EMBARGOED UNTIL DATE OF MEETING.

NHS Greater Glasgow

Greater Glasgow NHS Board

Board Meeting

22 October 2002 **Board Paper No. 02/69**

Director of Public Health

Geographical Inequalities In Access To Coronary Angiography

Recommendation: Members are asked to note the following paper

1 Introduction

Coronary angiography is used to assess the severity of coronary artery disease so that informed decisions can be made about whether a patient requires coronary revascularisation, and whether this should be done by cardiac surgery or balloon angioplasty. In 1995/1996 (financial year) we demonstrated inequalities in access to coronary angiography across Glasgow. There was no obvious correlation between need and investigation. Furthermore, some areas with the highest risk of death from ischaemic heart disease had the lowest coronary angiography rates. As a direct result of this survey additional resources were provided to Trusts to increase coronary angiography capacity. GPs were also encouraged to refer patients with CHD for investigation. The survey was repeated using data from 1999 (calendar year) to determine whether inequalities had reduced.

2 Methodology

Routine recording of coronary angiography on SMR1 is incomplete. Therefore, to ensure completeness of data collection, procedures were identified through a number of cross-referenced sources including SMR1, catheter laboratory log books, radiographers' diaries and the Scottish Coronary Revascularisation Register which is run by GGNHSB. Population rates of death due to ischaemic heart disease were used as a proxy measure of "need." These data were obtained from the General Registrar's Death Database.

Coronary angiography facilities are currently provided by the Western and Royal Infirmaries.

3 Results

In 1999, 2,662 Greater Glasgow residents underwent angiography. This compared with 2,032 in 1995/1996 and equated to an overall increase of 630 (31%) angiograms per annum. In the second survey, angiography was more equitably distributed in relation to need (Table). For example, residents in the south west of Greater Glasgow had a high death rate from ischaemic heart disease in both years. In 1995/1996 they had the lowest rate of coronary angiography. Following targeted provision of resources their rate increased and, by 1999, was the highest in Greater Glasgow.

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Table. Deaths due to ischaemic heart disease and coronary angiograms by area of residence.

	First survey			Second survey		
	deaths per 10,000	angiograms per 10,000	angio:death ratio	deaths per 10,000	angiograms per 10,000	angio:death ratio
East	41.8	21.9	0.5	29.5	30.6	1.0
South West	35.5	17.6	0.5	35.8	32.1	0.9
North	31.8	20.2	0.6	26.7	31.9	1.2
West	29.5	30.3	1.0	22.2	24.8	1.1
South East	25.0	18.5	0.7	24.2	26.5	1.1
Total	32.4	22.0		27.2	28.9	

4 Conclusions

1. In 1995/1996, access to coronary angiography was unequal and bore little relation to apparent need. There was evidence of the inverse care law whereby those with greatest need were least likely to be investigated and therefore considered for coronary revascularisation
2. Across Greater Glasgow as a whole, the overall number of coronary angiograms has increased. This is in line with trends in other areas in Scotland and the rest of the United Kingdom.
3. Targeted provision of resources and encouraging GPs to refer appropriate patients, has achieved the desired effort of reducing inequalities in investigation.
4. The overall increase in numbers and greater equality has not been achieved at the expense of waiting times. Waiting times are now all within the 12 week maximum recommended by the Scottish Executive and, most patients wait considerably less than 12 weeks.

5 Recommendations

1. In terms of geographical equity of access to elective coronary angiography, no further action is required at this time.
2. The survey should be repeated in four years to ensure that the improvements achieved have been maintained.

6 New developments

Recent evidence suggests that emergency angiography followed by balloon angioplasty can improve survival significantly in patients who suffer myocardial infarctions (heart attacks) but are unsuitable for thrombolysis (clot busting drugs) or in whom thrombolysis has failed. Current practice in Scotland is markedly different from the USA and western Europe. In Scotland, patients who suffer myocardial infarction are still rarely offered emergency angioplasty. In addition, urgent revascularisation is being used increasingly for patients with unstable angina (worsening angina at rest) who have a very high early mortality if untreated. Urgent and emergency procedures can disrupt elective work, so there is a need to provide additional hours of catheter laboratory time, both in the normal working week and out-of-hours. Adequate access also needs to be provided over weekends and public holidays. Protocols and audit are required to ensure that these additional facilities are used appropriately and equitably.

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