remain at rest for the two hours duration of the test except for voiding and should not smoke, eat or drink except for small amounts of water.
- A venous plasma sample of blood is taken
- Then ask the patient to drink **394 mls** of Orange bottle Original Lucozade that **is chilled and flat, within 5 minutes**. Note the time the patient starts drinking.
- The patient should sit in the waiting room (for two hours) and should be advised not to leave the waiting room as any form of exercise can have a detrimental effect on the test.
- A repeat venous plasma sample is taken at 120 mins after the glucose drink was taken.
- Only **one blood form is required:**
  - ✓ With mention "OGTT"
  - ✓ First blood sample labelled with patient's details, time taken and add "fasting glucose"
  - ✓ Second blood sample labelled with patient's details, time taken and add "120 mns glucose"

#### Results & Interpretation

Diagnostic Group	Venous Plasma Glucose (mmol/l)
Normal	Fasting <6.1 and 120 minutes <7.8
Impaired Fasting Glycaemia	Fasting >6.1 and <7.0 120 minutes <7.8
Impaired Glucose Tolerance	Fasting <7.0 and 120 minutes >7.8 but <11.1
Diabetes Mellitus	120 minutes >11.1

## **Patient Leaflet**

Your health care professional has referred you to have an oral glucose tolerance test (OGTT), which is performed over a two hour period. This is to establish whether or not you are developing diabetes or whether your body just has difficulty in dealing with glucose.

For three days prior to this test, you should consume your normal diet. If you have been put on a weight reducing or low carbohydrate diet, this must be stopped for three days before the test.

It is important that you do not have anything to eat or drink after 10pm on the day before you come in for the test, except water.

You must not smoke on the day of the test. Please take any medicines on the day of the test as usual with water.

We will take a sample of blood when you arrive. You will then be given a drink of chilled glucose solution. Following this, a second blood sample will be taken two hours after. It is very important that you remain sitting in the waiting room (except if you need to go to the toilet) in between the two tests as any form of exercise will negatively impact on the reliability of the test. You should not smoke, eat or drink except for small amounts of water.

You should expect to stay for about two hours. You may wish to bring a book or magazine to read to pass the time. You may bring someone to stay with you during the test.

You should be able to undertake normal activities after the test is finished and it should not interfere with your ability to drive home.

We will make an appointment for you to return one week later, when we will be able to tell you definitely whether you have diabetes or not.

Thank you.

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**3.0**

- **SECTION 3: DATA COLLECTION AND MONITORING**

**3.1**

- **Data Collection**

**3.1.1**

- **Read Codes**

**3.2**

- **Monitoring and Evaluation**

## Administration of the Health Check process for Practices

To participate in the Health Check Call program practices will need to ensure the following:

- The monthly upload of data from QMS Practice Focus will ensure that the PCT has correct contact details and diagnosis indications for all 40 -75 year olds. This software will provide the facility to collect patient demographic details and limited clinical data in order to identify appropriate patients for screening.
- There is a defined practice contact to receive and process messages from the Health Check system. The practice contact will be responsible for the following:
  - Ensuring that the QMS Practice Focus data is refreshed in time to upload to the PCT on the 7<sup>th</sup> of each month
  - Messages from Health Check system are reviewed and checked in a timely manner by the named contact.
  - Ensuring that notification of Health Check performed on patients outside of the surgery are recorded accurately on the practice system
  - Any returned mail or other changes to patient details if recorded on practice system will be picked up in the monthly data upload.
  - Practice staff that need access to the Health Check System will be provided with a separate login user account on the health check system.

## GP Data Upload for Health Check

GP data to support the Health Check program will be collected monthly using QMS Practice Focus. The following patient data is collected to support the program (Note: it is planned to add further clinical data at a later time to support monitoring and reporting of uptake of Health Check and follow-up):

- Practice Number
- NHS Number
- First name
- Surname
- Date Of Birth
- Gender
- Address inc Postcode
- Registration Date
- Deregistration date
- Patient Status
- GP Patient Number

- Ethnicity
- Religion
- Spoken Language
- Opt out (declined Health Check) & date
- Last 3 CVD risk scores and dates
- Diabetes Diagnosis & Date
- CHD Diagnosis & Date
- CKD Diagnosis & Date
- Hypertension Diagnosis & Date
- Latest Health Check
- Latest Health Check date

In order to ensure that the call and recall letters can be generated accurately it is important that the GP data is uploaded monthly to the Health Check system. QMS Practice Focus provides an 'Export' facility that will allow the upload process to occur with minimal intervention by the practice. However, the upload will only happen if the QMS Practice Focus data is refreshed regularly by running queries on your clinical system. To ensure that your data is uploaded successfully, please ensure that:

1. If you are offered an 'update' to Practice Focus when you open the Practice Focus application, you install it.
2. You run your Practice Focus 'Refresh' on the first day of the month, or as soon as possible after that.
3. Your Practice Focus 'Exporter' is configured to send data automatically as a scheduled task. This will happen on or around the 7<sup>th</sup> of the month, and you will receive an email if there are any problems with the export.

QMS will be providing support to practices to ensure the smooth running of this process, and can be contacted at [support@qms-uk.com](mailto:support@qms-uk.com) as usual.

### **Recording of data for Health Check performed outside of general practice**

As well as practice-based Health Check, patients will be screened in community settings, e.g. pharmacies and by the PCT Specialist Outreach team. When this occurs, the Health Check system will inform the nominated contact at the patients' registered surgery. The nominated practice contact will be able to log into the Health Check system and view details of the results of the Health Check. It is very important that the Health Check is recorded consistently on the clinical system at the patients registered practice. A process for data transfer will be agreed with practices.

For further information, contact NHS Health Check specialist team on tel: **02030494134** or email: ***lam-pct.nhshcteam@nhs.net***

### **Data Collection templates for Practices**

For data entry please use "NHS Health Check Lambeth" template which has been developed by the PCT Clinical Information facilitators. Templates will vary depending on the clinical information system and they will be sent out to each practice with instructions on how to upload them onto the practice system.

Contact the team on **0203 0494289** or Email: ***lam-pct.CIFTeam@nhs.net***

## 3.1.1

## • Read Codes

Please note that coding is done via the template, we however recommend that you use the READ codes below for reference for extra coding if required. This list was compiled by the SEL Cardiac & Stroke Network and agreed by NHS Lambeth. They also include disease, lifestyle and administration codes.

NHS Lambeth recognise that there may be some overlap of patients presenting for vascular checks in boroughs where they live and work. However if we have standardised the READ codes across the patch to allow for this, it will make monitoring of activity easier. We will also like to bring to your attention that some READ codes are not available (especially for lifestyle interventions), requests have been forwarded to the DH and we are currently waiting for an update.

<b>Vascular checks</b>	<b>READ CODE</b>
Vascular disease risk assessment (for call recall use diary template)	38B1
Vascular disease risk declined	8IAC
JBS2 CVD risk <10%	662k
JBS2 CVD risk 10-20%	662l
JBS2 CVD risk >20-30%	662m
JBS2 CVD risk > 30%	662n
QRISK	38DF
<b>Family history</b>	
Family history of IHD < 60	12C2
FH: CVA/Stroke	12C4.
FH: MI in first degree female rel <65 yrs	12CN.
FH: MI in first degree male rel <55 yrs	12CP.
FH: Angina in first degree female rel <65yrs	12CL.
FH: Angina in first degree male rel < 55yrs	12CM.
FH: Cardio Vascular Disease in first degree female rel <65 yrs	12CW
FH: Cardio Vascular Disease in first degree male rel <55 yr	12CV
FH: Hypercholesterolaemia in first degree relative	126B
FH: Familial Hypercholesterolemia	1269
No FH of CVD	1224.
<b>Personal history / Disease Codes</b>	
Rheumatoid Arthritis	NO40
Premature Menopause	C1634
Gestational Diabetes Mellitus	L1809
Pure Hypercholesterolemia	C320
Mixed Hyperlipidaemia	C324
HDL	44P5
IHD	G3

Hypertension	G2
• ECG LVH	3242
Atrial fibrillation	G573
Type 1 Diabetes	C10e
Type 2 Diabetes	C10f
• Fasting blood glucose	44fl
• Impaired glucose tolerance	C11y2
• Impaired FPG	C11y3
• Diabetes annual review	66AS
PVD	G73
CKD	1ZI%
• eGFR	45IF
• eGFR calculated abbreviated MDRD adj for African American origin	451G
• ACR	46TC
• PCR	
Stroke	G66
TIA's	G65
Hyperthyroidism	C02
Hypothyroidism	C04
<b>Lifestyle codes</b>	
BMI	22K
Obesity BMI>30	22K5
Obesity BMI > 27.5 (ethnicity)	?
Exercise physically impossible	1381
Avoids even trivial exercise GPAQ- Inactive	138X
Enjoys light exercise GPAQ- Moderately Inactive	138Y
Enjoys moderate exercise GPAQ- Moderately Active	138a
Enjoys heavy exercise GPAQ- Active	138b
<b>Administration Codes</b>	
Review of patient at risk of CHD	6A40
Health assessment external agency	Will need a local code
Cholesterol screen (to be used in community)	6879-1
Cholesterol raised (to be used for community results)	C320
CHD risk clinical management plan	8CR6
Cardiovascular disease monitoring not required	66b0
Cardiovascular risk indicated	8BR1
<b>Initial assessment</b>	
CVD risk assessment invitation	9m2
CVD risk assessment telephone invitation	9m20
CVD risk assessment verbal invitation	9m21
CVD risk assessment first letter	9m22
CVD risk assessment second letter	9m23
CVD risk assessment third letter	9m24
<b>Follow up Review assessments</b>	
At high risk of CVD monitoring administration	9Ox
At high risk of CVD monitoring telephone invite	9Ox0

At high risk of CVD monitoring letter invite	9Ox1
CVD monitoring invitation first letter	9Ox2
CVD monitoring invitation second letter	9Ox3
CVD monitoring invitation third letter	9Ox4
CVD risk assessment done	9OhA
Failed to respond to cardiovascular disease risk assessment invitation	9Nj4
Vascular Risk assessment declined	8IAC / 9Oh9
Did not attend cardiovascular risk assessment	9NiM
Cardiovascular Disease interim monitoring	66f1
<b>Statins &amp; other drugs</b>	
Statin contraindicated	8I27
Statin declined	8I3C
Adverse reaction to statin/ Statin not tolerated	8I76
Adverse reaction to Simvastatin	TJC24
Adverse reaction to Pravastatin	TJC25
Drug compliance good	8B3E
Drug compliance poor	?
Drug declined	8B30
<b>Life style Interventions</b>	
Health education not wanted	6782
Exercise referral declined	138S
Weight management plan started	66CH
Weight management plan completed	66CJ
Exercise advice given	8CA5
Referral to exercise programme	8HHC
Lifestyle counselling	67H
Referral to smoking cessation	8H7i
Smoking cessation advice	8CAL
Lifestyle advice regarding alcohol	67H0
Weight management advice	6799P
Referral to weight management programme	8HHH
<b>Ethnicity Codes</b>	
Bangladeshi	9S8
Indian	9S6
Pakistani	9S7
Other Asian background	9SH
<b>Black or Black British</b> African	9S3
Caribbean	9S2
Any other black background	9S4
Chinese	9S9
Any other ethnic group	9SJ
<b>Mixed</b> White and Asian	9SB2
White & Black African	9SB5
White & black Caribbean	9SB5
Any other mixed background	9SB
White British	9S10
White Irish	9S11
Any other white background	9S12

<b>Blood pressure</b>	
Pre treatment BP	6623.
Systolic	2469.
Diastolic	246A.
Refused	8I3Y
<b>Pulse rate</b>	242..
Pulse rhythm	243..
Pulse – regular	2431.
Pulse- irregularly irregular	2432.
Pulse - regularly irregular	2433.

## 3.2

### • Monitoring and Evaluation

A national evaluation framework for the NHS Health Check programme will be developed. Our Public Health Team is looking at the methodology we will use to evaluate locally to measure the impacts on our priority of reducing health inequalities.

The monitoring of activity will take place through the usual contracting methods used. The pilot year gives us an opportunity to measure activity and we will use the data collected to inform us which patients are coming forward for checks. We will then be able to revise our priorities and target the promotion of the checks accordingly if we are not reaching those population groups most at risk of CVD.

If you would like to know more about the evaluation process please contact Hiten Dodhia at NHS Lambeth. [Hiten.dodhia@lambethpct.nhs.uk](mailto:Hiten.dodhia@lambethpct.nhs.uk)

## **PART 3**

**4.0**

- **SECTION 4: NON PHARMACOLOGICAL INTERVENTIONS**

**4.1**

- **Lifestyle Interventions Introduction and Referral Flowchart**

**4.2**

- **Lifestyle Intervention: MyAction**

**4.3**

- **Lifestyle Intervention: Exercise on Referral**

**4.4**

- **Lifestyle Intervention: Health Trainers Services**

4.5

- **Lifestyle Intervention:  
Self-care skills training course**

4.6

- **Lifestyle Intervention:  
Stop Smoking Services**

4.7

- **Lifestyle Intervention:  
General Lifestyle Advice and Signposting**

4.8

- **All Interventions: Referral and Feedback  
Forms**

4.9

- **Signposting options, including useful  
Websites**

### NHS Health Check – Lifestyle Interventions: An Introduction

This section addresses the post-health check and lifestyle interventions. It describes the different lifestyle interventions available for patients defined as very high, high and moderate risk score and the specific qualifying criteria.

During the post-health check appointment, the healthcare professional should discuss with the patient lifestyle changes they wish to make to reduce their vascular risk.

There are a number of lifestyle interventions available for patients defined as very high, high and moderate risk to which they can be referred. These are structured programmes which aim to support patients in making a lifestyle change. Each of these has specific referral criteria. When considering which would be the most appropriate option you should also take into account the following factors

- Does that patient understand what it is about their lifestyle that is unhealthy and that to improve their health they need to make changes?
- Is the patient ready and willing to make a lifestyle change?
- Can they commit the time required for the programme in question?
- Are the activities/format/venues suitable for them?

Patients should only be referred to one structured programme initially, in order to ascertain whether this sort of format is suitable for them. If there are a number for which they meet the criteria, discuss with the patient what they think they are most likely to achieve. In addition focussing on one achievable goal at a time can promote patient motivation (see the flow chart overleaf for a summary).

There are a number of lifestyle interventions which you can signpost moderate and low risk patients.

Some of these are listed in this handbook. For up to date information please see [www.nhs.uk/lambeth](http://www.nhs.uk/lambeth).

**All the programmes for high and very high risk patients have limited capacity therefore demand will be high. It is vital that those patients' referred meet the criteria and wish to take part in a lifestyle intervention.**

## Lifestyle Intervention Referral Flowchart

Risk $\geq$ 30% (Very high) Impaired glucose regulation*	MyAction Exercise on referral (very high risk) Stop smoking services (where applicable) Exercise on referral (high risk)
Risk 20 to <30%	Health Trainers Stop smoking services (where applicable) Self-care skills training programme General lifestyle advice and signposting
Risk 10 to <20%	Stop smoking services (where applicable) General lifestyle advice and signposting
Risk <10% (Low)	Stop smoking services (where applicable)



\* Impaired fasting glucose, impaired glucose tolerance & non diabetic hyperglycaemia (see diabetes filter F.3.d)

## • Lifestyle Intervention: MyAction

Applicable Category of Risk:

**Very High** High Moderate Low

\***impaired glucose regulation:** impaired fasting glucose, impaired glucose tolerance, non diabetic hyperglycaemia

### • Service outline and description

- o Average of 16 weeks programme, of which patients and partners will be encouraged to attend a minimum of eight/ten sessions.
- o The programme will commence with a 2.5 hour comprehensive multi-disciplinary assessment of each participant. Following this assessment, the MyAction multi-disciplinary team, led by the Nurse Coordinator, will review the patient & partner to agree long and short term goal setting, an individualised risk assessment, a care management plan and an underpinning behaviour change strategy to empower the individuals to sustain long term lifestyle change.
- o The programme will follow this initial assessment, which includes weekly one to one reviews, a structured exercise programme and multidisciplinary health promotion workshops. Additionally, one to one appointments for reviews & ongoing support will be arranged as appropriate to the needs of the individual.
- o The programme's sessions will be provided with a choice between evenings and daytimes.
- o The comprehensive assessments will be held at the start of the programme, at the end of the programme (usually around 16 weeks) when the intensive intervention is complete, and one year later.
- o Patients will be referred on when ready, to additional local services as needed for on-going support, e.g. Stop Smoking Services.
- o Timings and venues – choice of one morning or evening session per week, at a venue in Kennington or Streatham

### • Source of referral

NHS Health Check referrals accepted from

- o Referrals will be accepted from GPs/practice nurses
- o Specialist health checks nurse-led outreach team

- **Referral/eligibility criteria**

Patient has been identified as being  $\geq 30\%$  risk of developing CVD within next ten years. That is very high risk.

Patients with Impaired Glucose regulation (please refer to Best Practice Guidance)

- o The motivation to change must come from the patient. The patient needs to have a good understanding of a healthy lifestyle.
- o The patient must have said that they want to do something to improve their health. The patient must have the understanding of what it is they will need to do to adopt a healthier lifestyle.
- o The patient must be agreeing to commit to a 16 week programme and be able to access the venues and times where it is offered.
- o The patient must be physically able to do any of the activities on offer before they are referred.

Exclusion criteria

- o Under 16 years of age
- o Pre-contemplators. People who have not given any thought to their health before are not recommended to attend

- **Process (including any forms required etc)**

- o After clinical assessment of the patient to determine suitability for referral, the GP/practice nurse will complete the Lifestyle Referral form
- o Forms are available both electronically and in paper form (in section 3.8)
  - Electronic form produces a word document which should be sent to the relevant secure email account listed at the bottom of the form
  - Paper – the form should be completed and faxed to the relevant number listed.
- o On receipt of the form the MyAction team will contact the patient by telephone to book an initial appointment (IA).
- o Confirmation of the IA will be sent to the patient with additional information about the MyAction programme.
- o The patient will attend the IA and has a one to one consultation with a MyAction Nurse. This member of the team will discuss the health goals and the programme in more detail, with the patient. They will undertake an assessment with the patient then enrol them on the course.
- o The patient (and partner) will then attend weekly sessions of activity with the MyAction team.
- o Data collected before, during and at the completion of the programme will be returned to the central MyAction team database.
- o The database will be used to generate individual patient reports for referring clinicians as well as performance and outcome reports for NHS Lambeth. The MyAction database is able to interface with local clinical information systems. This is a secured transfer which will import data into the systems. This will avoid the scenario of double-entry information into computing systems and enables the MyAction database to receive some of its information to be populated from the local IT system.

- **Referring back to primary care**

- o Patient's GP will be informed of progress throughout the programme – the frequency/format of communication has yet to be agreed

- **Exit routes**

The MyAction team will discuss a range of exit routes with the patient towards the end of the agreed programme. Onward referral from MyAction to the Health Trainers Service is an agreed route.

- **Roles and responsibilities**

Referring health professionals are responsible for the following aspects of the patient's referral:

- o Overall clinical responsibility for the individual patient
- o Clinical assessments of patients prior to referral
- o Professional judgements on information to be disclosed to the exercise professionals
- o Transfer of meaningful, relevant information to the MyAction Scheme
- o Gaining consent from the patient for the transfer of information to the MyAction Scheme
- o Responding to queries from MyAction professionals

The MyAction Programme, including the management, is responsible for the following aspects of a patient's referral:

- o Appropriate administration to ensure smooth transition of the patient into and through the Exercise on Referral Scheme
- o Pre-exercise assessment including screening and data collection
- o Gaining consent from the patient to agree to take part and adhere to the programme design and guidance given
- o The safe and effective management, design and delivery of the programme
- o Reporting outcomes and patient progress to both general practice, MyAction Central and NHS Lambeth
- o Liaising with health care professionals regarding concerns or queries

## **MyAction Programme Contact Details**

For information on the MyAction Programme

Office: MyAction, Moffat Health Centre, Sancroft Street, SE11

Name: Catherine Kironde

Position: Head of Health Improvement Delivery

Email: [catherine.kironde@lambethpct.nhs.uk](mailto:catherine.kironde@lambethpct.nhs.uk)

Email: [lam-pct.myaction@nhs.net](mailto:lam-pct.myaction@nhs.net)

Tel: 020 3049 5229

Fax: n/a (at present)

Applicable Category of Risk:

**Very High** High Moderate Low

### • Service outline and description

- o 12 week programme of exercise, which includes gym sessions, circuit training and water aerobics.
- o A rolling programme of educational sessions covering topics such as maintaining a healthy lifestyle and motivation
- o Patients will be risk stratified based on information provided in referral form and an initial assessment will be undertaken by an exercise professional. Based on this assessment a customised exercise programme will be agreed with the patient.
- o Baseline measurements (BP, exercise indicators etc) will be taken at the start and end of the exercise programme.
- o Venue/Times: exercise sessions will be offered in a number of locations at various times. Further details can be found in Appendix 1.

### • Source of referral for NHS Health Check

NHS Health Check referrals will be accepted from

- o GPs/practice nurses in Lambeth practices
- o Specialist health checks nurse-led outreach team

### • Referral/eligibility criteria

Patient has been identified as being 20% risk or over of developing CVD within next ten years. That is the high risk and very high risk patients.

*to be eligible for the high risk scheme the score should be  $\geq 20\%$  but  $< 30\%$*

*to be eligible for the very high risk scheme the score should be  $\geq 30\%$*

Patients must be willing to adopt a healthier lifestyle and commit to completing a 12 week exercise programme. The health care professional should discuss with the patient:

- o Their motivation to change. The patient needs to understand what a healthy lifestyle is and they need to know what it is about their current lifestyle that is unhealthy.

- o The patient must have said that they want to do something to improve their health. The patient must have a good understanding of what is required of them to achieve a healthier and more active lifestyle.
- o The amount of physical activity they are currently undertaking. Check whether they are currently meeting or not the national recommendations for physical activity of 5 times a week, 30 minutes a day of moderate intensity physical exercise, and therefore if they would benefit or not from the scheme. Patients with a sedentary lifestyle (less than 30 minutes of moderate intensity exercise per week) should be prioritised.
- o The patient must be agreeing to commit to a 12 week programme, be able to access the venues and times where it is offered.
- o The patient must be physically able to do any of the activities on offer before they are referred.

#### Exclusion criteria

- o Under 16 years of age
- o Pre-contemplators
- o Currently meeting the recommended guidelines for physical activity
- o Progressive back pain, referred back pain
- o Disability preventing independent transition between machines
- o Disability preventing compliance with prescribed exercise programme
- o Uncontrolled asthma
- o Vertigo, unexplained dizzy spells or episodes of loss of consciousness

#### Absolute contra indications for exercise (excluding diagnosed cardiovascular conditions)

- o Systolic blood pressure >180mmHg &/or diastolic blood pressure >100mmHg
- o Previously documented BP drop >20mmHg during Exercise Tolerance Test (ETT)
- o Unstable diabetes or other metabolic disease

#### • **Processes (including any forms required etc)**

- o After patient's clinical assessment to determine referral suitability, the GP/practice nurse will complete the Lifestyle Referral form (in section 3.8)
- o Forms are available both electronically and in paper form
  - Electronically – it produces a word document which should be sent to the relevant secure email account listed at the bottom of the form
  - Paper – the form should be completed and faxed to the relevant number listed.
- o On receipt of the form the central Healthy Lifestyles team will contact the patient by telephone to book an initial appointment (IA).
- o Confirmation of the IA will be sent to the patient with additional information about the scheme including venues and session times.
- o The patient will attend the IA and have a one to one consultation with an exercise instructor.

- o The exercise instructor will arrange for an induction at the chosen venue. An exercise programme will be devised.
- o The patient will attend the exercise sessions with a qualified exercise instructor present. They will be encouraged to attend regularly, following their agreed exercise programme.
- o The patient will be monitored regularly by the exercise instructor.
- o Data collected before, during and at the completion of the programme will be returned to the Lambeth Healthy Lifestyles team.
- o A re-referral will require the patient to return to the surgery to receive a new up to date referral form.

- **Feedback for primary care**

- o General practice will receive feedback from the Health Lifestyles team
- o where the referral is inappropriate
- o if the patient DNAs
- o if patient condition deteriorates and needs to be referred back to GP
- o when the patient completes the programme – summary of progress to be provided.
- o On completion of the programme, patients will be encouraged to continue to exercise and instructors will discuss the options with the patient.

- **Referring back to primary care**

Patients who develop the following symptoms will be referred back to their GP before continuing participation in the exercise programme:

- o Deteriorating functional capacity despite apparent compliance with prescribed exercise regime
- o Resting SBP  $\geq$  or equal to 180 mmHg
- o Resting DBP  $\geq$  or equal to 100 mmHg

- **Exit routes**

The exercise instructor will discuss a range of exit routes with the patient during the exit interview undertaken at the end of the agreed programme. All patients completing, will receive a concessionary leisure card.

The educational component of this scheme includes sessions which aim to support patients in continuing to exercise once they have finished the programme and will outline the range of options available.

Upon completion of the scheme, the service will send to the referring clinician a copy of the exercise programme together with a summary of progress and suggested next steps.

Some patients may require additional support after they finish the programme. They could be referred to see a Health Trainer.

- **Roles and responsibilities**

Referring health professionals will be responsible for the following aspects of the patient's referral:

- o Overall clinical responsibility for the individual patient
- o Clinical assessments of patients prior to referral
- o Professional judgements on what information is disclosed to the exercise professionals
- o Transfer of meaningful, relevant information to the exercise referral scheme
- o Gaining consent from the patient for the transfer of information to the exercise referral scheme
- o Responding to queries from exercise professionals

In the context of a referral scheme, GPs or practice nurses do not prescribe exercise. They make a referral into a system which is quality assured.

The exercise professionals including managers and instructors will be responsible for the following aspects of a patient's referral:

- o Appropriate administration to ensure smooth transition of the patient into and through the exercise referral scheme
- o Pre-exercise assessment including screening and data collection
- o Gaining consent from the patient to agree to take part and adhere to the programme design and guidance given
- o The safe and effective management, design and delivery of the exercise programme
- o Reporting outcomes and patient progress to both general practice and NHS Lambeth
- o Liaising with health care professionals regarding concerns or queries

If you wish to contact the Healthy Lifestyles Service regarding a particular patient or find out more about the scheme contact:

Email	<a href="mailto:healthylifestyles@lambeth.gov.uk">healthylifestyles@lambeth.gov.uk</a>
Telephone	020 7926 0761
Fax	020 7926 1782

## Appendix 1: Timings and venues

Please note these times are correct at the time of print.  
For the most recent information check with the Lambeth Healthy Lifestyles Team  
[healthylifestyles@lambeth.gov.uk](mailto:healthylifestyles@lambeth.gov.uk)

Day	Time	Venue	Session
Monday	1.30 – 2.30pm	<b>Immanuel and St Andrew</b> 452 Streatham High Road SW16 3PY	<p><b>Circuit</b> Moderate intensity group exercises with light weights and aerobic training stations.</p> 
Tuesday	10.00 – 11.00am	Ferndale Sports Centre <b>Nursery Road, Brixton</b> SW9 8BP	
Wednesday	11.15 – 12.15pm	Nettlefold Hall <b>West Norwood Library</b> SE27 9JX	
	10.00 – 11.00am	<b>110 Union Road,</b> Stockwell SW8 2SH.	
Thursday	10.00-11.00am	Ferndale Sports Centre <b>Nursery Road, Brixton</b> SW9 8BP	
Tuesday	2.00 – 2.45pm	<b>Ferndale Sports Centre</b> <b>Nursery Road, Brixton</b> <b>SW9 8BP</b>	
Monday	10.00-12.00noon	<b>Lilian Baylis Old School</b> Lollard Street SE11	<p><b>Gym</b> Exercise based in an environment equipped with treadmills, stationary bikes, cross trainers and strength training machines. Although supervised the emphasis is on exercising independently.</p> 
	10.00 – 11.00am 11.30 – 12.30pm	<b>Brixton Recreation Centre</b> 27 Brixton Station Road SW9 8QQ	
Tuesday	1.30 – 2.30pm	Streatham Leisure Centre <b>Streatham High Road</b> SW16 6HX	
Wednesday	10.00 – 11.00am 11.30 – 12.30pm	<b>Brixton Recreation Centre</b> 27 Brixton Station	

		Road SW9 8QQ	
Thursday	9.30 – 11.00am	Streatham Leisure Centre <b>Streatham High Road</b> SW16 6HX	
	10.00-12.00noon	<b>Lilian Baylis Old School</b> Lollard Street SE11	
Friday	3.00 – 4.30pm	<b>Clapham Leisure Centre</b> <b>141 Clapham Manor St</b> SW4 6DB	
	10.00- 11.00am	<b>Brockwell Lido</b> Dulwich Road SE24 0PA	
Monday	2.00 – 3.00pm	<b>Clapham Leisure Centre</b> <b>141 Clapham Manor St</b> SW4 6DB	<p><b>Aqua</b> Water based aerobic exercise.</p> 
Wednesday	3.00 – 4.00pm		
Tuesday	12.00pm-1.00pm	Streatham Leisure Centre	
Thursday	12.30pm-1.30pm	<b>Streatham High Road</b> SW16 6HX	
Friday	2.00 – 3.00pm	<b>Clapham Leisure Centre</b> <b>141 Clapham Manor St</b> SW4 6DB	
Monday	6.00 – 7.00pm	<b>Clapham Park Homes community resource centre</b> (corner of Headlam road and Kings Avenue) <b>Intermediate class</b>	
Friday	10.00 – 11.00am	<b>Brockwell Lido</b> Dulwich Road SE24 0PA	<p><b>Dance Style Aerobics</b> Group based session with dance-themed combinations</p>

			
Thursday	2.15 – 3.15pm	<b>Ferndale Sports Centre</b> Nursery Road, Brixton SW9 8BP	<p><b>Tai Chi</b></p> <p>A form of traditional Chinese mind/body exercise and meditation that uses slow sets of body movements and controlled breathing.</p> 
Monday	12.30 – 1.30pm	<b>Kennington Park</b>	<p><b>Walks</b></p> <p>Group walks situated in Lambeth parks and open spaces.</p> 
Tuesday	2.00 – 3.00pm	<b>Brockwell Park</b>	
Thursday	1.00 – 2.00pm	<b>Streatham Common</b>	
Wednesday	10.00 – 11.00am	Nettlefold Hall <b>West Norwood Library</b> SE27 9JX	<p><b>Pilates</b></p> 
Thursday	12.30 – 2.30pm	Clapham Common <b>Bandstand</b> <i>Seasonal</i>	<p><b>Cycling</b></p> 

## • Lifestyle Intervention: Health Trainers Services

Applicable Category of Risk:

Very High | **High** | Moderate | Low

### • Service outline and description

- o Health Trainers work with patients on a one-to-one basis to assess their health and lifestyle needs, and are seeing a patient up to 6 times on an individual basis /one to one
- o Health Trainer's role is to facilitate behaviour change with the patient by providing motivation and practical support to them. This is done through the patient developing a personal health plan with the Health Trainer. The plan has goals which the patient wishes to achieve
- o Helping patients to access and use local services
- o Identifying and involving patients in health promoting group activities e.g. gentle exercise, cooking healthily on a budget, stopping smoking, managing blood pressure, diabetes etc.
- o Signposting patients to the appropriate health services and social activities
- o Maximum waiting time from referral to an initial Health Trainer appointment is two weeks
- o The service is able to provide office working hours, evening and weekend appointments

### • Source of referral for NHS Health Check

NHS Health Check referrals accepted from

- o Referrals accepted from GPs/practice nurses
- o Specialist health checks nurse-led outreach team
- o Pharmacists

### • Referral/eligibility criteria

Patient has been identified as being  $\geq 20\%$  but  $< 30\%$  risk of developing CVD within next ten years. That is high risk.

Patients who have existing lifestyle risk factors (those who smoke, are overweight, have low physical activity, poor diet, excessive alcohol consumption) that they wish to address.

Patients must be willing to adopt a healthier lifestyle. The Health Care Professional should discuss with the patient:-

- o The motivation to change must come from the patient. The patient needs to have a good understanding of a healthy lifestyle. .
- o The patient must have said that they want to do something to improve their health. The patient must have a good understanding of what is required of them to achieve a healthier and more active lifestyle. Some patients may have more than one lifestyle factor they need to address. The preference for which factor they address with the Health Trainer should come from the patient.
- o It needs to be made clear to the patient that changes will potentially impact on personal and social relationships and activities.
- o Patients must agree to see a Health Trainer for up to six sessions and must be willing to develop and implement a Personal Health Plan. Personal Health Plans will be used by Health Trainers to identify goals for people who want to live a healthier lifestyle.

Exclusion criteria

- o Currently there are no exclusion criteria; however pre-contemplators should not be referred.

- **Process (including any forms required etc)**

After clinical assessment of the patient to determine suitability for referral, the GP/practice nurse completes the Lifestyle Referral form (in section 3.8)

- o Forms are available both electronically and in paper form
  - Electronic form produces a word document which should be sent to the relevant secure email account listed at the bottom of the form
  - Paper – the form should be completed and faxed to the relevant number listed.
- o On receipt of the form the Health Trainer team will contact the patient by telephone to book an initial appointment (IA).
- o Confirmation of the IA will be sent to the patient with additional information about the Health Trainers programme.
- o The patient will attend the IA and will have a one to one consultation with a Health Trainer. They will discuss the health goals with the patient.
- o The Health Trainer will support the patient to develop a Personal Health Plan (PHP) for an induction at the chosen venue. An exercise programme will be devised.
- o The patient will then be able to see the Health Trainer five times more to get the support to meet their PHP.
- o Data collected before, during and at the completion of the programme is returned to the central Health Trainers Services.

- **Feedback for primary care**

- o General practice will receive feedback from the Health Trainers Services
- o where the referral is inappropriate (i.e. they were a pre-contemplator)
- o if the patient DNAs

- o when the Health Trainer intervention is completed (this will include outcome of the PHP)

- **Exit routes**

There is currently no specified exit route for Health Trainers Services. However as one of the goals of the programme is to support patients to take control of their health they will be sign posted to other services as appropriate.

Maximum waiting time from referral to an initial Health Trainer appointment will be two weeks

The service will be able to provide office working hours, evening and weekend appointments

The Health Trainer will meet the patient in one of the identified sites and begin the process of developing the Personal Health plan

Feedback will be given to GP's when the intervention is complete. This will include the outcome of the Personal Health Plan and a list of DNA's

- **Roles and responsibilities**

Referring health professionals will be responsible for the following aspects of the patient's referral:

- o Overall clinical responsibility for the individual patient
- o Clinical assessments of patients prior to referral
- o Professional judgements on what information is disclosed to the Health Trainers Services
- o Transfer of meaningful, relevant information to the Health Trainers Services
- o Gaining consent from the patient for the transfer of information to the Health Trainers Services
- o Responding to queries from Health Trainer Co-ordinator

The Health Trainers Services are responsible for the following aspects of a patient's referral:

- o Appropriate administration to ensure smooth transition of the patient into and through the Health Trainers Services
- o Pre- assessment including screening and data collection
- o Gaining consent from the patient to agree to develop a PHP and relevant monitoring data
- o The safe and effective management, design and delivery of the Health Trainer support
- o Reporting outcomes and patient progress to both general practice and NHS Lambeth
- o Liaising with relevant health care professionals regarding concerns or queries

## **Health Trainers Services Contact Details**

For up to date details of where in the borough the Health Trainers work and any other queries then contact:

Office: Lambeth Health Trainers, Moffat Health Centre, Sancroft Street, SE11

Name: Issa Nda Bouadou

Position: Health Trainer Team Leader – Health Checks

Email: [nda.bouadou@lambethpct.nhs.uk](mailto:nda.bouadou@lambethpct.nhs.uk)

Tel: 020 3049 5229

Fax: n/a (at present)

## **Additional Information**

The Health Trainers Services also accepts self referrals and referrals from other health programmes not related to NHS Health Check.

## • Lifestyle Intervention: Self-care skills training course

Applicable Category of Risk:

Very High High Moderate Low

### • Service outline and description

- o Self Care Skills Training Course is for any adult who wants to take control of their life and make positive changes to improve their health.
- o Self Care Skills Training Course helps patients to take more responsibility for and make more informed choices about managing their own health.
- o Each course is delivered flexibly and comprises of 6 sessions each of which last just over an hour. The course times vary and can be based on demand. More information on the times and venues can be sought from the Self Care Co-ordinator.
- o It provides an opportunity for participants to look at their motivation to change their behaviour, the psychological aspects of health and well-being plus the physical aspects of health and well-being
- o The course addresses both theoretical and practical aspects of self care
- o The overall aim is to provide people with skills suitable for their circumstances, and to consider changes to their health behaviours and those of their family.
- o To provide people with confidence and skills to care for themselves when they experience short-term conditions and minor health problems, and know when to use health and social care services

### • Source of referral for NHS Health Checks

NHS Health Check referrals accepted from

- o GPs/practice nurses in Lambeth practices
- o Specialist health check nurse-led outreach team
- o Pharmacists

### • Referral/eligibility criteria

- o Patient must have a risk score of  $\geq 10\%$  but  $< 30\%$

This scheme is open to all patients within this category. Patients can be referred using the Lifestyle Intervention Referral form and coded accordingly.

Patients must be willing to adopt a healthier lifestyle. The Health Care Professional should discuss with the patient:-

- o The motivation to change must come from the patient. The patient needs to understand what a healthy lifestyle is and they need to know what it is about their current lifestyle that is unhealthy.
- o The patient must have said that they want to do something to improve their health. The patient must have the understanding of what it is they will need to do to adopt a healthier lifestyle.
- o Patient must be willing and agree to commit the time to complete a 6 session course.

- **Process (including any forms required etc)**

- o After clinical assessment of the patient to determine suitability for referral, the GP/practice nurse will complete the Lifestyle Referral form
- o Forms are available both electronically and in paper form (in section 3.8)
  - Electronically – it produces a word document which should be sent to the secure email accounts listed at the bottom of the form
  - Paper – the form should be completed and faxed to the relevant number.
- o On receipt of the form the Self Care Co-ordinator will contact the patient by telephone.
- o They will discuss the Self Care Skills Training Course with the patient and inform them when and where the next groups are running.
- o If no group is running the patient will be informed when the next groups are talking place and placed on the appropriate waiting list.
- o Additional information about the Self Care and other patient programmes will be sent to the patient on request.
- o The patient will attend the group to which they sign up and be provided support by the course tutor.
- o Data collected before, during and at the completion of the course will be returned to the Self Care Co-ordinator.

- **Feedback for primary care**

- o General practice will receive feedback from the Self Care Co-ordinator
  - where the referral is inappropriate (i.e. they were a pre-contemplator)
  - if the patient DNAs
  - when the Self Care Skills Course is completed

If you wish to contact the Self Care Co-ordinator contact

Email [sharon.hudswell@lambethpct.nhs.uk](mailto:sharon.hudswell@lambethpct.nhs.uk)

- **Exit routes**

There is the opportunity for ongoing support from patient led support groups

- **Roles and responsibilities**

Referring health professionals are responsible for the following aspects of the patient's referral:

- o Overall clinical responsibility for the individual patient
- o Clinical assessments of patients prior to referral
- o Professional judgements on what information is disclosed to the Self Care Co-ordinator
- o Transfer of meaningful, relevant information to the Self Care Co-ordinator
- o Gaining consent from the patient for the transfer of information to the Self Care Co-ordinator
- o Responding to queries from the Self Care Co-ordinator

The Self Care Co-ordinator is responsible for the following aspects of a patient's referral:

- o Appropriate administration to ensure smooth transition of the patient into and through the Self Care Course
- o Pre- assessment including screening and data collection
- o Gaining consent from the patient to agree to develop a PHP and relevant monitoring data
- o The safe and effective management, design and delivery of the Self Care Course
- o Reporting outcomes and patient progress to both general practice and NHS Lambeth
- o Liaising with relevant health care professionals regarding concerns or queries

### **Self Care Co-ordinator Contact Details**

For up to date details of Self Care Skills Training Courses then contact the Self Care Co-ordinator

Office: EPP and Self Care Programme, Moffat Health Centre, Sancroft Street, SE11

Name: Sharon Hudswell

Position: Expert Patient Programme/ Self Care Co-ordinator

E-Mail: [sharon.hudswell@lambethpct.nhs.uk](mailto:sharon.hudswell@lambethpct.nhs.uk)

Tel: 020 3049 5245

Fax: n/a (at present)

## • Lifestyle Intervention: Stop Smoking Services

Applicable Category of Risk:

**Very High** High Moderate Low

### • Service outline and description

Stop Smoking Services are available in a range of settings:

- o Most GP Practices will have its own in-house specialist stop smoking advisor who is qualified in this area. If this is the case referral is simple and convenient. The advisor can offer behaviour support therapy along with stop smoking medications including Nicotine Replacement Therapy (NRT) , varenicline (Champix) and bupropion (Zyban)
- o Most pharmacists in Lambeth have a qualified stop smoking advisor who can offer behavioural support therapy and NRT
- o One to one counselling is also available through community stop smoking advisors based at Lambeth Stop Smoking Services.
- o Group sessions and drop in clinics are also available through Lambeth Stop Smoking Services. Group sessions last 7 weeks, with weekly appointments to give maximum support. The sessions also cover how to use nicotine replacement therapy and advise smokers of the most effective treatment to suit their needs. Most people set a joint quit date for the third week of the group.
- o Stop Smoking Services are offered across the borough, locations and times of groups will be posted on [www.nhs.uk/lambeth](http://www.nhs.uk/lambeth)
- o Call the Lambeth Stop Smoking Services free phone number 0800 856 3409 for information on any of these options.

### • Sources of referral

NHS Health Check Referrals accepted from

- o GPs/practice nurses in Lambeth practices
- o Specialist nurse-led outreach team
- o Pharmacists

### • Referral/eligibility criteria

- o Patients must be motivated to stop smoking. They should have expressed the desire and willingness to stop smoking.
- o If they decide they wish to use NRT they must have completely stop smoking before use.
- o Some patients may have tried numerous times before to stop smoking or may have other relevant medical history which means that it may be more

appropriate for them to receive more intensive, ongoing help and support such as that offered by the Lambeth Stop Smoking Services.

- o Patients who do not wish to use in house GP or pharmacy Stop Smoking Services can be referred to the Lambeth Stop Smoking Services using the Lifestyle Intervention Referral form and coded accordingly.

Lambeth Stop Smoking Services also runs a specialist service for pregnant smokers. Patients can either self-refer or be referred by calling 0800 856 3409, or by completing the referral form.

#### Exclusion criteria

- o There are no exclusions on clinical or social grounds that would prevent a patient gaining access stop smoking support. It is acknowledged however that there must be a desire to cease smoking and some patients will not have this no matter what risk category they are faced with.

#### • **Process (including any forms required etc)**

- o After clinical assessment of the patient to determine suitability for Stop Smoking Services, the GP/practice nurse/pharmacist will complete either their internal Stop Smoking Services process or the Lambeth Stop Smoking Services Lifestyle Interventions Referral Form
- o Forms are available both electronically and in paper form (in section 3.8)
  - Electronic form produces a word document which should be sent to the relevant secure email account listed at the bottom of the form
  - Paper – the form should be completed and faxed to the relevant number listed.
- o On receipt of the form the Lambeth Stop Smoking Services will contact the patient by telephone to discuss with them what kind of stop smoking support they would like.
- o Depending on patient preference they will then be booked to see a community stop smoking advisor for a one to one consultation or booked into a stop smoking support group.
- o The patient will then be supported by the advisor or group in their attempt to stop smoking and, if required, be provided with the type NRT that is best suited to their needs and preferences.
- o Data collected from this is collated by Lambeth Stop Smoking Services

#### • **Feedback for primary care**

- o General practice will receive feedback from the Stop Smoking Services
  - When the patient referred to the completes the programme or is lost to follow-up
  - On completion of their programme, patients will be followed up by telephone at 3, 6, 9 and 12 months. If they have remained free from the habit the service will offer encouragement and support. If they have relapsed they will be offered the service again

If you wish to contact the Lambeth Stop Smoking Services

Email [natasha.smith@lambethpct.nhs.uk](mailto:natasha.smith@lambethpct.nhs.uk)

Telephone Tel: 0800 856 3409

Fax N/A (at present)

- **Referring back to primary care**

- o At present there is no process for informing a patient's GP when they complete any stop smoking intervention.

- **Exit routes**

Once the patient has successfully stop smoking and counted towards the 4 week quit target they will be discharged from the service. Telephone follow-up support is provided at 3/6/9/12 months.

The patient will be able to contact the Stop Smoking Services at any point if they wish to speak to an advisor or find out details of stop smoking drop in clinics, where they can get additional on-going support.

- **Roles and responsibilities**

Referring health professionals are responsible for the following aspects of the patient's referral:

- o Overall clinical responsibility for the individual patient
- o Clinical assessments of patients prior to prescribing of NRT or other stop smoking products
- o Professional judgements on what information is disclosed to the stop smoking advisor
- o Transfer of meaningful, relevant information to the stop smoking advisor
- o Gaining consent from the patient for the transfer of information to the stop smoking advisor or service

The stop smoking advisors are responsible for the following aspects of a patient's referral:

- o Appropriate administration to ensure smooth transition of the patient into and through their chosen stop smoking service
- o The safe and effective management, design and delivery of their stop smoking intervention including any prescribing of NRT or other stop smoking product.
- o Recording patient quit information onto their appropriate data collection system

## **Stop Smoking Service Contact Details**

For up to date details of where in the borough stop smoking services are available or any other query relating to stop smoking then contact the Lambeth Stop Smoking Service.

Office: Lambeth Stop Smoking Service, Moffat Health Centre, Sancroft Street, SE11

Name: Natasha Smith

Position: Stop Smoking Service Administrator

E-Mail: [Natasha.smith@lambethpct.nhs.uk](mailto:Natasha.smith@lambethpct.nhs.uk)

Tel: 0800 856 3409

Fax: N/A (at present)

## • Lifestyle Intervention: General Lifestyle Advice

Applicable Category of Risk:

Very High High **Moderate** Low

All patients, regardless of their risk score, should have an opportunity to discuss their lifestyle and be given appropriate health promotion advice. It is important to focus on the health issue that is the most important to the patient, even if it is not related to CVD. Once you have acknowledged this, they will be more open to discussing the topics you think will impact the reduction of their CVD risk. This will support them to lead a healthier lifestyle.

Patients should be signposted to NHS Choices at [www.nhs.uk](http://www.nhs.uk) for evidence based information on health topics that impact the reduction of their CVD risk. Topics and tools are available on healthier eating, weight loss, exercising safely and stopping smoking, mental well-being and much more. There is Lambeth specific information available at [www.nhs.uk/lambeth](http://www.nhs.uk/lambeth) Lambeth Public Libraries and Lambeth UK Online Centres have free Internet access and staff support available to access online services.

The information is written in a user friendly way. The website also has content that is suitable for people with lower levels of literacy.

There is also a plenty of good printed health promotion material available that you can give to patients on specific health conditions and adopting a healthy lifestyle. At the back of this pack is a list of leaflets we currently stock that we would recommend you to use.

NHS Lambeth recommends that all GPs and Pharmacists in Lambeth order free health information resources through the Lambeth and Southwark Leaflet Distribution Service. All these can be found at [www.hpac.lslsis.nhs.uk](http://www.hpac.lslsis.nhs.uk)

If you cannot find the leaflet or health information you require or would like to make suggestions or comments on HPAC please contact:

Office: NHS Lambeth, 1 Lower Marsh, Waterloo, London, SE1 7NT

Name: Heidi Fanning

Position: Head of Health Promotion Knowledge and Resources

Email: [heidi.fanning@lambthpct.nhs.uk](mailto:heidi.fanning@lambthpct.nhs.uk)

Tel : 020 3049 4453

Fax : n/a

## The Referral Form

It has been decided that the referral process should initially be paper based and where possible utilise existing formats. Therefore we have developed one referral form for you to use. This incorporates extra information that is needed for those patients who will be referred to Exercise on Referral Programme who have long term conditions.

During the lifestyle conversation with the patient, when all their results are to hand, you will need to discuss appropriate referral options with the patient. This will result in the completion of the designated Lifestyle Intervention Referral Form

Please ensure that you tick the appropriate parts of the form and send to the correct service.

It is anticipated that over time we will develop an electronic referral system which will enable greater flexibility and better quality controls.

## The Referral Process

Following the consultation with the patient the referral form will be faxed to each of the relevant service contacts, for the Lifestyle Intervention that has been deemed appropriate for the patient. The patient will then be contact by the service as outlined in the Lifestyle Intervention description template.

If the patient is seeking stop smoking support and you are using an in-house stop smoking advisor, please follow your normal referral process.

The referrer is responsible for maintaining appropriate records of referrals and providing follow-up should a patient report that they have not been contacted following the referral.

Patients should initially only be referred to one service as a result of their check

## The Feedback Process

The service providers will provide feedback to the patient's GP using the form attached. It is the responsibility of the practice to store this information with the patient records.

If you have any queries about the referral process please contact [lam-pct.healthchecks@nhs.net](mailto:lam-pct.healthchecks@nhs.net)

# Lifestyle Interventions Referral Form (Example)

<b>PATIENT DETAILS</b>	<b>REFERRER DETAILS</b>
Name: .....	Name: .....
Address: .....	Profession: .....
Date of birth: .....	GP Practice/Dept: .....
NHS Number: .....	Address: .....
Ethnicity: .....	.....
Preferred contact number: .....	Telephone number: .....
Interpreter required: Y/N	
If yes, specify language .....	

**Reason for referral**  
Has this referral been initiated via the NHS Health Checks programme? **Y/N**

**Current patient status**  
BP: ..... Pulse: ..... BMI: ..... Smoker: .... CVD Risk score: .....%  
(only if NHS Checks referral)

**Lifestyle Interventions\*\***  
Please indicate which service(s) you wish to refer the patient to  
 Exercise on referral     My Action     Health Trainers     Self-care     Smoking cessation

**Please provide details of other relevant medical history and issues e.g.**  
- medications (please attach list)  
- other relevant patient information e.g. access issues

**ONLY REQUIRED FOR EXERCISE ON REFERRAL**  
Reason for referral: please provide additional patient information (as appropriate)

<input type="checkbox"/> Depression <input type="checkbox"/> Arthritis <input type="checkbox"/> Hypertension <input type="checkbox"/> Obesity <input type="checkbox"/> COPD (complete MRC scale/home oxygen) <input type="checkbox"/> Diabetes <input type="checkbox"/> Familial hypercholesterolaemia <input type="checkbox"/> History of established CVD (complete cardiac details as appropriate) <input type="checkbox"/> Heart Failure	<b>COPD Classification</b> MRC scale: ..... Home oxygen: Y/N  <b>Cardiac History</b> MI: <input type="checkbox"/> Date: ..... Heart Failure: Y/N ICD: Y/N Pacemaker: Y/N Current Dyspnoea: Y/N Arrhythmias: Y/N Angioplasty/Stent: Y/N If yes, date: ..... CABG: Y/N If yes, date: ..... Other events: ..... Date: <b>Cardiac investigations:</b> ETT: Y/N Date: ..... Result: .....
---	--

<b>Referrer consent</b> – The information on this form is an accurate representation of the patient's health status. Please sign to indicate that the patient exhibits no contraindications to the intervention to which they are being referred to. The patient is clinically stable. Referrer's signature Print Name                      Date	<b>Patient consent</b> I agree for the above information to be passed onto the appropriate people within the service to which I have been referred to.  Patient signature: Print Name                      Date
--	---

Please send this form either by email or fax to the appropriate service below:

<b>Exercise on Referral:</b> 020 7926 1782 <a href="mailto:healthylifestyles@lambeth.gov.uk">healthylifestyles@lambeth.gov.uk</a>	<b>Health Trainers Service</b> <a href="mailto:lam-pct.healthtrainersservice@nhs.net">lam-pct.healthtrainersservice@nhs.net</a>
<b>Self-care Training Skills</b> <a href="mailto:lam-pct.selfcare@nhs.net">lam-pct.selfcare@nhs.net</a>	<b>My Action</b> <a href="mailto:lam-pct.myaction@nhs.net">lam-pct.myaction@nhs.net</a>
<b>Lambeth Stop Smoking Service</b> (groups, pregnancy and community advisor service) <a href="mailto:lam-pct@stopsmokingservice@nhs.net">lam-pct@stopsmokingservice@nhs.net</a>	



## • Signposting options, including useful Websites

Applicable Category of Risk:

Very High High **Moderate** Low

The lifestyle options listed here are for patients who are low or moderate risk of developing CVD. They may also be suitable for those patients who decline a referral but would still like to do something to improve their health.

Some activities are structured, such as the Healthy and Active Walks. Others will involve the patient searching information for themselves on the websites listed here.

For up to date information on lifestyle activities in Lambeth log onto [www.nhs.uk/lambeth](http://www.nhs.uk/lambeth)

If you are aware of any activities which you think could be added to this section please contact [lam-pct.healthchecks@nhs.net](mailto:lam-pct.healthchecks@nhs.net)

### Local services and evidenced based sources of information

NHS Lambeth has selected a range of websites that can be recommended to patients when they have their health checks. These are evidenced based sources of information which will help patients to make informed choices about their lifestyle in relation to their health and wellbeing.

The selection of websites (including a range of local sports centres, volunteer services and educational courses), is intended to encourage people to make simple lifestyle changes that will have a huge benefit to their health and wellbeing.

### General Healthy living advice

[www.nhs.uk/lambeth](http://www.nhs.uk/lambeth)

The website provides Lambeth residents with health advice together with positive and uplifting stories about health and wellbeing in their community.

[www.nhs.uk/livewell](http://www.nhs.uk/livewell)

### Stop Smoking

[www.makesmokinghistory.co.uk](http://www.makesmokinghistory.co.uk)

Lambeth based stop smoking service information

### Physical Activity

### Sports and recreation

[www.lambeth.gov.uk/Services/LeisureCulture/SportsClubsCentres](http://www.lambeth.gov.uk/Services/LeisureCulture/SportsClubsCentres)

Have details of all local sports and recreation activities patients can get involved in.

## **Parks and Green Spaces**

[www.lambeth.gov.uk/Services/Environment/ParksGreenSpaces/index.htm](http://www.lambeth.gov.uk/Services/Environment/ParksGreenSpaces/index.htm)

## **Historic parks and gardens**

[www.lambeth.gov.uk/NR/exeres/5620E084-4274-4932-A5A8-E86A1913112D.htm](http://www.lambeth.gov.uk/NR/exeres/5620E084-4274-4932-A5A8-E86A1913112D.htm)

## **Cycling in around London**

[www.tfl.gov.uk/roadusers/cycling/11598.aspx](http://www.tfl.gov.uk/roadusers/cycling/11598.aspx)

## **Walking - Free programmes of led walks**

[www.getwalking.org](http://www.getwalking.org)

## **Volunteering**

Volunteering provides patients with an opportunity to meet new people and get actively involved in their community. It also reduces social isolation and can improve the mental well being of people. There are lots of voluntary groups in Lambeth looking for people to get involved.

[www.lambeth.gov.uk/Services/CommunityLiving/Volunteering.htm](http://www.lambeth.gov.uk/Services/CommunityLiving/Volunteering.htm)

## **Education**

There are a number of places where people can go in Lambeth to get involved in education. Some places offer courses and activities on a range of health topics, as well as physical activity based classes. People on low incomes can often access courses at no or low cost.

[www.lambethcollege.ac.uk/lambeth\\_college.cfm](http://www.lambethcollege.ac.uk/lambeth_college.cfm)

[www.lambeth.gov.uk/Services/EducationLearning/AdultLearning/](http://www.lambeth.gov.uk/Services/EducationLearning/AdultLearning/)

[www.morleycollege.ac.uk](http://www.morleycollege.ac.uk)

[www.u3a.org.uk/home.html](http://www.u3a.org.uk/home.html) is a self-help organisation for people no longer in full-time employment providing educational, creative and leisure opportunities in a friendly environment.

## **Support and Patient Groups**

Offer advice and guidance regarding healthcare concerns and health issues

[www.lambethpct.nhs.uk/a/129](http://www.lambethpct.nhs.uk/a/129)

### **The LINK**

The LINK is totally independent. It is open to all Lambeth residents, groups and organisations.

[www.lambeth.gov.uk/Services/HealthSocialCare/SupportGroups/LocalInvolvementNetwork.htm](http://www.lambeth.gov.uk/Services/HealthSocialCare/SupportGroups/LocalInvolvementNetwork.htm)

## Health Topic Websites

### Heart Disease

British Heart Foundation [www.bhf.org.uk](http://www.bhf.org.uk) and  
[www.bhsoc.org](http://www.bhsoc.org)

### Stroke

Stroke Association [www.stroke.org.uk](http://www.stroke.org.uk)

### Diabetes

Diabetes UK [www.diabetes.org.uk](http://www.diabetes.org.uk)

[www.londondiabetes.nhs.uk](http://www.londondiabetes.nhs.uk)

### Chronic Kidney Disease

NKF [www.kidney.org.uk](http://www.kidney.org.uk)

[www.kidneypatientguide.org.uk/site/contents.php](http://www.kidneypatientguide.org.uk/site/contents.php)

### Alcohol

<http://units.nhs.uk/>

Advice re safer drinking, information on units and strengths of drink plus practical information and advice on how to cut down

[www.downyourdrink.org.uk](http://www.downyourdrink.org.uk)

Free and confidential six week online programme to help individuals reduce drinking and develop safer drinking habits

## • Healthy and Active Walks

Applicable Category of Risk:

Very High High **Moderate** Low

### • Service outline and description

- o Walking is the most popular recreational activity for adults according to Sport England's Active People Survey. In particular, guidance from NICE recommends that older people should be offered a range of walking schemes of low to moderate intensity to improve mental wellbeing (Be Active, Be Healthy).
- o The programme provides organised group walks. They are organised via the Healthy Living Team and run by the Park Wardens. The walks provide a platform for individuals to improve their quality of life by increasing activity their levels, promoting wellbeing and potentially making new friends. It is suitable for people who are low and medium risk.
- o The patient must be motivated to take part and have an expressed interest in engaging in walking as an avenue to other mainstream physical activity. As the walks are led this should make it easier for patients who are concerned about going on their own. The walk leader is there to welcome them and make participants feel comfortable.

### • Benefits of walking

- o It may be good to share the benefits of walking to the patient that are relevant to their condition:
- o Reduce the risk of coronary heart disease and stroke
- o Lower blood pressure
- o Reduce high cholesterol and improve blood lipid profile
- o Reduce body fat
- o Enhance mental well being
- o Increase bone density, hence helping to prevent osteoporosis
- o Reduce the risk of cancer of the colon
- o Reduce the risk of non insulin dependent diabetes
- o Help to control body weight
- o Help osteoarthritis
- o Help flexibility and co-ordination hence reducing the risk of falls

## **The walks in Lambeth take place at:**

Brockwell Park (led) Tuesdays at 2pm meet at Brockwell Lido  
(<http://www.lambeth.gov.uk/Services/LeisureCulture/SportsClubsCentres/LeisureCentres/BrockwellLido.htm>)

Streatham Common (led) Thursdays at 1pm meet at The Rookery café

SE1 Embankment walk (led) Tuesdays at 2.30pm meet at St Thomas's Hospital - main entrance

People can also access can access <http://www.whi.org.uk/walkfinder/home> to find walks in a specific locality.

- **Source of referral**

- o This is a self-referral service at present. People are free to contact the service directly at
- o If you are signposting patients to the walks, remind them that they will need to think about wearing suitable clothing.

## **Healthy and Active Walks Contact Details**

Walks are organised by a range of community groups. For up to date details of where in the borough the healthy and active walks take place contact:

Office: Lambeth Community Health, Moffat Health Centre, Sancroft Street, SE11  
Name: Monica Imbert  
Position: Health Promotion Specialist

Email: [monica.imbert@lambethpct.nhs.uk](mailto:monica.imbert@lambethpct.nhs.uk)

Tel: 020 3049 5798

Fax: N/A (at present)

5.0

• **SECTION 5: PHARMACOLOGICAL INTERVENTIONS**

5.1

• **Prescribing Guidelines: Lipid Management**

5.2

• **Prescribing Guidelines: Statin Prescribing**

5.3

• **Non-diabetic patients with newly diagnosed hypertension**

## 5.1

## • Prescribing guidelines: Lipid Management

### SLCSN Primary Prevention Lipid guidance

#### Lipid Management for Primary Prevention of Cardiovascular Disease

*This guidance represents the consensus view of the South London Cardiac and Stroke Network Cardiac Prescribing Forum.*

*The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.*

**Primary prevention is appropriate for patients without known cardiovascular (CV) disease but a calculated CV risk  $\geq$  20% over the next 10 years**

It should not be used for patients with CHD, ischaemic stroke or PVD, diabetes or familial hypercholesterolaemia

#### Lifestyle Advice and Blood Pressure

**The following lifestyle issues should be addressed prior to consideration of statin therapy:**

- Smoking cessation
- Diet (reduce saturated fats, include Mediterranean diet and oily fish twice a week, aim for body mass index (BMI) of 19 – 25kg/m<sup>2</sup>, or a minimum of a 10% reduction in body weight)
- Alcohol moderation to within safe limits (up to 21 units per week for men and 14 units per week for women)
- Exercise (aim for a total of 30 minutes of moderate intensity physical activity (eg, brisk walking) at least 5x a week)

**Blood pressure control** - Treat if BP consistently over 140/90mmHg to achieve a BP of less than 140/90mmHg; more aggressive targets apply in patients with chronic kidney disease

#### Initiating Therapy

- **Assessment of global cardiovascular risk is essential before starting lipid-lowering therapy**
- An isolated high total cholesterol without other risk factors may not indicate a need for a statin, except in potential cases of familial hypercholesterolaemia (total cholesterol > 7.5 mmol/L and a family history of CVD) where treatment is essential
- Ideally, cholesterol levels should be measured on two separate occasions and an average of the results used to calculate CV risk. At least one fasting full lipid profile should be taken.
- For patients aged between 40 and 74 years: risk should be calculated using an approved CVD risk calculator, for example, Joint British Societies or other Framingham-based CVD risk tool or QRISK
- Patients of 75 years or over should automatically be considered at high risk,

however the decision to treat should take into account individual circumstances

- **Statin therapy should be considered for all patients where CVD risk  $\geq$  20% over the next 10 years**

**First line choice: Simvastatin at a dose of 40mg\* with the evening meal.**

The dose may be reduced in the event of intolerance.

*\*Max dose 10mg daily with concomitant ciclosporin, danazol, fibrates or lipid-lowering dose of niacin; max dose 20mg daily with concomitant amiodarone or verapamil; max dose 40mg with concomitant diltiazem*

Where simvastatin 40mg is contraindicated or not tolerated, initiate a lower dose of simvastatin or consider pravastatin as an alternative agent

**Next Steps**

**No target lipid levels are routinely recommended for primary prevention**

Patients should be reviewed annually to ensure on-going adherence to therapy - lipid monitoring should be considered to confirm this

Lifestyle issues should be revisited regularly

No routine increase in statin therapy beyond simvastatin 40mg daily is recommended in this patient group

Appropriate safety monitoring should be undertaken – see 'SLCSN Guidance on Prescribing Statin Therapies'

If statin therapy is contraindicated or not tolerated, consider offering a fibrate, anion exchange resin or ezetimibe as an alternative

**For more information on contraindications and cautions to statin therapies, common drug interactions with statins and for guidance on safety monitoring – see SLCSN Guidance on Prescribing Statin Therapies**

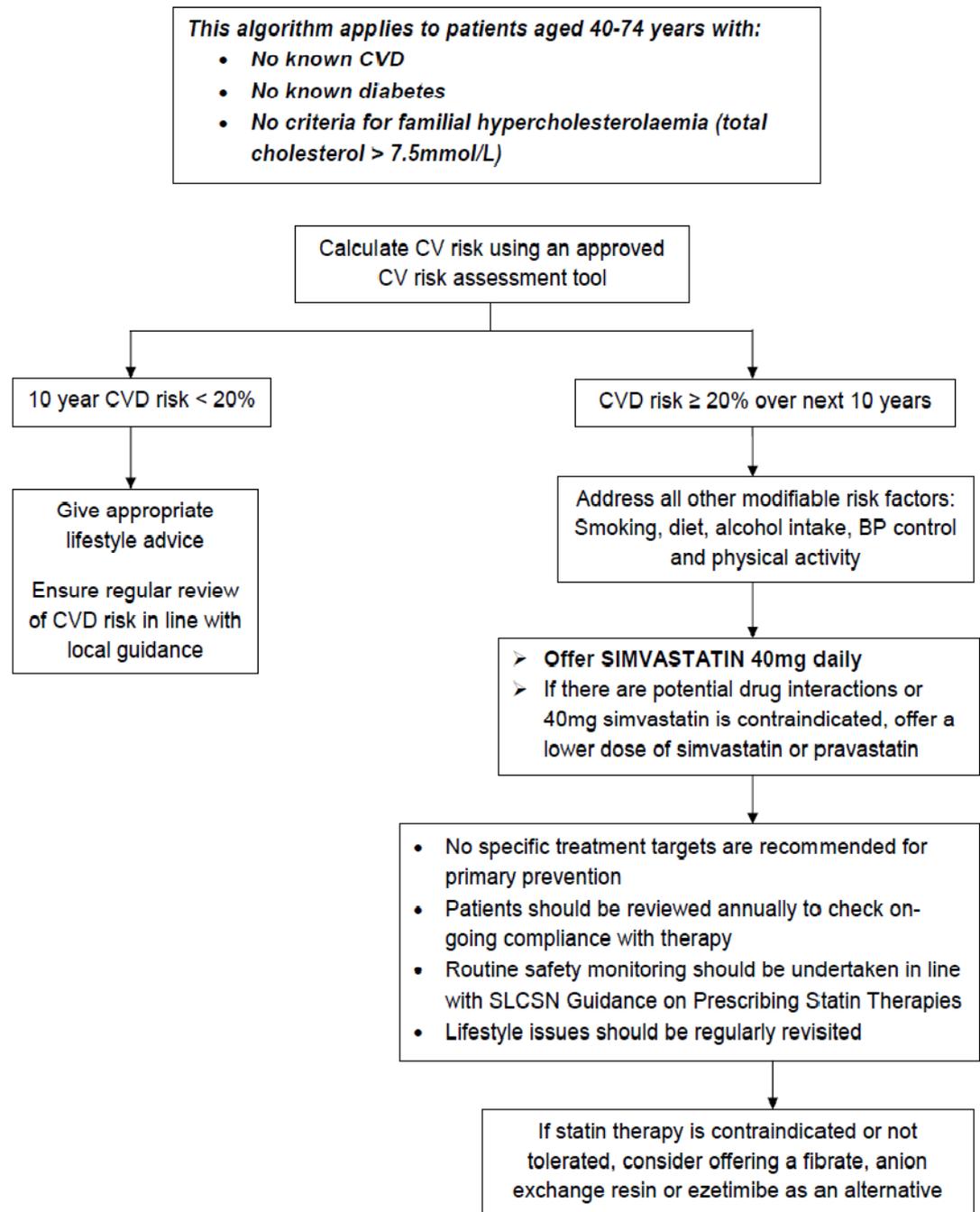
**References**

1. NICE Clinical Guideline CG43: Obesity. December 2006
2. NICE Clinical Guideline 66 (2008) Type 2 Diabetes
3. NICE Guidance CG15: Type 1 diabetes in children, young people and adults. July 2004
4. NICE Technology Appraisal 94: Statins for the prevention of cardiovascular events. January 2006
5. NICE Clinical Guideline 67 (2008) Lipid Modification Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease.

Agreed by SEL Cardiac Prescribing Forum on 28<sup>th</sup> Jan 2009 and SWL Cardiac Prescribing Forum on 24<sup>th</sup> Feb 2009. Review date April 2011

**SLCSN Primary Prevention Lipid guidance**

**Lipid Management for Primary Prevention**



## • Prescribing Guidelines: Statins

The following issues need to be considered when prescribing a statin:

- Identifying patients in whom additional advice should be sought prior to initiation
- Contraindications and cautions
- Drug interactions
- Baseline and follow up monitoring

**Seek further advice before initiating statins in patients with:**

- Renal impairment (Cr >180µmol/l; CrCl<30ml/min)
- Liver disease (cirrhosis or hepatitis)
- Untreated hypothyroidism

### **General Contraindications and Cautions**

- Hypersensitivity to the individual statin or to any of the excipients
- Active liver disease (AST or ALT level > 100iu/L) or unexplained persistent isolated elevations of serum transaminases
- Statin use is contraindicated in both pregnancy and lactation. Consideration should be given to delaying statin therapy or addressing contraceptive needs in women of child-bearing age
- Concomitant use of fibrates and statins increases the risk of muscle toxicity. Seek specialist advice. The co-administration of statins and nicotinic acid should be used with caution.
- Patients with excess alcohol intake (more than 50 units per week)

### **SIMVASTATIN (see SPC for full detail)**

- In patients with severe renal insufficiency (creatinine clearance < 30 ml/min), dosages above 10 mg/day should be carefully considered and, if deemed necessary, implemented cautiously.
- Significant drug interactions occur with certain drugs (e.g. amiodarone, verapamil, diltiazem, erythromycin, clarithromycin, ciclosporin, itraconazole, ketoconazole, HIV protease inhibitors, nefazodone, ciclosporin).  
Dose reductions or cessation of therapy may be required – see FAQ / BNF for more details. Consider an alternative agent if necessary
- Advise patients to avoid consumption of grapefruit or grapefruit juice during simvastatin therapy
- International normalised ratio (INR) in patients on warfarin can be affected by concomitant simvastatin use.  
Monitor INR in patients before and more frequently during the early phase of treatment with simvastatin and after any dose changes

**ATORVASTATIN (see SPC for full detail)**

- For patients with prior haemorrhagic stroke or lacunar infarct the balance of risks and benefits of atorvastatin 80 mg is uncertain and the potential risk of haemorrhagic stroke should be carefully considered before initiating this dose
- For patients on interacting drugs, a lower starting dose may be required and lower maximum doses may need to be considered. Interacting drugs include ciclosporin, clarithromycin, diltiazem, amiodarone and verapamil, itraconazole, protease inhibitors - see BNF/ SPC for more details.
- Concomitant intake of large quantities of grapefruit juice and atorvastatin is not recommended
- International normalised ratio (INR) in patients on warfarin can be affected by concomitant atorvastatin use.  
Monitor INR in patients before and more frequently during the early phase of treatment with atorvastatin and after any dose changes

**PRAVASTATIN (see SPC for full detail)**

- Caution should be exercised where pravastatin is prescribed for patients treated with erythromycin or clarithromycin
- Start with a dose of 10mg daily in patients with creatinine clearance <20ml/min./min.

## Monitoring Statin Therapy

<p><b>Lipid Levels</b>          Total cholesterol (TC)          High density lipoprotein (HDL)          Low density lipoprotein (LDL)          Triglycerides</p>	<p><b>Primary Prevention:</b> routine monitoring of lipid levels is not recommended, although clinicians should consider checking lipid levels occasionally throughout treatment to ensure on-going adherence to therapy</p> <p><b>Secondary Prevention:</b> Lipid levels should be measured before therapy is initiated; at 12 weeks following initiation or change of dose and at 12 monthly intervals thereafter</p> <p>If total cholesterol remains persistently raised despite optimising statin therapy – follow local guidance</p>
<p><b>Thyroid Function Tests</b></p>	<p>Check before initiating a statin to exclude hypothyroidism</p>
<p><b>Liver Function Tests (LFTs)</b></p>	<p>Baseline liver enzymes should be measured before starting a statin. Liver function (transaminases) should be measured within 3 months of starting treatment and at 12 monthly intervals thereafter.</p> <p>If transaminases &gt;3x upper limit of normal (ULN) discontinue statin and refer.</p> <p>For lesser increases in transaminases, which remain elevated at 6 months consider specialist advice</p>
<p><b>Creatine kinase (CK)</b></p>	<p>Baseline CK should be measured before starting a statin.</p> <p>Routine CK monitoring after initiation is not recommended. CK should be measured during treatment when clinically indicated – i.e. where there are symptoms of muscle pain or tenderness, muscle weakness or muscle cramps.</p> <p><b>Patients should be counselled on initiation of statin to report any usual muscle pain, tenderness or weakness during treatment</b></p> <p><b>IF MYOSITIS IS PRESENT OR SUSPECTED DISCONTINUE IMMEDIATELY</b></p> <p>If muscle soreness occurs:</p> <ul style="list-style-type: none"> <li>• Rule out common causes (e.g. exercise)</li> <li>• Check TFTs (hypothyroidism predisposes to myopathy)</li> <li>• Measure CK             <ul style="list-style-type: none"> <li>- If CK elevated &gt; 5 x ULN stop and seek advice</li> <li>- If CK elevated &lt; 5 x ULN                 <ul style="list-style-type: none"> <li>a) Monitor carefully by repeating CK level in one month</li> </ul> </li> </ul> </li> </ul>

	<p>b) If remains elevated, reduce dose and recheck CK level in one month</p> <p>c) If still remains elevated consider seeking advice</p> <p>1. If symptoms continue STOP statin and consult a specialist before re-initiating</p> <p><i>Note: Some Black African and Caribbeans have elevated baseline levels of CK. This is not a contra-indication to statin therapy. In these patients, after initiation if the CK &gt; 5 x baseline - seek advice</i></p>
<p><b>Other adverse effects</b></p>	<p>Headache, dyspepsia or insomnia. Evaluate symptoms at each visit.</p> <p>If symptoms not tolerated:</p> <p>2. Consider changing time of dose (after food if nauseous, morning if sleep disturbed)</p> <p>3. Consider decreasing dose</p> <p>4. Consider using an alternative agent</p>

## References

1. Pasternak RC, Smith SC, Bairey-Merz CN, et al., ACC/AHA/NHLBI Clinical Advisory on the Use and Safety of Statins. *Circulation* 2002; 106:1024 – 1028
2. Summary of Product Characteristics for Simvastatin at [www.emc.medicines.org.uk](http://www.emc.medicines.org.uk) (accessed 23/01/2006)
3. NICE Technology Appraisal 94: Statins for the prevention of cardiovascular events. January 2006
4. NICE Technology Appraisal 94: Statins for the prevention of cardiovascular events. January 2006
5. NICE Clinical Guideline 67 (2008) Lipid Modification Cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease.

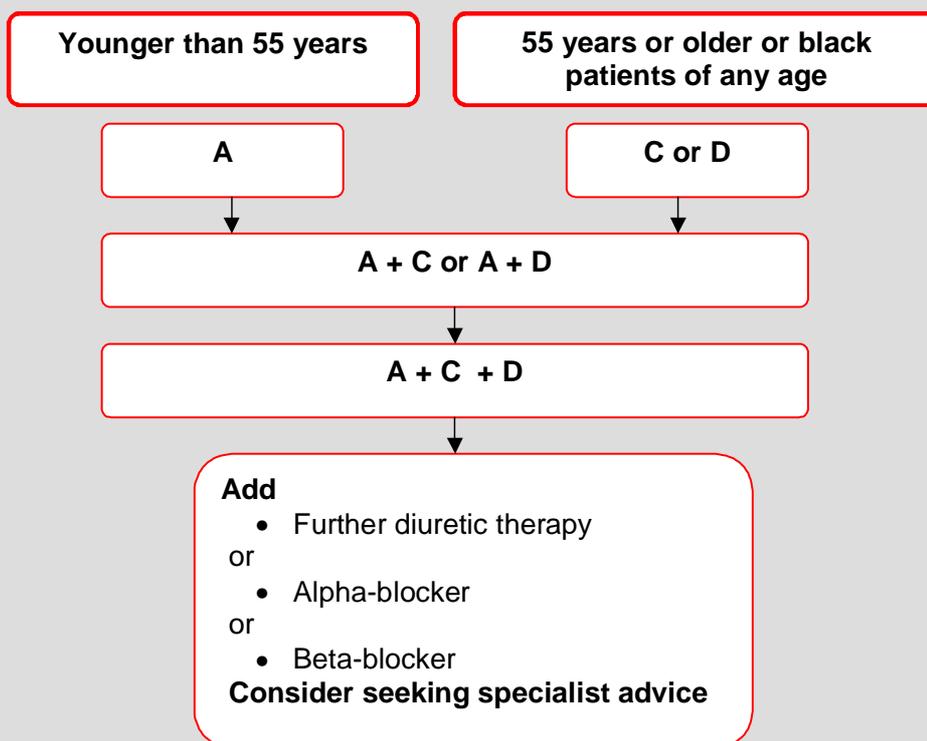
Agreed by SEL Cardiac Prescribing Forum on 28<sup>th</sup> Jan 2008 and SWL Cardiac Prescribing on 24<sup>th</sup> Feb 2009.  
Review date: April 2011

5.3

- **Non-diabetic patients with newly diagnosed hypertension**

**CHOOSING DRUGS FOR NON-DIABETIC PATIENTS  
NEWLY DIAGNOSED WITH HYPERTENSION  
FEBURARY 2007**

ABBREVIATIONS	PREFERRED AGENTS
A = ACE Inhibitor	Ramipril (lisinopril, enalapril)
C = Calcium-channel blocker	Amlodipine (prescribed as 'Amlodipine tablets')
D = Thiazide-type diuretic	Bendroflumethiazide



Black patients are those of African or Caribbean descent, and not mixed-race, Asian or Chinese patients

References

1. National Institute of Clinical Excellence. Hypertension. Clinical Guideline 34, June 2006. Available at [www.nice.org.uk](http://www.nice.org.uk)
2. Williams B, Poulter NR, Brown MJ, Davis M, McInnes GT, Potter JP, Sever PS and Thom S McG; The BHS Guidelines Working Party Guidelines for Management of Hypertension: Report of the Fourth Working Party of the British Hypertension Society, 2004 - BHS IV. Journal of Human Hypertension 2004; 18: 139-185

Review date: February 2008

For enquiries for Southwark please contact the team administrator, Mehmet Shah on 020 7525 3253 who will put you in contact with a member of the Medicines Management and Pharmacy Team. For enquiries for Lambeth, please contact the Lambeth Medicines Management Team on 020 7716 7141 .

6.0

- **SECTION 6: OTHER INFORMATION**

6.1

- **NHS Health Check Lambeth Key Staff Contact Details**

## • NHS Health Check Lambeth Key Staff Contact Details

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• <b>APPENDICES</b>
• <b>Department of Health Patient Information</b>
• <b>Glossary</b>



## • Department of Health Patient Information

Please find below the link to the Department of Health website regarding the Information leaflet for people invited for a check.

[http://www.dh.gov.uk/dr\\_consum\\_dh/groups/dh\\_digitalassets/@dh/@en/documents/digitalasset/dh\\_097495.pdf](http://www.dh.gov.uk/dr_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_097495.pdf)

The leaflet is also available in several other languages, namely:

- Arabic
- Chinese
- Czech
- French
- Polish
- Portuguese
- Romanian
- Russian
- Slovak
- Somali
- Spanish
- Tagalog
- Turkish

Please follow the link below for download

[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_097490](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_097490)

The leaflet is also being produced in

- Bengali
- Urdu
- Hindi
- Gujarati
- Punjabi



## • Glossary

ACE/ARBs	Angiotensin-Converting Enzyme/ Angiotensin II Receptor Blockers
ACR	Albumin Creatinine Ratio
ApoB/ApoA1	Apolipoprotein B/apolipoprotein A
C11y2	Impaired Glucose Tolerance
C11y3	Impaired Fasting Glucose
CHD	Coronary Heart Disease
CI	Confidence Interval
CK	Creatine Kinase
CKD	Chronic Kidney Disease
CVD	Cardio Vascular Disease
DBP	Diastolic Blood Pressure
eGFR	estimated Glomerular Filtration Rate
FH	Familial Hypercholesterolemia
FPG	Fasting Plasma Glucose
GPPAQ	GP Physical Activity Questionnaire
HbA1c	Haemoglobin A1c
HCP	Health Care Professional
HDL cholesterol	High Density Lipoprotein cholesterol
HTA	Health Technology Assessment
IA	Initial Appointment
IFG	Impaired Fasting Glucose
IGT	Impaired Glucose Tolerance
IHD	Ischaemic Heart Disease
JBS2	Joint British Societies' guidelines on prevention of cardiovascular disease in clinical practice
LDL	Low Density Lipoprotein
LES	Local Enhance Service
LFT	Liver Function Test
LVH	Left Ventricular Hypertrophy

NPT	Near Patient Testing
NPV	Negative Predictive Value
OGTT protocol	Oral Glucose Tolerance Test
PAI	Physical Activity Index
PNL	Prior Notification List
PPV	Positive Predictive Value
PVD	Peripheral Vascular Disease
QOF	Quality and Outcome Framework
QRISK2	A cardiovascular disease risk calculator, based on the QRESEARCH database
RPG	Random Plasma Glucose
Ryu8A	Hyperglycemia
SBP	Systolic Blood Pressure
TC	Total Cholesterol
TC/HDL-C	Total Cholesterol/High Density Lipoprotein Cholesterol
TFT	Thyroid Function Test
TG	Triglyceride
ULN	Upper Limit of Normal
WOSCOPS	West of Scotland Coronary Prevention Study