

# General practitioner perceptions of treatment benefits and costs in patients with hyperlipidaemia

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## SUMMARY

*This study explored general practitioner (GP) perceptions of use of treatments to manage hyperlipidaemia and their cost implications. GPs recognized different levels of coronary heart disease (CHD) risk, but were not always aware of which were major factors. Most were unfamiliar with published guidelines on managing hyperlipidaemia, and were likely to initiate drug therapies even in low-risk patients with mild hyperlipidaemia. Clearer advice is needed on whom to treat and on dietary intervention with high-fibre as well as low-fat diets.*

*Keywords: hyperlipidaemia; coronary heart disease; questionnaire survey; preventive medicine.*

## Introduction

THE Scandinavian Simvastatin Survival Study (4S)<sup>1</sup> and the West of Scotland Coronary Prevention Study (WOSCOPS)<sup>2</sup> provide evidence of the clinical benefits of lipid-lowering therapy in reducing the incidence of coronary heart disease (CHD) in patients with hypercholesterolaemia. However, these findings have prompted debate over the affordability of lipid-lowering treatment, with the 10-year treatment by statins of men aged 45 to 64 years (with no history of CHD and cholesterol levels of >6.5 mmol/l) estimated at £136 000 per life-year saved.<sup>3</sup>

The WOSCOPS data are being used to argue for selective use of lipid-lowering agents in primary prevention of CHD,<sup>4</sup> although such a policy in individuals aged up to 69 years would cost £3 billion a year for drugs alone.<sup>5</sup> In contrast to all these data, little is known of GP attitudes towards lipid-lowering therapy, despite their pivotal role in the primary prevention of CHD. This study explores their perceived use of hyperlipidaemia therapies and attendant cost implications.

## Method

A semi-structured questionnaire interview was conducted among 39 randomly selected computerized Greater Birmingham GPs in 1996, following an initial, short, piloted postal questionnaire. The interview distinguished between patients with raised cholesterol and a maximum of one other CHD risk factor, and those with multiple risk factors; it also distinguished between three levels of hypercholesterolaemia.

Two hundred doctors were initially approached, and 39 of the first 53 responders were randomly selected for interview. Subsequent cost modelling of the GPs' management strategies concentrated on treatment of patients with moderate hyperlipidaemia (6.5–7.8 mmol/l). Costs of drug treatment, GP consultations, and cardiology outpatient consultations over 12 months of lipid-lowering therapy were estimated.

## Results

The distinctions between mild, moderate, and severe hyperlipidaemia were understood by GPs, although most were unfamiliar with specialist guidelines. After hyperlipidaemia, GPs perceived the hierarchy of risk factors in CHD primary prevention to be smoking, hypertension, and family history. Diabetes and obesity were frequently mentioned, but less than 50% of GPs actively screened for CHD risk factors other than hyperlipidaemia, smoking, and hypertension (Table 1). GPs considered the combination of risk factors to be more important than the number of factors.

Half of hyperlipidaemic patients were considered likely to be diet-resistant after a dietary regime lasting six months, although a significant minority of GPs would try diet alone for 12 months. Doctors were overwhelmingly more likely to advise low-fat rather than high-fibre diets. Perceived referral rates following initial diet treatment varied from 25–50% of all 'moderate' patients, depending on other risk factors. Sixty-six per cent of GPs were prepared to prescribe drugs to patients who proved diet resistant with one other factor, and 58% of GPs for patients with multiple risk factors (Table 1).

The most commonly prescribed drugs recalled were simvastatin, bezafibrate, and pravastatin. Fifteen GPs (38%) thought that lipid-lowering drugs were 'expensive' or 'very expensive', and three (8%) volunteered the specific problem of side effects. Overall, 48% of GPs believed that current lipid-lowering drugs were not cost-effective for patients with moderate or severe hyperlipidaemia.

Based on the management options recalled by the GPs, average 12-month treatment costs per patient for those with moderate hyperlipidaemia (and a maximum of one other risk factor) ranged from £119 (bezafibrate 200 mg) to £467 (pravastatin 20 mg). For patients with moderate hyperlipidaemia and multiple risk factors, costs would range from £126 (bezafibrate 200 mg) to £481 (pravastatin 20 mg).

## Discussion

Most respondents recognized the multifactorial nature of CHD, with 85% mentioning smoking, 77% family history, and 72% hypertension as risk factors. However, smoking was identified as one of the three principal risk factors by only 62% of GPs and hypertension by 44%. Family history was over-emphasized as a risk, but for some doctors this factor alone would prompt referral.

Doctors concentrated on low-fat rather than high-fibre diets, expressed considerable doubt about the likely success of dietary measures, and expected to prescribe lipid-lowering drugs. However, for diet-resistant patients, 87% of doctors anticipated

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**Table 1.** Perceived hierarchy of CHD risk factors, excluding hyperlipidaemia, and perceived GP referral and initiated drug therapy rates for diet-resistant patients.

Risk factor hierarchy	Percentage of GPs (n = 39)			
	1st	Ranking 2nd	Any mention	Active screening
Smoking	41	21	85	69
Hypertension	23	21	72	62
Family history	13	13	77	49
Diabetes	-	18	56	38
Obesity	-	10	62	46

  

Referral of diet-resistant patients	Percentage of GPs (n = 39)		
	Mild	Moderate	Severe
Hyperlipidaemia with $\leq 1$ other risk factor	10	23	51
Hyperlipidaemia with $> 1$ other risk factor	26	54	62

  

GP-initiated drug therapy	Percentage of GPs (n = 38)		
	Mild	Moderate	Severe
Hyperlipidaemia with $\leq 1$ other risk factor	87	66	42
Hyperlipidaemia with $> 1$ other risk factor	87	58	34

therapeutic intervention even in low-risk patients with mild disease (cholesterol 5.2–6.4 mmol/l) — a policy that does not accord with specialist consensus guidelines. The British Hyperlipidaemia Association recommends lipid-lowering therapy in patients with cholesterol levels of  $> 5.2$  mmol/l and pre-existing CHD or two other risk factors, and only after a strict dietary regime lasting three months.<sup>6</sup> The European Task Force also recommends dietary advice as a first line treatment, moving to drug treatment only in high-risk patients with cholesterol levels of 6–7 mmol/l, and in all patients with levels  $> 7$  mmol/l.<sup>7</sup>

This study suggests that GPs need clearer advice on which patients will benefit most from existing drug therapy, and highlights the need for more education on the cardioprotective effect of modifying dietary fibre,<sup>8</sup> as well as fats, in patients with moderate and lower-risk hyperlipidaemia.

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