Statins, aspirin and lifestyle modification in the prevention of Coronary Heart Disease (CHD)

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Type of audit

Structure	✘
Process	✔
Outcome	✔

Who to involve?

Consider involving/informing the following individuals from the start:

- All community pharmacy staff – including locums and your pre-reg trainee.
- Local practices: GPs, practice nurses.
- Patients/customers receiving statins from your pharmacy.
- Local pharmacist group if established, or other pharmacists in your area.
- Local audit facilitator.
- Secondary care colleagues: Hospital cardiology pharmacist /Consultant Cardiologist.
- Local health promotion department.

Background – Why is this audit worth doing?

- CHD is the most common cause of death in Scotland [1].
- CHD has a multifactorial aetiology and a number of potentially modifiable risk factors, including raised cholesterol[2].
- Statins are the drugs of choice in hyperlipidaemia and NHS expenditure on these agents is increasing [2,3,4].
- Low dose aspirin should be considered for all patients with established CHD and primary prevention patients in whom the risk of a coronary event is high enough to justify the use of lipid lowering drug therapy [2].
- There is evidence of under-prescribing of aspirin and high discontinuation rates with lipid-lowering drugs, in part due to lack of patient knowledge [5,6].
- SIGN recommends that prescriptions for, and compliance with, prophylactic medication for CHD should be monitored [3].
- Lifestyle measures can have a significant effect on the secondary prevention of CHD and remain the first priority in its primary prevention [2,3].

Benefits of doing this audit

Benefits to patients	✔
Benefits to the pharmacist	✔
Benefits to the health care team	✔

Aims and objectives of the audit

Aim

To evaluate patient knowledge of statin therapy and the extent of concurrent aspirin prescribing and lifestyle advice provision.

Objectives

- To assess if patients know the correct indication for, and duration of, their statin therapy.
- To identify and refer to their GP, patients prescribed statins without a concurrent prescription for aspirin.
- To ensure patients who receive statins are provided with either verbal or written information on lifestyle modification.

The audit cycle

1 Defining criteria and setting standards

Criteria (i.e. the aspects of care which you are going to be measuring)
Suggested criteria which may be appropriate for this audit are:

Criterion	'Must do/could do'
Patients should know that the indication for their statin therapy is to lower cholesterol (fat in their blood) and reduce their risk of heart disease.	Must do
Patients should know that the duration of their statin therapy is lifelong.	Must do
Patients receiving statins without a concurrent prescription for aspirin should be referred to their GP.	Could do
Patients receiving statins should be provided with verbal or written information on lifestyle modifications known to lower the risk of heart disease.	Could do

Standards (i.e. the proportion of times the criteria should be fulfilled)
It will be essential to agree these locally. An example of standards which may be appropriate are:

- 90% of patients should know that the indication for their statin therapy is to lower cholesterol (fat in their blood) and reduce their risk of heart disease [A].
- 90% of patients should know that the duration of their statin therapy is lifelong [A].
- 80% of patients receiving statins without a concurrent prescription for aspirin should be referred to their GP[A].
- 80% of patients receiving statins should be provided with verbal or written information on lifestyle modifications known to lower the risk of heart disease [A].

Footnote: The standards listed in this table are either 'anecdotal' (A) i.e. based the opinion of 2 or more Scottish Audit Facilitators, or 'evidence-based' (E) i.e. drawn from the literature or data from previously completed audits (see reference section at end of template).

2 Assess local practice

Getting things started

- Decide whether the audit will be run on an individual pharmacy or locality basis.
- Decide which criteria you wish to focus on, through discussion with local GP practices (see 'defining criteria and setting standards' – some criteria are only 'could do').
- Decide which patients you wish to include/exclude from your audit e.g. patients presenting with a Rx for any statin, or patients presenting with a Rx for a defined statin (simvastatin/pravastatin). The choice is yours and should be discussed with everyone involved in the audit.
- Agree the patient information material/counselling checklist you are going to use in the audit. It makes sense that patients receive consistent advice from all those involved in their care e.g. local pharmacies, GP practices, hospital cardiology department. See attached 'patient information leaflet' and 'counselling checklist for pharmacists' as a starting point for local discussion. Your local health promotion department is a useful resource.
- Ensure you have a sufficient volume of patient information material in stock.
- Agree a suitable local referral rate with your local GPs. A high referral rate may produce an unacceptably high workload for practices, in some areas. This could be managed by reviewing your patient and/or drug inclusion criteria.
- Agree a suitable local mechanism for referral. See attached 'sample GP referral form' as a starting point for local discussion. It may be that a phone call to the local practice manager/nurse/GP is more appropriate in some areas.

What data to collect?

- See attached 'data-collection form'.
- It may be useful to keep a brief tally count of: the total number of statin Rxs which could have been included in the audit; the number of occasions where the patient was available in person for questioning; the proportion of available patients who agreed/refused to participate.

How much data to collect?

This should be agreed locally. The size of your audit will be defined either by the number of patients available for recruitment, or the time period over which it is run.

You may be able to calculate the average number of statin prescriptions for your pharmacy by looking at last month's prescription data.

Public health data estimates that approximately 3% of the population have established CHD and may benefit from statin therapy. A further 1% of the population may benefit from receiving statins for primary prevention. Therefore, for an average community pharmacy serving a population of 5,000 patients, approximately 200 could be candidates for statin therapy. It is unlikely that all these patients will be receiving treatment.

Factors to consider include:

- Total no. of pharmacies participating in the audit.
- Total no. of GP practices participating in the audit.
- Total no. of patients per pharmacy included in the audit.
- Time available for data collection.

Further advice on selecting a suitable time period over which to run the audit can be obtained from your local audit facilitator.

How to collect it?

- Collect continuously for defined time period, remembering to inform all staff, especially locums, if data is to be comprehensive.
- Collecting data for a proportion of patients, or on certain days/during quiet periods, will bias your results.

3 Compare practice with standards

4 Change

Some suggestions:

- Feedback the results of your audit to your staff/local GPs/practice nurses/other pharmacies.
- Can you secure locum funding to go into your local practice to undertake a computer search to identify those patients on statins without concurrent aspirin?
- Are all members of staff remembering to provide verbal/written lifestyle information to patients receiving statins? If not, why?
- Are all new patients being counselled on the indication and duration of their statin therapy? If not, why?

5 Re-audit

6-12 months after completion of the first audit.

Resources

- Sample patient information leaflet/counselling checklist for pharmacists (attached). Copies of the leaflets recommended in the patient information leaflet/ counselling checklist for pharmacists are available from:
  - Health Education Board for Scotland/Local Health Board Health Education Departments. http://www.hebs.scot.nhs.uk
  - Appendix to SIGN Guideline Number 40: Lipids and the Primary Prevention of Coronary Heart Disease. Royal College of Physicians, Edinburgh. September 1999. http://www.sign.ac.uk
- Sample GP referral letter (attached).
- Data collection form (attached).
- Locum expenses to attend initial/follow-up discussions with local GPs/practice nurses/hospital colleagues.
- Estimated time to complete the first audit (during normal working hours): 2 months to set things up, X weeks to run the audit (dependent on your decisions reached under 'how much data to collect'), project write-up within 1 month.
- Estimated time to complete the re-audit (during normal working hours): X weeks to run the audit (dependent on your decisions reached under 'how much data to collect'), project write-up within 1 month.

References

1 Website for the Health Education Board for Scotland. Coronary Heart Disease – Key Facts: http://www.hebs.scot.nhs.uk/heart/factmain.htm.

2 SIGN Publication Number 40: Lipids and the Primary Prevention of Coronary Heart Disease. Royal College of Physicians, Edinburgh. September 1999. http://www.sign.ac.uk.

3 SIGN Publication Number 41: Secondary Prevention of Coronary Heart Disease following Myocardial Infarction. Royal College of Physicians, Edinburgh. January 2000. http://www.sign.ac.uk.

4 Supporting prescribing in general practice. Accounts Commission for Scotland, Edinburgh. Sept 1999.

5 Apparent discontinuation rates in patients prescribed lipid-lowering drugs. Med J Aust 1996;164(4): 208-11.

6 Persistence of use of lipid-lowering medications: a cross-national study. JAMA 1998; 279(18):1458-62.

Useful additional reading: Pharmaceutical care of the Cardiovascular Patient, Distance Learning Pack, Scottish Centre for Post Qualification Pharmaceutical Education, University of Strathclyde, Glasgow (available from Autumn 2000).

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Suggested review date *April 2001*

Information on statins and healthy lifestyle choices*

You have recently been given a drug called a statin to help lower your cholesterol (fat in your blood). Reducing your cholesterol can help reduce your risk of heart disease.

It is likely that you will need to take your statin treatment for life.

However, in addition to taking your tablets regularly, there are 5 key things you can do to help achieve a healthy heart:

1 Stop smoking.

2 Eat healthily.

3 Reduce your weight if you are overweight or obese.

4 Take regular physical activity.

5 Reduce your alcohol intake if you drink > 21 units/week (and are male), or >14 units/week (and are female).

Within the pharmacy we have the following information leaflets to help you achieve these goals:

- **Stop Smoking:** 'You can stop smoking', 'Stopping smoking made easier'
- **Eat Healthily:** 'Healthier Eating – Healthier Heart Leaflet', 'Hassle Free Food: A guide to cheap, quick, healthy eating'
- **Reduce your weight:** List of local support groups who can help with weight reduction + healthy eating/exercise leaflets
- **Regular physical activity:** 'Hassle Free Exercise: Why be more active?'
- **Reduce your alcohol intake:** 'That's the Limit. A Guide to Sensible Drinking', 'So you want to cut down your drinking? A self-help guide to sensible drinking'

Additionally, we can offer advice in the following areas:

- Nicotine Replacement Therapy, if you want to stop smoking.
- How to calculate your Body Mass Index (BMI) – a guide to whether or not you are overweight.

Please ask if we can be of any further assistance.

* Content to be debated and agreed locally with GP practices and hospital cardiology departments.

Sample counselling checklist for pharmacists* Lifestyle advice for patients on statins

Stop smoking

- Stopping smoking significantly reduces CHD risk.
- Nicotine Replacement Therapy works and should be considered.
- Offer to speak to the patient at any stage in their attempts to quit - repeated brief and supportive advice to patients works.
- Patient information leaflets available:
  - 'You can stop smoking'
  - 'Stopping smoking made easier'

Eat well

- More starchy carbohydrate (bread, breakfast cereals, potatoes, rice and pasta).
- More fruit and vegetables (these are rich in antioxidants which may be protective against CHD).
- More oily fish (mackerel, salmon, herring, kippers, sardines).
- Less saturated fat (butter, cheese, meat products, pies and pastries), sugar, salt (<6g of salt a day).
- Patient information leaflets available:
  - 'Healthier Eating – Healthier Heart Leaflet'
  - 'Hassle Free Food: A guide to cheap, quick, healthy eating'

Reduce weight if overweight/obese

- Modest weight reductions of 5-10kg are associated with many benefits e.g. reduction in blood pressure, blood cholesterol, improvements in joint/back pain and breathlessness.
- The overall goal is modest weight loss (5-10kg) and long term weight maintenance, rather than a return to ideal or normal weight.
- Things that can help: dietary modification; regular physical activity; attending a support group, e.g. WeightWatchers.
- Patient information leaflets available:
  - 'Healthier Eating – Healthier Heart Leaflet'
  - 'Hassle Free Food: A guide to cheap, quick, healthy eating'
  - 'Hassle Free Exercise: Why be more active?'
- List of local support groups (to developed locally).

Pharmacists can help patients to work out if they are overweight or obese

$$\text{Body Mass Index (BMI)} = \frac{\text{weight (Kg)}}{\text{height m}^2}$$

BMI > 25.0 (overweight)
BMI > 30.0 (obese)

Take regular physical activity

- For those who are currently inactive, aim to accumulate 30 minutes of moderate intensity physical activity on most days.
- For those who are already active, vigorous intensity aerobic exercise of 20-30 minutes three times per week is recommended.
- Patient information leaflets available:
  - 'Hassle Free Exercise: Why be more active?'

Reduce alcohol intake if > 21 units/week for men, >14 units/week for women

- Light to moderate drinkers of alcohol (1-2 units/day) have lower CHD incidence and mortality than non-drinkers.
- Men drinking more than 21 units weekly and women drinking more than 14 units weekly should reduce their consumption.
- Patient information leaflets available:
  - 'That's the Limit. A Guide to Sensible Drinking'
  - 'So you want to cut down your drinking? A self-help guide to sensible drinking'

* Content to be debated and agreed locally with GP practices and hospital cardiology departments.

Pharmacy stamp

Dear Dr _____ Date

The following is a collated summary of patients identified from a recent audit conducted in our pharmacy *who may benefit from having low dose aspirin (75-150mg daily) co-prescribed with their statin therapy.*

Patient name and address	**Details of current statin therapy** (drug name and dose)	**Confirmed not on regular aspirin with:** **PMR***	**Patient**
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

*PMR = Pharmacy Medication Records

I hope you find this information useful. I would be happy to discuss the audit results in further detail with the practice, if you feel that would be beneficial.

Kind regards

Yours sincerely

Community Pharmacist

Data collection form Statins, aspirin and lifestyle modification in the prevention of Coronary Heart Disease (CHD)

Date	Patient name and address	GP name and address	Details of current statin therapy (drug name and dose)	Correct indication for statin?* (tick if mentioned) A B	Duration of statin is lifelong? YES NO	Patient received lifestyle info in past? YES NO	If Yes, from whom?	If No, further info given? (tick if given) VERBAL WRITTEN	Patient reports taking low-dose aspirin? YES NO	PMR indicates patient is receiving low-dose aspirin? YES NO	Patient to be referred to GP? YES NO
				☐ ☐	☐ ☐	☐ ☐		☐ ☐	☐ ☐	☐ ☐	☐ ☐
				☐ ☐	☐ ☐	☐ ☐		☐ ☐	☐ ☐	☐ ☐	☐ ☐
				☐ ☐	☐ ☐	☐ ☐		☐ ☐	☐ ☐	☐ ☐	☐ ☐
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				☐ ☐	☐ ☐	☐ ☐		☐ ☐	☐ ☐	☐ ☐	☐ ☐

* A – lowers cholesterol (fat in blood) B – lowers risk of heart disease